



P.O. Box 7186 Missoula MT 59807 406-543-0054

31 July 2013

Herb Rolfes  
Environmental Management Bureau  
Montana DEQ  
Metcalf Building  
P.O. Box 200901  
Helena, MT 59620

Re: Draft EA Tintina Alaska Exploration, Inc.'s Black Butte Project

Dear Mr. Rolfes:

Thanks for the opportunity to comment on the draft EA for proposed exploration activities at the Black Butte Copper Project in Meagher County. Montana Trout Unlimited (Montana TU) is comprised of 3,600 conservation-minded anglers. We have a long history of conservation advocacy in the Smith River drainage, including in recent years being responsible for establishment of a Smith River Corridor Account, which dedicates some float fees to habitat restoration in the river corridor, and by prevailing with our co-plaintiff Meagher County landowners in a legal challenge in the Montana Supreme Court that prohibited shallow well development from impairing surface water rights in the upper Missouri River basin.

Further, many TU members float, fish or own property in the Smith River watershed, while a number of members and supporters depend on recreational use on the Smith River for their livelihoods. The Smith River is recognized in Montana and nationally as a special resource, one that the State of Montana promotes prominently to residents and visitors. Therefore, any large development that poses risk to water quality, streamflows and fisheries in the watershed is of interest to Montana TU.

We have determined that Tintina Alaska Exploration, Inc.'s proposal to expand exploration activities to include development of a mile long exploration decline poses significant risk to the Smith River and its tributaries.

### **General Observations, MEPA and Recommendation**

The draft EA for the proposed action is rife with data gaps and depends too heavily on still-to-be-specified details regarding water and waste rock chemistry, water treatment, soil characterization and operational commitments. The type and

scale of the project transcends typical exploration activities that merit only EAs, such as drilling or bulk sampling through excavation in pits. The project will generate a significant amount of materials and discharge – the latter perhaps permanently – that could result in a source of acid mine drainage (AMD). The record of DEQ – including staff involved in reviewing this project – in failing to accurately predict the scale and character of AMD and other pollutants at hard-rock operations around the state in recent years, as well as the inadequate reclamation, mitigation and funding the agency required for these projects, gives reasonable pause to a public regarding the thoroughness of this EA. The EA depends on mitigating potential impacts below the “threshold of significance,” but depends too much on still-to-be determined data (such as data from yet to be completed kinetic humidity tests), and amorphous promises of water treatment, “best management practices” (p. 38), or, “standard mining practices” (p. 38).

We believe the EA should be pulled back, and that the agency must require additional information and perform more complete analysis while disclosing the results in a thorough Environmental Impact Statement. This EA is simply too inadequate to provide confidence to the public that the proposed action will not result in significant impacts.

The Montana Environmental Policy Act requires disclosure of all known and reasonably foreseeable impacts of proposed actions affecting the human environment. Montana agencies are to determine whether an EIS is necessary based on, among other things: 1.) Scope and magnitude of the action; 2.) the severity, duration, geographic extent and frequency of the impact; 3.) full characterization of the location and resources at risk; 4.) the probability an impact will occur; 5.) the quality of the affected resources; and, 6.) any precedent represented by the action.

We conclude: 1.) The scope and magnitude is much larger than the typical exploration activity, and it implicates significant ground water, surface water, wetland, fishery and wildlife resources; 2.) the location affects a significant resource of statewide and national value (the Smith River watershed); 3.) the potential of significant impacts is high, and they have potential for being severe (during and after the activity), could be long lasting and frequent, as indicated by DEQ’s own experience with mining-related activities it has permitted elsewhere with complex groundwater sources and AMD; 4.) the quality of the resources at risk is significant – water quality and the fisheries in a nationally known river that the State of Montana promotes and which contributes significantly to the economy; and, 5.) DEQ could create the wrong precedent by inadequately using an EA to approve an unusually large exploration activity that will generate AMD, and which has reasonable probability of creating long-lasting impacts to the environment.

DEQ has not demonstrated in the EA it has mitigated the proposed activity below a significant threshold. Mitigated EAs must: 1.) Demonstrate all impacts have been accurately identified; 2.) All impacts have been mitigated below a level of significance; and, 3.) That no significant impact is likely to occur.

Because the EA is rife with data gaps (one example: it does not disclose quantitatively the chemistry of the proposed discharge to the LAD areas), and it includes *discussions but not commitments about potential actions* that *might* be implemented should something not predicted occur (i.e., vague promises about treatment based on future monitoring), the agency cannot with reasonable confidence demonstrate significant impacts will not occur. The problem with depending on monitoring that *might* result in corrective responses should an adverse impact occur later is that DEQ is setting the State up for getting into disputes with permittees about the significance of impacts and whether additional investments in mitigation should be made – *after the impact has occurred, the performance bond approved and the permit issued*. This has happened repeatedly in the past with DEQ mine permitting elsewhere. And it almost always results in litigation, unplanned taxpayer expenditures, delay in fixing problems and damaged public resources.

We strongly recommend DEQ depend less on potential future commitments based on future data collection and monitoring, and instead get more data now, analyze it in more depth and come up with mitigation *commitments instead of considerations*, and to do it with public participation in a more detailed EIS.

### **Important Gaps in Data**

DEQ or the applicant need to develop a full, complete and understandable water balance for the operation so the public can better understand potential effects. In addition, data gaps must be addressed before an EIS is completed and a permit issued, because the quality of the discharge from the portal, waste rock dumps and potentially from springs is still unknown or unavailable.

The EA leaves too much to question, for instance:

- “35,000 tons of NAG “is likely to be dry.” (p. 7). Data are not provided to demonstrate this.
- “Tintina claims it would not be possible to saturate either of the waste rock piles during the short period of the decline construction and operation, or that a large volume of seepage would develop during this time period.” (p. 7). Data are not provided to validate this claim with any reasonable confidence, nor is it completely clear what DEQ thinks of the “claim.”
- Tintina assumes that there would be 5 million gallons of remaining storage capacity available.” (p. 7). Again, no data are provided. The company “assumes,” and it is unclear whether DEQ has tested this assumption. Data and engineering plans are also not provided to demonstrate that the waste

rock storage areas could withstand large, short-term storm events. Failure or overtopping of waste rock dumps could be very detrimental.

- The EA refers several times to average site precipitation as being 17 inches a year with 34 inches of evaporation a year (p. 22). These are the data that much of the water balance for activities outside the decline is based on. But the nearest stations for these estimates are Canyon Ferry Reservoir and Bozeman, both which are at lower elevations and in different climatological settings. Given how important water management is at the operation, it's essential to have more site-specific information, with monthly averages instead of averaging over the year. It is not inconceivable that this site could experience short-duration, intense rain events or a serious rain-on-snow flooding. Further, meaningful evaporation at the site occurs probably less than half the year. Citing annual precipitation and evaporation estimates based on sites that are 40-80 miles away in different settings is not meaningful enough to evaluate potential impacts.
- Surface water and groundwater baseline data (p. 22) are insufficient, with data available only from some quarters in 2011 and 2012 -- neither year having flows representing the long-term means during some months at reference gauging stations in the Smith River watershed. Data should be available from a longer period to better characterize expected surface and groundwater conditions in the area.
- The EA states, "Kinetic humidity cell tests are ongoing and water treatment systems are under design, so Tintina cannot quantitatively predict the chemistry of water that would be land applied using the LAD system." (p. 53). It is absolutely crucial that the EA disclose the specific potential in terms of scale, duration and ability to buffer for AMD in the waste rock and affected discharges. This also will help determine the type of treatment required. Leaving this open while still approving a permit is a mistake, and probably violates required disclosure under MEPA. It is important to note that DEQ has consistently underestimated the potential for AMD at previous mining operations it has approved, including at Zortman-Landusky and Golden Sunlight. In terms of public confidence, the agency has an obligation to get it right with this proposal. Waiting until later to characterize the AMD potential of exposed sulfide materials and commit to specific treatment and mitigation at this site is simply bad business.
- The EA identifies 9 seeps and 13 springs in the project area, indicating the potential presence of deep fractures. No data are provided demonstrating whether these springs and seeps could be affected by the exploration decline during development or after closure. Data are not provided demonstrating whether after decline closure, and after flooding, fractures connected to the decline could become sources of polluted surface discharges, as has occurred

at other mines in Montana. The EA needs to characterize the source of the springs and seeps, better describe potential faulting in the area and related fractures, and address the potential that decline flooding represents for creating dispersed surface discharges.

- Though the EA describes soil characteristics in the surface LAD area (p. 29 and Appendix), it doesn't provide data on the ability of these soils to reduce, adsorb, filter or otherwise permanently remove acidic discharge, metals, nitrates and sediment. Of course, it is impossible to do that analysis until the discharge has been characterized, which it hasn't (p. 53).
- Only inadequate data are provided demonstrating the hydrological connection between LAD wetland areas and surface flows. No data are provided demonstrating how the temperature of the discharged water could affect the wetlands, or, potentially connected surface flows.
- The EA states, "Sheep Creek would not be affected by the cone of depression because of high permeability and the large amount of water..." (p. 37). But the EA provides no data or specific analysis of Sheep Creek and its alluvial aquifer supporting this conclusion.
- The EA states that running the decline 90 feet under Coon Creek will not result in reduction of flows in the stream (p. 39). It is unclear whether DEQ agrees with this conclusion. We don't necessarily agree the aquifer tests presented are robust enough. DEQ should require additional data, perhaps using a dye test.
- The EA states that, "No threatened and endangered animal species were found in the project area....and there are no predicted impacts to species of concern." (p. 39). However, because a systematic survey never occurred on the site or on adjoining lands, this conclusion is not merited. In the least, wetland areas that will be affected by LAD should be inventoried for common and rare species.
- The EA states that, "no critical fishery habitat locations have been identified." (p. 39). Of course they weren't located. A systematic survey never occurred to look for them. The only fishery related data included in the document is the presence-absence chart from the Montana FWPS MFISH data base (p. 32). No data are provided on abundance and size distribution, or on non-game species of fish or other aquatic species. We note that this information indicates both resident and migratory (fluvial) trout species are in the Sheep Creek watershed. Because migratory fish are present, it indicates that water quality degradation of surface flows in the area could directly harm the fishery of the Smith River. Recent FWP telemetry data indicate that the Sheep Creek drainage below and above the mine site is used by migratory trout

from the Smith River, and, it appears possibly from the Missouri River. This information and other data that completely characterize the aquatics community in the vicinity of the mine should be included in the EA. The EA concludes later that fish won't be harmed because water quality won't be harmed. However, the conclusion that water quality won't be harmed is based on incomplete data, including the lack of a comprehensive water balance, still-to-be-determined rates of treated and untreated discharge, unknown water quality of the discharge, undescribed quantitative abilities of the LAD areas to remove pollutants, among other shortcomings.

- There is no description in the EA of the potential for seismic events in the area, which could affect the integrity of the waste rock sites and the decline.
- The EA states in several places that "Flooding will eventually reach the level of the water table but would never discharge from the decline." (p. 7 and elsewhere). This is Tintina's conclusion, but it's unclear if DEQ agrees. In any event, no quantitative description is included on water table elevations and the expected elevation of the flooded decline.
- The EA says much mitigation will allegedly be in place to deal with potential impacts to springs, groundwater and water rights (p. 47). We interpret this commitment to expending resources for mitigation to mean that the applicant and DEQ feel that the level of significance of potential impacts is not low, indicating that the scale and duration of the proposed activity is not insignificant and requires detailed scrutiny -- which it hasn't received in this document.

### **Water treatment and LAD**

The EA references water treatment and water treatment systems, but it does not commit to any specific application. This results in part, apparently, because DEQ cannot describe the quality or quantity of the discharge. Yet this is specifically one of the purposes of an EA. And it is a key issue. Among the references and vague statements that raise rather than answer questions:

- Seepage will either be treated or dispersed to an LAD, depending on the time of year (p. 6). What criteria will determine whether LAD or a treatment system is used?
- Treatment "may" be required for nitrates and arsenic if grouting and LAD are "insufficient." (p. 7). What criteria will be used to make this determination? What are the standards for "insufficient?" How will this be determined?
- Contaminated water will be dealt with "until appropriate treatment systems are operational." (p. 7). Why wouldn't the systems be operational BEFORE

contaminated water is present? This implies DEQ will wait until unacceptable impacts occur.

- The EA says, “treatments being considered for decline H2O and PAG waste rock seepage, include lime treatment and co-precipitation of arsenic and iron,” as well as possibly reverse osmosis. The permit must commit the company to a treatment system that is proven and ample for the discharge that ensues. And it must be a condition of the permit. “Being considered” is not good enough.
- To deal with LAD year-round, the EA states: “Large underground drainfield systems would be constructed to dispose of water below the frost level during winter months...Tintina has developed shallow and deep percolation testing to identify areas suitable for drainfield systems.” (p. 9). The EA does not explicitly describe where these areas are, how the company can dispose of water underground at the same time it is working there, and where the discharge will drain to. Further, DEQ doesn’t say what it thinks about this concept and if it indeed believes this is a good practice, why and what analysis it did to demonstrate that. This has to be done before a permit is issued.
- The EA says that geochemical impacts....”would be mitigated below the level of significance by operational design...” (p. 39). But it doesn’t describe what that mitigation is, except to imply it will be still to be specified LAD system or water treatment technology for a discharge that’s quality has still to be characterized.
- The EA states that LAD discharges to wetlands will meet human health standards. We maintain DEQ has an obligation to ensure any discharges to wetlands – or groundwater -- that are hydrologically connected to surface flows meet aquatic life standards – unless there is clear and convincing evidence that concentrations and load in any discharge will be reduced to aquatic life standards before reaching surface flows.

### **Future commitments and undescribed promises**

The EA includes many promises to commit to actions later, refers to safeguards that are not described and depends on the company to make good on promises that apparently might not be required in the permit. For instance:

- To ensure waste rock and polluted surface discharges are dealt with responsibly and that they are mitigated to a level that is not significant, DEQ says the company will depend on “BMPs” to control runoff. (p. 38). Then it lists “typical” BMPs. Nowhere does it say what BMPs are specifically required, where they will be applied, nor whether they will be monitored,

maintained and be effective. Without this information, and without explicitly stating what is required where, this is a meaningless guarantee.

- The EA states that Tintina will depend on “standard mining practices” to provide additional protection to Coon Creek from undermining. What are those practices and does DEQ agree they are appropriate? We hope they are not similar to practices and grouting that failed to prevent a combination of low-level seismic events and surface flows from flooding the underground works at the Troy Mine, resulting in instability, unsafe working conditions and the unfortunate cessation of mining.
- The EA says, “Tintina would implement mitigation if necessary to prevent any adverse impacts to wetlands in the area.” (p. 38). Okay, but what are the measures, and will DEQ require them upfront, instead of waiting until after an impact is detected and the agency must argue with the company over implementing new measures? This is a meaningless commitment and shouldn’t be used as a measure to demonstrate impacts are being mitigated to below significance.
- The EA says, “Tintina contends no U.S. Army Corps of Engineers or DEQ permits for wetland disturbance are needed.” (p. 39). Okay, that’s what Tintina thinks, but what does DEQ believe and why?
- The EA seems to indicate that having an RO unit on-site will be optional. (p. 8). We recommend the permit require that one be on-site permanently from project inception, at closure and until it is deemed there is no long-term discharge of polluted discharge at the site.
- The EA says, “Tintina would initiate closure and reclamation activities within four years of the completion of the exploration decline. An extension of the four-year time frame could be requested from DEQ if needed.” (p. 18). This essentially does not commit Tintina to a four-year window for reclamation after closure. Without even being approached, DEQ is already telling the company the period for reclaiming after closure is on open-ended deal. It shouldn’t be. Four years should be it. Montana has enough unreclaimed mining-related sites that the industry, when pressed, promises to re-open.
- The EA says, “Tintina would make a reasonable and conscientious effort to identify, control and suppress all weeds...” (p. 57). This says Tintina will not be *required* to do weed control. It’s merely a meaningless promise. The EA also states, “Tintina has consulted with landowners and the County Conservation District on what seed types and mixes to use for reseeding disturbed areas. “ (p. 57). If so, the nature of these communications and the details should be documented and disclosed in the MEPA document.



## DEQ Mitigations

- We support DEQ's requirement to install geotextile liners below both the PAG and NAG waste rock. It is important to note, that segregation will be not be 100 percent, and therefore the NAG rock should be monitored rigorously, and at closure as much of it as possible moved to the decline.
- We support DEQ's proposed improvements to the water quality monitoring plan, especially the increased frequency of monitoring for surface and groundwater stations.

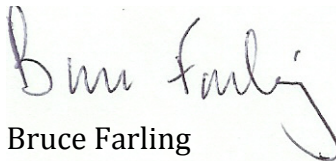
## Performance Bond

Given the high profile of this project, the risk and potential significant impacts it poses, and the record of underbonding mining activities that have produced AMD at other sites in Montana, the EIS should include a description and explanation of the performance bond. It is important for public confidence that the public have the ability to review the bond before a permit is issued.

Because the project is in a sensitive watershed, has potential to affect resources of significant public concern, includes a scope and scale that is unusually large for an exploration project, and has the potential for creating long-term impacts that have been proven to be vexing if not impossible to mitigate or correct, it is essential that DEQ withdraw the EA and prepare a more detailed EIS for this proposal.

Thank you for your consideration.

Sincerely,



Bruce Farling  
Executive Director

cc.  
Office of the Governor  
Montana FWP