



**NEWBERRY GEOTHERMAL EXPLORATION PROJECT EA APPEAL EXHIBITS**

- 1. EXHIBIT A: “Tapping Earth’s Geothermal Energy: “Green” Panacea Or Pandora’s Box?” by Asante Riverwind, Original 1990 Report.**
- 2. EXHIBIT B: 2007 Updated Summary Article of the above report “Tapping Earth’s Geothermal Energy: “Green” Panacea Or Pandora’s Box?” by Asante Riverwind.**
- 3. EXHIBIT C: Department of the Interior Bureau of Land Management Case Recordation for Newberry Project Geothermal Leases OR-12437 and OR-40497.**
- 4. EXHIBIT D: Pit River Tribe vs. USFS, US Circuit Court of Appeals for the Ninth Circuit, Case No. 04-1576, DC No. CV-02-01314-DFL Opinion, November 6, 2006.**
- 5. EXHIBIT E: CD of Photos of Unreclaimed Cal Energy Exploration Sites and of Northwest Geothermal Energy Lease Sites.**
- 6. EXHIBIT F: CD of Photos of Newberry Monument Area.**
- 7. EXHIBIT G: CD of an Oregon Chapter Sierra Club 2007 Power Point Show on Geothermal Energy and its Impacts**



## **APPELLANTS’ STATEMENT OF REASONS**

### **I. NOTICE OF APPEAL**

The Oregon Chapter Sierra Club, and the League Of Wilderness Defenders – Blue Mountains Biodiversity Project, (“Appellants”)<sup>1</sup> hereby appeal the decision document entitled “Decision Record, EA Number OR-0507-075, Newberry Geothermal Exploration Project, Federal Leases OR-12437 and OR-40497” (hereinafter “DR”) issued by the Bureau of Land Management (“BLM”) and approved on October 26, 2007 by BLM Prineville District Office Manager Deborah Henderson-Norton.

Appellants believe and contend that the October 26, 2007 decision to approve the Newberry Geothermal Exploration Project (the “Newberry Project”) is legally flawed, in that it fails to comply with the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4321 et seq., and its implementing regulations at 40 C.F.R. Part 1500; the National Forest Management Act (“NFMA”), 16 U.S.C. § 1600 et seq., and its implementing regulations at 36 C.F.R. Part 219; the Federal Land Management Policy Act (“FLMPA”) \_\_\_\_\_ and its implementing regulations at \_\_\_\_\_ ; the Geothermal Steam Act of 1970 (“GSA”), 30 U.S.C. § 1001 et seq., and its implementing regulations; Executive Orders 12898 and 13007; as set forth in more detail in the following supporting Statement of Reasons.

Accordingly, the Interior Board of Land Appeals (“IBLA”) should conclude that the Agencies have failed to comply with statutory directives. The ILBA should therefore void the DR, and deny approval of the Newberry Project. The IBLA, at a minimum it should order the Agencies to comply with applicable laws by completing the requisite proper NEPA analysis, including preparing and circulating for public review and comment a new environmental assessment (“EA”) or environmental impact statement (“EIS”), providing adequate public notice of this project, and holding public hearings in the affected regional communities, including LaPine, Sunriver, Bend, and Paulina Lakes; as more fully described below.

The Appellants have a specific interest in this project, indicated by our comments throughout the planning process and continued involvement in the public lands management of the Prineville District

---

<sup>1</sup> The addresses for Appellants are as follows: (1) Oregon Chapter Sierra Club, P.O. Box 5534, Bend, Oregon 97708; (2) League Of Wilderness Defenders-Blue Mountains Biodiversity Project, 27803 Williams Lane, Fossil, Oregon 97830.

BLM. Appellants have standing to appeal the District Manager’s decision in accordance with 43 C.F.R. 3265.1, 43 CFR § 4 and Form 1842-1 because of our submission of substantive comments and involvement throughout the planning process.

The Oregon Chapter Sierra Club represents over 23,000 members throughout Oregon, including over 1,000 Juniper Group members throughout central and eastern Oregon. The League Of Wilderness Defenders-Blue Mountains Biodiversity Project has many members and volunteers throughout the Northwest. Sierra Club members feel strongly about nature, wilderness, wildlife and the environment. Our members regularly enjoy hiking, camping, birding, wildlife watching, recreation and ecological study within the national forests of central and eastern Oregon, including the greater project area adjacent to the Newberry National Monument and within the Deschutes National Forest. The interests of Sierra Club members would be irreparably harmed if the Decision Record approving the Plan of Exploration for the Newberry Geothermal Exploration Project EA is implemented as planned. Members and volunteers of the LOWD-Blue Mountains Biodiversity Project regularly use the Deschutes National Forest and the Newberry National Monument for hiking, ecological study, watching wildlife, viewing forest native botanical diversity, and avian species study. The Newberry Geothermal Exploration Project EA and Decision Record, if implemented, would adversely degrade the ecological integrity of the proposed project area and irretrievably harm the interests of LOWD-BMBP members, volunteers and supporters. To protect the interests of our members and volunteers, and to protect the greater public good, our two organizations join as co-Appellants in this appeal.

The EA for the Newberry Project fails to analyze or disclose scientific research, environmental analysis, and judicial caselaw that addresses numerous significant adverse impacts to human health and safety, natural ecosystems, tourism, agricultural operations, aquatic and wildlife species, watersystems, sub-surface aquifers, air quality, and a host of interrelated social and resource concerns resulting from geothermal exploration, testing, and related construction, maintenance and energy production facilities. Considerable risk exists that the interests of the members and volunteers of both of our organizations would be irreparably harmed, that the unique and irreplaceable environmental and scenic quality of the Newberry Monument and surrounding public lands would be irreparably and irretrievably harmed, and that the recreational, economic, and health interests of the greater public and surrounding regional communities would be significantly and irreparably harmed as well, if the exploratory geothermal drilling and testing is approved and implemented; and if this exploration leads to the development of a geothermal energy production plant in this location. The analysis and disclosure deficiencies of the Newberry Project

EA and DRA violate the requirements of the NEPA concerning full disclosure, high quality science, objective analysis, reasonable range of alternatives, impacts to the affected environment, cumulative impacts for the planned exploration, past and possible future exploration, other area management actions,, and inextricably related actions.

## **II. PETITION FOR A STAY**

Pursuant to 43 CFR 3265.1 § 4.21(b) Appellants herein petition for an immediate stay on the effectiveness of the decision for the Newberry Project EA and DR, halting immediately any and all implementation of the Newberry project EA and DR. We request a stay be granted on all actions directly and indirectly related to this decision, including but not limited to the current ongoing road reconstruction, construction, widening, site preparation, and equipment delivery, assembly, and all planning that results in direct and indirect impacts to the lease areas and greater project area. For reasons clearly articulated and evidenced herein this appeal, the Newberry Project is in violation of a number of this nation's environmental policy laws, first and foremost including violations of the most basic tenets of NEPA itself. It is clear that if a stay is not granted immediately, and properly enforced throughout the during of this appeal, including subsequent judicial review if necessary, that the interests of the Appellants and the bests interests of the American public would be irreparably harmed, the legal responsibilities of BLM and the USFS would be breached, and the environmental policy laws of this nation would be violated. As required, this appeal and request for a stay has also been provided to all parties noted in the EA and DR. The Statement of Reasons throughout this appeal clearly articulates the many legal violations and analysis deficiencies of the Newberry Project, and evidences the irreparable harms that would incur, and have cumulatively incurred, to the natural resources of the affected greater project area, the affected human communities and recreational resources, and the members and volunteers of Appellant organizations. This Appeal demonstrates sufficient evidence of the Newberry project's many legal violations and deficiencies as to clearly indicate the likelihood of Appellants success on the merits during judicial review, should this be necessary. Failure to implement an immediate stay will permit further irretrievable impacts in the greater project area. Immediate and irreparable harms include: the industrial conversion of public forest lands and scenic forest dirt roadways; fifteen acres of clearcuts and industrial leveling spread across three five acre sites; geothermal well drilling and the venting of toxic geothermal steams; the accumulation of toxic geothermal brines in holding ponds; the stockpiling of industrial machinery and equipment on affected sites; harmful direct and cumulative impacts to forest wildlife, soils, forest structure, ecological

functioning and recovery; incessant industrial noise, traffic, and construction impacts directly and indirectly adversely impacting the area’s public lands; all resulting in the irreparable degradation of the natural resources and recreational experiences in and throughout the greater project area in both the immediate short-term and extended indefinite long-term of time. As the Newberry Project failed to analyze or disclose known adverse impacts of geothermal exploration, failed to address, incorporate or disclose scientific research pertinent to geothermal projects, failed to meaningfully inform and involve the affected public, failed to address cumulative impacts throughout the greater project area, failed to ensure requisite foundational environmental analysis was completed before leases were issued and failed to rectify with subsequent environmental analysis supporting geothermal leases in this area, failed to abide by the clear requirements of our nations environmental policy laws, and as geothermal exploration in this area will have significant known adverse environmental consequences, including potentially harmful human health, human community, and natural resource impacts, it is clearly within the public’s best interests that a stay be immediately granted halting the implementation of the Newberry Project EA and DR. Furthermore, as the project itself is speculative, as it will not benefit the residents of the affected central Oregon communities nor benefit the many recreational visitors to the Newberry Volcanic Caldera, as it will have known though as yet insufficiently assessed and disclosed adverse impacts, as there exists no immediate emergency requiring this project’s urgent implementation, there is no rationale, responsible reason not to grant an immediate stay until proper environmental and human community impacts, concerns, and issues have been addressed. Indeed, failure to grant an immediate stay on this project would violate BLM’s legal and ethical public trust responsibilities, as duly noted throughout this appeal.

Lastly, BLM staff responsible for this project explicitly told our organizations that we would have the entire appeal period to address our issues and concerns. They made no mention of the “full force” decision authorizing immediate implementation of this decision. The Newberry Project EA DR on page 10 belatedly discloses that this decision was “issued under 43 CFR Part 3265.1 and is immediately effective.” The Newberry Project EA failed to notify the public that this would be a “full force” decision with immediate implementation, as required under the NEPA. The EA addresses the “1.7 Decision to be made” and “4.17 Implementation” on pages 9 and 35 respectively, and fails entirely to inform the public of the immediate implementation of this decision. Appellants contacted BLM staff immediately after this decision was received, and asked why the public had not been notified of this “full force” immediate implementation of this decision, and why we had been told we would have the full appeal period before it would be implemented. BLM project staff replied that they did not know that a “full force” decision

would be used for this project. They stated that it was a surprise to them and had come from regional direction, and that they did not intentionally misinform our organizations or the public. NEPA requires all agency land management decisions meet legally mandated public disclosure and informed accuracy standards. The EA failed to disclose the agency would issue this decision authorizing immediate effectiveness, permitting implementation upon decision throughout the appeal period. BLM staff responsible for this project, who themselves state they were not informed and as such did not intentionally deceive the public, nonetheless inadvertently misrepresented the agency’s decision effect and appeal period to our organizations and potentially any other inquiring public. As such, this decision may not be legally issued under 43 CFR Part 3265.1, cannot legally be immediately effective. BLM is legally bound to honor the full stay on implementation of all aspects of this decision throughout the appeal period as represented by BLM staff responsible for this project.

### **III. INTRODUCTION AND BACKGROUND**

The DR grants final approval for geothermal exploration on two Federal Geothermal Leases (OR-12437 and OR-40497). The DR approves the construction of three 5 acre well pads authorizing the clear cutting and leveling of these three five acre sites; the drilling of three exploration wells per pad (up to 9 exploration wells); the testing of each drilled well; the continuous venting of geothermal steams for up to 45 days for each well testing; containment ponds for geothermal brines, drilling fluids, muds and sludges; the construction of ½ mile of road; the reconstruction of portions of existing Forest Service roads including the widening of these affected roads; approving exploration activities indefinitely, which could extend for a number of years, as the decision fails to specify an ending date or operations timeline for this project. In effect, the decision authorizes the construction and operation of three five acre industrial complexes adjacent to the Newberry National Monument, located in an undeveloped forested area of the Deschutes National Forests in Deschutes County, Oregon.<sup>2</sup> Set in the forested foothills and outer western slopes of the Newberry Caldera, adjacent to the ecologically treasured Newberry National Monument and its two recreationally popular natural perched aquifer lakes, East lake and Paulina Lake, the Newberry Project would involve construction and operation of up to nine geothermal exploration wells located on fifteen acres of undeveloped forest land spread across three five acre sites; the construction of ½ mile of new access road and the reconstruction and widening of existing Forest Service roads affecting 7.7 miles

---

of roads (EA page 13); and the construction of water wells, sump ponds and containment ponds; heavy equipment operating and supply storage sites. (As noted in the DR and EA.)

#### **IV. THE NEWBERRY PROJECT EA AND DR FAILED TO PROVIDE FOR MEANINGFUL PUBLIC NOTICE AND AFFECTED COMMUNITY INVOLVEMENT**

The Newberry Project EA and DR have been concluded absent reasonable responsible measures ensuring requisite notification of the greater area’s affected communities and public, including area residents and frequent recreationists in the Deschutes National Forest and greater Newberry National Monument area. As such, there remains a significant need for additional adequate public notification, including public hearings and responsible provisions to ensure all affected citizens and communities are notified and their comments and concerns are assessed and incorporated. Notification of this renewed Newberry Geothermal Exploration Project has not been adequately provided, and public hearings have not been held. A survey of residents, workers, and frequent recreationists at the Newberry Monument by Appellant organizations completed during the public NEPA comment period for example, revealed that no one among the couple dozen people queried had knowledge of this project. Additionally, a number of those in the area had specific questions and strong concerns about this project, with the majority of those queried opposed to the Newberry Project. Throughout the public NEPA comment period, from scoping comments to final EA comments, our organizations noted this need. We contacted both the BLM and Deschutes NF staff concerning the need for public hearings. The agencies responded that Davenport Power would be notifying the affected public. Davenport’s geologist contractor did indeed contact and meet with two Sierra Club members, however, the company did not contact local affected citizens or communities. The list of public contacts found on pages 42 - 43 of the EA fails to note any public community events, or any contacts in the greater Newberry Monument community. Limited “stakeholder” and elected official meetings, interviews, and e-mails conducted by representatives of the private business venture itself do not constitute nor substitute for responsible objective federal land management agency conducted public hearings. That none of the listed interviews or meetings resulted in objective community events, further underscores the lack of informed community participation. The only formal event noted was at a geothermal industry sponsored event (Nov. 7, 2006), largely attended by representatives of other geothermal companies, a few elected officials, and not the affected public communities – which largely knew nothing of this “insider” event. Federal agencies, including the BLM and the Deschutes National Forest, have public notification and hearings responsibilities that due to conflict of interest may not be

relegated to private business enterprises with vested financial interests. The failure of the BLM and Deschutes NF to adequately notify the public directly, and to schedule public hearings on the Newberry Project before and/or during the NEPA comment period violates the clear Congressional intent of federal environmental policy laws to provide for meaningful informed participation of the affected public. The Newberry Geothermal Exploration Project will have significant direct and cumulative affects upon the greater project area, including the Newberry National Monument, Deschutes National Forest lands, Forest Service and Oregon State and Deschutes County public highways and area roads, and upon the greater area’s communities, residents, recreationists, and visitors to this popular National Monument area. Federal policy laws require the agency hold public hearings on a project of this magnitude and impact. Federal agencies need to conduct public hearings with adequate public notice throughout the affected region, from La Pine to Bend and corresponding distances east and west also. Until reasonable notice is given and meaningful public hearings are held, this project may not go forward, in whole or part. The Newberry project EA and DR must be withdrawn, and a new public NEPA process begun with legally responsible public notice and meaningful public hearings, ensuring adequate informed involvement of the affected public.

## **V. THE NEWBERRY EA IS BASED UPON LEASES ISSUED WITHOUT REQUISITE NEPA ENVIRONMENTAL ANALYSIS**

The Newberry Geothermal Exploration Project EA is being conducted for leases OR-12437 and OR-40497, both of which were issued without environmental analysis, similar to other leases issued during that time-period. As such, the full implications of geothermal leaseholds have never been assessed, disclosed and publicly reviewed, including direct impacts from the leases themselves, and cumulative impacts from the leases in conjunction with other geothermal and mineral leases in the greater area, and in conjunction with other past, current, and known future management actions. Additionally, both leases have a checkered history of ownership changes, terminations, suspensions, modifications, renewals, and defaults. The history, legitimacy, cumulative impacts, and track records of these leases (as well as other area releases that contribute to cumulative impacts upon the area’s environment) has not been disclosed or reviewed in the EA for the Newberry Project. Lease OR-12437 was reportedly first applied for on March 1, 1974. Records show over three years followed of application review, rejection and partial denial, appeal, appeal denial, reconsideration, concluding in another apparent appeal denial in 1977. Then in 1983, after an elapsed period with no recorded activity spanning from the affirmation of the decision

(apparently denying the appeal reconsideration) on June 5, 1977 to April 26, 1983, the lease )R-12437 was inexplicably issued. The EA fails to disclose to the public any foundational environmental analysis supporting the issuance of this or any geothermal lease in the greater affected project area. Lease OR-40497 reportedly was not applied for until May 1, 1983, when BLM documents report it as “case established” and “effective date.” It was reportedly “committed to unit” to years to the day later on May 1, 1985. Again, the Newberry Project EA and DR fail to disclose any supporting environmental analysis for the issuance of this or any other geothermal lease hold in the greater Newberry Volcanic Caldera area. Records for this lease indicate that the current operator Northwest Geothermal is still partners on leasehold records with Vulcan Power. Vulcan reportedly may now be financially bankrupt, however the exact legal status, including fiscal, operational, and reclamation responsibility and capability is not disclosed or addressed in the EA for this project. Northwest Geothermal is also partners with four other parties that are recorded as having “overriding royalty.” The EA fails to disclose or address the fiscal, operational, and reclamation responsibility of these additional parties recorded on the Newberry Project leases, nor does the EA disclose the checkered history of these leases, or of other leaseholds in the greater project area. Leases OR-12497 and OR-40497 are both recorded as being put into suspension on November 30, 1998. After a period of inactivity spanning over 8 years, both leases were removed from suspension on January 1, 2007. The lifting of suspension for both of these leases was done absent any legal public environmental analysis process. As both leases were issued without any legal public environmental analysis, as both leases have recorded checkered histories of suspensions, terminations, reinstatements, partner financial legal disputes, changed partner ownerships and leaseholders, both of these leases lack legally requisite environmental analysis and fail to evidence responsible management oversight by either BLM or the USFS, upholding the public's best interest and the environmental integrity of these public lands. Both BLM and the Forest Service have had a significant period of time to initiate an environmental analysis addressing geothermal leaseholds in the greater Newberry area. Such a common sense, publicly responsible, foundational environmental analysis has never been conducted. In 1994 the USFS, jointly with the BPA and BLM, completed a brief EIS for the “Newberry Geothermal Pilot Project.” This analysis addressed some of the known direct impacts of one particular geothermal pilot project. The 1994 EIS did not adequately address cumulative impacts in the area; nor did it adequately address the ecological, recreational, geological, and human community significance of the Newberry Volcanic Caldera. The 1994 explorations, which reportedly occurred at five sites on Deschutes National Forest lands along the border of the Newberry National Monument, has been completed for over a decade.

Despite the prolonged period of time since this completion, the EIS promised reclamation has never occurred. Exploration sites have been left as compacted industrial site clearcuts, with toxic holding ponds open to ongoing wildlife use. Wildlife tracks are evident in and adjacent to pond muds and sludge. No warning signs are posted to unsuspecting public, allowing unknown impacts to human adults, children and their pets. Industrial debris is still located in the area, with no apparent effort by managing agencies or the leaseholder to responsibly reclaim these five sites after over a decade of abandonment. The public trust and responsibility vested in federal land management agencies, and required of leaseholders, has been seriously breached and violated. The current Newberry Project EA fails to disclose or meaningfully address this issue. Indeed, this issue has only become known due to visits to the affected area sites by representatives of the appellant organizations. The 1994 EIS, and again the current Newberry EA, failed to responsibly addressing the lack of suitability of this geologically and recreationally treasured caldera to industrial geothermal exploration and production. The Newberry EA fails to sufficiently and meaningfully address reclamation responsibility, including fiscal capability (one of the recent former leaseholders – or if records are correct, current partners - has reportedly already gone bankrupt) and agency oversight and enforcement. But overall, the leases themselves are ecologically bankrupt. Both of the Newberry project leases were issued between 24 and 22 years ago. Both leases were issued without responsible environmental analysis, public review, and responsible managing agencies oversight. The Newberry EA, as the 1994 EIS over 13 years before it, fails the reasonableness tests and basic tenet requirements of environmental policy laws. Akin to ignoring the proverbial elephant that should not reasonably be in the kitchen at all, while inspecting myopically selected areas of its impacts, the Newberry Project EA fails the federal agencies responsibility to uphold the both letter and intent of a host of environmental policy laws, including but not limited to the most basic tenets of NEPA, NFMA, FLMPA, among others. Absent such common sense, legally requisite analysis foundations, the current geothermal leaseholds and Newberry Project EA have no substantiating basis. We strongly recommend both BLM and the USFS begin a public EIS process addressing the suitability or lack thereof, and direct and cumulative impacts of, geothermal leases throughout the greater Newberry Monument area. Until this has been done, due to the many interrelated yet separate reasons cited above, the Newberry Project EA is legally deficient in its scope, analysis, foundations, and disclosures, failing to meet the most basic tenets of the NEPA, and as such must be withdrawn.

Indeed courts have affirmed that environmental analysis must be the required foundations upon which geothermal leases are based and issued. Federal laws are explicitly clear on these issues. The

National Environmental Policy Act of 1969 sets forth a “national policy which will encourage productive and enjoyable harmony between man and his environment [and will] promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. NEPA requires the preparation of an environmental impact statement (“EIS”) when major federal actions may significantly alter the quality of the human environment. *See id.* § 4332(2)(C). *See also* Union Oil Co., 102 IBLA 187, 189 (1988).

The importance of BLM’s compliance with NEPA cannot be overstated. The NEPA process is BLM’s primary mechanism for insuring that the agency is aware of current, on-the-ground conditions, and with that information in hand it can make informed decisions how to comply with other statutory mandates. *See e.g.*, Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989) (NEPA aims to encourage more environmentally sensitive decision-making by requiring Federal agencies to take a “hard look” at the environmental consequences of their actions before they occur, thereby ensuring “that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impact.”).

The Tenth Circuit, in a major decision in the minerals and energy leasing context upholding the IBLA’s reversal of BLM-issued leases, stated:

Agencies are required to satisfy the NEPA “before committing themselves irretrievably to a given course of action, so that the action can be shaped to account for environmental values.” Sierra Club v. Hodel, 848 F.2d 1068, 1093 (10<sup>th</sup> Cir. 1988).

Pennaco Energy v. Dept. of Interior, 377 F.3d 1147, 1159 (10<sup>th</sup> Cir. 2004). “The query is whether the [BLM decision] contains a ‘reasonably thorough discussion of the significant aspects of the probable environmental consequences’ of the proposed action.” Southwest Center for Biological Diversity, 154 IBLA 231, 236 (2001) (quoting California v. Block, 690 F.2d 753, 761 (9<sup>th</sup> Cir. 1982)) (emphasis added).

The timing of an agency’s compliance with NEPA is essential:

“[T]he appropriate time for preparing an EIS is prior to a decision, when the decision maker retains a maximum range of options.” An EIS is required when the “critical agency decision” is made which results in “irreversible and irretrievable commitments of resources” to an action which will affect the environment.

Sierra Club v. Peterson, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (internal citations omitted)(overturning federal oil and gas leases for NEPA violations).

More recently, the Board has reiterated its position that the sale of non-NSO oil and gas leases is an irreversible commitment of resources: “BLM regulations, the courts and our precedent proceed under the notion that the issuance of a lease without an NSO stipulation conveys to the lessee an interest and a right so secure that full NEPA review must be conducted prior to the decision to lease.” Southern Utah Wilderness Alliance, 159 IBLA 220, 240-43 (2003) (citing Friends of the Southeast’s Future v. Morrison, 153 F.3d 1059, 1063 (9<sup>th</sup> Cir. 1998) (additional citations omitted). See Wyoming Outdoor Council, 157 IBLA 259, 264-65, 272-73 (2002) (Burski, J. concurring), *affirmed* Pennaco Energy, Inc. v. U.S. Dept. of the Interior, 377 F.3d 1147 (10<sup>th</sup> Cir. 2004)(same); Union Oil Co., 102 IBLA at 189 (citing Peterson).

Courts recently affirmed and further clarified agency analysis and legal responsibility, in the “Pit River case,” noting that leases cannot be renewed without a public NEPA environmental analysis process. The intent of federal environmental policy laws is clear, as noted above. See:

1. Pit River Tribe v. United States Forest Serv., No. 04-15746 , UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT, 469 F.3d 768; 2006 U.S. App. LEXIS 27385; 36 ELR 20223, February 14, 2006, Argued and Submitted, San Francisco, California , November 6, 2006, Filed
2. N. Plains Res. Council v. United States BLM, Cause No. CV 03-69-BLG-RWA, Cause No. CV 03-78-BLG-RWA , UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MONTANA, BILLINGS DIVISION, 2005 U.S. Dist. LEXIS 4678, February 25, 2005, Decided , February 25, 2005, Filed
3. Pit River Tribe v. BLM, CIV-S-02-1314 DFL/JFM , UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF CALIFORNIA, 306 F. Supp. 2d 929; 2004 U.S. Dist. LEXIS 3130, February 13, 2004, Decided , February 13, 2004, Filed , Reversed by Pit River Tribe v. United States Forest Serv., 2006 U.S. App. LEXIS 27385 (9th Cir. Cal., Nov. 6, 2006)

Both Newberry leases were recently lifted from over 8 years of extended suspension. Both leases have been terminated and reinstated. Environmental analysis has never been conducted for either Newberry lease, nor for the many geothermal leaseholds throughout the Newberry area. BLM and the USFS have legal and ethical responsibility to the public and the laws of this nation to conduct an EIS for all leaseholds in this greater Newberry Caldera area, including these two Newberry Project leases, before a decision may be issued authorizing the irretrievable commitment of resources that will irreparably result from the implementation of the Newberry Project EA and DR.

## **VI. THE ENVIRONMENTAL ASSESSMENT IS INADEQUATE UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT**

The EA violates NEPA in five respects. First, the required “purpose and need” section in the EA is legally deficient because the purported “purpose” is defined too narrowly and the purported “need” is vague, inaccurate, and misleading. Second, the EA fails to analyze a reasonable range of alternatives. The DR presents only one action alternative and a no action alternative. The EA dismisses other possible action alternatives, such as exchanging current leases for different geothermal lease locations farther removed from the Monument, wildlife, and visibility to National Forest and National Monument area recreationists (including elsewhere in Oregon on federal public lands); a reduced number of exploration sites; the withdrawal of some or all of the greater Newberry Caldera area from geothermal leasing, exploration, and/or development; sequential lease site exploration with subsequent site exploration contingent upon the successful reclamation of competed sites, and modified in response to the monitoring and assessment of actual environmental impacts resulting from the exploration of preceding sites. These are just a few examples of the range of possible reasonable alternatives that BLM deprived the public and decision-maker from reviewing as a result of its myopic and legally deficient contrived “purpose and need” and biased, inaccurate and deficient analysis throughout the Newberry EA and DR.

Third, the EA violates NEPA because its analysis of the Newberry Project’s impacts on the environment is fraught with biases, omissions, unsupported conclusions, and outright mistakes. Fourth, the EA fails to analyze any “cumulative effects” associated with other past and potential future geothermal lease exploration, and from the probable construction of nearby geothermal plants. Fifth, the EA does not analyze and disclose the socioeconomic, natural resource, and human community health impacts that would likely result from the Newberry Project.

## **VII. THE PURPOSE AND NEED FAILS THE REQUIREMENTS OF THE NEPA**

The specification of “purpose” cannot be so narrow as to preordain a particular conclusion. See Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 196 (D.C. Cir. 1991). Project developers are forbidden from defining the purpose of a project “in unreasonably narrow terms.” Carmel-by-the-Sea v. United States Dep’t of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997). Here, the stated purpose of the Newberry Project is “The purpose of the Proposed Action is to conduct exploration activities to acquire

more information about the geothermal resource at Newberry Volcano, specifically in the area of the two federal leases identified in Davenport’s Plan of Exploration.” EA at page 6.

This unduly narrow definition of “purpose” caused the Agencies to overlook factors relevant to their decision and, ultimately, to limit unreasonably the range of alternatives considered. See Citizens Against Burlington, 938 F.2d at 196 (“agencies must look hard at the factors relevant to the definition of purpose,” including the intent of Congress in authorizing the agency to act, and then define goals that determine the range of options considered). In the Newberry Volcanic Caldera area of the Deschutes National Forest, the USFS has a congressional mandate to manage National Forests for “multiple use.” 16 U.S.C. § 1604(e); 43 U.S.C. § 1732. Energy development is but one possible management scenario for the Newberry area, along with management to conserve cultural resources, management to protect wildlife values, and management to promote recreational uses, among others. In other words, the proper purpose for the Agencies’ NEPA analysis is not “conduct exploration activities to acquire more information about the geothermal resource at Newberry Volcano” on Davenport Power’s Northwest Geothermal leases, but rather, to determine whether this area of the public lands should be managed for energy development consistent with the agency’s multiple use management directive.

By narrowly and improperly defining purpose as development of geothermal resources on the Northwest Geothermal leases, the Agencies have essentially preordained the outcome of the evaluation and undermined the legal veracity of the NEPA process, since no other action alternative but implementation of the POE for the Newberry Project would satisfy that purpose. Had the Agencies properly defined purpose as a determination of whether these particular public lands should be managed for energy development, the reasonable range of alternatives to the Newberry Project would have included, for instance, other locations for geothermal development, other types of energy development or conservation that could substitute for the Newberry Project, and alternate management regimes for the area, such as management as a special public recreational and natural resources area more in accordance with the treasured ecological qualities of the adjacent Newberry Monument.

The “Purpose and Need” for this project fails the objective requirements of the NEPA. It is arbitrarily and capriciously contrived so as to allow for only the selection of one of the two proposed geothermal exploration actions. Legally, the purpose and need is required to be worded in objectively so the decision-maker is not predisposed towards the selection of any action alternative. Legally, the purpose and need should have been worded: “The purpose of this Environmental Analysis is to assess potential impacts that would result from proposed geothermal exploration. As there is a proposal for resumed geothermal exploration in the Newberry area, there is a need to assess impacts to determine: 1. If significant direct and indirect impacts may result that require an EIS; 2. If resource objectives and human community concerns in the area are compatible with the proposed geothermal exploration; and 3. If geothermal exploration is an irretrievably connected action to geothermal production, and as such must be addressed in a comprehensive NEPA environmental analysis on both the proposed exploration and connected geothermal production.” Instead, the Newberry Project EA purpose and need reads: “The purpose of the Proposed Action is to conduct exploration activities to acquire more information about the geothermal resource at Newberry Volcano, specifically in the area of the two federal leases identified in Davenport’s Plan of Exploration.” EA at page 6. The need is stated in the EA as: “BLM has a need to consider objectives from the National Energy Policy (May 2001), which includes the need ‘to expedite projects that will increase the production, transmission, or conservation of energy’ (Section 1, Policy and Executive Order 13212). BLM will also consider objectives from the Energy Policy Act of 2005 (Public Law 109-58) of promoting the leasing and development of geothermal resources where appropriate on public lands.” This section of the EA continues, citing the Geothermal Steam Act requirement for the agency to respond to proposed plans submitted by lessee’s and their designated operators. It also notes both the NFMA and the FLMPA requirements that approved actions be consistent with these acts Land and Resource Management Plans (LRMP), including the Deschutes National Forest LRMP (1990) as amended, the BLM Upper Deschutes Resource Management Plan (2005), and the Newberry National Volcanic Monument Plan (1994). The newberry project EA section 1.4 concludes by citing geothermal energy as “one of the renewable energy sources identified” by the State of Oregon, and Oregon’s Senate Bill 838C, “which requires that the largest Oregon utilities provide 25 percent of their retail sale of electricity from clean renewable sources of energy by 2025.” As noted above there are several inherent legal flaws in this contrived purpose and need, including its lack of objectivity, omissions, and proposed action-selection biased disclosures.

NEPA requires that the EA “specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” 40 C.F.R. §1502.13. The specification of purpose and need is essential for evaluating whether the EA includes a reasonable range of project alternatives. See Sierra Club, Ill. Chapter v. U.S. Dep’t of Transp., 962 F.Supp. 1037, 1042-44 (N.D. Ill. 1997) (holding an FEIS invalid because projected “needs” were inconsistent with project alternatives). Here, the EA violates NEPA’s requirements for specifying “purpose and need” because the stated “purpose” is too narrowly defined and the stated “need” is vague, inaccurate, and misleading.

### **VIII. THE EA AND DR VIOLATE NEPA REQUIREMENTS PROHIBITING THE SEGMENTATION OF THE PLANNED EXPLORATION FROM RELATED GEOTHERMAL ENERGY PRODUCTION**

Federal environmental policy law requires that inextricably interrelated management projects be addressed in one NEPA analysis document. BLM and the Deschutes National Forest may not legally approve geothermal exploration and test well drilling without first conducting the requisite comprehensive environmental analysis on a geothermal power production plant within the greater project area. As eventual plans for a geothermal energy electrical production plant are the only rationale for conducting the planned geothermal exploration on these two leases, it is of paramount importance to first conduct the requisite environmental analysis addressing the suitability of geothermal energy production in the greater Newberry Caldera area, and addressing the full impacts of geothermal energy production in this area should exploration discover economically feasible geothermal energy production resources. As the original leases throughout this area were initially granted without requisite environmental analysis, as noted elsewhere herein the agency must first subject all existing leases to a public environmental analysis process before these leases can be considered legally legitimate and societally acceptable in this treasured recreational area. Currently the Newberry Project EA is founded upon a legally noncompliant process. Similar to a pile of pick up sticks, it lacks the necessary environmental analysis and informed public participation and consent to legally proceed. The overriding questions of whether geothermal production is appropriate in the Newberry Caldera area, and what the full range of probable impacts would be, have never been analyzed, disclosed or publicly addressed. As a result, we have regional communities and the nations public that are now subject to the potential irretrievable alternation and industrial conversion of the greater westside of the newberry Volcanic Caldera. In short, the public could loose the area’s irreplaceable treasured natural qualities without realization of such loss until it has already occurred. NEPA is designed to prevent just such an unformed irretrievable loss of natural resources such as BLM

proposes to authorize in its current Newberry EA and DR. NEPA requires that both BLM and the USFS begin this NEPA process with a full analysis of the impacts geothermal production that could result from the planned exploration, and indeed are the only motivating rationale for such exploration. Such NEPA analysis is necessary prerequisite to the planned exploration. If the conservation of the natural resource values of the area and the interests of the citizens of the region are better served by removing parts or all of this area from geothermal energy production, it would best conserve and respect the time and resources of all parties involved to acknowledge and address these issues well before any irretrievable and needless expenditures of resources were lost on exploration for geothermal resources that society deems are best left undeveloped, at least by industrial geothermal electrical energy production facilities. As the old, common sense colloquialism wisely says: “one must not put the cart before the horse.” Given the treasured ecological features of this highly popular recreational caldera, common sense wisdom must first take the NEPA requisite “hard look” at the full impacts of geothermal energy production in this area. NEPA analysis must first be conducted with the horse placed properly before the cart, in this case the horse being the geothermal energy production desires motivating the cart into movement in the first place, with the cart being the necessary exploration process that begins geothermal production ventures. Through such analysis, land management agencies and the affected public must ask whether the proposed exploration and related eventual energy production are both suitable and desirable for this area. Responsible agencies must employ both common sense and informed wisdom, and ask the hard questions of whether full scale geothermal production and related exploration in this location is really an unsuited horse and ill-fated cart, and if so, decline to take the ride to begin with. Instead, with the current Newberry EA and DR, the agencies are embarking us all on an irretrievable ride that will either result in the loss of time and resources to the geothermal companies and their investors if production is ultimately denied as a result of public opposition and unacceptable environmental impacts, or the industrialization of the Newberry Caldera project area. Such large-scale decisions with far reaching societal impacts require an EIS, and proper non-segmented comprehensive analysis.

FLPMA, NEPA, and federal judicial caselaw clearly hold that the concerns and issues regarding proposed projects cannot be broken into separate, piece-meal segments. Interrelated issues and concerns regarding integral portions of this project proposal, including the exploration test drilling, are inextricably tied to the overall plans for the geothermal production plant itself. As the exploration proposal would not exist in itself without an underlying proposal to operate a geothermal plant, the proposal for exploration

must ultimately be contingent upon issues related to full-scale geothermal production in the area, in addition to issues solely derived from the exploration proposal.

The proposed test drilling represents an irretrievable commitment of resources, and will irrevocably further transform the proposed exploration and drilling areas. As noted above, exploration drilling would directly impact and irretrievably alter three 5-acre sites, a total of 15 acres. The Newberry Project POE represents a substantial alteration and degradation of the greater area’s environment. It also represents a considerable financial expenditure of resources that could not be reasonably recouped without the eventual approval, construction, and decades long operation of a geothermal production plant in this area. Similar to a “foot in the door” approach, the attempt to gain approval for the test-drilling phase of this geothermal project, and resultant piecemeal degradation of the area’s natural resources, would allow for new industrial incursions into the proposed production plant area. Before such a commitment may be approved, federal environmental policy laws require that an environmental impact analysis must be conducted that assesses the many issues and consequences likely resultant if a geothermal production plant eventually becomes operational. An EIS is necessary, addressing the entire interrelated phases of this proposed project before any one stage may be approved.

NEPA, FLPMA, and federal judicial case law, require that environmental analysis process cannot be segmented piecemeal into disparate parts. The proposed test drilling results from the proposed geothermal plant itself, and must be analyzed and disclosed as such. As favorable results from the test drilling will open the way for the geothermal project, the test drilling must be assessed as an inherently inseparable component of the proposed geothermal production plant. This necessitates that the full EIS analysis process must occur prior to any approval to move forward with the proposed test drilling. The test drilling itself is not without environmental impacts. These impacts may adversely affect many of the same ecological concerns, including wildlife and botanical species, human health, recreational values in the Monument, regional community aquifers, as well as ecosystem functioning and integrity, in addition to affecting similar social, political and recreational concerns. It is paramount and legally required that these impacts and concerns be assessed in a public NEPA EIS process for the entirety of the Newberry Caldera area, addressing fully potential geothermal production and exploration project impacts.

EAs cannot be authorized for proposals in which there will be clear extensive significant impacts, and which also generate significant widespread public controversy. Our organizations represent numerous citizens, from local residents to state and national citizens. The comment timeline, public notice, project

scope, and community involvement have been insufficient to responsibly notify and meaningfully involve the public. This EA process failed to fully disclose and address the serious significant impacts of the planned Newberry exploration. It failed to accurately and adequately address likely impacts, both in the short exploration phase, and in the long-term inseparable geothermal production phase.

As such, the Newberry EA and DR are legally inadequate in scope and deficient in analysis. An EA that only has addressed exploration fails NEPA’s requirements that inextricably related projects not be segmented. The DR’s approval of exploration is not legally acceptable, as this violate federal policy laws prohibiting such segmentation. Both BLM and the Deschutes National Forest need to withdraw the Newberry EA and DR and reopen this proposed project. These agencies must jointly conduct public hearings with adequate public notice throughout the affected region, from La Pine to Bend and corresponding distances east and west also. A notice of intent to conduct an EIS also must be issued for this project, which addresses fully the environmental and societal consequences of geothermal exploration and production in the greater Newberry Volcanic Caldera.

The existence of extraordinary circumstances, and NEPA/FLPMA regulations prohibit segmenting this proposed geothermal project. Among the issues of significant concern which exist are:

- A. Water is a regionally significant and critically important resource within the area’s dry forests and high desert ecosystems surrounding the proposed geothermal area. Geothermal operations, including test drilling, utilize significant quantities of water. Even if the company conducting the exploration operations has valid water permits, the environmental and social impacts of the long-term exploration and production withdrawal of water from this area must be disclosed and analyzed before proposed test drilling can occur.
- B. ESA listed species, Oregon State listed species, regional species of concern, indicator species, and rare endemic species may be adversely impacted by the proposed test drilling as well as the proposed geothermal production. Full disclosure and assessment of these species and potential long-term cumulative impacts to them must be completed before this project can be approved to prevent irreversible and illegal harms from occurring.
- C. The proposed geothermal site is within public forests directly adjacent to a world-renowned volcanic national monument. The area’s wildlands support significant human recreational uses, as well as ESA listed wildlife populations. The area serves as a wildlife travel route between the national monument lands and surrounding area. Development throughout the greater region has already resulted in the loss, degradation, and fragmentation of significant

areas of wildlife habitat, including corridor habitat. The project’s national forest location near the monument, and associated issues elevate the importance of this area to the greater public and numerous wildlife species as well. Adverse impacts to the ecological viability, recreational quality, and natural habitat of this area must be disclosed and assessed in an EIS before the proposed test drilling can occur, to prevent irreparable harms to the public lands forests and the monument’s recreational values, wildlife species, and the ecological integrity of the area.

Geothermal testing and production releases dangerous quantities of highly toxic emissions into the atmosphere, and can result in contamination of surface and subsurface aquifers with dangerous toxins. The EIS must fully disclose and assess these likely impacts – especially those resulting from the proposed testing and exploration, during which period geothermal sites can release substantial severe harms to area ecosystems, aquifers, and atmosphere, causing severe harms to citizens and the environment.

- D. Seasonal fires are common in the Deschutes NF ecosystem. EIS analysis must address potential severe fire impacts to geothermal drill and production sites, including the potential for unchecked, unstoppable dangerously toxic emissions. Similarly, tectonic activities in this geologically active area are not uncommon. The EIS must assess and disclose potential impacts of increased tectonic activity associated with geothermal exploration and production upon the sites themselves, including unchecked toxic emissions, as well as upon the greater region.
- E. Significant social, political, and recreational issues exist with this proposed test drilling and related geothermal production. These issues are of great concern to many of the residents of the area, as well as many of the nation’s and world’s citizens who utilize the area’s public forests and nearby monument for recreation and natural inspiration. The EIS for this entire project must fully address geothermal exploration and production issues in a public NEPA process before approval of the test drilling can occur.
- F. Newberry Monument is world renowned as an exceptional natural treasure and recreation destination. The proposed exploration, test drilling, and related proposed geothermal production, will result in significant impacts that may despoil and degrade the natural and recreational values of this area. These likely impacts must be disclosed and analyzed in a public EIS document, preceded by public forums.

G. The project area is also internationally recognized as part of the heartland heritage of indigenous peoples, and as such is also world renowned for its historical and spiritual significance. The proposed geothermal explorations, and related production, would further despoil the historical and spiritual heritage of this special area. This project must not be implemented without the full expressed support of affected native peoples, including the Klamath Nation.

Federal environmental policy law requires that members of the public and the decision-maker must have adequate and accurate information necessary to make an informed decision before a proposed project on public lands may be approved. Federal law clearly requires that proposed projects such as the test drilling may not be segmented from the proposed geothermal production with which it is inextricably tied, but must instead be addressed in one comprehensive NEPA EIS process. Only if the overall geothermal production is itself first approved, can the irretrievable commitment of resources and irreversible impacts from the proposed test drilling be permitted to occur. Again, given the lack of adequate analysis, the many known adverse harms of geothermal exploration and production, the significant ecological concerns of this treasured area, and related public and conservation issues and concerns noted herein, we strongly recommend against geothermal production in this ecologically and recreationally significant area.

## **IX. THE NEWBERRY PROJECT EA ANALYSIS FAILS TO MEET THE REQUIREMENTS OF THE NEPA AND THE EA FAILS TO PRESENT A RANGE OF REASONABLE ALTERNATIVES**

A. Page 17 of the Newberry EA evidences the illegality of the purpose and need for this proposed project. All alternatives, including that of no action, must be acceptable as the selected decision under federal laws. The purpose and need may not be arbitrarily contrived to predispose the selection of any one alternative, whether an action alternative or the no action alternative. Indeed, in this case, the greater public interests and intent of federal environmental policy laws, coupled with the lack of any urgent “emergency” for this project, clearly require the agency to either select the “no action” alternative, or to have presented additional environmentally and legally proactive action alternatives, such as withholding a decision on this Newberry Project POE until requisite foundational NEPA environmental analysis has been completed on the suitability or lack thereof of the greater Newberry Caldera area to geothermal exploration and production; and addressing and disclosing the environmental impacts including

cumulative impacts to natural resources and human community concerns within this greater project area. Legally and ethically, BLM has no national direction to provide for geothermal development in areas that are inappropriate due to resource and community concerns. The EA fails to address this significant issue, which requires an EIS to sufficiently address.

**B.** The EA states that the proposal is somehow connected to Oregon’s goal of obtaining “renewable” energy. However, the EA fails to disclose that the energy produced, should this project be implemented, would go to California, not Oregon. Davenport representatives have been very clear that energy would be sold to California. The EA’s failure to accurately disclose this fact, and its erroneous statement’s that the energy would contribute to Oregon’s energy supply, violate the accuracy, expert, objective, and professional requirements of the NEPA. That this inaccurate information is then used within the EA to dismiss the selection of the “no action” alternative violates the requirements of the NEPA. The EA as such must be withdrawn.

**C.** Federal laws require the agency assess the ecological inappropriateness of this proposed geothermal production site. While the Newberry Monument Act does not prohibit geothermal development, it does not mandate such development. Instead it authorizes federal agencies to responsibly assess proposed projects. Federal courts have affirmed the responsibility and ability of federal agencies to uphold the intent of Congress to protect public lands natural resources and human communities from irreparable and undue harms by basing their approval or denial of proposed exploration projects on public lands in part on whether the minerals exploration and/or operation would result in unnecessary or undue degradation to public land (referred to as UUD). Both BLM and the USFS can deny the proposed geothermal plans outright, either by withdrawing the area from subsurface exploration, or by a UUD determination, thereby protecting the ecological integrity of Newberry Monument and the ecosystem’s surrounding Deschutes National Forest lands and waters. The Newberry Project EA fails to address or disclose BLM’s legal responsibilities and decision options in this regard. It also fails to present reasonable legal alternatives allowing for a decision other than the selection of the one action alternative presented, in violation of NEPA requirements and judicial rulings.

As a reasonable review of the above readily establishes, an EIS not an EA is necessary for this proposed project. The EIS must address and establish the environmental analysis foundation for these and other area geothermal leaseholds. The EIS must address all direct and indirect connected actions,

including site compatibility for exploration as well as production, and disclose the full range of scientific controversy and potential impacts that could result from both exploration as well as long term production. The current EA, its deficient analysis, scope, level of public involvement, and contrived illegal purpose and need, violates the requirements of federal environmental policy laws and must be withdrawn. A legal decision based upon this EA is neither permissible nor possible under applicable federal laws.

**D.** A review of the 1994 Geothermal EIS, to which this EA is tiered, reveals that many of the public, conservation, and scientific research controversy and concerns noted in our comments regarding geothermal energy exploration and production impacts were not adequately addressed. Additionally, there has been considerable new public legal rulings, policy, and scientific information on geothermal energy exploration and production impacts during the ensuing 13 years since the 1994 EIS was completed. The Newberry EA may not rely upon an inaccurate, scientifically and resource analysis deficient, outdated 13 year old EIS for its analysis foundations, which among other issues failed to substantiate an environmental analysis foundation for geothermal leaseholds, and failed to implement reclamation provisions once exploration sites were abandoned. Promises made within the 1994 EIS concerning reclamation of abandoned sites have been circumvented by both the federal agencies and by the exploration leaseholder, by putting that project into “suspension” for many years. The Newberry EA fails to address similar possibilities regarding promised reclamation of the Davenport Power/Newberry Geothermal exploration sites, nor does it disclose information addressing reclamation responsibility and completion should the lease holding company become bankrupt or financially insolvable during subsequent years. Unlike Cal Energy, the leaseholder of the 1994 EIS sites, Davenport Power and Northwest Geothermal Company lack significant recoverable financial and real property assets should they default on their reclamation responsibilities, or should this exploration project result in adverse environmental and human community health impacts such as occurred elsewhere with geothermal exploration and production. It is suspected the Newberry geothermal sites may be dry steam, similar to the Geysers geothermal sites in California. Dry steam sites have serious environmental risks, which have had numerous documented harmful impacts upon area communities, residential and worker human health, agricultural operations, waterways, vegetation, and natural resources. The failed track record of the responsible federal agency to require and satisfactorily complete needed reclamation on abandoned sites (including “suspended” sites that are in effect abandoned on the landscape) violates federal laws and provisions of the 1994 EIS. The failure to disclose and address this in the Newberry EA deprives the

public and decision-maker of important information necessary to assessing the full potential impacts of this project. These failures violate NEPA and land use laws and responsibilities.

**E.** The EA fails to disclose ongoing scientific debate, research, and controversy exists calling into significant question whether geothermal energy is truly renewable or sustainable. Despite current politically contrived classifications of geothermal as renewable, NEPA mandates that NEPA processes be based upon scientific accuracy, including the disclosure of scientific controversy. This is in part to prevent contrived and often inaccurate political assumptions and social climates from subverting objective informed analysis. Federal laws require that the decision-maker and the public be fully informed of all applicable scientific conclusions, recommendations, and controversy pertinent to proposed actions. The EA as such fails the requirements of the NEPA and must be withdrawn. References to these scientific studies may be found in Exhibit A, a report completed for Greenpeace in 1990, and Exhibit B, a 2007 article updating and summarizing geothermal issues and concerns noted in the scientific research in the Exhibit A report.

**F.** The Newberry study concerning energy potential noted on page 9 of the EA, is by admission of Davenport’s geologist, excessively inflated and inaccurate. The NEPA requires accurate disclosures and analysis based upon these disclosures, not mere parroting of outdated or industry contrived speculation. The EA fails to conduct this analysis, fails to disclose the name of this study or who commissioned the study (including conflict of interest issues), and as such violates the NEPA.

**G.** As noted briefly and inadequately on page 10 of the EA, Newberry is still geologically young and subject to reawakened activity. The last eruption is reported to be only 1,350 years ago. No disclosures are made concerning seismic activity in the area, and only brief mention is made of hot spring activity but this is absent any historical information on fluctuations or significant changes in levels or locations. As noted in our scoping comments, scientific research on geothermal exploration and production impacts as concluded that these actions result in increasing and inducing seismic activity. Research has indicated that previously dormant volcanic sites have become tectonically active due to geothermal exploration and production. Scientists have concluded that industrial geothermal activities have caused “swarms of quakes” in affected areas. The EA fails to disclose or address these issues, fails to compare the current dormant status of the geologically young Newberry Caldera with other areas of geothermal exploration and production where renewed seismic activity was induced by industrial geothermal activities, and fails

to assess the potentials for such activity to occur in the Newberry area as a result of this exploration project or as a result of related subsequent geothermal energy production. In the response to comments section of the DR, BLM states that increased seismic activity is unlikely, but does not disclose any substantiating research upon which this scientifically insupportable conclusion is based. The EA fails entirely to address this significant issue. As impacts to resort facilities, hot springs, and greater community properties and residences may result from increased seismic activity, the failure to disclose and assess this possibility violates the NEPA, rendering a legal decision from this EA impossible. The EA must disclose the full range of known and potential impacts from geothermal exploration and production both in the region, and elsewhere in similar geological configurations. Potential impacts and changes to now dormant volcanic and tectonic activity must also be addressed. References to these scientific studies may be found in Exhibit A, a report completed for Greenpeace in 1990, and Exhibit B, a 2007 article updating and summarizing geothermal issues and concerns noted in the scientific research in the Exhibit A report.

**H.** Compounding adverse impacts from past ecologically egregious timber sale clear-cutting and over-logging is not acceptable under federal laws, nor by conservation science and LRMP objectives. The EA fails to accurately disclose or address ecological issues, including scientific research concerning restoration of logging abused forest ecosystems, in violation of the NEPA and the NFMA. Simply pretending that since the area has already been degraded, additional degradation is somehow acceptable fails to incorporate expert scientific research conclusions to the contrary. Failure to disclose this issue violates the NEPA, and implementation would violate the NFMA, FLMPA, Deschutes National Forest LRMP and BLM standards, goals, objectives, and provisions.

**I.** The EA’s reliance on statutes to justify the Newberry Project is misplaced and inaccurate. None of the four statutes cited in the EA’s “purpose and need” section provides any support for any “need” for the Project. The Geothermal Steam Act of 1970 grants the Secretary of the Interior authority to issue leases for the development and utilization of geothermal steam and associated geothermal resources and establishes the guidelines for the administration of the leasing program. 30 U.S.C. § 1003. The Act does not express any need or requirement for the actual development of these resources. Nor does the Act direct the federal government to either “foster” or “encourage” private enterprise development of specific

geothermal resources; it merely establishes parameters by which the Secretary may choose to lease some public lands containing geothermal resources to private parties.

The Federal Land Policy and Management Act of 1976 (“FLPMA”) directs the Secretary of Agriculture “to manage public lands under the principles of multiple use and sustained yield.” 43 U.S.C. § 1732.<sup>3</sup> Additionally, FLPMA’s Congressional declaration of policy requires that:

“the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.”

43 U.S.C. § 1701(8). The sole mention of geothermal energy in FLPMA is the direction that funds generated from geothermal leases are to be deposited in the federal Treasury. 30 U.S.C. § 191.

The EA’s references to the Energy Policy Act of 2005 and 1992, and to other cited laws and policies, are particularly disingenuous. The original Act created a wide variety of energy programs, projects and governing laws addressing topics ranging from the regulation of diesel emissions to federal funding for the study of electric and magnetic fields. Geothermal energy is mentioned in only one section of the Act, 42 U.S.C. § 13551, which was repealed in 1996, and which authorized the Secretary of the Interior to consider allowing states, municipalities, counties and townships to install geothermal heat pumps. No section of the original Energy Policy Act states a need for the development of electrical generation capacity from geothermal resources or directs the federal government to “foster and encourage” the development of alternative energy sources. The updated 2005 Act, while noting potential geothermal energy contributions to the nation’s energy needs, does not authorize the development of geothermal resources above other natural resource or human environmental concerns. Similarly the National Energy Policy of 2001, the Newberry National Volcanic Monument Act of 1990, and other policies and laws cited in the Newberry EA and DR clearly do not require federal agencies to place priority on the development of geothermal resources above other resource needs and concerns.

---

**J.** Heavy equipment operating on so-called “temporary” roads, in the number of vehicles and runs necessary for this project, will permanently compact forest soils under these new “temporary” road beds. Impacts as such will not be temporary, as there will be little chance these areas would ever recover soil resiliency, subsurface microbial and nutrient composition, and hydrological capacity to ever sustain healthy forest vegetation – at least not for hundreds to thousands of years. Failure to accurately disclose and address these impacts and issues violates the NEPA, and impacts as such would violate the NFMA.

**K.** The cutting of large trees, proximity to viable wildlife habitat and riparian systems, and unsuitability of proposed exploration site S-17 is not disclosed in the EA. The failure to accurately disclose site-specific conditions and concerns, and adequately address impacts violates the NEPA, and implementation would violate the both the NFMA, Deschutes LRMP, and FLPMA. The failure to develop and present additional action alternatives addressing this and other issues raised herein this appeal violates the NEPA, as noted elsewhere also.

**L.** The EA fails to adequately disclose or accurately assess possible impacts to the area’s water table and aquifer, including potential changes in water table levels and availability as a result of this project’s exploration, and/or as a result of later proposals to develop electrical production facilities in the area. The EA fails to adequately address consequent impacts to biodiverse native species that may result from drilling and using water wells on each geothermal exploration site, and from future geothermal development arising from this exploration project. This failure violates the NEPA, and implementation may violate the NFMA. There is insufficient information and assessment of this significant issue for a legal decision to be made under this EA.

**M.** Impacts to wildlife and the recreating public, area natural ecosystems, as well as area residents, are not sufficiently identified, disclosed, or addressed concerning incessant industrial noise resulting from 45 consecutive days of ceaseless well drilling, the combined drilling of multiple wells including wells for water, or the ongoing operation of exploration activities including heavy vehicular traffic on area roads, FS roads, and highways. These analysis deficiencies violate the NEPA. The EA makes insufficient provisions for project actions and noise restrictions during seasonal nesting and fledging periods for affected raptors and avian species, including many native and neotropical migrant birds, in violation of the NEPA, NFMA, and MBTA.

**N.** The EA mentions that “controlled venting” of geothermal steam would occur with this exploration project. The EA briefly notes that hydrogen sulfide is a harmful component of such steam but fails to adequately disclose or address this issue, or related environmental and human health issues arising from the venting of geothermal steams and brines. The agency’s assertion that the operator would chemically treat Hydrogen Sulfide reducing emissions to elemental sulfur fails to accurately address the actual realities of geothermal H<sup>2</sup>S emissions, including their known frequency of occurrence and harmful health and environmental impacts. Geothermal workers have experienced severe respiratory affects and heart attacks upon encountering high H<sup>2</sup>S emission levels, which can be a common occurrence at geothermal exploration sites. The EA fails the accuracy and objective analysis requirements of the NEPA, and its deference of agency oversight responsibility to financially vested self-interested leaseholders violate federal laws and policies, including credible, accurate, objective NEPA analysis and full disclosures of potential impacts. During the NEPA comment and scoping periods, Appellants provided the agency with an article, again included as part of Exhibit B of this Appeal, titled “*Tapping Earth's Geothermal Energy: "Green" Panacea or Pandora's Box?*,” that notes significant adverse environmental and harmful human health impacts from geothermal exploration and production. The EA and DR’s failure to disclose or address these scientifically documented concerns violates the NEPA. The legally deficient Newberry Project EA and DR must be withdrawn, and the POE abandoned until these issues are disclosed to the public and the decision maker and meaningfully addressed. References to these scientific studies may be found in Exhibit A, a report completed for Greenpeace in 1990, and Exhibit B, a 2007 article updating and summarizing geothermal issues and concerns noted in the scientific research in the Exhibit A report.

**O.** The EA notes on page 15 that provisions will be taken to ensure a “safe testing process” but doesn’t disclose the effectiveness of such provisions, how to mitigate for failures or unexpected occurrences, the track record of such provisions, or even specify beyond a brief and incomplete mention of some of the equipment what these provisions will be. The DR specifies various provisions, but again fails to correct the EA’s analysis and disclosure deficiencies. Additionally, some of its provisions are essentially meaningless as stated. For example addressing provisions from the DR at page 9: Hydrogen Sulfide alarms and detection devices only provide limited protections. These devices do not prevent or stop uncontrollable emissions of H<sup>2</sup>S, nor can they alleviate harms to those working too closely to H<sup>2</sup>S emissions to escape. The agency should have responsibly reviewed NIOSH records for geothermal projects and consulted regarding potential impacts and mitigation measures. Another of many similar examples of NEPA inadequacy can be found in the agency’s DR provisions for wildlife on page 7, the

agency states that sumps will be monitored for wildlife access and fenced if necessary to prevent wildlife from contacting toxic substances. It is easily evidenced from the five unreclaimed Cal Energy geothermal exploration sites already in the area, that wildlife do indeed contact substances in sumps. The tracks of deer, coyote, other mammals large and small, as well as avian species are readily visible in the sludge-like muds of containment ponds. These old ponds have been affecting countless wildlife for approximately 13 years, with no steps taken by either federal agency, BLM and the USFS, or by the lease holding company to rectify this unacceptable issue of ongoing exposure of wildlife to unabated harms. It is also clear that fencing will not stop the contact of avian species with these toxic sumps. The agency’s DR provisions are too lax as stated, and too ineffective in design and description to meaningfully address these and other related wildlife concerns. Similarly restrictions on project actions are insufficient to adequately address adverse impacts from industrial noise levels, heavy road use, 24-hour 45 day long incessant drilling, ongoing construction and related industrial project activities that essentially will transform the greater project area from a recovering forest, with at least some viable wildlife habitat and the serenity of nature, to an industrial location. Additionally, the agency does not note how frequently the exploration will be monitored for compliance, fails to note what would occur should operations be found in violation of these provisions or should the provisions be found to be ineffective, or otherwise clarify in an effective meaningfully informed manner how environmental and human health harms may be prevented. Such failures violate the requirements of the NEPA. The EA also fails to disclose the full likely compositions of the area’s geothermal steams, whether from previous Newberry exploration or from similar sites. The EA fails to disclose NIOSH information concerning geothermal steams, brines, and worker and community health impacts. The EA also does not disclose why this readily available information was not disclosed to the affected public and decision maker. These failures violate the NEPA. Again, Appellants Exhibits A and B address available scientific research and NIOSH reports which the agency has failed to disclose or analyze in the Newberry Project EA.

**P.** The 1994 Geothermal EIS noted that fire incidences would increase due to exploration and production, specifically noting that 8 fires could be expected. While this exploration proposal is initially smaller, it could result in a proposal for production, which is inextricably connected to this project (and must be addressed in an EIS as such). Consequently, increased fire risk and probability would occur from this project. Since 1994 climatic conditions have resulted in increased fire risk overall, and more severe fires. The proximity to Newberry Monument, combined with increased seasonally climatic fire risk in the overall area, exacerbate the significance of increased fire risk resulting from this proposal. The EA and

the DR fail to sufficiently address or adequately disclose this issue, and must be withdrawn with a new EIS fully assessing fire risk issues. As fire severity risk reduction is a major focus of Deschutes NF and BLM projects, it is contrary to agency objectives to increase fire risks, especially so near to the Newberry Monument. The agency must disclose and address this issue, and incorporate reasonable and effective measures insuring fire risk does not result in harms to adjoining forests, including the ecologically irreplaceable Monument area. Provisions for effectively halting a fire should one occur must also be addressed, as must evacuation routes for Newberry visitors and area communities. This latter is of paramount importance, as there are limited exit roads to the Monument, which has seasonally high visitor populations corresponding to summer’s peak fire-risk season. Fiscal responsibility for damages and fire fighting costs from a fire arising from exploration activities must also be addressed and disclosed, in a new EIS for this project. As with reclamation financial responsibilities, the agency must ensure that leaseholders are capable of covering the costs of any fires or other environmental harms that may result from this project. The EA and DR fail the NEP on these accounts, and fail the best interests and public trust of the area’s communities and recreational visitors.

**Q.** The EA states that exploration sites would be restored and recontoured, (page 16), however fails to address the reality of attempting to vegetate and restore sites compacted by repeated frequent trips and long-term use by heavy machinery and vehicles. The EA fails to adequately address cleanup of toxic spills, including petroleum fluids as well as geothermal brines, and fails to disclose and adequately address the failure to properly reclaim other abandoned exploration sites in the greater project area (as noted above). Failure to address these significant issues violates the NEPA.

**R.** The 1983 leases were issued in a different era, with different ecological concerns and priorities, and were issued absent comprehensive environmental analysis. These leases must be re-assessed, and subject to requisite environmental public NEPA analysis that incorporates scientific research and addresses conservation concerns and objectives. If these and other leases are found to be no longer compatible with agency goals and community desires, the leases should be rescinded (which given the weight of all applicable issues, we highly recommend at this time).

**S.** Scenic views are only one component of a natural experience. Noise can degrade even the most beautiful scenic views, robbing visitors of a quality natural experience. Noise, increased visible truck traffic, rising dusts, steam plumes, noxious hydrogen sulfide releases and the release of other known

toxins, all combine to make this proposal unacceptable to the greater public. The EA fails to accurately disclose or sufficiently address these issues in a meaningful and responsible manner, in violation of the NEPA.

## **X. THE AGENCY’S RESPONSIBILITY TO UPHOLD FEDERAL LAWS AND POLICIES AND THE RESOLUTION OF THIS APPEAL**

In conclusion, Appellants strongly recommend the withdrawal of the EA and DR for the Newberry Geothermal Exploration Project. We look forward to further discussion with the agency and interested parties, working towards resolution of conservation community concerns and legal issues.

Overall, the proposed geothermal exploration and test drilling would irretrievably degrade Deschutes National Forest lands immediately adjacent to the Newberry Monument, adversely impacting the monument itself, including the quality of its recreational visitor experience.

- While all of the three proposed drill test sites have been previously harmed by logging, one site in particular is adjacent to a riparian draw containing mature and old forest habitat. This third site itself has a few remaining mature/old trees left from prior logging, and has numerous maturing trees. If left alone it will provide additional viable forest habitat so needed in this over-logged area.
- Exploration drilling would directly impact and irretrievably alter the three proposed 5-acre sites, with ongoing industrial exploration activities adversely impacting natural conditions throughout the surrounding forest area.
- Area forest roads would be widened to 14 feet, with turnouts and reconstruction improving curves for large trucks and equipment. An existent spur road that is not currently navigable by passenger car would become a major forest road. Construction and exploration project trucks would use affected forest roads, adversely impacting wildlife, forest ecological integrity and recovery, and public recreational use of the greater area.
- Construction of well pads and exploration drilling activities is project to occur for up to 3 years.
- A total of up to 9 wells are proposed (three wells on each pad), with up to 24 hour drilling occurring during the next three years, resulting in prolonged periods of incessant drilling noise, construction, and associated impacts, including potentially highly toxic emissions from unchecked exploratory test holes.
- Previous test drilling exploration sites, Cal Energy sites from 1994 among these, have not been reclaimed. Instead they remain as 5 acre clear cuts, with industrial debris, and holding ponds.

Wildlife in the area use the ponds, which are lined with clays and may contain materials and substances that are toxic or otherwise not benign to area wildlife. The EA fails to adequately disclose or address the failure of the previous exploration company and responsible public land management officials to conduct reclamation activities in these old sites, some of which have been abandoned and dormant for over a decade.

- Exploration also includes the risk of well blowouts, which have proven to be often unstoppable.
- Well blowouts elsewhere have resulted in highly toxic emissions of hydrogen sulfide and other dangerous pollutants that continued unabated for years.
- The Newberry area is geologically active and still tectonically “young.” Deep hot spring vents feed its lakes, and surface along a lakeshore.
- Geothermal production can alter subsurface geothermal fluid flows, and research concludes it can induce seismic activity, including “swarms of small earth quakes.”
- Newberry’s Paulina and East Lakes are located on a perched aquifer. If geothermal exploration and/or production activities directly or indirectly affect tectonic activity in the area, it is possible the perched aquifer could be breached, fracturing or rupturing the underlying structure. This could result in the loss of these treasured lakes. Oil exploration test drilling in Louisiana years ago resulted in the loss of a perched water table lake there, which has been described as draining quickly, similar to a bathtub when its drain plug is pulled. Untold losses resulted, as boats were swirled spiraling downwards with the draining waters. While this may be unlikely at Newberry, it is also likely that it was considered unlikely in Louisiana until after it was too late. The EA must address potential adverse impacts and underlying geologic structure, differentiate best guesstimates and assumptions from known facts, and identify and assess known and potential risks.
- This proposal represents a substantial alteration and degradation of the greater area’s environment, changing it from a logged but recovering forest ecosystem which still provides wildlife habitat, to an industrial site. It also represents a considerable financial expenditure of resources that could not be reasonably recouped without the eventual approval, construction, and decades long operation of a geothermal production plant in this area. Similar to a “foot in the door” approach, the attempt to segment analysis, and gain approval for the test-drilling phase of this geothermal project, would increase the likelihood of a large geothermal production plant in this ecologically significant and inappropriate area.

- Newberry Monument is world renowned as a volcanic geologic treasure. The 500 square mile Newberry volcano is one of the largest shield volcanoes in North America. Recreationally popular Paulina and East Lakes are located in the caldera, with an 80 foot waterfall downstream as wild and scenic Paulina Creek drops into a canyon. The area’s large deep lakes and beautiful old growth forests provide habitat for nesting bald eagles, osprey, black bears, pine marten, ducks, geese and tundra swans.
- Federal laws require the agency assess the ecological inappropriateness of this proposed geothermal production site. While the Newberry Monument Act does not prohibit geothermal development, it does not mandate such development. Instead it authorizes federal agencies to responsibly assess proposed projects.
- Society is not static, as neither is technology, scientific research, or conservation objectives. Since the Newberry Geothermal Act was signed, awareness of geothermal energy production’s potential adverse impacts has grown. Similarly, public and scientific perceptions and awareness concerning the importance of ecological conservation has also grown. The EA for this project fails to reasonably assess and incorporate these changes.
- Federal policy laws FLPMA and NEPA require BLM and the USFS conduct an EIS assessing the full impacts of geothermal power production in this area as well as the impacts of exploration and test drilling.
- Federal policy laws and judicial caselaw prohibit analysis segmentation of this project, preventing it from being implemented piecemeal, incrementally irrevocably degrading this treasured place.
- Comments are also copied to the Deschutes Forest Service, as they are required to work with BLM, developing an interagency EIS for this project.
- A notice of intent to conduct an EIS also must be issued for this project, and published in the federal register, as well as regional newspapers.
- Federal courts have affirmed the responsibility and ability of federal agencies to uphold the intent of Congress by basing their approval or denial of proposed exploration projects on public lands in part on whether the minerals exploration and/or operation would result in unnecessary or undue degradation to public land (referred to as UUD).
- Both BLM and the USFS can deny the proposed geothermal plans outright, either by withdrawing the area from subsurface exploration, or by a UUD determination, thereby protecting the

ecological integrity of Newberry Monument and the ecosystem’s surrounding Deschutes National Forest lands and waters.

Appellant organizations herein offer to meet with both the BLM and USFS to address these significant issues and the development of an EIS addressing geothermal exploration, production and suitability issues throughout the greater Newberry Volcanic Caldera. We respectfully request that the Newberry Geothermal Exploration Project EA and DR be withdrawn and that an immediate stay be placed upon the implementation of any and all parts of this decision.

For Life in Balance with Nature,

Asante Riverwind, Eastern Oregon Forest Organizer  
Oregon Chapter Sierra Club  
POB 5534  
Bend, Oregon 97708  
(541) 322-4065  
[asante.riverwind@sierraclub.org](mailto:asante.riverwind@sierraclub.org)

and for: Karen Coulter, Director  
League Of Wilderness Defenders –  
Blue Mountains Biodiversity Project  
27803 Williams Lane  
Fossil, Oregon 97830  
(541) 468-2028 office or 385-9167 voice mail

cc: Department of the Interior, Board of Land Appeals, Office of the Secretary;  
Office of the Solicitor;  
District Manager, Prineville District BLM;  
John Allen, Deschutes National Forest Supervisor,  
Phil Cruz, Bend-Fort Rock District Ranger,  
Davenport Power, LLC, Operator for Northwest Geothermal Company



**NEWBERRY GEOTHERMAL EXPLORATION PROJECT EA APPEAL EXHIBITS**

- 1. EXHIBIT A: “Tapping Earth’s Geothermal Energy: “Green” Panacea Or Pandora’s Box?” by Asante Riverwind, Original 1990 Report.**
- 2. EXHIBIT B: 2007 Updated Summary Article of the above report “Tapping Earth’s Geothermal Energy: “Green” Panacea Or Pandora’s Box?” by Asante Riverwind.**
- 3. EXHIBIT C: Department of the Interior Bureau of Land Management Case Recordation for Newberry Project Geothermal Leases OR-12437 and OR-40497.**
- 4. EXHIBIT D: Pit River Tribe vs. USFS, US Circuit Court of Appeals for the Ninth Circuit, Case No. 04-1576, DC No. CV-02-01314-DFL Opinion, November 6, 2006.**
- 5. EXHIBIT E: CD of Photos of Unreclaimed Cal Energy Exploration Sites and of Northwest Geothermal Energy Lease Sites.**
- 6. EXHIBIT F: CD of Photos of Newberry Monument Area.**
- 7. EXHIBIT G: CD of an Oregon Chapter Sierra Club 2007 Power Point Show on Geothermal Energy and its Impacts**