



Prepared for:



**FINAL**

Black Butte Copper  
 Environmental Impact  
 Statement  
 Scoping Report

December 2017



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## Acronyms and Abbreviations

CTF	Cement Tailings Facility
DEQ	Montana Department of Environmental Quality
EIS	Environmental Impact Statement
MCA	Montana Code Annotated
MEPA	Montana Environmental Policy Act
MT	Montana
Project	Black Butte Copper Project
Tintina	Tintina Montana Inc.

## 1. INTRODUCTION

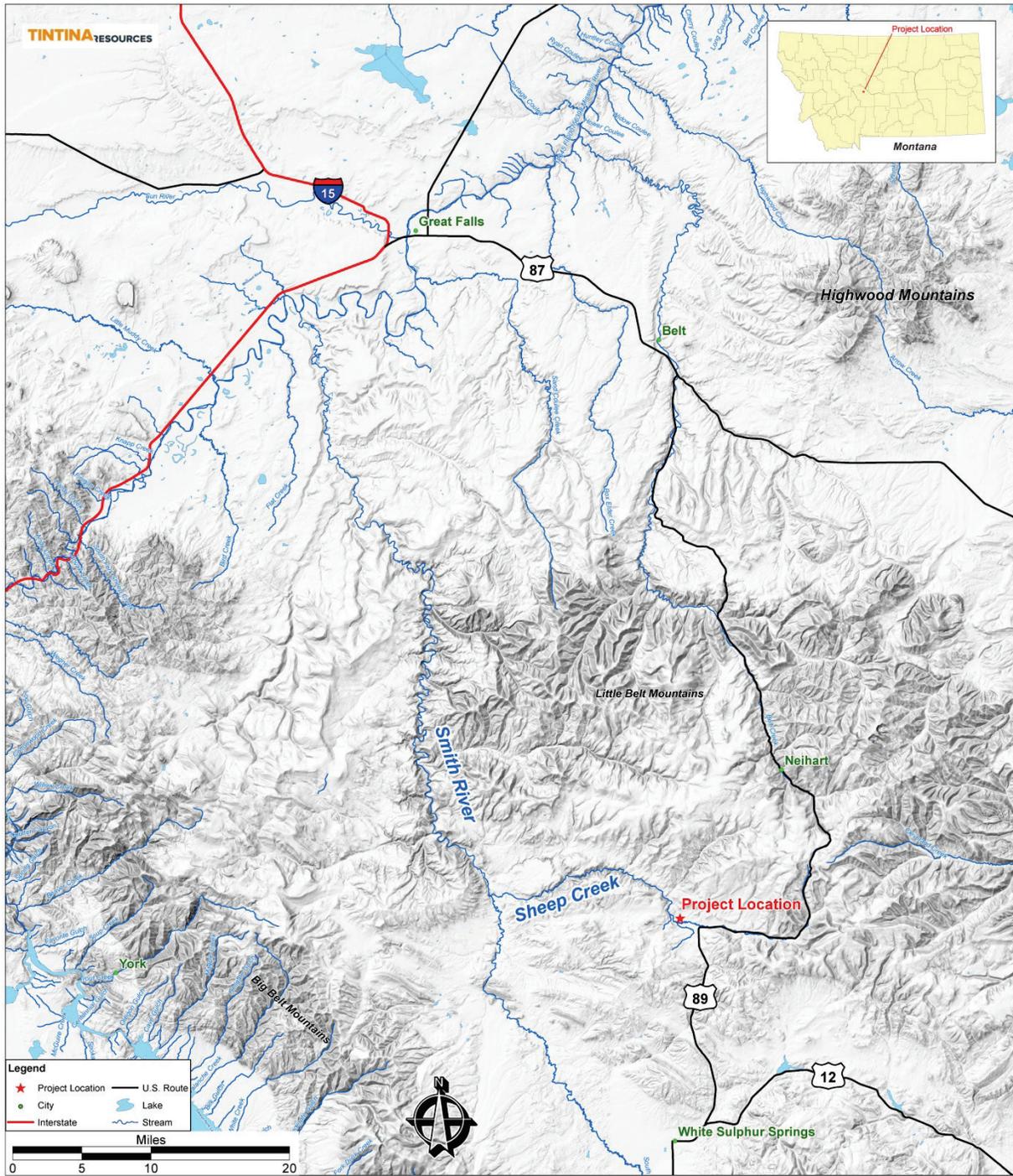
The Montana Department of Environmental Quality (DEQ) is preparing an Environmental Impact Statement (EIS) for the operating permit for the proposed Black Butte Copper Project (the Project), submitted by Tintina Montana Inc. (Tintina), a wholly owned subsidiary of Tintina Resources Inc. The EIS must comply with the requirements of the Montana Environmental Policy Act (MEPA) (Title 75, Chapter 1, Parts 1-3, Montana Code Annotated [MCA]) and the administrative rules adopted under MEPA. The purpose of the EIS is to analyze the potential environmental impacts of the Project and reasonable alternatives to the Proposed Action, including a No Action Alternative as required by MEPA, so that DEQ can make an informed decision in regards to the permit-ability of the Project and permit conditions.

To inform the EIS analysis of, and potential alternatives to the Project, DEQ established a public comment scoping period from October 2, 2017, to November 16, 2017. During this time, DEQ received written and oral comments from the public. This report describes the public scoping process, including the public meetings, and summarizes substantive comments received during the scoping period. It also contains materials generated for the scoping process.

The Project site is located about 15 miles north of White Sulphur Springs in Meagher County, Montana (MT). The site has a history of mineral exploration activities since the 1800s. Tintina applied to DEQ for an operating permit for the Project on December 15, 2015, under the Metal Mine Reclamation Act, Section 82-4-301, et seq., MCA. Pursuant to Section 82-4-337, MCA, DEQ determined that Tintina's application was complete and compliant and, on September 18, 2017, issued Tintina a draft operating permit for the Project. The proposed mine permit boundary encompasses 1,887.7 acres of privately owned ranch land, which would include all proposed facilities and surface disturbances. The location of the Project is shown in Figure 1.

The proposed Project is an underground copper mine. Multiple surface facilities, haul roads, access roads, and stockpiles would be constructed in addition to the underground mine portal. Ore mined from underground would undergo crushing and grinding onsite. Copper concentrate would be separated from a tailings waste stream via a flotation process. The tailings would be managed onsite by storing a portion underground as cemented backfill and storing the rest as cemented paste tailings in a tailings storage facility on the surface. The copper concentrate would be transported offsite for further processing.

Reclamation conducted contemporaneous to construction would stabilize disturbed areas throughout the life of mine. Monitoring programs would continue during construction, operations, temporary closure, and in permanent closure until closure objectives are met. Upon final closure, surfaces would be revegetated with pre-mining seed mixes adapted to the area.



**Figure 1: Project Location**

## 2. SCOPING PROCESS

The purpose of scoping is to provide information about Tintina’s proposed Project to the public, to identify issues related to the proposed Project that are likely to involve significant impacts that will be analyzed in depth in the EIS, and to identify possible alternatives to be considered.

Knowing the scope and the importance of issues assists the DEQ in preparing an accurate and timely environmental analysis. The scoping process also helps identify issues important to the community and is designed to encourage public input.

Comments received during the scoping phase are combined with review of the Project by an interdisciplinary team of technical experts to establish the scope of analysis to be conducted in the EIS. Alternatives will be developed based on issues of concern raised by the public, participating government agencies, and EIS team resource specialists. Following scoping, a Draft EIS will be published and made available for public review and comment.

Public scoping comments were received from October 2, 2017, to November 16, 2017. Comment letters were submitted by email ([deqtintinablackbuttecopperproject@mt.gov](mailto:deqtintinablackbuttecopperproject@mt.gov)), by mail (Craig Jones, DEQ, P.O. Box 200901, Helena, MT 59620-0901), and provided orally during four public meetings. DEQ reviewed, coded, and organized all public comments into a database. Substantive comments on EIS scoping (those pertaining to the analysis) are summarized in Section 4 below.

A total of 9,236 comment letters were received, which include transcripts from stenographers at the public meetings (see Table 1). Two versions of an automatically generated form letter were received. Comments from these letters were repeated 8,928 times and made up 97 percent of all comment letters received. A small fraction of individuals chose to edit or create a variant of the form letters by adding customized text. The comments in the form letters focused on the Smith River. There were 308 individuals who provided unique comment letters.

**Table 1: Scoping Comment Count Summary**

Comment Type	Number of Commenters	Number of Comments
<b>Unique (emails, letters, comment forms)</b>	206	1,134
<b>Unique Transcripts (from meeting court reporter)</b>		
Great Falls	31	84
White Sulphur Springs	16	37
Helena	36	85
Livingston	19	65
<b>Form Letter 1</b>		
Variants	119	137
Non-Variants	5,400	N/A
<b>Form Letter 2</b>		
Variants	93	114
Non-Variants	3,316	N/A
<b>Total</b>	9,236	1,656

### 3. PUBLIC SCOPING MEETINGS

#### 3.1. NOTIFICATION PROCESS

On August 15, 2017, the DEQ issued a press release on the MONTANA.GOV website (<http://deq.mt.gov/Public/PressRelease/mine-application-deemed-complete-and-environmental-review-to-begin>) stating that the mine application was complete and the environmental review was set to begin. The DEQ issued a second release on September 18, 2017, (<http://deq.mt.gov/Public/PressRelease/deq-begins-review-of-black-butte-copper-project-under-the-montana-environmental-policy-act>) indicating the review had begun under MEPA. On October 3, 2017, the DEQ issued a press release (<http://deq.mt.gov/Public/PressRelease/scoping-meetings-held-for-environmental-impact-statement-of-proposed-mine>) disclosing the times and locations of three public meetings as well as information about the EIS and permit application. A fourth press release was issued for adding a fourth and final meeting on October 24, 2017, (<http://news.mt.gov/additional-scoping-meeting-announced-for-environmental-impact-statement-of-proposed-mine>) containing similar information. Each of these releases was also submitted via email to national, state, and local news outlets on the respective release dates (see Appendix A).

The DEQ prepared a legal notice for the public scoping meetings. In addition to providing information about the public meetings, the notice described the purpose of the scoping meetings, provided a web link to access the permit application, and identified methods to submit EIS scoping comments. The notice was published in the following newspapers:

- Livingston Enterprise, a daily newspaper, on October 6, 13, and 20 of 2017;
- Great Falls Tribune, a daily newspaper, on October 8, 15, and 22 of 2017; and the
- Meagher County News for three weeks beginning October 5 and ending October 19, 2017.

On September 29, 2017, public meeting notices were mailed to 151 organization or individuals. On October 2, 2017, the DEQ emailed 85 notices. Those contacted had previously expressed interest in the Project.

#### 3.2. PUBLIC SCOPING MEETINGS

On October 30, 2017, a public meeting was held at the Civic Center in Great Falls, MT. On November 1, 2017, a second meeting was held at the White Sulphur Springs High School gymnasium in White Sulphur Springs, MT. The third meeting was held at the Radisson Hotel in Helena, MT, on November 6, 2017. The final public meeting was held November 7, 2017, in Livingston, MT, at the Park County High School Gymnasium. Each meeting began at 6 pm and ended at 9 pm. The public registered to enter the meeting, were offered materials, and signed up to speak if they desired.

Each public meeting began with an open house. Its purpose was to allow the public to speak with technical experts about the Project. Posters were prepared on the following topics and DEQ staff was available to speak to these topics as well as others:

1. MEPA and Metal Mining Reclamation Act Process

2. How to Submit Comments
3. EIS Potential Schedule
4. Issues to be Examined in the EIS
5. Site Location and Plan
6. Cement Tailings Facility (CTF)
7. Hydrology
8. Geochemistry
9. Water Treatment

Following the open house, DEQ gave a brief presentation about the EIS scoping process and the Project. Finally, the public was invited to speak to DEQ staff. Speakers were chosen at random and their words were recorded by a stenographer. A summary of registered attendance is captured in Table 2.

**Table 2: Summary of Public Meeting Attendance**

<b>Location</b>	<b>Number of Registered Attendees</b>
Great Falls	130
White Sulphur Springs	70
Helena	161
Livingston	99
Total	460

#### **4. MAJOR COMMENTS RAISED DURING SCOPING**

Every comment letter was reviewed by the DEQ or its third-party contractor, Environmental Resources Management (ERM). Tables 3 and 4 provide summaries of comments received during the scoping process. Each comment was coded based upon the resource topic it addressed (e.g. water, wildlife, economics). The text does not capture any comment verbatim and does not attempt to report the most often submitted comments. Table 3 identifies the most salient or substantive comments in regards to the EIS analysis, potential mitigation, and consideration of alternatives.

**Table 3: Summary of Major Comments**

Resource Topic	Comment Summary
Air Quality	The EIS should evaluate the Project's potential effect on climate change and how this effect would impact natural resources. Fugitive dust and its impacts to natural resources should be evaluated.
Alternatives	The DEQ should not analyze alternatives that they have the legal authority to implement. The scope of alternatives analysis should be done in consultation with Tintina Resources in accordance with the MMRA and MEPA requirements. The EIS should consider a no action alternative. The EIS should provide an alternative analysis informed by other tailings impoundment that reduces the risk of environment impacts including liner degradation, impoundment location and design. The EIS should evaluate sourcing metals from another ore body. The EIS should evaluate the use of tanks instead of ponds to retain process water. The EIS should evaluate alternative truck transportation routes. The EIS should evaluate a wetland treatment system for a long a long-term water treatment solution.
Aquatic Species	The EIS should collect fisheries baseline data for several years that includes Calf Creek, Sheep Creek, the South Fork of Sheep Creek, Coon Creek, Moose Creek, the Smith River, and Missouri River. This analysis and subsequent impact analysis should consider climate change, species composition, size distribution, spawning, fish densities, seasonal migration behavior, macroinvertebrates, amphibians, mollusks, waterway physical characteristics, metal concentrations in fish tissue, and effects from changes to water temperature, flow and quality. Sources of water to streams and rivers via groundwater and surface water including wetlands should be evaluated for potential impacts. Potential for acid mine drainage to develop and affect fisheries should be evaluated.
Cultural Resources	The EIS should evaluate the effects of archaeological features of the Smith River. The EIS should evaluate cultural and archaeological resources and cultural landscapes that could be affected by the Project including those near the Project site.
Cumulative Effects	Induced effects from mine development such as road and building construction should be evaluated in combination with the Project. The EIS should evaluate current water withdrawals from Sheep Creek and Smith River in combination with the potential effects of the Project. The EIS should evaluate the possible contributions of Superfund sites in the area of Great Falls in combination with the Project's potential effects on the Missouri. The EIS should evaluate the combined effect of the Project potentially contaminating the already contaminated Livingston rail. The EIS should consider the combined effects of truck traffic from new industrial activity along the Missouri River Corridor and truck traffic from the Project. Fugitive dust from train cars should be considered in combination with effects from the Project. Other companies may mine the area in the future. A mining district of multiple Projects should be evaluated. Cumulative effects to fisheries should be evaluated.

<b>Resource Topic</b>	<b>Comment Summary</b>
Financial Assurance	The EIS should disclose reclamation bonding costs and calculations of the reclamation and closure bond to demonstrate sufficient funds will be in place, including paying for long-term water treatment if needed. The EIS should also disclose the form(s) of financial assurance that will be required. The EIS should look at the effects on individuals' taxes resulting from inadequate bonding.
General Topics	The EIS should evaluate the effects and response to unforeseen events. The EIS should evaluate the probability of the Smith River being degraded and the indirect effects from that degradation. A Failure Modes Effects Analysis should be completed for the CTF. The EIS should analyze the potential impacts from CTF liner failure.
Geotechnical Stability	The effects of earthquakes and heavy rains on the mine should be studied in relation to geotechnical stability. The evaluation and certification of cement tailings facility stability should be disclosed in the EIS. A Failure Modes Effects Analysis should be completed.
Human Health and Safety	The EIS should evaluate significant environmental, health and safety impacts for Meagher County and for neighboring counties and communities as a result of the need to transport concentrated copper ore from the mine. The EIS should go beyond air and water standards and evaluate complex physical and mental health benefits of an outdoor recreation based economy. The EIS should evaluate the effects to ranchers and property owners who source their drinking water from the Smith River and who may breathe air emissions from the mine.
Land Use, Recreation, and Visual Resources	Property boundaries need to be checked to ensure mining activities do not encroach on public lands. The EIS should evaluate mitigation to maintain the scenery along Kings Hill Scenic Byway. Catastrophic spills from trucks on Rt. 89 should be evaluated. Potential transportation impacts require greater scrutiny. The Smith River must be carefully evaluated and specifically addressed. The EIS should evaluate the impacts to the recreation and agricultural industry.
MEPA Adequacy	The EIS timeline is not long enough to properly evaluate the Project. The scope of analyses needed cannot be accomplished in the allotted time. MEPA requires the evaluation of potential direct, indirect and cumulative effects. The MEPA process was started prematurely because the application is incomplete and without the involvement of federal agencies. An application cannot be considered complete until the proposer owns or controls all of the minerals it intends to mine in its application. In light of constitutional rights to clean and healthful environment, the EIS must explain how negative impacts of the Project on the biological, physical, social, economic, cultural, and aesthetic environment could maintain and improve the environment in the Smith River drainage. To meet the requirements of the state law, information in the EIS must be thorough and accurate and its analysis must be probing and critical.

<b>Resource Topic</b>	<b>Comment Summary</b>
Noise and Vibration	Noise impacts on people and wildlife in the vicinity of the Smith River should be evaluated. The EIS needs to evaluate noise impacts from the Little Moose Subdivision located 3 miles from the proposed mill. This was left out of noise assessments.
Project Description	The EIS should evaluate the effects of mining the entire ore body within the federal mining claims and assume open-pit mining techniques are used. The Lowry deposit is a part of the mine plan and should be included as a part of the Project. The intentions of Tintina in their financial statements should be used to define the Project, not the permit application. The EIS should evaluate the potential for mine expansion. The EIS should evaluate the expected life of the cement tailings facility liners and the degradation rates of cement and binding materials. The EIS should disclose safeguards to protect creeks and rivers and engineered redundancies for environmental protection. The EIS should disclose if the proposer intends to mine under Sheep Creek.
Permitting and Regulatory Considerations	The EIS must address how this mine will guarantee a clean and healthy environment consistent with the Montana Constitution. The permit application is incomplete because it does not consider the possible expansion of the mine. The EIS should disclose and evaluate the state mineral lease. There is potentially a need for a utility corridor across federal lands as part of this Project. Any development of this nature would require the issuance of a Special Use permit and environmental analysis and decision.
Socioeconomics	Population and urban growth and demographics in White Sulphur Springs as a result of mining should be studied. The DEQ must perform an economic impact assessment to determine the direct and indirect values provided by recreation on the Smith River. The EIS should evaluate cultural and intrinsic values that the Smith River provides. The EIS should evaluate the economic loss if the Smith River is impacted. The EIS should evaluate the impact on rural life by the introduction of the mine. The EIS should evaluate the effects of a boom and bust mining cycle on White Sulphur Springs including the costs of building infrastructure that would only be needed temporarily such as schools. The EIS should evaluate how many jobs will be provided to local residents. Environmental justice must be included in the EIS. Consider the loss of state tax dollars if the Smith River is impacted. The EIS should include a detailed economic analysis of Meagher County.
Vegetation	The EIS should evaluate the spread of weeds on lands adjacent to the Project site and adopt mitigation.

<b>Resource Topic</b>	<b>Comment Summary</b>
Water Resources	<p>The EIS should perform a rigorous review of potential long-term impacts to the Smith River and its watershed. The EIS needs to address the dynamic aquifer and springs. The EIS should evaluate downstream users of water for irrigation, drinking, fisheries and recreation. The Forest Service administers livestock allotments on the federal and private lands of Black Butte Section 26 and on the federal lands of the Moose Creek allotment in Section 18 to the north of the proposed Project. The EIS should evaluate federal water rights for livestock and wildlife. The EIS should evaluate the durability and longevity of proposed water treatment as well as contingencies. The EIS should evaluate surface and groundwater quantity and quality and the potential for acid mine drainage. The EIS should evaluate algae blooms in the Smith River.</p>
Wetlands	<p>The EIS should examine the impact of filled wetlands on cold-water storage during low water periods on Sheep Creek and the effects on the Smith River.</p>
Terrestrial Wildlife	<p>The EIS should evaluate how mining activities in conjunction with climate change, would affect the water table and floodplains of the Smith River and how that will affect long-term population persistence of wildlife that use riparian systems. The EIS should disclose the specifics of the wildlife baseline data collection efforts and discuss how the methodology effects observations. More recent mapping and avian data should be used because this information is too old to be reliable. The protocol for wildlife observations and use of direct evidence is not adequate for some species such as Canada lynx and wolverine. There was no effort made to inventory bats. Small mammals, raptor, amphibians, reptiles analyses is incomplete or their survey methodologies poorly explained. The EIS effects analysis should evaluate potential impacts to wildlife including migration patterns due to traffic, dust, noise, and increased human populations. The wildlife report is lacking several species known to be in the area such as Grizzly bear, lynx, wolverine, bald eagles, and peregrine falcons. The study area is too small and does not consider haul roads. The duration of wildlife monitoring is too short to sufficiently observe species.</p>

**Table 4: Scoping Comment Issue Summary**

<b>Comment Issue</b>	<b>Number of Unique Comments</b>	<b>Number of Form Letter Comments</b>
Air Quality	9	1
Alternatives	11	0
Aquatic Species	67	0
Cultural Resources	5	0
Cumulative Effects	37	1
Financial Assurance	62	3
General Topics	361	1
Geotechnical Stability	13	0
Hazardous Materials	10	0
Human Health and Safety	14	0
Land Use, Recreation, and Visual Resources	74	1
MEPA Adequacy	40	1
Noise and Vibration	3	0
Project Description	59	0
Permitting and Regulatory Considerations	18	0
Socioeconomics	214	3
Vegetation	3	0
Water Resources	375	8
Wetlands	1	0
Terrestrial Wildlife	32	0