



July 15, 2015

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VIA ELECTRONIC MAIL AND HAND DELIVERY

RE: Lucky Minerals Exploration Project

Dear Mr. Werner:

I submit these comments on behalf of Defenders of Wildlife, Greater Yellowstone Coalition, National Parks Conservation Association, and Park County Environmental Council regarding the U.S. Forest Service's Scoping Notice for Lucky Minerals Inc. Emigrant Project Plan of Operations, File Code: 1950; 2810, at 5 (June 2, 2015) ("Scoping Notice"). The organizations and their thousands of members in Montana urge the Forest Service to engage in a full environmental review of the proposed mineral exploration on Emigrant Peak, one of the most treasured natural areas in the state.

The National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., requires the Forest Service to analyze and disclose the environmental consequences of its proposed actions before decisions are made. While the Scoping Notice identifies a "categorical exclusion" for certain mineral exploration activities spanning less than a year, the exclusion is inapplicable here, where Lucky Minerals has planned a wide-ranging, multi-year exploration effort covering a large area of public and private land. Furthermore, reliance on a categorical exclusion for the exploration proposal is improper because it would shield potentially significant environmental impacts from agency and public scrutiny, subverting NEPA's purposes. Because the project may significantly harm wildlife, wilderness, roadless areas, cultural and historical resources, water quality, and other resources, the Forest Service should prepare an Environmental Impact Statement ("EIS").

I. EMIGRANT PEAK AND THE PARADISE VALLEY

Lucky Minerals proposes mineral exploration in one of the most spectacular areas of the Custer Gallatin National Forest, just 30 miles north of Yellowstone National Park. Emigrant Peak is within the Absaroka Mountains—named after the Crow, or Apsáalooke, Indians—and lies just outside the Absaroka-Beartooth Wilderness. It is flanked by Emigrant Creek on the north and Sixmile Creek on the south, both of which are tributaries of the Yellowstone River. The nearly 11,000-foot high peak is one of the most prominent mountain-tops from the aptly named Paradise Valley, to the west. The Absaroka Mountains are home to bighorn sheep, elk, deer, moose, marmots, coyotes, black bears, wolves, and wolverines. The Absarokas provide important

habitat for federally listed lynx and grizzly bears, both of which already face threats due to dwindling suitable habitat and food resources.

For all of these reasons, Emigrant Peak and the Emigrant Gulch are important places for people throughout the country. But they are also local treasures. Emigrant Peak is one of the most popular year-round recreation destinations in Montana, including for hiking in the summer and backcountry skiing in the winter. Chico Hot Springs resort sits at the mouth of Emigrant Gulch. Since 1900, area residents and visitors have soaked in Chico's natural mineral pools, which are fed by thermal water rising from deep fractures in the earth. These features and the pristine beauty of the area also are important to the local economy, supporting tourism that directly and indirectly employs large numbers of Park County, Montana residents.

Park County's newspaper, *The Livingston Enterprise*, recently editorialized that, "[a]s we have learned from a long, sordid history of mining in Montana, we must be selective and critical in determining where companies are given the green light for resource extraction. ... Emigrant Peak is the ideal location for many activities, but a mine exploration project isn't one of them."¹ Community meetings in Emigrant and Livingston, Montana each drew crowds of more than 100 local residents, revealing substantial opposition to any proposal for exploration drilling or full-scale gold mining on Emigrant Peak and surrounding areas. For these reasons, and for the reasons detailed in this letter, the Forest Service should ensure public involvement and full disclosure to the public of all environmental impacts before taking any action concerning the proposed mineral exploration on Emigrant Peak.

II. LEGAL BACKGROUND

A. The Forest Service's Obligations under NEPA

NEPA "is our basic national charter for protection of the environment[,]" 40 C.F.R. § 1500.1(a)—a statute that "prohibits uninformed ... agency action" by requiring federal agencies to "take a hard look at [the] environmental consequences" of their conduct, Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-51 (1989) (internal quotations omitted). Under NEPA, federal agencies must prepare an environmental impact statement ("EIS") for every major action that will significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C). Environmental impact statements are "more than ... disclosure document[s,]" their "primary purpose" being to "serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government." 40 C.F.R. § 1502.1; see also Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n, 449 F.2d 1109, 1113 (D.C. Cir. 1971) (noting "'action-forcing'" nature of NEPA). Accordingly, an EIS must provide a "full and fair discussion of significant environmental impacts and ... inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. In doing this, an EIS is required to "state how alternatives considered in it and decisions based on it will or will not achieve the requirements of ... [NEPA] and other environmental laws and policies[,]" *id.* § 1502.2(d), and discuss "[p]ossible conflicts

¹ J. Post, There's a place for mines, and it's not on Emigrant Peak, Livingston Enterprise (July 10, 2015), attached as Exhibit 1.

between the proposed action and the objectives of Federal ... policies and controls for the area concerned[,]” *id.* § 1502.16(c). Ultimately, an EIS must “[r]igorously explore and objectively evaluate all reasonable alternatives,” thereby “sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.” *Id.* § 1502.14.

Where an agency is unsure whether an action is likely to have “significant” environmental effects, it may prepare an environmental assessment (“EA”), which is a “concise public document” designed to “[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement....” *Id.* § 1508.9. If the EA concludes that the action will not have a significant effect on the environment, the agency may issue a Finding of No Significant Impact and proceed with the action. *Id.* § 1508.13. However, if the EA raises “substantial questions ... regarding whether the proposed action may have a significant effect upon the human environment, a decision not to prepare an EIS is unreasonable.” *Save the Yaak Comm. v. Block*, 840 F.2d 714, 717 (9th Cir. 1988) (citation omitted). “Additionally, an agency’s decision not to prepare an EIS will be considered unreasonable if the agency fails to supply a convincing statement of reasons why potential effects are insignificant.” *Id.* (citation and quotation omitted).

NEPA regulations allow for categorical exclusions for a narrow set of actions that “do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency,” and which therefore do not require completion of an EA or EIS. 40 C.F.R. § 1508.4. In defining categorical exclusions, agencies must also “provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect” in their implementing procedures. *Id.* § 1508.4; *see also* 36 C.F.R. § 220.6(a) (Forest Service regulations providing that a proposed action may be categorically excluded only “if there are no extraordinary circumstances related to the proposed action”). Actions presenting such “extraordinary circumstances” require completion of an EA or EIS.

In general, the scope of an agency’s environmental review “must be appropriate to the action in question.” *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1072 (9th Cir. 2002). To help meet this objective, the first stage of an agency’s NEPA review is “scoping,” which is designed to be “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” 40 C.F.R. § 1501.7. Among other things, “[s]coping should ... reveal any past, present, or reasonably foreseeable future actions with the potential to create uncertainty over the significance of cumulative effects.” Forest Service Handbook, § 31.3. Thus, scoping is a critical component of the agency’s decision whether reliance on a categorical exclusion is appropriate based on the scope of planned activities and the potential for significant environmental effects considering both the direct and indirect effects of those activities and “reasonably foreseeable future actions.” *Id.*

B. The Forest Service’s Obligations under the 1872 Mining Law and Regulations

While parties obtaining valid mining claims on national forest lands acquire certain rights to reasonably access and extract minerals within those claims, the Forest Service retains

considerable authority to regulate those activities. Under both the Forest Service's Organic Act, Organic Administration Act of June 4, 1897, 16 U.S.C. § 473 et seq., and the Multiple Use Mining Act of 1955, 30 U.S.C. § 611 et seq., the Forest Service may regulate mining activities on National Forests to minimize adverse environmental impacts from those activities. As affirmed by the Forest Service Handbook,

In managing the use of the surface and surface resources, the Forest Service should attempt to minimize or prevent, mitigate, and repair adverse environmental impacts on National Forest System surface and cultural resources as a result of lawful prospecting, exploration, mining, and mineral processing operations, as well as activities reasonably incident to such uses. This should be accomplished by imposition of reasonable conditions which do not materially interfere with such operations.

Forest Service Handbook, § 2817.02.

To that end, Forest Service regulations provide that, subject to certain exceptions, persons wishing to engage in mining activity on forest lands must submit and receive Forest Service approval for a "plan of operations." 36 C.F.R. § 228.4(a)(3). The plan must include "[i]nformation sufficient to describe or identify the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation used or to be used as set forth in § 228.12, the period during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection in § 228.8." *Id.* To meet these requirements, the plan must describe feasible measures "to minimize adverse environmental impacts on National Forest surface resources, including" air and water resources, scenic values, fisheries and wildlife habitat. *Id.* § 228.8. The plan must describe measures for the construction and maintenance of roads "so as to assure adequate drainage and to minimize or, where practicable, eliminate damage to soil, water, and other resource values." *Id.* § 228.8(f). The plan must ensure that solid waste is "disposed of or treated so as to minimize, so far as is practicable, its impact on the environment and the forest surface resources." *Id.* § 228.8(c). Further, the applicant must propose measures to "reclaim the surface disturbed in operations by taking such measures as will prevent or control onsite and off-site damage to the environment and forest surface resources" once operations are complete. *Id.* § 228.8(g).

Forest Service regulations also speak to the scope of the requisite documentation. "The plan of operations shall cover the requirements [above], as foreseen for the entire operation for the full estimated period of activity[.]" *Id.* § 228.4(d) (emphasis added). The only exception from this requirement is when "a plan for an entire operation is not possible," in which case the plan must set forth the proposed operation "to the degree reasonably foreseeable" at the time the application submits the plan of operations. *Id.*

In evaluating the plan of operations, the Forest Service must evaluate compliance with these regulations, including the sufficiency of planned environmental protection measures. *See* Forest Service Handbook, § 2817.03 (agency "should consider the environmental effects of the mineral operation..."); *see also* 36 C.F.R. § 228.5 (requiring Forest Service to "determin[e] the

reasonableness of the requirements for surface resource protection” in determining whether to approve operating plan). Nothing in the mining law or regulations exempts the Forest Service from its obligation to comply with NEPA; on the contrary, “[u]pon completion of an environmental analysis in connection with each proposed operating plan, the authorized officer will determine whether an environmental statement is required. . . . The Forest Service will prepare any environmental statements that may be required.” 36 C.F.R. § 228.4(f)

III. THE FOREST SERVICE MUST ANALYZE ALL FORESEEABLE EXPLORATORY DRILLING

The Forest Service must expand the scope of its NEPA review to encompass all reasonably foreseeable mineral exploration associated with Lucky Minerals’ Emigrant Peak project—not just the initial, limited segment that Lucky Minerals has seen fit to advance at this time. The purpose of environmental review under NEPA “is to evaluate the possibilities in light of current and contemplated plans and to produce an informed estimate of the environmental consequences.” Kern v. U.S. Bureau of Land Mgmt., 284 F.3d 1062, 1072 (9th Cir. 2002) (quoting City of Davis v. Coleman, 521 F.2d 661, 676 (9th Cir.1975) (emphasis added)). Thus, the Council on Environmental Quality’s NEPA regulations prohibit segmentation of projects, providing that the “[s]ignificance [of environmental impacts] cannot be avoided by . . . breaking [an action] down into small component parts.” 40 C.F.R. § 1508.27(b)(7). An agency may not “divid[e] a project into multiple ‘actions,’ each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” Great Basin Mine Watch v. Hankins, 456 F.3d 955, 969 (9th Cir. 2006) (quoting Wetlands Action Network v. U.S. Army Corps of Engineers, 222 F.3d 1105, 1118 (9th Cir. 2000) abrogated on other grounds by Wilderness Soc’y v. U.S. Forest Serv., 630 F.3d 1173 (9th Cir. 2011)).

Lucky Minerals has submitted a plan of operations for initial exploration lasting less than a year, but already is planning additional drilling as part of, in the company’s words, “an aggressive exploration program in the near future.”² The engineering report available on Lucky Minerals’ website makes plain that while the initial exploration proceeds under a categorical exclusion from NEPA, “an application (Plan of Operations) will be made for road access construction and additional drilling locations that would be covered by an Environmental Assessment[.]”³ Indeed, Lucky Minerals’ initial program budget includes \$380,000 for preparation of an environmental assessment under NEPA.⁴

As an initial matter, Lucky Minerals’ submission of a plan of operations for only a portion of its exploration activities is prohibited by Forest Service mining regulations. As described above, a plan of operations must describe activities “as foreseen for the entire

² Geologic Systems Ltd., The Emigrant Mining District Project, 43-101 report prepared for Lucky Minerals, at 7 (Mar 2015) (“Engineering Report”), available at <http://luckyminerals.com/content/Emigrant%20Mining%20District%20Project%2043-101%20report.pdf>, attached as Exhibit 2.

³ Id. at 74.

⁴ Id.

operation for the full estimated period of activity” whenever possible. 36 C.F.R. § 228.4(d). Lucky Minerals has offered no indication that it would be impossible to describe or forecast the full extent of its exploration activities. Indeed, the company’s engineering report indicates that future phases of the project are well understood and already budgeted. Even if exact drilling locations or depths are as yet undetermined, the plan of operations must describe future exploration “to the degree reasonably foreseeable.” *Id.* In the event that such plans change, the company may amend or supplement its application at a future date. What Lucky Minerals may not do, and the Forest Service may not allow under its regulations, is to ignore future phases of exploration that are reasonably foreseeable.

Because Lucky Minerals has improperly constrained the scope of its plan of operations to exclude foreseen minerals exploration, the action described in the Forest Service’s scoping notice is likewise improperly constrained. However, the scope of the Forest Service’s NEPA analysis “must be appropriate to the action in question.” *Kern*, 284 F.3d at 1072. As the Ninth Circuit has explained:

NEPA is not designed to postpone analysis of an environmental consequence to the last possible moment. Rather, it is designed to require such analysis as soon as it can reasonably be done. If it is reasonably possible to analyze the environmental consequences . . . , the agency is required to perform that analysis.

Id.; see also *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985) (NEPA’s purpose of requiring consideration of environmental impacts in decisionmaking “requires that the NEPA process be integrated with agency planning ‘at the earliest possible time,’ 40 C.F.R. § 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step has already been taken.”).

While Lucky Minerals refers to two phases of exploration, they appear to be interdependent pieces of a single exploration project designed to gather information necessary to complete a pre-feasibility study for the planned mine. See *id.* at 73 (describing purpose of exploration). Because the initial exploration on 12 public-land drill sites described in the Plan of Operations would not alone serve this purpose, it should be evaluated together with subsequent phases of exploration that Lucky Minerals has deemed necessary to evaluate the mineral resources on its numerous prospects in Emigrant Gulch.

On this issue, the circumstances here are similar to those addressed in *Blue Ocean Pres. Soc’y v. Watkins*, 754 F. Supp. 1450 (D. Haw. 1991). In that case, the court examined four phases of a geothermal energy development project. Phases 1-3 involved exploring and verifying the potential geothermal resource before construction of a geothermal energy plant in Phase 4. As with Lucky Minerals’ initial mineral exploration plans here, in *Blue Ocean Pres. Soc’y*, “the early phases were to be carried out . . . to remove the uncertainty and risk, and thereby encourage private investors to undertake the ultimate Project development.” *Id.* at 1453. The court in that case found that the exploration and verification activities had no “independent utility” because they would be “‘irrational’ absent imminent construction of a geothermal power plant (Phase IV).” *Id.* at 1459. Therefore, the agency was required to consider the impacts of

these connected actions in a single EIS. *Id.* Likewise here, it would be irrational for Lucky Minerals to conduct its initial, limited exploration activities on public lands without further exploration to fully investigate and characterize the relevant mineral resource. Accordingly, it would be unlawful under NEPA for the Forest Service to consider only a portion of planned exploration activities. To satisfy NEPA, the agency must examine the full extent of Lucky Minerals' exploration plans in a single EIS.

Not only must the Forest Service analyze the entire scope of foreseen exploration activities on National Forest Lands, the agency must examine the cumulative impacts of exploration activities within patented mining claims. Such cumulative effects are relevant even at this early stage in the Forest Service's NEPA review, as "[s]coping should ... reveal any past, present, or reasonably foreseeable future actions with the potential to create uncertainty over the significance of cumulative effects." *Forest Service Handbook*, § 31.3. Such an analysis additionally must inform the agency's consideration of whether an otherwise categorically excluded action would have cumulatively significant environmental effects constituting "extraordinary circumstances" requiring further review. *Alliance for the Wild Rockies v. Weber*, 979 F. Supp. 2d 1118, 1129 (D. Mont. 2013). Accordingly, the Forest Service's analysis must account for the proposed explorations at 23 private-land drill sites in the initial phases of exploration and any additional foreseen exploration activities on patented mining claims. As described in sections V and VI below, the cumulative effects of the mineral exploration on both public and private lands warrant preparation of an EIS.

IV. THE NEPA CATEGORICAL EXCLUSION FOR EXPLORATORY DRILLING OF LESS THAN A YEAR IS INAPPLICABLE TO LUCKY MINERALS' PROPOSAL

In its scoping notice, the Forest Service proposed reliance on a categorical exclusion for "[s]hort-term (1 year or less) mineral, energy, or geophysical investigations and their incidental support activities that may require cross-country travel by vehicles and equipment, construction of less than 1 mile of low standard road, or use and minor repair of existing roads." Scoping Notice, at 5; *see* 36 C.F.R. § 220.6(e)(8) ("categorical exclusion 8").⁵ However, because as described above Lucky Minerals plans a multi-year exploration project, the Forest Service may not satisfy its NEPA obligations with the cited categorical exclusion.

V. EVEN IF THE CATEGORICAL EXCLUSION COULD APPLY HERE, EXTRAORDINARY CIRCUMSTANCES REQUIRE ENVIRONMENTAL ANALYSIS

Even if it were proper for the Forest Service to consider the truncated scope of Lucky Minerals' Phase I exploration activities on unpatented mining claims—and it is not—"extraordinary circumstances" preclude the Forest Service's reliance on a categorical exclusion to satisfy NEPA. The Forest Service has identified a non-exhaustive list of seven "resource conditions" that may indicate the potential for significant environmental effects, and therefore

⁵ The scoping notice incorrectly cites this categorical exclusion to 36 C.F.R. § 220.6(e)(3), rather than 36 C.F.R. § 220.6(e)(8).

the presence of extraordinary circumstances warranting preparation of an EA or EIS. 36 C.F.R. § 220.6(b)(1); see National Environmental Policy Act Procedures, 73 Fed. Reg. 43,084, 43,091 (July 24, 2008) (stating that this list of resource conditions is not meant to be exhaustive, rather the list “is intended as a starting place and does not preclude consideration of other factors or conditions by the responsible official with the potential for significant environmental effects”). They are:

- (i) Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species;
- (ii) Flood plains, wetlands, or municipal watersheds;
- (iii) Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas;
- (iv) Inventoried roadless area or potential wilderness area;
- (v) Research natural areas;
- (vi) American Indians and Alaska Native religious or cultural sites;
and
- (vii) Archaeological sites, or historic properties or areas.

36 C.F.R. § 220.6(b)(1).

Based on these considerations, if the Service determines through scoping “that it is uncertain whether the proposed action may have a significant effect on the environment,” then it should “prepare an EA.” Id. § 220.6(c) (emphasis added). Likewise, if the Service determines that the proposed action “may have a significant environmental effect” then it should “prepare an EIS.” Id. The extraordinary circumstances analysis includes considering whether an otherwise categorically excluded action would have cumulatively significant environmental effects. Alliance for the Wild Rockies, 979 F. Supp. 2d at 1129. Thus, extraordinary circumstances compel completion of an EA or EIS if there is a possibility of a significant impact on resource conditions, as a result of either direct or cumulative impacts of the proposed action.

At least four of the Forest Service’s identified resource conditions are relevant to the Emigrant Peak Project: (1) federally listed threatened or endangered species or designated critical habitat; (2) inventoried roadless areas; (3) wilderness areas; and (4) archaeological sites or historic properties. Id. § 220.6(b)(1)(i),(iii),(iv),(vii). The impacts of the proposed exploration on any one of these resource conditions—and certainly on the four conditions taken together—makes application of the categorical exclusion improper.

A. The Proposed Exploration May Harm Threatened Grizzly Bears and Canada Lynx

Because the proposed mineral exploration project threatens significant adverse impacts to federally listed species, extraordinary circumstances preclude reliance on a categorical exclusion under NEPA. The grizzly bear (*Ursus arctos horribilis*) and the Canada lynx (*Lynx canadensis*) (“lynx”), which live in the region around Emigrant Peak, are both listed as threatened species under the federal Endangered Species Act. 50 C.F.R. § 17.11(h). The scoping notice and plan of operations both indicate scant consideration of potential harm to members of these listed species. However, in light of the potentially significant adverse effects to both grizzly bears and lynx from the proposed mineral exploration, the Forest Service must prepare an EIS.⁶

1. Grizzly Bears

The Greater Yellowstone Ecosystem—including Yellowstone and Grand Teton National Parks and surrounding forest lands—is one of the few remaining strongholds for grizzly bears in the lower-48 states. Yet with an estimated population of only 757 bears,⁷ and whitebark pine—one of the Yellowstone grizzly’s most important food sources—dwindling, active conservation measures are essential to the population’s continued survival and recovery. The importance of occupied grizzly bear habitat in the area of Lucky Minerals’ proposed exploration project constitutes an extraordinary circumstance necessitating full NEPA review.

Lucky Minerals’ plans of operations for both public and private lands document increased motorized intrusion into grizzly bear habitat. The planned exploration all will take place within the current grizzly bear recovery area and the primary conservation area (“PCA”) identified by the Yellowstone-area grizzly bear Conservation Strategy.⁸ The initial exploration will increase use of existing roads, rely on helicopter travel to certain drill sites, and expand human presence within occupied grizzly bear habitat. Additional exploration already in the

⁶ Notably the Forest Service does not appear to have prepared a biological assessment in fulfillment of its obligations under Endangered Species Act § 7(c)(1), 16 U.S.C. § 1536(c)(1), to determine whether the proposed exploration is likely to adversely affect either species. If adverse effects are found, the Forest Service must engage in formal consultation with the U.S. Fish and Wildlife Service. 16 U.S.C. § 1536(a)(2). The agency may not approve any exploratory drilling before it satisfies these requirements.

⁷ F.T. vanManen, et al, eds., *Yellowstone Grizzly Bear Investigations*, 2014 Annual Report of the Interagency Grizzly Bear Study Team, at 16 (2015)

⁸ Interagency Conservation Strategy Team, *Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area* (2007). The Conservation Strategy was developed by an interagency team that included the Forest Service to guide Yellowstone grizzly bear management and habitat conservation following eventual removal of the grizzly from the federal list of threatened species. Because Yellowstone grizzly bears remain listed under the Endangered Species Act, the Conservation Strategy is not currently in effect; however, it identifies the minimum standards that the agencies have agreed are necessary to conserve the population into the future.

planning stages will involve new road construction and greater motorized access. See Engineering Report, at 8 (stating that “an application (Plan of Operations) will be made for road access construction and additional drilling locations” while initial drilling occurs).

Human-caused mortality—including hunter self-defense, poaching, and agency removal of bears involved in conflicts—is the principal cause of grizzly bear deaths in the Greater Yellowstone region. See Final Rule Designating the Greater Yellowstone Area Population of Grizzly Bears as a Distinct Population Segment; Removing the Yellowstone Distinct Population Segment of Grizzly Bears From the Federal List of Endangered and Threatened Wildlife, 72 Fed. Reg. 14,866, 14,920-22 (March 29, 2007).⁹ To avoid conflicts that most commonly lead to such mortality, grizzly bears require secure habitat that minimize opportunities for human encounters.

As a general principle, “grizzly bear survival is positively related to remoteness from humans.”¹⁰ Indeed, researchers have found that, in the Greater Yellowstone Ecosystem, “survival of independent (age \geq 2 yr) grizzly bears [is] best explained by the level of human development of the landscape within the home range of bears.”¹¹ According to the Conservation Strategy, “[m]otorized access is one of the most influential factors affecting grizzly bear use of habitats.”¹²

Roads in particular are known to have a significant negative effect on grizzly bears through a variety of mechanisms, and generally speaking, “[b]ears living in roadless areas ha[ve] higher predicted survival.”¹³ Roads fragment habitat and populations, elicit behavioral changes in grizzly bears (e.g., grizzlies may avoid preferred feeding areas near roads or expend extra energy avoiding roads), result in indirect mortality such as vehicle collisions, and lead to direct

⁹ Although the U.S. Fish and Wildlife Service eliminated Endangered Species Act protections for Yellowstone grizzly bears in 2007, those protections were restored in 2009 by a court order finding that the action was unlawful. See Greater Yellowstone Coal. v. Servheen, 672 F. Supp. 2d 1105 (D. Mont. 2009), affirmed 665 F.3d 1015, 1029 (9th Cir. 2011).

¹⁰ Troy Merrill & David Mattson, The Extent and Location of Habitat Biophysically Suitable for Grizzly Bears in the Yellowstone Region, 14 *Ursus* 171 (2003), attached as Exhibit 3.

¹¹ Charles C. Schwartz et al., Hazards Affecting Grizzly Bear Survival in the Greater Yellowstone Ecosystem, 74 *J. Wildlife Mgmt.* 654, 654 (2010), attached as Exhibit 4.

¹² Conservation Strategy, at 43.

¹³ Charles C. Schwartz et al., Impacts of Rural Development on Yellowstone Wildlife: Linking Grizzly Bear *Ursus arctos* Demographics with Projected Residential Growth, 18 *Wildlife Biology* 246, 249 (2012), attached as Exhibit 5. See also John Boulanger et al., Use of Multi-State Models to Explore Relationships Between Changes in Body Condition, Habitat and Survival of Grizzly Bears *Ursus arctos horribilis*, 19 *Wildlife Biology* 274, 278 (2013) (“the presence of roads strongly affect[s] grizzly bear] survival”), attached as Exhibit 6.

mortality through increased poaching and self-defense killings.¹⁴ In the Greater Yellowstone Ecosystem, grizzly bear “[s]urvival ... decline[s] as road density, number of homes, and site developments increase[s].”¹⁵

Roads are just one of a number of anthropogenic impacts that negatively impact grizzly bears. Helicopter noise has “the potential to disturb grizzly bears, ... creat[ing] temporary disturbance that can influence” grizzly bear behavior.¹⁶ Helicopter noise may also result in den abandonment.¹⁷

Neither the Plan of Operations nor the Forest Service scoping notice discusses how the direct, indirect, and cumulative effects of proposed exploration activity would impact grizzly bears. Such analysis is necessary not only under NEPA, but by the Forest Service’s own management documents. The Forest Plan for the Gallatin National Forest, which establishes management standards for the forest, incorporates grizzly bear management guidelines that specifically direct the Service to conduct biological reviews for all mineral development plans of operation within occupied grizzly bear habitat.¹⁸ The scoping notice does not indicate whether a biological review for Lucky Minerals’ proposed mineral exploration has taken place, let alone the results of such a review.

The Forest Service’s proposed reliance on a categorical exclusion would rule out meaningful consideration of whether Lucky Minerals’ exploration activities satisfy minimum standards to prevent grizzly bear mortality and ensure habitat security. The need for such consideration in light of the documented grizzly bear presence and importance of grizzly bear habitat that will be adversely affected by the proposed exploration constitutes an extraordinary circumstance that makes reliance on a categorical exclusion inappropriate.

¹⁴ See D.J. Mattson et al., The Effects of Developments and Primary Roads on Grizzly Bear Habitat Use in Yellowstone National Park, Wyoming, 7 *Seventh Int’l Conf. Bear Research & Mgmt.* 259 (1987), excerpt attached as Exhibit 7; B.N. McLellan & D.M. Shackleton, Grizzly Bears and Resource-Extraction Industries: Effects of Roads on Behaviour, Habitat Use and Demography, 25 *J. Applied Ecology* 451 (1988), attached as Exhibit 8; Bruce N. McLellan, Relationships Between Human Industrial Activity and Grizzly Bears, 8 *Eighth Int’l Conf. Bear Research & Mgmt.* 57 (1990), attached as Exhibit 9; Richard D. Mace et al., Relationships Among Grizzly Bears, Roads and Habitat in the Swan Mountains in Montana, 33 *J. Applied Ecology* 1395 (1996), attached as Exhibit 10; Richard D. Mace et al., Landscape Evaluation of Grizzly Bear Habitat in Western Montana, 13 *Conservation Biology* 367 (1999), attached as Exhibit 11; Schwartz et al. (2010), *supra* n. 9; John Boulanger & Gordon B. Stenhouse, The Impact of Roads on the Demography of Grizzly Bears in Alberta, *PLOS One* 9(12): e115535 doi:10.1371/journal.pone.0115535 (Dec. 22, 2014), attached as Exhibit 12.

¹⁵ Schwartz et al. (2010), *supra* n. 9, at 654.

¹⁶ Parametrix, Grizzly Bear Species Account, prepared for Mont. Dep’t of Natural Resources & Conservation (DNRC) Forest Mgmt. Bureau 4-3 (Rev. Sept. 2010), attached as Exhibit 13.

¹⁷ *Id.* at 4-3 – 4-4.

¹⁸ Gallatin Forest Plan, 1987 as Amended through November 2014, at G-19 (Nov. 18, 2014).

2. Canada Lynx

Lucky Minerals' proposed exploration also may significantly affect lands within a portion of the Greater Yellowstone Ecosystem identified both as a "core area" for lynx conservation and critical habitat for the lynx.¹⁹

The Interagency Lynx Biology Team—which includes members from the Forest Service, Fish and Wildlife Service, Bureau of Land Management, and National Park Service—recently updated its Canada Lynx Conservation Assessment and Strategy and specifically addressed the potential threat of minerals exploration within lynx habitat.

Activities associated with exploration and development of locatable minerals could affect lynx habitat by changing or eliminating the native vegetation, and by contributing to habitat fragmentation. Amount of impact can be variable depending on the size of the associated mining operation or development. Locatable minerals are extracted through both open pit and sub-surface mines with potential habitat alteration ranging from tens to thousands of hectares. . . . Development of road and railroad access to facilitate exploration and development could also directly impact lynx habitat, contribute to fragmentation, facilitate increased competition as a result of snow-compacted routes, and result in direct mortality.²⁰

The authors identified conservation measures to minimize lynx mortality and habitat loss from minerals development within core areas, including the Emigrant Peak area.²¹ Among other things, they recommend "locat[ing] facilities and roads outside of lynx habitat and linkage areas where possible."²²

The Forest Service scoping notice and Lucky Minerals plan of operations fail even to mention lynx, let alone the identified threats of minerals exploration. Because these impacts are adverse and potentially significant, they warrant a full NEPA analysis and disqualify the Lucky Minerals exploration project from reliance on a categorical exclusion.

¹⁹ See Interagency Lynx Biology Team, Canada Lynx Conservation Assessment and Strategy 37 (3rd ed. 2013) (hereafter, "Lynx Conservation Assessment"), excerpts attached as Exhibit 14; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary, 79 Fed. Reg. 54,782, 54,823 (Sept. 12, 2014).

²⁰ Lynx Conservation Assessment, supra n. 19, at 83.

²¹ Id. at 95.

²² Id.

B. The Proposed Exploration May Adversely Impact the Absaroka-Beartooth Wilderness

The Lucky Minerals exploration project also is planned adjacent to the congressionally designated Absaroka-Beartooth Wilderness, threatening potentially significant adverse impacts to wilderness attributes that require consideration in a full NEPA analysis. 36 C.F.R. § 220.6(b)(1)(iii) (requiring consideration of congressionally designated wilderness in evaluating extraordinary circumstances precluding reliance on categorical exclusion). The Wilderness Act of 1964 defines wilderness, “in contrast with those areas where man and his own works dominate the landscape, ... as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” 16 U.S.C. § 1131(c). Among other things, a wilderness area “has outstanding opportunities for solitude or a primitive and unconfined type of recreation.” *Id.* § 1131(c)(2). Perhaps no area embodies this definition as fully as the Absaroka-Beartooth Wilderness. The wilderness area encompasses 943,648 acres in the heart of the Greater Yellowstone Ecosystem, adjoining Yellowstone National Park on the park’s northern edge, and contains some of the most wild and remote country in the lower-48 states.

The Scoping Notice and Plan of Operations do not make any mention of wilderness areas; however, plate 3 of the figures accompanying the Plan of Operations situate the drill areas immediately north of the Absaroka-Beartooth Wilderness boundary.²³ Noise and disturbance from increased motorized vehicle use and helicopter hauling of core samples, as well as lights used for night drilling, are fundamentally inconsistent with wilderness character of adjacent wilderness and require consideration under NEPA. See Greater Yellowstone Coal. v. U.S. Forest Serv., 12 F. Supp. 3d 1268, 1278-79 (D. Idaho 2014), appeal dismissed (Sept. 8, 2014) (stating that NEPA required Forest Service to examine the “sight and sound impacts” within recommended wilderness area of motorized vehicles occurring half mile outside of recommended wilderness boundary); Greater Yellowstone Coal. v. Timchak, No. CV-06-04-E-BLW, 2006 WL 3386731, at *3 (D. Idaho Nov. 21, 2006) (recognizing that helicopter flights may be inconsistent with solitude and opportunities for primitive recreation); see also Izaak Walton League of Am., Inc. v. Kimbell, 516 F.Supp.2d 982, 988–90 (D.Minn. 2007) (stating that “the agency’s duty to preserve the wilderness area is wholly independent of the source or location of that activity” and “may apply to agency activity that occurs outside of the boundaries of the wilderness area”).

These potentially significant adverse effects to the Absaroka-Beartooth Wilderness constitute extraordinary circumstances rendering the categorical exclusion for otherwise insignificant mineral exploration inapplicable. 36 C.F.R. § 220.6(b)(1)(iii) (identifying wilderness areas as resource condition potentially giving rise to “extraordinary circumstances”).

²³ Emigrant Exploration Project, Park County, Montana: Proposed Areas of Drilling (Jan. 2015), available at <http://www.fs.usda.gov/project/?project=47041>.

C. The Proposed Exploration May Adversely Impact the North Absaroka Inventoried Roadless Area

The expansion of motorized vehicle travel in the North Absaroka inventoried roadless area as documented in the Plan of Operations, in addition to unknown further intrusion during future exploration stages that are already planned by Lucky Minerals, yield potentially significant environmental consequences that must be studied in an EIS. See 36 C.F.R. § 220.6(b)(1)(iv) (identifying the presence of inventoried roadless areas as a resource condition potentially giving rise to “extraordinary circumstances”). Two of Lucky Minerals’ proposed drill sites are located within the North Absaroka inventoried roadless area, and others may yet be identified for future exploration. In the initial exploration, the sites will be accessed by existing primitive roads, expanding motorized travel in an area that, by definition, have characteristics making it suitable for wilderness designation. Final Rule and Record of Decision, Special Areas; Roadless Area Conservation, 66 Fed. Reg. 3,244, 3,246 (Jan. 12, 2001).

As the Forest Service recognized in promulgating special protections for roadless areas:

Inventoried roadless areas provide clean drinking water and function as biological strongholds for populations of threatened and endangered species. They provide large, relatively undisturbed landscapes that are important to biological diversity and the long-term survival of many at risk species. Inventoried roadless areas provide opportunities for dispersed outdoor recreation, opportunities that diminish as open space and natural settings are developed elsewhere. They also serve as bulwarks against the spread of non-native invasive plant species and provide reference areas for study and research.

Id. at 3,245. The Ninth Circuit Court of Appeals has identified two reasons why development in roadless areas has potentially significant environmental consequences requiring study in an EIS. “First, roadless areas have certain attributes that must be analyzed. Those attributes, such as water resources, soils, wildlife habitat, and recreation opportunities, possess independent environmental significance. Second, roadless areas are significant because of their potential for designation as wilderness areas under the Wilderness Act of 1964, 16 U.S.C. §§ 1131–1136.” Lands Council v. Martin, 529 F.3d 1219, 1230 (9th Cir. 2008) (citations omitted).

Mineral exploration and development may impair these qualities of the North Absaroka inventoried roadless area by diminishing the natural integrity, remoteness, and solitude of roadless areas; degrading wildlife habitat; and polluting water resources. Lucky Minerals’ initial exploration proposal includes immediate drilling within the roadless area and future exploration threatens to expand this intrusion. Although the company plans to use existing roads initially, nevertheless the motorized intrusion into this roadless landscape threatens impacts to wildlife, recreation, and water quality—among other roadless attributes—that preclude application of a categorical exclusion. Further, the next phase of Lucky’s planned exploration includes “road access construction” and additional drilling locations, Engineering Report, at 74, potentially within the roadless area. Further, even on existing roads, the impacts could be substantial. The

Plan of Operations proposes grading Forest Service Road 3273 within the roadless area to allow access to the sites. Plan of Operations, at 4. In addition to the grader, the Plan calls for an excavator, two track-mounted diamond drilling machines, and diesel- or gas-powered water pumps at each drill site. *Id.* at 6-7. All of this equipment will be transported on a primitive road through the roadless area, which will necessarily upgrade and alter the impact of existing primitive roads on the landscape. Additionally, 2-3 vehicle roundtrips per day are anticipated to support around-the-clock drilling in two, 10-hour shifts. *Id.* at 4. The Forest Service must undertake a full NEPA review of these activities to analyze their potentially significant environmental impacts. See Lands Council, 529 F.3d at 1230 (finding discussion in EIS of the effects of the proposed logging in roadless areas was insufficient under NEPA).

D. The Proposed Exploration May Adversely Impact Cultural, Architectural and Historic Resources

While little information currently is known about cultural, architectural and historic resources in the area of Lucky Minerals' proposed exploration, the significant potential that exploration activities may impact such resources requires a full NEPA analysis to evaluate the consequences. 36 C.F.R. § 220.6(b)(1)(vi), (vii) (presence of American Indians religious or cultural sites; and archaeological sites, or historic properties may give rise to "extraordinary circumstances"). Although the Plan of Operations states that "there are no known archeological or historical cultural sites within the claims covering the Plan of Operations," Plan of Operations, at 11, there does not appear to have been any study or survey of potential cultural resources in the project area.

In fact, the rich history of Native American presence in the area of the proposed exploration makes the presence of cultural sites likely. Throughout much of the 18th and 19th centuries, the Paradise Valley, including Emigrant Gulch, was inhabited by the Crow, or Apsáalooke, Indians for whom the Absaroka Mountains are named. Crow presence on the Yellowstone River was documented by the Lewis and Clark expedition, which encountered the tribe in 1806.²⁴ The famous mountain man Jim Bridger wintered with the Crow Indians near Emigrant in 1844-45.²⁵ During this time, the Crow likely hunted in the summertime in and around the sites now proposed for exploratory drilling.

Before the Forest Service may approve any Plan of Operations for mineral exploration on Emigrant Peak and in the Emigrant Gulch, it must fully evaluate the potentially significant adverse impacts to cultural and historical sites.

E. Additional Impacts of the Emigrant Exploration Project are Significant

In addition to the impacts discussed above, the proposed mineral exploration and foreseen future exploration on public and private lands likely also has significant environmental

²⁴ Encyclopedia of the Lewis and Clark Expedition, at 108 (2003), excerpt attached as Exhibit 15.

²⁵ History of Park County, at <http://www.parkcounty.org/site/2History.html> (last visited July 13, 2015), attached as Exhibit 16.

consequences for surface and ground water quality, recreation, and private lands requiring study in an EIS.

1. Impacts to Water Quality

Lucky Minerals' planned mineral exploration activities risk significant harm to ground and surface water quality. The proposed exploration targets ore bodies with extensive sulfide mineralization. See Engineering Report, at 3 (describing mineral deposits occurring as "sulfide disseminations"). When metal sulfide minerals are exposed to air and water, they oxidize to form sulfuric acid.²⁶ Mineral development enhances the oxidation process by exposing a greater surface area to air and water.²⁷ Water contaminated by acid mine drainage is extremely toxic to fish and other aquatic life.²⁸ Acid drainage reaching Yellowstone River tributaries through groundwater or surface runoff has the potential to destroy sensitive trout fisheries.

While factors such as high sulfide concentration and disseminated minerals increase the risk of acid mine drainage from particular sites, the potential for significant problems at any particular site is difficult to predict even with extensive modeling and testing.²⁹ Indeed, although nearly all pre-mine environmental analyses predict that the potential for acid mine drainage will be avoided or mitigated such that mining at any particular site would not yield unacceptable water quality, detailed investigations have revealed that post-mining water quality exceeds acceptable water quality standards for both ground and surface water in a majority of cases.³⁰

While extensive mineral exploration has already occurred in Emigrant Gulch, Lucky Minerals proposes drilling at depths up to 2,000 feet, which appears to be an increase over historic drilling depths. Such depths may enhance the potential for acid mine drainage by exposing a greater surface area of sulfide minerals to air and water, or by complicating efforts to plug drill holes to prevent further oxidation. It also increases the potential for drill holes to encounter aquifers that may serve as a conduit for acidic minerals reaching both groundwater and surface water, which are well connected in the Emigrant area, including through thermal springs such as the springs that feed the Chico Hot Springs Resort.

Given the mineralogy of the area, the presence of sensitive fisheries, the interconnectedness of ground and surface waters, and the unprecedented drilling depths involved

²⁶ See U.S. Environmental Protection Agency, Technical Document: Acid Mine Drainage Prediction, EPA 530-R-94-036, NTIS PB94-201829, at 4 (Dec. 1994), attached as Exhibit 17.

²⁷ Id.

²⁸ Reclamation Research Group, LLC, Acid Mine Drainage and Effects on Fish Health and Ecology: A Review (June 2008), attached as Exhibit 18

²⁹ U.S. Environmental Protection Agency, Technical Document: Acid Mine Drainage Prediction, supra note 26, at 6

³⁰ Reclamation Research Group, LLC, supra note 28, at 13-14.

in the Lucky Minerals proposal, the Forest Service must conduct a full NEPA analysis to analyze potentially significant adverse impacts to water quality from the proposed mineral exploration.³¹

2. Impacts to Recreation

The Forest Service must also analyze the potentially significant impacts to recreational opportunities due to the minerals exploration proposal. Emigrant Peak and surrounding areas are popular destinations for hikers in the summer time and backcountry skiers in the winter and spring. Lucky Minerals' proposal may impede recreation access by fencing drill sites and blocking roads. In addition, the presence of industrial activities within otherwise wild country impedes recreational users' sense of solitude and enjoyment of their activities. These impacts warrant evaluation in an EIS.

3. Impacts to Private Property

The scope of impacts from Lucky Minerals' proposed exploration activities expand beyond the drill sites and adjacent public lands. Across the entire route that would be used to transport heavy equipment and workers' vehicles from the highway to the drill sites, private landowners will be affected. Lucky Minerals proposes to access the drill sites through Emigrant Creek road, running through the parking lot of the Chico Hot Springs Resort and past the residences of Old Chico. The Forest Service scoping notice and Plan of Operations both fail to quantify the total volume of traffic on Emigrant Creek road attributable to exploration activities, but it is almost certainly a significant increase over existing traffic volume, particularly heavy truck traffic. The Forest Service's environmental review should evaluate the health, safety, and noise impacts to private residences and businesses along the haul route.

In sum, the direct, indirect, and cumulative environmental consequences of Lucky Minerals' proposed exploration activities are potentially significant and constitute "extraordinary circumstances" rendering the categorical exclusion for short-term mineral exploration activities inapplicable.

³¹ In addition, the Forest Service must require Lucky Minerals to pay a bond sufficient to cover post-exploration reclamation, including potential water quality mitigation or restoration activities. 36 C.F.R. § 228.13. In the event that the Montana Department of Environmental Quality requires a bond, the Forest Service must independently evaluate the size of the bond to ensure its adequacy in light of the water contamination risks, and reevaluate the bond in the event of any unforeseen environmental impacts requiring additional reclamation. See Forest Service Handbook, § 2817.24.

VI. THE FOREST SERVICE SHOULD IDENTIFY THE NATIONAL PARK SERVICE AS A COOPERATING AGENCY

Given the proximity of the proposed mineral exploration to Yellowstone National Park and its potentially significant effects on resources within and adjacent to the Park, the Forest Service should identify the National Park Service as a cooperating agency under NEPA.

The Council on Environmental Quality and Forest Service regulations require the Forest Service to invite fellow federal agencies with special expertise regarding environmental impacts of a proposed action to participate in the NEPA process as a cooperating agency. See 40 C.F.R. §§ 1508.5 (defining “cooperating agency” as “any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal”), 1501.6(a)(1) (requiring lead agency to “[r]equest the participation of each cooperating agency in the NEPA process at the earliest possible time”), 1501.7(a) (requiring lead agency to “[i]nvite the participation of affected Federal ... agencies” “[a]s part of the scoping process”). See also 36 C.F.R. § 220.4(e)(2) (Forest Service regulations directing that the Service’s “[s]coping shall be carried out in accordance with the requirements of 40 C.F.R. § 1501.7”); Forest Service Handbook 1909.15, Ch. 10, § 1131b (“The lead agency has the responsibility to solicit cooperation from other Federal, Tribal, State or local agencies with jurisdiction by law or special expertise on environmental issues that should be addressed in the environmental analysis.”).

Lucky Minerals’ proposed exploration may adversely affect wildlife that move between Yellowstone and the Custer Gallatin National Forest, including federally listed grizzly bears and lynx. In addition, the proposal has the potential to effect air quality, water quality, and scenic and recreational values in areas adjacent to and within close proximity to Yellowstone. The National Park Service is recognized as an expert agency concerning impacts to National Park System areas from water pollution, noise, land uses, forestry activities, and other vegetative resource activities. See Council on Env’tl Quality, Nat’l Env’tl. Policy Act (NEPA) Implementation Procedures; Appendices I, II, and III, 49 Fed. Reg. 49,754, 49,755, 49,757, 49,766, 49,774, 49,775 (Dec. 21, 1984) (identifying NPS as an agency with “special expertise” in these areas, triggering requirement to engage NPS as cooperating agency in NEPA review where this expertise is implicated by proposed action). To effectively engage the National Park Service, the Forest Service must request the agency’s participation as a cooperating agency as part of the scoping process “at the earliest possible time.” 40 C.F.R. § 1501.6(a)(1). According, the Forest Service should not conclude scoping before the National Park Service has been given the opportunity to formally weigh in on the project and the requisite NEPA analysis.

VII. CONCLUSION

Lucky Minerals seeks immediate approval for only a portion of its planned mineral exploration on Emigrant Peak and within Emigrant Gulch. However, the company’s Engineering Report touts “an aggressive exploration program in the near future” that exceeds the scope of its formal Plan of Operations in terms of timing, spatial extent, and intensity. Engineering Report, at 7. Under well-established NEPA principles and the Forest Service’s own regulations requiring a Plan of Operations to document all foreseen activities connected with a

proposal, it would be improper to consider Lucky Minerals' Plan of Operations in isolation. Instead, the Forest Service should require Lucky Minerals to resubmit a plan that complies with regulatory requirements and evaluate the direct, indirect, and cumulative impacts of the proposed mineral exploration activities in an EIS. However, even considering just the exploration activity included in Lucky Minerals' existing Plan of Operations, potentially significant environmental impacts are evident that require the Forest Service to complete a full environmental analysis under NEPA.

Sincerely,



Jenny Harbine

CC: Warren McCullough, Montana DEQ, wmccullough@mt.gov