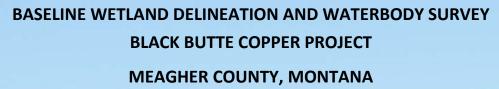
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Tintina Montana, Inc. July 2017



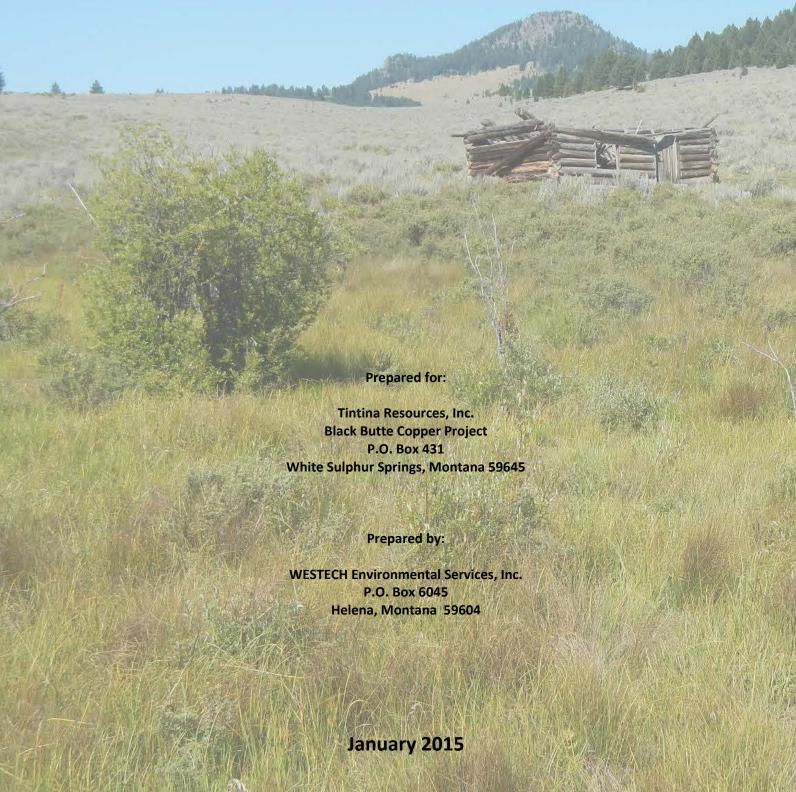


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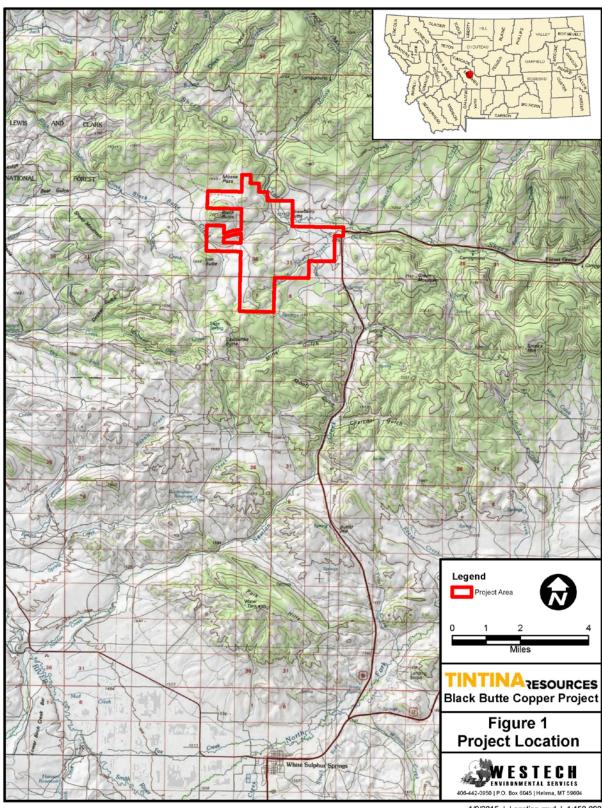
1.0 INTRODUCTION

Tintina Resources, Inc. intends to develop the Black Butte Copper Project (Project), a copper mine approximately 16 miles north of White Sulphur Springs, Montana in Meagher County. WESTECH Environmental Services, Inc. (WESTECH) delineated wetlands and surveyed waterbodies within the Project area to facilitate environmental review and permitting. Specifically, this inventory will be used to help prepare a 404 Application to the U.S. Army Corps of Engineers (USACE), including functional assessments and mitigation planning. The wetland delineation presented in this report and map will be reviewed by USACE, who will then provide jurisdictional determinations of Waters of the U.S. (WUS). Some of the wetlands discussed in this report may not be jurisdictional.

The Project area is shown on Figure 1, including all or portions of Sections 23-26 and 35-36 of T12N R6E; Sections 19, 29, 30, 31, and 32 of T12N R7E; and Section 1 of T11N R6E. The study area climate is continental, having cold winters and warm summers with a growing season extending from mid-May to late-September in most years (USDA 2014).

The wetland delineation and waterbody survey was conducted over 10 days between August 14 and September 4, 2014. Field delineation was completed by John Beaver, Ken Scow, Lisa Larsen, and Dean Culwell assisted by Dan Culwell, Dave Hagen, Drake Barton, and Dr. Steve Cooper,. Primary wetland investigators on each crew had a minimum of 20 years' experience delineating wetlands.

Data analysis and report preparation were conducted by John Beaver, Ken Scow, Jessica Allewalt, and Nancy Scow, with GIS analysis and graphic support by Dan Culwell.



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2.0 METHODS

Wetlands were identified and delineated using the routine on-site approach described in the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory 1987) and the final Regional Supplement to the Corps of Engineers Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE 2010) termed Regional Supplement in this report. Wetlands were classified according to the Cowardin classification system (Cowardin et al. 1979). Non-wetland waterbodies, such as streams, were classified according to flow regime (perennial, seasonal, etc.) and substrate (e.g., unconsolidated bottom, rock bottom, etc.) according to the Cowardin system (Cowardin et al. 1979).

Background and supplementary sources of data for the delineation were obtained from various environmental baseline studies conducted for the Project and publicy available data. Background Project specific data, including hydrology, wetlands, and soils data, are contained in the *Amendment to Exploration License 00710 Tintina Alaska Exploration, Inc. Exploration Decline for Underground Drilling and Bulk Sampling Black Butte Copper Project, Meagher County, Montana* (Tintina 2013). Publicly available resources included high-resolution aerial photographs (true color and IR), USGS topographic maps, National Wetland Inventory (NWI) mapping, and Natural Resource Conservation Service (NRCS) soils mapping.

Data from the sources cited above were used to assist in determining areas to be field-surveyed. All areas with potential wetlands or waterbodies were observed via pedestrian survey. Wetland and upland plots were sampled to identify wetland boundaries. In several cases, paired plots were used to distinguish mesic, non-wetland (i.e., upland sites) from wetlands. Once a boundary was determined, additional wetland plots were often completed to further characterize wetland vegetation, hydrology, and soils within an area. Numerous wetland plots were recorded in large, complex wetlands.

Wetland data were recorded on USACE wetland determination field forms (Appendix C), which serve as worksheets for determining the presence/absence of wetland hydrology, hydric soils, and hydrophytic vegetation. Supplementary wetlands determination data were recorded in field maps and notebooks. A total of 45 wetland plots and 50 upland plots (with 2 upland subplots for additional soil investigation) were completed. Photographs of each plot are included in Appendix D.

Once reliable indicators of a wetland boundary were determined from the upland and wetland plots, wetland boundaries were walked and mapped using sub-meter GPS units. Mapped wetlands and waterbodies were assigned unique labels based on ordinal stream names and were characterized according to the Cowardin classification system (Cowardin et al. 1979).

Wetland hydrology indicators, hydric soils indicators, and hydrophytic vegetation are used in combination to determine whether an area meets USACE criteria for wetlands (Enviornmental Laboratory 1987; USACE 2010). The next 4 sections discuss how the 3 wetland components were assessed in the field and how they were integrated to delineate wetlands. The fifth section discusses methods for identifying non-wetland waterbodies.

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2.1 Wetland Hydrology

The presence of wetland hydrology is inferred from hydrologic indicators of repeated, extended episodes of inundation or soil saturation (e.g., surface water, saturation, oxidized rhizospheres along living roots, drainage patterns, geomorphic position, and frost-heave hummocks) (USACE 2010). The Project's baseline hydrologic investigation (Tintina 2013) informed the Wetland/WUS delineation and indicated drainages and other areas where wetland hydrology may be present within the Project boundary. Field investigations included walking all areas that were determined to potentially support wetlands and noting the presence and extent of hydrologic indicators. In particular, shallow pits (at least 18 inches deep) excavated for hydric soil investigations at wetland plots and adjacent upland sites were also used to determine presence and depth to a shallow water table, depth to soil saturation, or oxidized rhizospheres along living roots.

2.2 Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (USDA Soil Conservation Service 1991). Generally, hydric soils are saturated, flooded, or ponded for one week or more during the period when soil temperatures are above biologic zero (41 degrees Fahrenheit or 5 degrees Celsius), as defined in USDA Soil Conservation Service (1975). These soils typically support hydrophytic vegetation and exhibit distinctive characteristics (e.g. redox features, gleying, histic epipedons) that result from repeated, extended periods of saturation; these characteristics tend to persist in the soils during both wet and dry periods. A recent compilation of hydric soils indicators is included in USDA Natural Resources Conservation Service (2005, 2006). Region-specific indicators are discussed in USACE (2010). As with wetland hydrology, supplemental resources (aerial imagery, NWI data, NRCS soils mapping, etc.) were reviewed to determine if hydric soils might be present.

Shallow pits at least 18 inches deep were dug at each wetland or upland plot to typify soils and determine if hydric indicators were present. Soil horizons and characteristics were described and any hydric soil indicators present were recorded according to criteria noted in the Regional Supplement (USACE 2010). In some cases, numerous pits were dug at a single wetland site if the wetland boundary was difficult to identify.

2.3 Hydrophytic Vegetation

The USACE wetlands delineation methodology uses a plant community approach to determine whether a site has hydrophytic vegetation, dominated by species that require or can tolerate prolonged inundation or soil saturation during the growing season (Environmental Laboratory 1987; USACE 2010). The USACE, in cooperation with the US Fish and Wildlife Service (USFWS), NRCS, and the Environmental Protection Agency (EPA), developed the "National Wetland Plant List", in which vascular plant species are assigned a wetland indicator status based on frequency of occurrence in wetlands (Lichvar 2012). Final status was determined by a National Panel and ten Regional Panels. The major indicator status

categories include obligate wetland species (OBL), facultative wetland species (FACW), facultative species (FAC), facultative upland species (FACU) and upland species (UPL), as briefly explained below:

Wetland Indicator Status	Definition*
Obligate Wetland (OBL)	Almost always occur in wetlands
Facultative Wetland (FACW)	Usually occur in wetlands, but may occur in non-wetlands
Facultative (FAC)	Occur in wetlands or non-wetlands
Facultative Upland (FACU)	Usually occur in non-wetlands, but may occur in wetlands
Obligate Upland (UPL)	Almost never occur in wetlands

^{*}More complete definitions are given by Lichvar et al. (2012).

The facultative categories include species that occur in both wetlands and non-wetlands to varying degrees. Any species not on the list is presumed to be an upland species. The National List is composed of ten region-specific subsets of the list; the Western Mountain, Valleys, and Coast Region list (Lichvar 2012) was used for the Project.

Vascular plant species were tallied on plots (typically 0.01-acre circular plots) at each sampling site by structural stratum (tree, sapling/shrub, herb, or woody vine). USACE formulas were used to determine dominant species in each stratum based on ocular estimates of percent cover for each species. An area has hydrophytic vegetation when more than 50 percent of the dominant species across all strata are OBL, FACW, and/or FAC species (the dominance test). In addition to the dominance test, a prevalence index was calculated for each sample site; this test is based on all species recorded, not just dominant species. Visual observations of other hydrophytic vegetation indicators such as plant morphological adaptations to prolonged wet conditions and presence of wetland non-vascular plants were also incorporated into hydrophytic vegetation determinations. A species list of plants encountered on wetland and upland inventory plots, as well as incidental species within the area, is included as Appendix B. Taxonomic nomenclature follows Lesica (2012).

2.4 Integration of Wetland Components

Generally, indicators of all three wetland components must be present for an area to be considered a wetland. The 1987 USACE manual states:

"Except in certain situations defined in this manual, evidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination."

Wetland determinations were made using methods and guidance in the 1987 USACE manual (Environmental Laboratory 1987) and the Regional Supplement (USACE 2010).

2.5 Waterbodies

Waterbodies (often termed "streams" by the USACE even if flowing water is not present) were searched for using guidance from the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE and EPA 2007) in conjunction with the definition of OHWM in §33 CFR 328.3(e) which states:

"The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Surveyors mapped non-wetland waterbodies using sub-meter GPS, or drew the waterbody onto high-quality aerial imagery where the feature was large enough to accurately map on a photo. Each waterbody was classified according to hydrologic regime (perennial, seasonal, intermittent, and ephemeral) and substrate per Cowardin *et al.* (1979).

3.0 RESULTS

3.1 Results by Wetland Component

The following discussion provides an overview for each of the three wetland components inventoried throughout the Project. A line list of wetlands and waterbodies by Cowardin type along with wetland acreage or stream length (feet) is provided in Appendix A according to standard USACE format. This list is organized by the Project-specific stream or tributary watershed (termed Local Waterway in Appendix A per USACE terminology) within which the wetland or stream occurs. Appendix B provides a species list compiled from all wetland and upland sample plots as well as incidental species observed during the survey. Wetland hydrology, hydric soils, and hydrophytic vegetation for each plot are shown on the wetland determination forms in Appendix C. Representative photographs from each plot (wetland or upland) are included in Appendix D. The locations of each wetland and upland plot, individual wetlands, and individual stream segments are shown on the Wetland Delineation and Waterbody Survey Map (3 sheets).

3.1.1 Wetland Hydrology

Wetland hydrology indicators within the Project are found adjacent to waterbodies, in subirrigated meadows, and at numerous springs and seeps. Flowing surface water was recorded in Sheep Creek, Little Sheep Creek, and Black Butte Creek and in many of the tributaries to these streams; flow volumes were typically lower in the tributaries than in the streams themselves. Standing surface water was noted at most wetlands throughout the Project, although in very limited quantities at many sites. Most wetlands also exhibited saturated soil within the wetland boundary. In many areas, particularly the large wetland complexes surrounding Sheep Creek and Little Sheep Creek, there appeared to be substantial intermixing between water that originates within the streams (either surface or subsurface) and groundwater discharge. This intermixing is common in headwaters areas (USACE 2014). Appendix A lists what surveyors qualitatively estimated to be the primary source of water for each wetland.

Some wetlands did not have any surface or subsurface water, or saturated soils. In these instances, wetland hydrology was inferred from secondary indicators. Important secondary indicators included frost-heave hummocks, geomorphic position, and drainage patterns. It should be noted that wetland field forms may not record surface water or saturation at the wetland plot as these plots were placed closer to the wetland margin in order to find the boundary between uplands and wetlands. Thus, wetland plots are not necessarily indicative of the wettest portion of a wetland site. Wetland hydrology indicators were often the key component in identifying wetland boundaries as most margins between wetlands and uplands contained FAC plant species that met the hydrophytic criteria for wetlands.

A summary of wetland primary and secondary indicators is provided below in Table 3.1-1.

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Table 3.1-1. Summary (Count) Primary and Secondary Hydrology Indicators – Black Butte Project

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	Primary Hydrology Indicators													
Surface Water (A1)	High Water Table (A2)	Saturation (A3)	Water Marks (B1)	Drift Deposits (B3)	Surface Soil Cracks (B6)	Inundation Visible on Aerial Imagery (B7)	Hydrogen Sulfide Odor (C1)	Oxidized Rhizospheres along Living Roots (C3)	Presence of Reduced Iron (C4)	Other (Explain in Remarks)				
11	11	25	3	2	1	2	2	2	2	1				
				Soci	ondary Hy	drology Indica	tors							

Secondary Hydrology Indicators Saturation Frost-Drainage FAC-Visible on Geomorphic Heave **Patterns** Neutral Aerial Position (D2) Hummocks Test (D5) (B10) Imagery (C9) (D7)

36

1

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3.1.2 Hydric Soils

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Hydric soils were found within the subirrigated zone around Sheep Creek, Little Sheep Creek, Black Butte Creek, the various tributaries to these waterbodies, and springs and seeps. In most of these locations the soils were finely textured clays and clay-loams. A few areas with high organic accumulation indicative of peat or muck were identified, primarily in the Little Sheep Creek wet meadow and at a quaking fen on a spring-fed tributary to Sheep Creek. Sandy soils were recorded in the Sheep Creek willow-dominated floodplain.

Large wetlands occur in areas of hydric soils within the Mooseflat-Foxgulch-Redfish complex soil unit or the Mannixlee, rarely-flooded-Clunton, frequently flooded-Meadowcreek complex soil unit (USDA 2014a). Large wetlands within the Little Sheep Creek wet meadow occur within the Bischoff-Monaberg complex which is mapped as predominately nonhydric (USDA 2014a). However, these wetlands clearly occurred on hydric soils indicating that either the USDA soils mapping unit was inaccurately drawn or that the wetland occurred within the hydric portion of the soil unit.

Five sites with substantial organic matter accumulation were recorded in the Project. Soil at plot LST1-W2 is fibric peat 12.5 inches thick, soil at SC-W5 is a sapric peat 12.5 inches thick, soil at SCT3-W1 is a sapric peat approximately 10 inches thick, soil at plot LS-W7 is sapric muck greater than 18 inches thick, and soil at plot SCT1-W1 is fibric peat greater than 20 inches thick. Soil from plot LST1-W2 was collected and sent to Energy Laboratories in Helena, Montana for physical analysis. Organic matter in this sample was 42.5 percent which is above the 35 percent threshold that qualifies the soil as a Histic epipedon. It is assumed that the other four organic soils would have over 35 percent organic matter as well. In addition, the soils at LS-W7 and SCT1-W1 have organic matter greater than 16 inches thick indicating that these soils are Histosols, i.e., organic matter soils that form in areas of continual saturation from groundwater or other sources. Soils at plots LS-W8, LS-W9, LS-W11, LST2-W1, and LST2-W2 also contained some organic matter but less than 8 inches thick, the minimum for a histic epipedon.

Histosols and histic epidedons are a key indicator of fens, a relatively rare wetland type in Montana.

Hydric soil indicators that were encountered during the delineation are listed below in Table 3.1-2.

Table 3.1-2. Summary (Count) of Hydric Soil Indicators – Black Butte Project

Histosol (A1)	Histic Epipedon (A2)	Hydrogen Sulfide (A4)	Depleted Below Dark Surface (A11)	Thick Dark Surface (A12)	Sandy Mucky Mineral (S1)	Sandy Redox (S5)	Stripped Matrix (S6)	Loamy Mucky Mineral (F1)	Depleted Matrix (F3)	Redox Dark Surface (F6)
2	8	2	12	19	1	1	0	2	13	3

3.1.3 Hydrophytic Vegetation

Hydrophytic vegetation within the Project area was divided almost equally between shrub wetlands (Palustrine Scrub-Shrub or PSS) and herbaceous wetlands (Palustrine Emergent or PEM). Forested wetlands (Palustrine Forested or PFO) accounted for a limited amount of total wetland area. Small, unvegetated potholes or ponds (Palustrine Unconsolidated Bottom or PUB) occurred in very limited areas. This last type is essentially an unvegetated wetland type as hydrophytic vegetation only occurs around the pothole or pond fringe. Table 3.1-3 lists the acreage of each wetland type according to its Cowardin classification as well as the percentage of each type within the Project area.

Table 3.1-3. Wetland Acreage and Percent by Cowardin Type – Black Butte Project

Cowardin Type ¹	Acres	Percent of Total Wetlands within Project Area
Palutrine Emergent (Herbaceous wetland)	152.61	46.41
Palustrine Scrub-Shrub (Willow dominated)	90.84	27.63
Palustrine Scrub-Shrub (Shrubby cinquefoil dominated)	82.84	25.20
Palustrine Forested (Englemann spruce dominated)	1.86	0.57
Palustrine Unconsolidated Bottom (Excavated pond)	0.46	0.14
Palustrine Unconsolidated Bottom (Natural depression)	0.15	0.05
TOTAL	328.76	100.00

¹ Cowardin et al. (1979)

Herbaceous wetlands within the Project area are typically dominated by beaked sedge (*Carex utriculata*), Nebraska sedge (*Carex nebrascensis*), clustered field-sedge (*Carex praegracilis*), Baltic rush (*Juncus balticus*), tufted hairgrass (*Deschampsia caespitosa*), redtop (*Agrostis stolonifera*), Kentucky bluegrass (*Poa pratensis*), and fowl bluegrass (*Poa palustris*). Redtop, Kentucky bluegrass, and fowl bluegrass are more prevalent near the transition between wetland and mesic meadow, while the sedges and tufted hairgrass are more prevalent within the wetland interior. Baltic rush occurs near the wetland transition and within the wetland interior.

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Shrub-dominated wetlands are comprised of two basic types: willow (*Salix sp.*) or shrubby cinquefoil (*Dasiphora fruticosa*). Within the willow-dominated wetlands, common willow species are Bebb willow (*Salix bebbiana*), blueberry willow (*Salix boothii*), and Drummond willow (*Salix drummondiana*). A complete list of willow species identified on the Project is provided in Appendix B. The understory within the willow-dominated type typically includes beaked sedge, Nebraska sedge, Baltic rush, woolly sedge (*Carex pellita*), bluejoint reedgrass (*Calamagrostis Canadensis*), and tufted hairgrass as well as Kentucky bluegrass and fowl bluegrass. Shrub wetlands dominated by shrubby cinquefoil typically have an understory similar to that within the willow-dominated wetlands but usually with higher amounts of Baltic rush, Kentucky bluegrass, and fowl bluegrass, and lower amounts of OBL or FACW sedges. Shrubby cinquefoil wetlands usually occur in the drier portions of a wetland while willow-dominated wetlands usually occur in the wetter portions of a wetland.

One small forested wetland was delineated on the Project. An Englemann spruce (*Picea engelmannii*) wetland (see W-SCT5-05 and 06) occurs at the base of a slope and along a small tributary to Little Sheep Creek. This wetland is a narrow stringer along the tributary with an overstory of Englemann spruce and an understory dominated by soft-leaved sedge (*Carex disperma*) and western twinflower (*Linnaea borealis*). Western twinflower is particularly common near the margin between wetland and upland.

As previously noted, hydrophytic vegetation is sparse at the Palustrine Unconsolidated Bottom depressional and excavated wetlands. Nebraska sedge typically forms a ring between the unvegetated bottom and surrounding upland vegetation at the natural depressions within the northwestern portion of the Project area (see W-BBT-11 for general location of these depressions). Typical herbaceous wetland vegetation, as previously described, surrounds the excavated pond (see W-LST5-02 for location of this pond).

3.2 Waterbodies

Several waterbodies (often termed 'streams' by the USACE even if perennially-flowing water is not present) occur within the Project boundary. Sheep Creek is the largest stream, by flow volume, within the Project while Little Sheep Creek is the longest stream within the Project. Very little stream length of Black Butte Creek occurs within the Project. Several tributaries to these streams occur within the Project. Most waterbodies within the Project area have an unconsolidated bottom with at least 25 percent streambed cover of particles smaller than stones and vegetative cover less than 30 percent. Sheep Creek has the highest amount of rock cover, but most stones are cobbles and gravels, not bedrock or boulders, placing this stream within the unconsolidated bottom type similar to most other waterbodies within the Project area. A single stream was classified as a rock bottom type. Stream segment S-BBT1-03 has a channel bed of large boulders or bedrock, water within this stream is often not

visible at the surface but could be heard running below the boulders. The lower portion of this drainage contains large cobbles but flowing water has moved subsurface and there is no clear hydrologic connection between the springs and stream channel in this area with Black Butte Creek.

3.3 Potential Waters of the U.S. (WUS)

Waters of the U.S. (WUS), as defined in 33 CFR Part 328, encompass all major streams and their tributary streams, ponds, and adjacent wetlands. Wetlands are a regulatory subset of WUS that require additional investigation, delineation, and avoidance/mitigation measures to comply with Section 404(b)(1) of the Clean Water Act. All WUS are regulated under Section 404 of the Clean Water Act if there is a "significant nexus" between a WUS and a traditional navigable water (TNW). WUS without a significant nexus are determined to be "isolated" and not "jurisdictional", and are not subject to regulation under Section 404 although they may be regulated under other federal or state regulations. The USACE determines if WUS are jurisdictional, typically following a site visit with the Project team.

The TNW nearest the Project is the Smith River, into which Sheep Creek flows. Both Little Sheep Creek and Black Butte Creek flow into Sheep Creek. Sheep Creek, Little Sheep Creek, and Black Butte Creek are relatively permanent waters (RPW) as are several of the tributaries to these streams. The hydrologic and ecologic connection between RPW and TNW are key considerations for the USACE when determining jurisidiction. Based on these factors, it is reasonable to assume that most of the wetlands within the Project area will be deemed jurisdictional by the USACE, with the possible exception of isolated spring and seeps where there is no more than an "insubstantial or speculative effect on the chemical, physical, and/or biological integrity of TNWs" (USACE 2007). The majority of these potetentially isolated springs and seeps occur in the northwestern corner of the Project. Appendix A provides a preliminary assessment of wetland and stream "water type" according to USACE terminology of RPW, non-RPW, etc. This assessment is meant to facilitate USACE review.

4.0 SUMMARY

A wetland delineaton and waterbody survey of the Black Butte Copper Project area identified extensive wetlands within the Project boundary. The largest wetlands occur within the subirrigated herbaceous meadows and willow- or shrubby cinquefoil-dominated wetlands surrounding Sheep Creek and Little Sheep Creek. Upland areas within these sites are highly mesic and the boundary between wetland and upland is often indistinct. Surveyors estimated that approximately 5 percent of the area within these wetlands is upland. Very small pockets of wetland also occur within the uplands at these sites, but were estimated to account for less than 1 percent of upland area and were too small or indistinct to delineate.

The majority of the remaining wetlands in tributaries to Sheep Creek and Little Sheep Creek, as well as the wetlands surrounding Black Butte Creek, are a mosaic of shrub and herbaceous vegetation types. The hydrology at most of these wetlands appears to be primarily groundwater driven. Small streams are present but are themselves a function of local springs and did not appear to have enough water within them to support the relatively large wetlands surrounding them. Based on observations during the delineation, it appeared that very few of the wetlands within the Project were specifically dependent on streamflow hydrology.

Overall, approximately half of the wetlands within the Project are dominated by various species of willow or shrubby cinquefoil. Wetlands dominated by sedges as well as native and non-native grasses comprise the majority of the remaining wetlands within the Project. One, small forested wetland dominated by Englemann spruce was delineated as were a series of small, depressional wetlands with minimal vegetation, and an excavated pond.

Wetlands with fen characteristics were recorded within 3 wetlands on the Project, W-SCT1-02, W-LS-11, and W-LST1-06. Water samples would have to be analyzed to determine if the water at these sites is chemically consistent with fen characteristics, but soil and vegetation characteristics suggest that these sites are likely fens or contain components that are fens. Fens are a relatively rare wetland type in Montana and can result in a high wetland functional rating. A wetland functional assessment report using the Montana Department of Transportation Wetland Functional Assessment Method (Berglund and McEldowney 2008) is provided under separate cover.

Table 4.0-1 summarizes wetland acreage within the Project; Table 4.0-2 summarizes stream length (feet) within the Project. Acreages and lengths are summarized by the local watershed within which the wetland or stream occurs. These watersheds are named and organized for the purpose of identifying and locating individual wetlands and stream segments within the Project area, and equate to the USACE terminology of "Local Waterways" in Appendix A. With the exception of Black Butte Creek and Sheep Creek, these watersheds do not relate to larger order watersheds.

Table 4.0-1. Summary of Wetland Acreage by Cowardin Type and Project Watershed – Black Butte Project

			Cowardin Ty	/pe²			
Project Watershed ¹	Palustrine Emergent Palustrin Shrub (Willow)		Palustrine Shrub Palustri (Shrubby Foreste		Palustrine Unconsolidated Bottom	Total by Project Watershed	
Black Butte Creek	10.69	7.86	1.61	0.00	0.00	20.16	
Black Butte Creek Total	10.69	7.86	1.61	0.00	0.00	20.16	
Black Butte Creek Tributary 1	2.06	0.00	0.00	0.00	0.14	2.20	
Black Butte Creek Tributary 2	0.02	0.00	0.00	0.00	0.00	0.02	
Black Butte Creek Tributary 3	0.71	0.15	0.00	0.00	0.00	0.86	
Black Butte Creek Tributaries Total	2.79	0.15	0.00	0.00	0.14	3.08	
Little Sheep Creek	51.03	5.16	62.95	0.00	0.09	119.23	
Little Sheep Creek Total	51.03	5.16	62.95	0.00	0.09	119.23	
Little Sheep Creek Tributary 1	8.57	3.33	3.13	0.00	0.00	15.03	
Little Sheep Creek Tributary 2	4.12	3.59	5.33	0.00	0.00	13.04	
Little Sheep Creek Tributary 3	0.00	0.00	0.35	0.00	0.00	0.35	
Little Sheep Creek Tributary 4	1.27	0.00	0.00	0.00	0.00	1.27	
Little Sheep Creek Tributary 5	10.62	0.47	0.00	0.00	0.38	11.47	
Little Sheep Creek Tributary 7	0.01	0.00	0.00	0.00	0.00	0.01	
Little Sheep Creek Tributaries Total	24.59	7.39	8.81	0.00	0.38	41.17	
Sheep Creek	52.77	53.87	0.00	0.00	0.00	106.64	
Sheep Creek Total	52.77	53.87	0.00	0.00	0.00	106.64	
Sheep Creek Tributary 1	4.32	0.81	1.87	0.00	0.00	7.00	
Sheep Creek Tributary 2	0.94	0.00	3.51	0.00	0.00	4.45	
Sheep Creek Tributary 3	1.17	1.04	0.94	0.00	0.00	3.15	
Sheep Creek Tributary 4	0.93	0.00	0.00	0.00	0.00	0.93	
Sheep Creek Tributary 5	3.38	14.56	3.15	1.86	0.00	22.95	
Sheep Creek Tributaries Total	10.74	16.41	9.47	1.86	0.00	38.48	
Project Total	152.61	90.84	82.84	1.86	0.61	328.76	

¹ Project watersheds are the specific, in many cases very small, watersheds within the Project area. With the exception of Sheep Creek and Black Butte Creek these watersheds do not correspond to larger order watersheds. In some cases, (e.g., Little Sheep Creek Tributary 6) a tributary is not listed in sequential order indicating that there were no wetlands, only streams, within that tributary.

² See Cowardin *et al.* (1979) for further discussion. Note that emergent wetlands are dominated by herbaceous species such as sedges and grasses. Unconsolidated bottom wetlands are those with a mud/silt bottom with limited vegetation.

Table 4.0-2. Summary of Stream Length (feet) by Cowardin Type and Project Watershed – Black Butte
Project

Project		Co	wardin Ty	pe²		Total by
Project Watershed ¹	R3UB	R3RB	R3SB	R3AB	R4SB	Project Watershed
Black Butte Creek	3,256	0	0	0	0	3,256
Black Butte Creek Total	3,256	0	0	0	0	3,256
Black Butte Creek Tributary 1	0	3,226	0	0	852	4,078
Black Butte Creek Tributaries Total	0	3,226	0	0	852	4,078
Little Sheep Creek	29,606	0	0	0	0	29,606
Little Sheep Creek Total	29,606	0	0	0	0	29,606
Little Sheep Creek Tributary 1	4,862	0	0	0	2,903	7,765
Little Sheep Creek Tributary 2	713	0	0	0	0	713
Little Sheep Creek Tributary 4	0	0	0	0	2,307	2,307
Little Sheep Creek Tributary 5	1,215	0	0	0	0	1,215
Little Sheep Creek Tributary 6	709	0	0	0	0	709
Little Sheep Creek Tributary 7	0	0	0	0	1,373	1,373
Little Sheep Creek Tributaries Total	7,499	0	0	0	6,583	14,082
Sheep Creek	6,663	0	0	0	0	6,663
Sheep Creek Total	6,663	0	0	0	0	6,663
Sheep Creek Overflow	0	0	0	0	9,446	9,446
Sheep Creek Overflow Total	0	0	0	0	9,446	9,446
Sheep Creek Overflow Tributaries	710	0	0	0	0	710
Sheep Creek Overflow Trib. Total	710	0	0	0	0	710
Sheep Creek Tributary 1	3,699	0	0	401	0	4,100
Sheep Creek Tributary 2	889	0	0	0	0	889
Sheep Creek Tributary 5	11,451	0	0	0	2,150	13,601
Sheep Creek Tributaries Total	16,039	0	0	401	2,150	18,590
Project Total	63,773	3,226	0	401	19,031	86,431

¹ Project watersheds are the specific, in many cases very small, watersheds within the Project area. With the exception of Sheep Creek and Black Butte Creek these watersheds do not correspond to larger order watersheds. In some cases, (e.g., Little Sheep Creek Tributary 3) a tributary is not listed in sequential order indicating that there were no streams, only wetlands, within that tributary.

² See Cowardin *et al.* (1979) for further discussion. Note: R = Riverine; 3 = Upper Perennial; 4 = Intermittent; UB = Unconsolidated Bottom; RB = Rock Bottom; SB = Streambed; and AB = Aquatic Bed.

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Appendix A

Line Item of Wetlands and Streams, Black Butte Project

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
W-BB-01	PSS1E	Riverine	Area	0.39	Acre	RPWWD	46.76774	-110.94902	Black Butte Creek
W-BB-02	PEM1E	Slope	Area	0.96	Acre	RPWWD	46.76772	-110.94856	Black Butte Creek
W-BB-03	PSS1E	Slope	Area	0.50	Acre	RPWWD	46.76755	-110.94825	Black Butte Creek
W-BB-04	PEM1B	Slope	Area	0.28	Acre	RPWWD	46.76703	-110.94877	Black Butte Creek
W-BB-05	PSS1E	Riverine	Area	6.86	Acre	RPWWD	46.76514	-110.94522	Black Butte Creek
W-BB-06	PSS6B	Slope	Area	0.50	Acre	RPWWD	46.76655	-110.94825	Black Butte Creek
W-BB-07	PSS6B	Slope	Area	0.48	Acre	RPWWD	46.76572	-110.94659	Black Butte Creek
W-BB-08	PSS6B	Slope	Area	0.63	Acre	RPWWD	46.76525	-110.94470	Black Butte Creek
W-BB-09	PEM1B	Slope	Area	0.22	Acre	RPWWD	46.76498	-110.94460	Black Butte Creek
W-BB-10	PEM1B	Slope	Area	9.23	Acre	RPWWD	46.76344	-110.94093	Black Butte Creek
W-BB-11	PSS1E	Slope	Area	0.12	Acre	RPWWD	46.76294	-110.94186	Black Butte Creek
W-BBT1-01	PEM1E	Riverine	Area	0.52	Acre	RPWWD	46.78753	-110.94199	Black Butte Creek tributary
W-BBT1-02	PEM1E	Riverine	Area	1.03	Acre	RPWWD	46.78733	-110.93646	Black Butte Creek tributary
W-BBT1-03	PEM1E	Slope	Area	0.25	Acre	RPWWN	46.78783	-110.93708	Black Butte Creek tributary
W-BBT1-04	PEM1B	Slope	Area	0.03	Acre	RPWWN	46.78725	-110.93410	Black Butte Creek tributary
W-BBT1-05	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.78736	-110.93418	Black Butte Creek tributary
W-BBT1-06	PEM1B	Slope	Area	0.06	Acre	RPWWN	46.78669	-110.93380	Black Butte Creek tributary
W-BBT1-07	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.78652	-110.93350	Black Butte Creek tributary
W-BBT1-08	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78646	-110.93340	Black Butte Creek tributary
W-BBT1-09	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78659	-110.93328	Black Butte Creek tributary
W-BBT1-10	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78635	-110.93326	Black Butte Creek tributary
W-BBT1-11	PUB3A	Depressional	Area	0.04	Acre	RPWWN	46.78611	-110.93285	Black Butte Creek tributary
W-BBT1-12	PUB3A	Depressional	Area	0.02	Acre	RPWWN	46.78585	-110.93254	Black Butte Creek tributary
W-BBT1-13	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.78564	-110.93223	Black Butte Creek tributary
W-BBT1-14	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.78553	-110.93216	Black Butte Creek tributary
W-BBT1-15	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78527	-110.93166	Black Butte Creek tributary
W-BBT1-16	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.78490	-110.93130	Black Butte Creek tributary
W-BBT1-17	PEM1B	Slope	Area	0.11	Acre	RPWWN	46.78468	-110.93097	Black Butte Creek tributary
W-BBT1-18	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78696	-110.93262	Black Butte Creek tributary
W-BBT1-19	PUB3A	Depressional	Area	0.01	Acre	RPWWN	46.78637	-110.93239	Black Butte Creek tributary
W-BBT1-20	PUB3A	Depressional	Area	0.01	Acre	RPWWN	46.78661	-110.93221	Black Butte Creek tributary
W-BBT1-21	PUB3A	Depressional	Area	0.00	Acre	RPWWN	46.78666	-110.93214	Black Butte Creek tributary
W-BBT1-22	PUB3A	Depressional	Area	0.00	Acre	RPWWN	46.78649	-110.93202	Black Butte Creek tributary
W-BBT1-23	PUB3A	Depressional	Area	0.00	Acre	RPWWN	46.78643	-110.93139	Black Butte Creek tributary
W-BBT1-24	PEM1B	Slope	Area	0.00	Acre	RPWWN	46.78657	-110.93143	Black Butte Creek tributary
W-BBT1-25	PUB3A	Depressional	Area	0.02	Acre	RPWWN	46.78656	-110.93128	Black Butte Creek tributary
W-BBT1-26	PUB3A	Depressional	Area	0.01	Acre	RPWWN	46.78680	-110.93086	Black Butte Creek tributary
W-BBT1-27	PUB3A	Depressional	Area	0.03	Acre	ISOLATE	46.78793	-110.93097	Black Butte Creek tributary
W-BBT1-28	PUB3A	Depressional	Area	0.01	Acre	ISOLATE	46.78898	-110.92633	Black Butte Creek tributary

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
W-BBT2-01	PEM1K	Slope	Area	0.02	Acre	ISOLATE	46.75207	-110.92740	Black Butte Creek tributary
W-BBT3-01	PSS1B	Slope	Area	0.11	Acre	NRPWW	46.74184	-110.92787	Black Butte Creek tributary
W-BBT3-02	PEM1B	Slope	Area	0.67	Acre	NRPWW	46.74157	-110.92689	Black Butte Creek tributary
W-BBT3-03	PSS1B	Slope	Area	0.04	Acre	NRPWW	46.74112	-110.92560	Black Butte Creek tributary
W-BBT3-04	PEM1A	Slope	Area	0.04	Acre	NRPWW	46.74078	-110.92394	Black Butte Creek tributary
W-LS-01	PSS1B	Riverine	Area	0.58	Acre	RPWWD	46.77480	-110.89803	Little Sheep Creek
W-LS-02	PSS1E	Riverine	Area	4.23	Acre	RPWWD	46.77337	-110.89577	Little Sheep Creek
W-LS-03	PEM1E	Riverine	Area	0.48	Acre	RPWWD	46.77210	-110.89268	Little Sheep Creek
W-LS-04	PUB3A	Slope	Area	0.01	Acre	RPWWN	46.77166	-110.88813	Little Sheep Creek
W-LS-05	PEM1E	Slope	Area	18.05	Acre	RPWWD	46.77092	-110.88239	Little Sheep Creek
W-LS-06	PUB3Ax	Slope	Area	0.08	Acre	RPWWN	46.77311	-110.88371	Little Sheep Creek
W-LS-07	PSS6B	Slope	Area	0.71	Acre	RPWWD	46.77108	-110.88349	Little Sheep Creek
W-LS-08	PSS6B	Slope	Area	1.26	Acre	RPWWD	46.77054	-110.88288	Little Sheep Creek
W-LS-09	PSS6B	Slope	Area	0.91	Acre	RPWWD	46.77042	-110.88067	Little Sheep Creek
W-LS-10	PSS6B	Slope	Area	0.22	Acre	RPWWD	46.76991	-110.88112	Little Sheep Creek
W-LS-11	PEM1E	Slope	Area	22.96	Acre	RPWWD	46.76379	-110.87466	Little Sheep Creek
W-LS-12	PSS6B	Slope	Area	0.58	Acre	RPWWD	46.76603	-110.87334	Little Sheep Creek
W-LS-13	PEM1B	Slope	Area	0.54	Acre	RPWWD	46.76659	-110.87157	Little Sheep Creek
W-LS-14	PSS6B	Slope	Area	3.77	Acre	RPWWD	46.76586	-110.87172	Little Sheep Creek
W-LS-15	PSS6B	Slope	Area	1.61	Acre	RPWWD	46.76534	-110.87293	Little Sheep Creek
W-LS-16	PSS6B	Slope	Area	12.21	Acre	RPWWD	46.76337	-110.87490	Little Sheep Creek
W-LS-17	PSS6B	Slope	Area	5.13	Acre	RPWWD	46.76243	-110.87662	Little Sheep Creek
W-LS-18	PSS6B	Slope	Area	34.25	Acre	RPWWD	46.76043	-110.88304	Little Sheep Creek
W-LS-19	PSS1E	Riverine	Area	0.35	Acre	RPWWD	46.76161	-110.87879	Little Sheep Creek
W-LS-20	PEM1E	Riverine	Area	0.52	Acre	RPWWD	46.76123	-110.87967	Little Sheep Creek
W-LS-21	PEM1Eh	Riverine	Area	3.80	Acre	RPWWD	46.75715	-110.89164	Little Sheep Creek
W-LS-22	PSS6B	Riverine	Area	2.32	Acre	RPWWD	46.75503	-110.89410	Little Sheep Creek
W-LS-23	PEM1B	Riverine	Area	2.94	Acre	RPWWD	46.75289	-110.89675	Little Sheep Creek
W-LS-24	PEM1B	Riverine	Area	1.76	Acre	RPWWD	46.74216	-110.90900	Little Sheep Creek
W-LST1-01	PEM1B	Slope	Area	0.05	Acre	ISOLATE	46.77113	-110.90083	Little Sheep Creek tributary
W-LST1-02	PSS6B	Riverine	Area	0.42	Acre	RPWWD	46.77051	-110.89357	Little Sheep Creek tributary
W-LST1-03	PSS1B	Riverine	Area	0.72	Acre	RPWWD	46.77050	-110.89356	Little Sheep Creek tributary
W-LST1-04	PSS6B	Riverine	Area	0.26	Acre	RPWWD	46.77054	-110.89367	Little Sheep Creek tributary
W-LST1-05	PSS6B	Riverine	Area	1.43	Acre	RPWWD	46.76947	-110.89557	Little Sheep Creek tributary
W-LST1-06	PEM1B	Riverine	Area	4.55	Acre	RPWWD	46.76761	-110.90073	Little Sheep Creek tributary
W-LST1-07	PSS1B	Slope	Area	0.03	Acre	RPWWN	46.76611	-110.90178	Little Sheep Creek tributary
W-LST1-08	PSS1B	Slope	Area	2.58	Acre	RPWWD	46.76612	-110.90418	Little Sheep Creek tributary
W-LST1-09	PEM1B	Slope	Area	3.26	Acre	RPWWD	46.76493	-110.90677	Little Sheep Creek tributary

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
W-LST1-10	PSS6B	Slope	Area	0.46	Acre	RPWWD	46.76503	-110.90590	Little Sheep Creek tributary
W-LST1-11	PSS6B	Slope	Area	0.56	Acre	RPWWD	46.76452	-110.90712	Little Sheep Creek tributary
W-LST1-12	PEM1B	Slope	Area	0.16	Acre	NRPWW	46.76437	-110.91502	Little Sheep Creek tributary
W-LST1-13	PEM1B	Slope	Area	0.27	Acre	NRPWW	46.76340	-110.91434	Little Sheep Creek tributary
W-LST1-14	PEM1B	Slope	Area	0.05	Acre	NRPWW	46.76255	-110.91087	Little Sheep Creek tributary
W-LST1-15	PEM1A	Slope	Area	0.02	Acre	NRPWW	46.76095	-110.91289	Little Sheep Creek tributary
W-LST1-16	PEM1A	Slope	Area	0.14	Acre	NRPWW	46.75986	-110.91460	Little Sheep Creek tributary
W-LST1-17	PEM1A	Slope	Area	0.07	Acre	NRPWW	46.75854	-110.91807	Little Sheep Creek tributary
W-LST2-01	PEM1E	Slope	Area	0.91	Acre	RPWWD	46.76753	-110.87552	Little Sheep Creek tributary
W-LST2-02	PSS6B	Slope	Area	0.63	Acre	RPWWD	46.76734	-110.87491	Little Sheep Creek tributary
W-LST2-03	PEM1A	Slope	Area	0.00	Acre	RPWWN	46.76638	-110.87655	Little Sheep Creek tributary
W-LST2-04	PEM1A	Slope	Area	0.00	Acre	RPWWN	46.76632	-110.87679	Little Sheep Creek tributary
W-LST2-05	PEM1B	Slope	Area	0.60	Acre	RPWWN	46.76595	-110.88054	Little Sheep Creek tributary
W-LST2-06	PSS6B	Slope	Area	4.11	Acre	RPWWN	46.76437	-110.88650	Little Sheep Creek tributary
W-LST2-07	PEM1E	Slope	Area	0.60	Acre	RPWWN	46.76538	-110.88391	Little Sheep Creek tributary
W-LST2-08	PEM1B	Slope	Area	0.44	Acre	RPWWN	46.76439	-110.88644	Little Sheep Creek tributary
W-LST2-09	PEM1B	Slope	Area	0.58	Acre	RPWWN	46.76357	-110.88890	Little Sheep Creek tributary
W-LST2-10	PSS1B	Slope	Area	3.13	Acre	RPWWN	46.76236	-110.89236	Little Sheep Creek tributary
W-LST2-11	PSS6B	Slope	Area	0.59	Acre	RPWWN	46.76263	-110.89208	Little Sheep Creek tributary
W-LST2-12	PEM1B	Slope	Area	0.49	Acre	RPWWN	46.76215	-110.89460	Little Sheep Creek tributary
W-LST2-13	PEM1B	Slope	Area	0.30	Acre	RPWWN	46.76166	-110.89769	Little Sheep Creek tributary
W-LST2-14	PSS1B	Slope	Area	0.47	Acre	RPWWN	46.76146	-110.89973	Little Sheep Creek tributary
W-LST2-15	PEM1B	Slope	Area	0.18	Acre	RPWWN	46.76107	-110.90120	Little Sheep Creek tributary
W-LST3-01	PSS6A	Slope	Area	0.15	Acre	RPWWN	46.75550	-110.89556	Little Sheep Creek tributary
W-LST3-02	PSS6B	Slope	Area	0.20	Acre	RPWWN	46.75441	-110.89994	Little Sheep Creek tributary
W-LST4-01	PEM1B	Riverine	Area	0.67	Acre	NRPWW	46.74696	-110.90949	Little Sheep Creek tributary
W-LST4-02	PEM1B	Riverine	Area	0.39	Acre	NRPWW	46.74883	-110.90982	Little Sheep Creek tributary
W-LST4-03	PEM1A	Riverine	Area	0.02	Acre	NRPWW	46.74939	-110.91436	Little Sheep Creek tributary
W-LST4-04	PEM1A	Riverine	Area	0.01	Acre	NRPWW	46.74941	-110.91527	Little Sheep Creek tributary
W-LST4-05	PEM1A	Riverine	Area	0.19	Acre	NRPWW	46.74979	-110.91764	Little Sheep Creek tributary
W-LST5-01	PEM1B	Slope	Area	10.62	Acre	RPWWD	46.77292	-110.88971	Little Sheep Creek tributary
W-LST5-02	PUB3/1Gx	Slope	Area	0.38	Acre	RPWWD	46.77314	-110.89084	Little Sheep Creek tributary
W-LST5-03	PSS1B	Slope	Area	0.47	Acre	RPWWD	46.77347	-110.89031	Little Sheep Creek tributary
W-LST7-1	PEM1B	Slope	Area	0.01	Acre	RPWWN	46.76098	-110.87373	Little Sheep Creek tributary
W-SC-01	PSS1C	Riverine	Area	0.08	Acre	RPWWD	46.78796	-110.91234	Sheep Creek
W-SC-02	PSS1C	Riverine	Area	0.14	Acre	RPWWD	46.78786	-110.91248	Sheep Creek
W-SC-03	PSS1E	Slope	Area	14.29	Acre	RPWWD	46.78321	-110.90752	Sheep Creek
W-SC-04	PSS1E	Riverine	Area	0.04	Acre	RPWWD	46.78451	-110.90645	Sheep Creek

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
W-SC-05	PSS1E	Riverine	Area	0.04	Acre	RPWWD	46.78444	-110.90610	Sheep Creek
W-SC-06	PSS1E	Slope	Area	14.14	Acre	RPWWD	46.78285	-110.90383	Sheep Creek
W-SC-07	PEM1E	Slope	Area	0.40	Acre	RPWWD	46.78390	-110.90405	Sheep Creek
W-SC-08	PEM1B	Slope	Area	1.08	Acre	RPWWD	46.78212	-110.90627	Sheep Creek
W-SC-09	PEM1B	Riverine	Area	0.36	Acre	RPWWD	46.78168	-110.90551	Sheep Creek
W-SC-10	PSS1E	Riverine	Area	0.08	Acre	RPWWD	46.78096	-110.90361	Sheep Creek
W-SC-11	PEM1B	Riverine	Area	6.46	Acre	RPWWD	46.77929	-110.90371	Sheep Creek
W-SC-12	PEM1B	Riverine	Area	1.99	Acre	RPWWD	46.78001	-110.90245	Sheep Creek
W-SC-13	PSS1E	Riverine	Area	0.30	Acre	RPWWD	46.78034	-110.90203	Sheep Creek
W-SC-14	PSS1E	Riverine	Area	0.11	Acre	RPWWD	46.78005	-110.90164	Sheep Creek
W-SC-15	PSS1B	Riverine	Area	7.01	Acre	RPWWD	46.77917	-110.90375	Sheep Creek
W-SC-16	PEM1B	Slope	Area	30.06	Acre	RPWWD	46.77840	-110.90508	Sheep Creek
W-SC-17	PSS1B	Riverine	Area	0.23	Acre	RPWWD	46.77853	-110.90665	Sheep Creek
W-SC-18	PEM1B	Riverine	Area	0.17	Acre	RPWWD	46.77816	-110.90463	Sheep Creek
W-SC-19	PEM1B	Riverine	Area	0.24	Acre	RPWWD	46.77829	-110.90344	Sheep Creek
W-SC-20	PEM1B	Riverine	Area	0.50	Acre	RPWWD	46.77857	-110.90218	Sheep Creek
W-SC-21	PEM1B	Riverine	Area	0.99	Acre	RPWWD	46.77764	-110.90125	Sheep Creek
W-SC-22	PEM1B	Riverine	Area	0.20	Acre	RPWWD	46.77871	-110.90108	Sheep Creek
W-SC-23	PSS1E	Riverine	Area	0.10	Acre	RPWWD	46.77773	-110.90040	Sheep Creek
W-SC-24	PEM1B	Riverine	Area	0.15	Acre	RPWWD	46.77733	-110.90084	Sheep Creek
W-SC-25	PSS1E	Riverine	Area	0.74	Acre	RPWWD	46.77711	-110.89998	Sheep Creek
W-SC-26	PEM1B	Riverine	Area	0.74	Acre	RPWWD	46.77814	-110.90032	Sheep Creek
W-SC-27	PSS1B	Slope	Area	0.50	Acre	RPWWD	46.77566	-110.90306	Sheep Creek
W-SC-28	PSS1B	Slope	Area	0.07	Acre	RPWWN	46.77553	-110.90331	Sheep Creek
W-SC-29	PSS1E	Riverine	Area	7.11	Acre	RPWWD	46.77663	-110.89824	Sheep Creek
W-SC-30	PSS1E	Slope	Area	0.63	Acre	RPWWD	46.77763	-110.89786	Sheep Creek
W-SC-31	PEM1B	Riverine	Area	4.57	Acre	RPWWD	46.77568	-110.89898	Sheep Creek
W-SC-32	PSS1E	Riverine	Area	0.39	Acre	RPWWD	46.77698	-110.89688	Sheep Creek
W-SC-33	PEM1B	Slope	Area	1.40	Acre	RPWWD	46.77549	-110.89662	Sheep Creek
W-SC-34	PSS1B	Riverine	Area	1.69	Acre	RPWWD	46.77328	-110.86874	Sheep Creek
W-SC-35	PEM1E	Slope	Area	2.02	Acre	RPWWD	46.77311	-110.86744	Sheep Creek
W-SC-36	PSS1E	Slope	Area	0.38	Acre	RPWWD	46.77358	-110.86774	Sheep Creek
W-SC-37	PSS1E	Slope	Area	5.44	Acre	RPWWD	46.77307	-110.86590	Sheep Creek
W-SC-38	PEM1E	Slope	Area	0.37	Acre	RPWWD	46.77320	-110.86656	Sheep Creek
W-SC-39	PEM1E	Slope	Area	0.49	Acre	RPWWD	46.77268	-110.86575	Sheep Creek
W-SC-40	PEM1E	Slope	Area	0.19	Acre	RPWWD	46.77234	-110.86529	Sheep Creek
W-SC-41	PEM1E	Riverine	Area	0.06	Acre	RPWWD	46.77371	-110.86477	Sheep Creek
W-SC-42	PSS1E	Riverine	Area	0.38	Acre	RPWWD	46.77333	-110.86509	Sheep Creek

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
W-SC-43	PEM1E	Riverine	Area	0.32	Acre	RPWWD	46.77326	-110.86518	Sheep Creek
W-SCT1-01	PSS6B	Slope	Area	0.29	Acre	RPWWD	46.78374	-110.90152	Sheep Creek tributary
W-SCT1-02	PEM1E	Slope	Area	0.32	Acre	RPWWD	46.78387	-110.90080	Sheep Creek tributary
W-SCT1-03	PSS6B	Slope	Area	0.54	Acre	RPWWD	46.78401	-110.89991	Sheep Creek tributary
W-SCT1-04	PSS6B	Slope	Area	0.39	Acre	RPWWD	46.78408	-110.89886	Sheep Creek tributary
W-SCT1-05	PSS1B	Slope	Area	0.81	Acre	RPWWD	46.78415	-110.89828	Sheep Creek tributary
W-SCT1-06	PEM1B	Slope	Area	4.00	Acre	RPWWD	46.78420	-110.89955	Sheep Creek tributary
W-SCT1-07	PSS6B	Slope	Area	0.66	Acre	RPWWD	46.78443	-110.89732	Sheep Creek tributary
W-SCT2-01	PSS6E	Slope	Area	3.51	Acre	RPWWD	46.77783	-110.89691	Sheep Creek tributary
W-SCT2-02	PEM1B	Slope	Area	0.94	Acre	RPWWD	46.77909	-110.89653	Sheep Creek tributary
W-SCT3-01	PSS6B	Slope	Area	0.94	Acre	NRPWW	46.77355	-110.87238	Sheep Creek tributary
W-SCT3-02	PEM1B	Slope	Area	0.42	Acre	NRPWW	46.77351	-110.87158	Sheep Creek tributary
W-SCT3-03	PSS1B	Slope	Area	1.04	Acre	NRPWW	46.77299	-110.87073	Sheep Creek tributary
W-SCT3-04	PEM1B	Slope	Area	0.30	Acre	NRPWW	46.77361	-110.87068	Sheep Creek tributary
W-SCT3-05	PEM1B	Slope	Area	0.46	Acre	NRPWW	46.77112	-110.86930	Sheep Creek tributary
W-SCT4-01	PEM1B	Slope	Area	0.89	Acre	ISOLATE	46.78796	-110.91890	Sheep Creek tributary
W-SCT4-02	PEM1B	Slope	Area	0.03	Acre	ISOLATE	46.78825	-110.92006	Sheep Creek tributary
W-SCT4-03	PEM1B	Slope	Area	0.00	Acre	ISOLATE	46.78830	-110.92029	Sheep Creek tributary
W-SCT5-01	PEM1B	Riverine	Area	0.35	Acre	RPWWD	46.77842	-110.90893	Sheep Creek tributary
W-SCT5-02	PSS1B	Riverine	Area	0.24	Acre	NRPWW	46.77931	-110.91263	Sheep Creek tributary
W-SCT5-03	PEM1B	Riverine	Area	0.22	Acre	NRPWW	46.77889	-110.91147	Sheep Creek tributary
W-SCT5-04	PEM1B	Riverine	Area	0.66	Acre	RPWWD	46.78130	-110.91649	Sheep Creek tributary
W-SCT5-05	PFO4B	Riverine	Area	0.08	Acre	RPWWD	46.78228	-110.91740	Sheep Creek tributary
W-SCT5-06	PFO4B	Slope	Area	1.78	Acre	RPWWD	46.78230	-110.92006	Sheep Creek tributary
W-SCT5-07	PEM1B	Slope	Area	1.13	Acre	RPWWD	46.78161	-110.92370	Sheep Creek tributary
W-SCT5-08	PEM1B	Slope	Area	0.02	Acre	NRPWW	46.78066	-110.92785	Sheep Creek tributary
W-SCT5-09	PEM1B	Slope	Area	0.58	Acre	NRPWW	46.78099	-110.92969	Sheep Creek tributary
W-SCT5-10	PEM1B	Slope	Area	0.03	Acre	NRPWW	46.78156	-110.92942	Sheep Creek tributary
W-SCT5-11	PSS1C	Slope	Area	8.29	Acre	RPWWD	46.77665	-110.91434	Sheep Creek tributary
W-SCT5-12	PSS1C	Slope	Area	6.03	Acre	RPWWD	46.77166	-110.91958	Sheep Creek tributary
W-SCT5-13	PSS6C	Slope	Area	3.15	Acre	RPWWD	46.77113	-110.91905	Sheep Creek tributary
W-SCT5-14	PEM1C	Slope	Area	0.40	Acre	RPWWD	46.77080	-110.92129	Sheep Creek tributary
S-BB-01	R3UB3/1	Riverine	Length	403	Foot	RPW	46.76775	-110.94879	Black Butte Creek
S-BB-02	R3UB3/1	Riverine	Length	2852	Foot	RPW	46.76510	-110.94500	Black Butte Creek
S-BBT1-01	R4SB2	Riverine	Length	223	Foot	NRPW	46.78658	-110.94873	Black Butte Creek tributary
S-BBT1-02	R4SB2	Riverine	Length	629	Foot	NRPW	46.78692	-110.94713	Black Butte Creek tributary
S-BBT1-03	R3RB2	Riverine	Length	3226	Foot	RPW	46.78763	-110.93999	Black Butte Creek tributary
S-LS-01	R3UB3	Riverine	Length	1887	Foot	RPW	46.77559	-110.89849	Little Sheep Creek

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
S-LS-02	R3UB3	Riverine	Length	631	Foot	RPW	46.77420	-110.89712	Little Sheep Creek
S-LS-03	R3UB3	Riverine	Length	1826	Foot	RPW	46.77253	-110.89387	Little Sheep Creek
S-LS-04	R3UB3	Riverine	Length	8109	Foot	RPW	46.77085	-110.88323	Little Sheep Creek
S-LS-05	R3UB3	Riverine	Length	13710	Foot	RPW	46.76068	-110.88220	Little Sheep Creek
S-LS-06	R3UB1/3	Riverine	Length	3443	Foot	RPW	46.74337	-110.90766	Little Sheep Creek
S-LST1-01	R3UB3	Riverine	Length	4862	Foot	RPW	46.76901	-110.89714	Little Sheep Creek tributary
S-LST1-02	R4SB5	Riverine	Length	98	Foot	NRPW	46.76482	-110.90722	Little Sheep Creek tributary
S-LST1-03	R4SB5	Riverine	Length	420	Foot	NRPW	46.76315	-110.91058	Little Sheep Creek tributary
S-LST1-04	R4SB5	Riverine	Length	1102	Foot	NRPW	46.76144	-110.91223	Little Sheep Creek tributary
S-LST1-05	R4SB5	Riverine	Length	588	Foot	NRPW	46.75790	-110.91986	Little Sheep Creek tributary
S-LST1-06	R4SB5	Riverine	Length	357	Foot	NRPW	46.76382	-110.91338	Little Sheep Creek tributary
S-LST1-07	R4SB5	Riverine	Length	339	Foot	NRPW	46.76416	-110.91383	Little Sheep Creek tributary
S-LST2-01	R3UB3	Riverine	Length	44	Foot	RPW	46.76216	-110.89520	Little Sheep Creek tributary
S-LST2-02	R3UB3	Riverine	Length	669	Foot	RPW	46.76136	-110.90085	Little Sheep Creek tributary
S-LST4-01	R4SB5	Riverine	Length	911	Foot	NRPW	46.74718	-110.90797	Little Sheep Creek tributary
S-LST4-02	R4SB3	Riverine	Length	271	Foot	NRPW	46.74791	-110.90870	Little Sheep Creek tributary
S-LST4-03	R4SB3	Riverine	Length	770	Foot	NRPW	46.74925	-110.91279	Little Sheep Creek tributary
S-LST4-04	R4SB3	Riverine	Length	279	Foot	NRPW	46.74957	-110.91597	Little Sheep Creek tributary
S-LST4-05	R4SB3	Riverine	Length	76	Foot	NRPW	46.74959	-110.91904	Little Sheep Creek tributary
S-LST5-01	R3UB1	Riverine	Length	12	Foot	RPW	46.77400	-110.89633	Little Sheep Creek tributary
S-LST5-02	R3UB1	Riverine	Length	1203	Foot	RPW	46.77311	-110.89305	Little Sheep Creek tributary
S-LST6-01	R3UB3	Riverine	Length	709	Foot	RPW	46.77054	-110.88237	Little Sheep Creek tributary
S-LST7-01	R4SB5	Riverine	Length	1373	Foot	NRPW	46.76088	-110.87334	Little Sheep Creek tributary
S-SC-01	R3UB1	Riverine	Length	230	Foot	RPW	46.78793	-110.91240	Sheep Creek
S-SC-02	R3UB1	Riverine	Length	6130	Foot	RPW	46.78009	-110.90164	Sheep Creek
S-SC-03	R3UB1	Riverine	Length	72	Foot	RPW	46.77374	-110.86857	Sheep Creek
S-SC-04	R3UB1	Riverine	Length	109	Foot	RPW	46.77371	-110.86803	Sheep Creek
S-SC-05	R3UB1	Riverine	Length	122	Foot	RPW	46.77363	-110.86489	Sheep Creek
S-SCO-01	R4SB5/3	Riverine	Length	645	Foot	NRPW	46.78261	-110.90421	Sheep Creek overflow
S-SCO-02	R4SB5/3	Riverine	Length	179	Foot	NRPW	46.78315	-110.90386	Sheep Creek overflow
S-SCO-03	R4SB5/3	Riverine	Length	226	Foot	NRPW	46.78172	-110.90468	Sheep Creek overflow
S-SCO-04	R4SB5/3	Riverine	Length	957	Foot	NRPW	46.78141	-110.90349	Sheep Creek overflow
S-SCO-05	R4SB5/3	Riverine	Length	435	Foot	NRPW	46.78198	-110.90359	Sheep Creek overflow
S-SCO-06	R4SB7/5	Riverine	Length	3514	Foot	NRPW	46.77837	-110.90312	Sheep Creek overflow
S-SCO-07	R4SB5/3	Riverine	Length	177	Foot	NRPW	46.78103	-110.90355	Sheep Creek overflow
S-SCO-08	R4SB7/5	Riverine	Length	1049	Foot	NRPW	46.77962	-110.90309	Sheep Creek overflow
S-SCO-09	R4SB5/3	Riverine	Length	405	Foot	NRPW	46.77702	-110.89824	Sheep Creek overflow
S-SCO-10	R4SB5/3	Riverine	Length	645	Foot	NRPW	46.77626	-110.89736	Sheep Creek overflow

Waters ID	Cowardin Code	HGM Code	Measurement Type	Quantity	Units	Prelimary Waters Types	Latitude	Longitude	Local Waterway
S-SCO-11	R4SB5/3	Riverine	Length	78	Foot	NRPW	46.77374	-110.86720	Sheep Creek overflow
S-SCO-12	R4SB5/3	Riverine	Length	834	Foot	NRPW	46.77323	-110.86581	Sheep Creek overflow
S-SCO-13	R4SB5/3	Riverine	Length	302	Foot	NRPW	46.77247	-110.86517	Sheep Creek overflow
S-SCOT-01	R3UB3	Riverine	Length	568	Foot	RPW	46.77313	-110.86766	Sheep Creek tributary
S-SCOT-02	R3UB3	Riverine	Length	142	Foot	RPW	46.77305	-110.86792	Sheep Creek tributary
S-SCT1-01	R3UB1	Riverine	Length	3100	Foot	RPW	46.78400	-110.90148	Sheep Creek tributary
S-SCT1-02	R3UB3	Riverine	Length	599	Foot	RPW	46.78330	-110.90486	Sheep Creek tributary
S-SCT1-03	R3AB3	Riverine	Length	221	Foot	RPW	46.78398	-110.90208	Sheep Creek tributary
S-SCT1-04	R3AB3	Riverine	Length	180	Foot	RPW	46.78404	-110.89937	Sheep Creek tributary
S-SCT2-01	R3UB3	Riverine	Length	889	Foot	RPW	46.77807	-110.89753	Sheep Creek tributary
S-SCT5-01	R3UB3	Riverine	Length	2766	Foot	RPW	46.78118	-110.90793	Sheep Creek tributary
S-SCT5-02	R3UB3	Riverine	Length	597	Foot	RPW	46.78399	-110.90799	Sheep Creek tributary
S-SCT5-03	R3UB3	Riverine	Length	836	Foot	RPW	46.78335	-110.90710	Sheep Creek tributary
S-SCT5-04	R3UB3	Riverine	Length	199	Foot	RPW	46.78381	-110.90684	Sheep Creek tributary
S-SCT5-05	R3UB3	Riverine	Length	145	Foot	RPW	46.77820	-110.90758	Sheep Creek tributary
S-SCT5-06	R3UB3	Riverine	Length	3701	Foot	RPW	46.77592	-110.91332	Sheep Creek tributary
S-SCT5-07	R3UB3	Riverine	Length	430	Foot	RPW	46.77260	-110.91876	Sheep Creek tributary
S-SCT5-08	R4SB7	Riverine	Length	632	Foot	NRPW	46.77868	-110.91050	Sheep Creek tributary
S-SCT5-09	R4SB7	Riverine	Length	1210	Foot	NRPW	46.77914	-110.91196	Sheep Creek tributary
S-SCT5-10	R3UB3	Riverine	Length	2776	Foot	RPW	46.78219	-110.91724	Sheep Creek tributary
S-SCT5-11	R4SB7	Riverine	Length	174	Foot	NRPW	46.78116	-110.92632	Sheep Creek tributary
S-SCT5-12	R4SB7	Riverine	Length	134	Foot	NRPW	46.78083	-110.92749	Sheep Creek tributary
NOTES:	NOTES: HGM Code - Designation indicates the qualitative estimated primary water source for the wetland per USACE 2014a. In many cases both riverine and slope (i.e., groundwater) likely contribute to wetland hydrology. Waters Types - These codes are consistent with those provided by the USACE for quantifying wetland and stream locations for jurisidictional determination. The designations are preliminary in that they have not been reviewed and approved by the USACE. RPW - Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs (Traditional Navigable Waters). Indirectly means that the water could be a tributary to another water that flows into a TNW.								
	NRPW -	Non-RPWs that flow directly or indirectly into TNWs.							
	RPWWD -	Wetlands directly abutting RPWs that flow directly or indirectly into TNWs. Wetlands are considered "abutting" if there is no upland, berm, dike, or similar feature between a wetland and a RPW (USACE 2007).							
	RPWWN -	Wetlands adjacent to but not directly abutting RPWs that tflow directly or indirectly into TNWs. Note that "adjacency" requires a determination of whether a "significant nexus" exists between the the wetland and the TNW (USACE 2007).							
	NRPWW -	Wetlands adjacent to	o non-RPWs that flo	ow directly o	or indirectly int	o TNWs. The same of	leterminati	on of adjacen	cy as noted above applies.
	ISOLATE - Isolated (interstate or intrastate) waters, including isolated wetlands. This designation is preliminary pending USACE review and concurrence.								ISACE review and concurrence.

Appendix B

Vascular Plant Species Recorded at Wetland and Upland Inventory Sites, Black Butte Project

Binomial	Code	WMVC	Common Name
NATIVE PERENNIAL GRAMINOIDS (Cool Season)			
Agropyron smithii (Elymus smithii, Pascopyrum smithii*)	Agr smi	FACU	Western wheatgrass
Agropyron spicatum (Elymus spicatus, Pseudoroegneria spicata)	Agr spi		Bluebunch wheatgrass
Agropyron trachycaulum (Agropyron caninum, Elymus trachycaulus*)	Agr tra	FAC	Slender wheatgrass
Agrostis scabra*	Agr sca	FAC	Rough bentgrass
Anthoxanthum hirtum* (Hierochloe odorata)	Ant hir	FACW	Northern sweetgrass
Bromus carinatus (Bromus marginatus)	Bro car	TACW	Mountain brome
Bromus ciliatus*	Bro cil	FAC	Fringed brome
Bromus pumpellianus (Bromus inermis var. pumpellianus)	Bro pum	TAC	Pumpelly's brome
Calamagrostis canadensis*	Cal can	FACW	Bluejoint reedgrass
Calamagrostis stricta* (Calamagrostis inexpansa, Calamagrostis neglecta)	Cal str	FACW	Northern reedgrass
Carex aquatilis*		OBL	Water sedge
Carex advantils* Carex atherodes*	Car aqu		
	Car ath	OBL	Slough sedge
Carex athrostachya*	Car ato	FACW	Slender-beaked sedge
Carex aurea*	Car aur	FACW	Golden sedge
Carex disperma*	Car dis	FACW	Soft-leaved sedge
Carex interior*	Car int	OBL	Inland sedge
Carex microptera*	Car mic	FACU	Small-winged sedge
Carex multicostata	Car mul		Manyrib sedge
Carex nebrascensis*	Car neb	OBL	Nebraska sedge
Carex obtusata	Car obt		Blunt sedge
Carex pachystachya*	Car pac	FAC	Chamisso sedge
Carex pellita* (Carex lanuginosa)	Car pel	OBL	Woolly sedge
Carex praegracilis*	Car pra	FACW	Clustered field sedge
Carex praticola*	Car prt	FACW	Meadow sedge
Carex scirpoidea*	Car sci	FAC	Northern single-spike sedg
Carex simulata*	Car sim	OBL	Short-beaked sedge
Carex utriculata* (Carex rostrata)	Car utr	OBL	Southern beaked sedge
Danthonia californica*	Dan cal	FAC	California danthonia
Danthonia intermedia*	Dan int	FACU	Timber oatgrass
Deschampsia cespitosa	Des ces		Tufted hairgrass
Eleocharis palustris* (Eleocharis erythropoda, Eleocharis macrostachya)	Ele pal	OBL	Common spikesedge
Festuca campestris (Festuca scabrella, Festuca altaica*)	Fes cam		Rough fescue
Festuca idahoensis*	Fes ida	FACU	Idaho fescue
Festuca rubra*	Fes rub	FAC	Red fescue
Glyceria grandis*	Gly gra	OBL	American mannagrass
Glyceria striata*	Gly str	OBL	Fowl mannagrass
Hordeum jubatum*	Hor jub	FAC	Foxtail barley
Juncus balticus*	Jun bal	FACW	Baltic rush
Juncus confusus*	Jun con	FAC	Colorado rush
Juncus longistylis*	Jun Ion	FACW	Longstyle rush
Juncus nodosus*	Jun nod	OBL	Jointed rush
Koeleria macrantha (Koeleria cristata, Koeleria pyramidata)	Koe mac		Prairie junegrass
Phalaris arundinacea*	Pha aru	FACW	Reed canarygrass
Poa secunda* (Poa canbyi, Poa gracillima, Poa juncifolia, Poa nevadensis, Poa sandbergii, Poa scabrella)	Poa sec	FACU	Sandberg's bluegrass
Scirpus microcarpus*	Sci mic	OBL	Panicled bulrush
Stipa occidentalis (Achnatherum occidentale)	Sti occ	OBL	Western needlegrass
Stipa occidentalis (Achinatherum occidentale) Stipa richardsonii (Achnatherum richardsonii*)		UPL	Richardson's needlegrass
эйра попагизонн (Астианіетині понагизонні)	Sti ric	UPL	vicitatuson s needlegrass
NATIVE DEDENMIAL CRAMINOIDS (Marine Consum)			
NATIVE PERENNIAL GRAMINOIDS (Warm Season)	NA. I.	F4.0	NAME OF THE PARTY
Muhlenbergia richardsonis*	Muh ric	FAC	Mat muhly
INTRODUCED PERENNIAL GRAMINOIDS			- ·
Agrostis stolonifera* (Agrostis alba)	Agr sto	FAC	Redtop
Alopecurus arundinaceus*	Alo aru	FAC	Creeping meadow foxtail

Binomial	Code	WMVC	Common Name
Alopecurus pratensis*	Alo pra	FAC	Meadow foxtail
Bromus inermis*	Bro ine	FAC	Smooth brome
Dactylis glomerata*	Dac glo	FACU	Orchard-grass
Phleum pratense*	Phl pra	FAC	Common timothy
Poa palustris*	Poa pal	FAC	Fowl bluegrass
Poa pratensis*	Poa pra	FAC	Kentucky bluegrass
Schedonorus arundinaceus* (Festuca arundinacea)	Sch aru	FAC	Tall fescue
Schedonorus pratensis* (Festuca pratensis)	Sch pra	FACU	Meadow fescue
- Control protection (Control protection)			
NATIVE ANNUAL GRAMINOIDS			
Juncus bufonius*	Jun buf	FACW	Toad rush
NATIVE PERENNIAL FORBS AND SUBSHRUBS			
Achillea millefolium*	Ach mil	FACU	Common yarrow
Actaea rubra*	Act rub	FACU	Red baneberry
Agoseris glauca*	Ago gla	FAC	Prairie agoseris
Allium brevistylum	All bre		Short-style onion
Allium geyeri*	All gey	FACU	Geyer's onion
Anemone multifida	Ane mul		Ball anemone
Antennaria microphylla	Ant mic		Littleleaf pussytoes
Arnica chamissonis*	Arn cha	FACW	Meadow arnica
Arnica fulgens*	Arn ful	UPL	Orange arnica
Artemisia ludoviciana*	Art lud	FACU	Cudweed sagewort
Astragalus agrestis* (Astragalus dasyglottis)	Ast agr	FACW	Field milkvetch
Astragalus alpinus*	Ast alp	FACU	Alpine milkvetch
Campanula rotundifolia*	Cam rot	FACU	Roundleaf harebell
Canadanthus modestus* (Aster modestus)	Can mod	FACW	Few-flowered aster
Cardamine breweri*	Car brw	FACW	Brewer's bittercress
Castilleja miniata*	Cas min	FACW	Scarlet paintbrush
Cerastium arvense*	Cer arv	FACU	Field chickweed
Cicuta maculata*	Cic mac	OBL	Spotted water-hemlock
Cirsium longistylum	Cir lon	OBL	Long-styled thistle
Cirsium scariosum*	Cir sca	FAC	Elk thistle
Clematis hirsutissima	Cle hir	TAC	Vaseflower clematis
Crepis runcinata*	Cre run	FACU	Meadow hawksbeard
·			Few-flowered shooting star
Dodecatheon pulchellum* Entlehium elliphium elandulesum)	Dod pul	FACW	Common willow-herb
Epilobium ciliatum* (Epilobium glandulosum)	Epi cil	FACW	Tufted fleabane
Erigeron caespitosus	Eri cae		
Erigeron subtrinervis	Eri sub		Three nerve fleabane
Eriogonum umbellatum	Eri umb	FACIL	Sulfur buckwheat
Fragaria virginiana*	Fra vir	FACU	Virginia strawberry
Galium boreale*	Gal bor	FACU	Northern bedstraw
Galium trifidum*	Gal trf	FACW	Small bedstraw
Gentiana affinis*	Gen aff	FACU	Pleated gentian
Geranium richardsonii*	Ger ric	FAC	White geranium
Geranium viscosissimum*	Ger vis	FACU	Sticky geranium
Geum aleppicum*	Geu ale	FACW	Yellow avens
Geum macrophyllum*	Geu mac	FAC	Large leaf avens
Geum rivale*	Geu riv	FACW	Water avens
Geum triflorum*	Geu tri	FACU	Prairiesmoke
Heracleum lanatum (Heracleum maximum*, Heracleum sphondylium)	Her lan	FAC	Cow parsnip
Hippuris vulgaris*	Hip vul	OBL	Common mare's tail
Iris missouriensis*	Iri mis	FACW	Rocky Mountain iris
Ligusticum filicinum	Lig fil		Fernleaf licorice-root
Linnaea borealis*	Lin bor	FACU	Western twinflower

Binomial	Code	WMVC	Common Name
Linum lewisii (Linum perenne)	Lin lew		Blue flax
Lupinus sericeus	Lup ser		Silky lupine
Mentha arvensis*	Men arv	FACW	Field mint
Mimulus guttatus*	Mim gut	OBL	Common monkey-flower
Moehringia lateriflora* (Arenaria lateriflora)	Moe lat	FAC	Bluntleaf sandwort
Orthilia secunda* (Pyrola secunda)	Ort sec	FACU	One-sided wintergreen
Osmorhiza chilensis (Osmorhiza berteroi*)	Osm chi	FACU	Mountain sweetroot
Oxytropis deflexa*	Oxy def	FACU	Pendent-pod locoweed
Oxytropis splendens*	Oxy spl	FAC	Showy locoweed
Parnassia palustris*	Par pal	OBL	Northern grass-of-parnassus
Pedicularis groenlandica*	Ped gro	OBL	Elephanthead
Perideridia montana (Perideridia gairdneri*)	Per mon	FAC	Gairdner's yampa
Petasites frigidus* (Petasites sagittatus)	Pet fri	FACW	Arrowleaf coltsfoot
Platanthera hyperborea (Habenaria hyperborea, Platanthera aquilonis*)	Pla hyp	FACW	Northern green bog-orchid
Polemonium pulcherrimum	Pol pul		Showy polemonium
Polygonum amphibium (Persicaria amphibia*)	Pol amp	OBL	Water ladysthumb
Potamogeton filiformis (Stuckenia filiformis*)	Pot fil	OBL	Slenderleaf pondweed
Potamogeton foliosus*	Pot fol	OBL	Leafy pondweed
Potentilla anserina*	Pot ans	OBL	Common silverweed
Potentilla gracilis*	Pot gra	FAC	Slender cinquefoil
Prunella vulgaris*	Pru vul	FACU	Self-heal
Pyrola asarifolia*	Pyr asa	FACU	Pink wintergreen
Pyrrocoma integrifolia (Haplopappus integrifolius)	Pyr int		Entire-leaved goldenweed
Ranunculus acriformis*	Ran aci	FACW	Sharp buttercup
Ranunculus aquatilis* (Ranunculus longirostris, Ranunculus subrigidus)	Ran aqu	OBL	Hairleaf water buttercup
Ranunculus inamoenus*	Ran ina	FACW	Graceful buttercup
Ranunculus macounii*	Ran mac	OBL	Macoun's buttercup
Rumex occidentalis*	Rum occ	FACW	Western dock
Rumex salicifolius*	Rum sal	FACW	Willow dock
Senecio pauperculus (Packera paupercula*)	Sen pap	FACW	Balsam groundsel
Senecio sphaerocephalus*	Sen sph	FACW	Mountain-marsh butterweed
Sisyrinchium idahoense*	Sis ida	FACW	Idaho blue-eyed grass
Smilacina stellata (Maianthemum stellatum*)	Smi ste	FAC	Starry false solomon's seal
Solidago canadensis var. salebrosa (Solidago lepida*)	Sol canl	FAC	Canada goldenrod
Solidago missouriensis	Sol mis		Missouri goldenrod
Spiranthes romanzoffiana*	Spi rom	FACW	Hooded ladies-tresses
Stachys palustris*	Sta pal		Swamp hedge-nettle
Stellaria longifolia*	Ste log	FACW	Longleaved starwort
Symphyotrichum ascendens* (Aster chilensis)	Sym asc	FACU	Long-leaved aster
Symphyotrichum boreale* (Aster junciformis)	Sym bor	OBL	Rush aster
Symphyotrichum campestre (Aster campestris)	Sym cam		Meadow aster
Symphyotrichum foliaceum* (Aster foliaceus)	Sym fol	FACU	Leafy aster
Symphyotrichum lanceolatum* var. hesperium (Aster hesperius)	Sym hes	OBL	Lance-leaved aster
Symphyotrichum subspicatum* (Aster subspicatus)	Sym sub	FACW	Douglas' aster
Thalictrum venulosum*	Tha ven	FAC	Veiny meadowrue
Trifolium longipes*	Tri lon	FAC	Long-stalked clover
Valeriana dioica*	Val dio	FACW	Northern valerian
Valeriana edulis*	Val edu	FAC	Edible valerian
Veronica americana*	Ver ame	OBL	American speedwell
Vicia americana*	Vic ame	FAC	American vetch
Viola adunca*	Vio adu	FAC	Early blue violet
Viola canadensis*	Vio can	FACU	Canada violet
Viola nephrophylla*	Vio nep	FACW	Northern bog violet
Zigadenus elegans (Anticlea elegans*)	Zig ele	FACU	Mountain death-camas
Zizia aptera*	Ziz apt	FAC	Heart-leaved alexanders
		•	

B-3

Binomial	Code	WMVC	Common Name
INTRODUCED PERENNIAL FORBS			
Cerastium fontanum* (Cerastium vulgatum)	Cer fon	FACU	Common chickweed
Cirsium arvense*	Cir arv	FAC	Canada thistle
(nautia arvensis	Kna arv		Field scabious
_eucanthemum vulgare* (Chrysanthemum leucanthemum)	Leu vul	FACU	Oxeye daisy
otus corniculatus*	Lot cor	FAC	Birdsfoot trefoil
Plantago major*	Pla maj	FAC	Common plantain
Rumex crispus*	Rum cri	FAC	Curl dock
Silene latifolia (Lychnis alba)	Sil lat		White campion
Sonchus arvensis* (Sonchus uliginosus)	Son arv	FACU	Field sow-thistle
Faraxacum officinale*	Tar off	FACU	Common dandelion
Frifolium hybridum*	Tri hyb	FAC	Alsike clover
Frifolium pratense*	Tri pra	FACU	Red clover
Frifolium repens*	Tri rep	FAC	White Dutch clover
FERNS AND ALLIES			
Equisetum arvense*	Equ arv	FAC	Common horsetail
Equisetum laevigatum*	Equ lae	FACW	Smooth horsetail
	·		
NATIVE ANNUAL/BIENNIAL FORBS Androsace septentrionalis*	And sep	FACU	Northern fairy-candelabra
Artemisia biennis*	Art bie	FACW	Biennial wormwood
Chenopodium glaucum*	Che gla	FAC	Oak-leaved goosefoot
Collomia linearis*	Col lin	FACU	Narrow-leaf collomia
Corydalis aurea	Cor aur		Golden corydalis
rysimum cheiranthoides*	Ery che	FACU	Treacle mustard
Gentianella amarella*	Gen ama	FACW	Northern gentian
Madia glomerata*	Mad glo	FACU	Cluster tarweed
Orthocarpus luteus*	Ort lut	FACU	Yellow owl clover
Plagiobothrys scouleri*	Pla sco	FACW	Scouler's popcorn-flower
Potentilla norvegica*	Pot nor	FAC	Norwegian cinquefoil
Rhinanthus crista-galli (Rhinanthus minor*)	Rhi cri	FACU	Yellow rattle
Rorippa palustris* (Rorippa islandica)	Ror pal	OBL	Marsh yellowcress
INTRODUCED ANNUAL/BIENNIAL FORBS			
Carduus nutans*	Car nut	UPL	Musk thistle
Carum carvi*	Car car	FACU	Caraway
Cirsium vulgare*	Cir vul	FACU	Bull thistle
Cynoglossum officinale*	Cyn off		Common hound's-tongue
· · · · · · · · · · · · · · · · · · ·	Med lup	FACU	Black medick
Polygonum aviculare* (Polygonum arenastrum)	Pol avi	FAC	Prostrate knotweed
Thlaspi arvense*	Thl arv	UPL	Fanweed
Fragopogon dubius	Tra dub		Common salsify
NATIVE SHRUBS AND VINES			
Artemisia tridentata	Art tri		Big sagebrush
Betula glandulosa*	Bet gla	OBL	Bog birch
Dasiphora fruticosa* (Potentilla fruticosa)	Das fru	FAC	Shrubby cinquefoil
luniperus communis*	Jun com	UPL	Common juniper
Ribes inerme*	Rib ine	FAC	Whitestem gooseberry
Ribes setosum (Ribes oxyacanthoides*)	Rib set	FACW	Bristly gooseberry
Rosa acicularis*	Ros aci	FACU	Prickly rose
Rosa woodsii*	Ros woo	FACU	Wood's rose
ROSA WOODSII .			
Salix bebbiana*	Sal beb	FACW	Bebb willow

Appendix B

List of Vascular Plant Species Identified for the Black Butte Wetlands Inventory Meagher County, Montana, 2014.

Binomial	Code	WMVC	Common Name
Salix brachycarpa*	Sal bra	FACW	Short-fruited willow
Salix candida*	Sal can	OBL	Hoary willow
Salix drummondiana*	Sal dru	FACW	Drummond willow
Salix eriocephala var. mackenzieana (Salix rigida var. mackenzieana, Salix prolixa*)	Sal erim	OBL	Mackenzie willow
Salix geyeriana*	Sal gey	FACW	Geyer willow
Salix planifolia* (Salix phylicifolia)	Sal pla	OBL	Planeleaf willow
Salix pseudomonticola* (Salix monticola)	Sal pse	FACW	Mountain willow
Shepherdia canadensis*	She can	UPL	Canada buffaloberry
Symphoricarpos occidentalis*	Sym occ	FAC	Western snowberry
NATIVE TREES			
Juniperus scopulorum	Jun sco		Rocky Mountain juniper
Picea engelmannii*	Pic eng	FAC	Engelmann spruce
Pinus contorta*	Pin con	FAC	Lodgepole pine
Populus tremuloides*	Pop tre	FACU	Quaking aspen
Pseudotsuga menziesii*	Pse men	FACU	Douglas-fir

Scientific nomenclature follows Lesica (2012). The more recent, most commonly used synonyms, partial synonyms/combinations, and misapplied names are given in parentheses. These, as well as common names, are taken from a variety of sources including:

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*An asterisk indicates nomenclature appearing on the National Wetland Plant List (Lichvar 2012, updated 2014). Taxa with no asterisk do not appear on the NWPL, and are to be considered "Upland" species in the context of wetland inventories; additionally, the 2014 NWPL rates wetland plants at only the species level and does not distinguish among infraspecific taxa in assigning wetland ratings.

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Appendix C

Wetland Determination Data Forms

BLACK BUTTE COPPER Wetland Plots

WETLAND DETERMINATION DATA FORMS

Western Mountains, Valleys, and Coast Region

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Black Butte Copper		Ci	ty/County:	: White Su	Ilphur Springs/Meagher	Sampling Date: 09-02-2014	
Applicant/Owner: Tintina Resources		•		State: MT	Sampling Point: BB-W1		
Investigator(s): L. Larsen, S. Cooper	S	Section, Township, Range: S35, T12N, R6E					
Landform: floodplain					convex, none): concave	Slope (%): 1-2	
Subregion (LRR): E			7663285	(concave,			
<u> </u>			7003203		_ Long: <u>-110.9473456</u>	Datum: WGS84	
Soil Map Unit Name: 501B Manixlee-Crunto					NWI classifi		
Are climatic/hydrologic conditions on the site			-		o∐ (If no, explain in Re	<u> </u>	
Are Vegetation, Soil, or Hydrology						present? Yes 🗸 No 🗌	
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS – Attach si					eeded, explain any answ		
			mping l		auons, transects, iiii	portant reatures, etc.	
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		,	lo f	he Sample	ad Araa		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	=	,		hin a Wetl		No 🗌	
Remarks: Stream flowing through wetland.							
Nemarks. Stream nowing through wetland.	rilotographs	. 30 913	-910				
VECETATION LIGATE INTERPRETATION				**************************************			
VEGETATION – Use scientific names	or plants.				1		
<u>Tree Stratum</u> (Plot size: NA)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test World		
1	_				Number of Dominant S That Are OBL, FACW,		
2.						,	
3.					Total Number of Domir Species Across All Stra		
4.							
		0	= Total (Cover	Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 0.01 acre	<u>e</u>)				Prevalence Index Wo		
Salix eriocephala var. mackenzieana		32	X	OBL			
2. Salix geyeriana		23_	x	FACW	Total % Cover of:		
3. Salix bebbiana				FACW	OBL Species 8 FACW Species 69.	6 x 1 = 86 5 x 2 = 139	
4. Dasiphora fruticosa				FAC		8 x 3 = 54	
5					FACU Species		
Herb Stratum (Plot size: 0.01 acre)	***	59	_ = Total (Jover	UPL Species	x 5 =	
1. Carex utriculata		54	х	OBL	Column Totals: 173.		
Calex diriculata Calamagrostis canadensis		18	^	FACW	Prevalence Index		
3. Juncus balticus		14		FACW		· /	
Agrostis stolonifera		9		FAC	Hydrophytic Vegetation	;	
5. Mentha arvensis		8		FACW	1 - Rapid Test for Hydr✓ 2 - Dominance Test is		
6. Geum macrophyllum		4		FAC	✓ 3 - Prevalence Index is		
7. Poa pratensis		3		FAC		otations¹ (Provide supporting	
8. Deschampsia cespitosa		2		FACW		r on a separate sheet)	
9. <u>Poa palustris</u>		1		FAC	5 - Wetland Non-Vasc	ular Plants¹	
10. Senecio sphaerocephalus		1		FACW	Problematic Hydrophy	tic Vegetation¹ (Explain)	
11. Symphyotrichum subspicatum		0.5		FACW		d wetland hydrology must be	
	_	114.5	= Total C	Cover	present, unless disturbed of	or problematic.	
Woody Vine Stratum (Plot size: NA)						
1.					Hydrophytic		
2					Vegetation Present? Yes	✓ No 🗆	
% Bare Ground in Herb Stratum 0.5	=	0	_ = Total C	over			
Remarks:					<u> </u>		



SOIL				F	Project/Site	e: Black	Butte Co	opper	Sampling Point: BB-W1
Profile Des	cription: (Descri	be to the d	epth needed to d	ocumen	t the indi	cator or	confirm	the abse	ence of indicators.)
Depth	Matrix		-	dox Featu					·····
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ure Re	marks
0-9	10YR 2/2	85	5YR 5/8	15	С	PL	Cl	COI	nsiderable OM
9-20	10YR 2/2	75	5YR 4/8	25	cs	PL	SI		
	101112/2		511(4/0					<u> </u>	
					. ——				
					- ——				
			M=Reduced Matri				Sand Gra	ains ²Lo	ocation: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to a	II LRRs, unless o	therwise	e noted.):			Indicator	s for Problematic Hydric Soils ³ :
Histosol (A 1)		Sandy Redox (S	55)			[2 cm M	luck (A10)
Histic Epi	pedon (A2)		Stripped Matrix	(S6)			[Red Pa	arent Material (TF2)
Black His	tic (A3)		Loamy Mucky M	lineral (F1)) (except MI	LRA 1)	[Very St	hallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed N	/latrix (F2)			[Other (Explain in Remarks)
✓ Depleted	Below Dark Surface	(A11)	✓ Depleted Matrix	(F3)					
Thick Dar	k Surface (A12)		Redox Dark Sur	face (F6)					s of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark S	Surface (F	7)				d hydrology must be present, sidisturbed or problematic.
Sandy Gl	eyed Matrix (S4)		Redox Depressi	ons (F8)				uness	disturbed of problematic.
Restrictive	Layer (if present	:):							
Type: Grav	el								
Depth (inch	es): 16						Hyd	ric Soil P	Present? Yes 🗹 No 🗌
	ydrology, the soil			irtially hy	dric"	;, and gr	ven pres	ence of hy	ydrophytic vegetation and wetland
	drology Indicato	re.							
-			ired; check all tha	t annly)				Second	any Indicators (2 or more required)
	· · · · · · · · · · · · · · · · · · ·	or one requ		,					ary Indicators (2 or more required)
Surface V	` '				aves (B9) (e	except			er-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A	, and 4B)			_	A, and 4B)
Saturation	` '		=	st (B11)				=	nage Patterns (B10)
Water Ma	• •		= '	Invertebra	` ,				Season Water Table (C2)
_	Deposits (B2)		= ' '		Odor (C1)				ration Visible on Aerial Imagery (C9)
Drift Depo					heres along		oots (C3)	=	norphic Position (D2)
= 1	or Crust (B4)		=		iced Iron (C	,			ow Aquitard (D3)
Iron Depo	• •		_		ction in Tille	•		=	Neutral Test (D5)
=	Soil Cracks (B6)	.=			ed Plants (D)1) (LRR /	A)	=	ed Ant Mounds (D6) (LRR A)
=	n Visible on Aerial Im	• • • •	U Other (E	explain in F	Remarks)			Frost	-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)							
Field Obse									
Surface Wa		Yes ∐ No							
Water Table		Ƴes ∐ No	_ · ·	s):					
Saturation F	Present? pillary fringe)	Yes 🗌 No	✓ Depth (inche	es):			Wetland	Hydrolog	gy Present? Yes ⊻ No 🗌
·	·	am gauge	monitoring well, a	erial pho	tos previo	ous inspe	ections)	if availahl	e:
		gaage,		2.10. p110	LOO, PICAIC	- ao mopi		aranabi	- .
Domarka: S	Stroom is just set th	no plot es-	rovimatoly 2.21 C	troom is	2 21	thon n!	at locati-	0.00.111011	
indinains. S	ou cam is just off th	е рю, арр	roximately 2-3'. S	u eaili i\$	z-a lower	man pic	or iocatioi	ı as Well.	

Project/Site: Black Butte Copper		C	ity/County	r: White Su	Iphur Springs/Meagher	Sampling Date: 09-02-2014		
Applicant/Owner: Tintina Resources			State: MT Sampling Point: BB-W2					
Investigator(s): L. Larsen, S. Cooper		S	Section, To	ownship, R	ship, Range: S35, T12N, R6E			
Landform: floodplain			ocal relief	f (concave,	convex, none): concave	Slope (%): 1-2		
Subregion (LRR): E					Long: -110.9400571	Datum: WGS84		
Soil Map Unit Name: 501B Manixlee-C	Crunton-Meadow		., 0001.12			cation: PEM		
Are climatic/hydrologic conditions on the	· · · · · · · · · · · · · · · · · · ·		fvear? V	os M				
Are Vegetation , Soil , or Hydrold						' present? Yes ✓ No		
Are Vegetation, Soil, or Hydrolo		-						
SUMMARY OF FINDINGS – Attac					eeded, explain any answ ations. transects. im	·		
Hydrophytic Vegetation Present?	Yes ✓ No				, , , , , , , , , , , , , , , , , , , ,			
Hydric Soil Present?	Yes ✓ No	=	ls t	the Sample	ed Area			
Wetland Hydrology Present?	Yes 🔽 No		wit	hin a Wetl	and? Yes ✓	No 🗌		
Remarks: Photographs: SC 907-910	(N to W)		<u> </u>					
- '								
VEGETATION - Use scientific na	ames of plant	s.						
		Absolute	Dominant	t Indicator	Dominance Test Wor	ksheet:		
Tree Stratum (Plot size: NA			Species?		Number of Dominant S	Species		
1					That Are OBL, FACW,	or, FAC: 2 (A)		
2					Total Number of Domin			
3					Species Across All Str	ata: 2 (B)		
4					Percent of Dominant S	pecies		
Sanling/Shruh Stratum (Plot size: NA			= Total	Cover	That Are OBL, FACW,	or, FAC:100 (A/B)		
Sapling/Shrub Stratum (Plot size: NA					Prevalence Index Wo	rksheet:		
1 2					Total % Cover of	: Multiply by:		
3.					OBL Species 3	35 x 1 = 35		
4.				THE PERSON NAMED IN COLUMN 2 IS NOT THE PERSON NAMED IN COLUMN 2 I	FACW Species			
5.		-				75 x 3 = 225		
		0	= Total	Cover		6 x 4 = 24		
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =		
1. Agrostis stolonifera		45		FAC	Column Totals: 12	23 (A) <u>298</u> (B)		
			X	OBL	Prevalence Index	(B/A) = 2.42		
3. Phleum pratense		20		FAC	Hydrophytic Vegetati	on Indicators:		
		8		FAC	1 - Rapid Test for Hyd	rophytic Vegetation		
5. Symphyotrichum foliaceum		5_		FACU	✓ 2 - Dominance Test is	>50%		
6. Deschampsia cespitosa		4		FACW	✓ 3 - Prevalence Index is	s ≤3.0¹		
9 Equipotum loguidatum		1		FAC FACW		ptations¹ (Provide supporting r on a separate sheet)		
O Montho anionois		1		FACW	5 - Wetland Non-Vaso	. ,		
10 Pag aggunda		1		FACU		rtic Vegetation¹ (Explain)		
11. Carex praegracilis		0.5		FACW		nd wetland hydrology must be		
The state of the s		123	= Total		present, unless disturbed			
Woody Vine Stratum (Plot size: NA)		-					
1					Hydrophytic			
2		<u> </u>			Vegetation			
0/ Bara Outstall 0/ 5 -		0	_ = Total (Cover	Present? Yes	✓ No 🗆		
% Bare Ground in Herb Stratum 0.5								
Remarks:								



OIL				۲	TOJECT OIL	. DIACK	Butte Coppe	r Sampling Point: BB-W2
Profile Desc	ription: (Describ	e to the de	pth needed to d					absence of indicators.)
Depth	Matrix		•	dox Featu				,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-3	10YR 2/1	100					CL	saturated at surface
3-16	10YR 2/1	65	7.5YR 6/8	35	RM	М	CL	restrictive layer at 16"
	1011(25)		7.017(0/0					
								× ×
T 0-0-			In Dead Make			04 - 4 0	\! Oi	2)
	ncentration, D=De Indicators (Appli					Coated S		² Location: PL=Pore Lining, M=Matrix cators for Problematic Hydric Soils ³ :
Histosol (A		cable to all	Sandy Redox (S		i iloteu.j.			•
_ `	•	L	· ·	•			_	cm Muck (A10)
☐ Histic Epip	, ,	L	Stripped Matrix		(aa.t BAI	DA 4)		led Parent Material (TF2)
☐ Black Histi	, ,	L	Loamy Mucky M		(except ivit	.RA 1)		/ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed N	` '				other (Explain in Remarks)
-	Below Dark Surface (A	411) <u>[</u>	Depleted Matrix				31ndi	cators of hydrophytic vegetation and
	Surface (A12)	L	Redox Dark Sur		7 \			retland hydrology must be present,
	cky Mineral (S1)	L	Depleted Dark S	,	()			nless disturbed or problematic.
	yed Matrix (S4)	L	Redox Depressi	ons (Fo)				·
	_ayer (if present)	i						
	<u> </u>							
Гуре: <u>Grave</u>	Depth (inches): 16							Soil Present? Yes ✔ No 🔙
Depth (inche Remarks: C	ould squeeze wate						indicator A1	1 and F3 with exception of soil hue is
Depth (inche Remarks: C da	ould squeeze wate	for deplete	d matrix. Soil typ	oe is a Mo	ollisol, whi	ch has a	indicator A1 dark A horiz	
Depth (inche Remarks: C da as hy	ould squeeze wate arker than required s "partially hy rdric.	for deplete	d matrix. Soil typ	oe is a Mo	ollisol, whi	ch has a	indicator A1 dark A horiz	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS
Depth (inche Remarks: C da as hy	ould squeeze wate arker than required s "partially hy rdric.	I for deplete /dric",	d matrix. Soil typ	oe is a Mo	ollisol, whi	ch has a	indicator A1 dark A horiz	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS
Depth (inche Remarks: C da as hy YDROLOG Wetland Hy	ould squeeze wate arker than required a "partially hy dric.	I for deplete dric",	d matrix. Soil typ and given prese	oe is a Mo	ollisol, whi	ch has a	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS
Depth (inche Remarks: C da as hy YDROLOG Vetland Hy	ould squeeze wate arker than required s "partially hy dric. SY drology Indicator cators (minimum o	I for deplete dric",	d matrix. Soil typ and given prese	pe is a Monce of hy	ollisol, whi	ch has a vegetation	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required)
Primary India Surface W Surface W	ould squeeze wate arker than required s "partially hy dric. SY drology Indicator cators (minimum of ater (A1)	I for deplete dric",	ed; check all tha	pe is a Monce of hy	ollisol, whi drophytic	ch has a vegetation	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered
Primary India Surface W High Wate	ould squeeze water than required a squot; partially hydric. SY drology Indicator cators (minimum of ater (A1) r Table (A2)	I for deplete dric",	ed; check all tha	t apply)	ollisol, whi drophytic	ch has a vegetation	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary India Surface W High Wate Saturatio	ould squeeze water than required a squot; partially hydric. SY drology Indicator cators (minimum of ater (A1) r Table (A2) n (A3)	I for deplete dric",	ed; check all tha	t apply) Stained Lea A 1, 2, 4A, st (B11)	ollisol, whi drophytic	ch has a vegetation	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Pepth (inche Remarks: C da as hy YDROLOG Vetland Hy Primary India Surface W High Wate Saturatio Water Mar	ould squeeze water than required a " partially by dric. SY drology Indicator cators (minimum of ater (A1) report Table (A2) in (A3) ks (B1)	I for deplete dric",	ed; check all tha Water-S MLR Salt Cru Aquatic	t apply) Stained Lea A 1, 2, 4A, ast (B11) Invertebra	ollisol, whi drophytic aves (B9) (e and 4B) tes (B13)	ch has a vegetation	indicator A1 dark A horizon and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOC Wetland Hy Surface W High Wate Water Mar Sediment	ould squeeze water than required a " partially by dric. GY drology Indicator cators (minimum of ater (A1) representation (A3) ks (B1) Deposits (B2)	I for deplete dric",	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge	t apply) Stained Lea A 1, 2, 4A, ast (B11) Invertebra	oblisol, white drophytic aves (B9) (e and 4B) tes (B13)	ch has a vegetation	indicator A1 dark A horizon and wetla	1 and F3 with exception of soil hue is con. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary India Surface W High Wate Saturatio Water Mar Sediment	ould squeeze water than required a " partially by dric. GY drology Indicator cators (minimum of ater (A1) reposits (B2) sits (B3)	I for deplete dric",	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge Oxidized	t apply) stained Lea A 1, 2, 4A, est (B11) Invertebra en Sulfide e	aves (B9) (e and 4B) tes (B13) Odor (C1) neres along	ch has a vegetation	indicator A1 dark A horizon and wetla	1 and F3 with exception of soil hue is ion. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
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YDROLOG Wetland Hydrimary India Surface W High Wate Saturatio Water Mar Sediment I Drift Depos	ould squeeze water than required a " partially by dric. GY drology Indicator exactors (minimum of exactors (minimum of exactors (A1) or Table (A2) or (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	I for deplete dric",	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge Oxidizer Recent	t apply) tapply) tained Lea A 1, 2, 4A, list (B11) Invertebra en Sulfide e d Rhizosph ee of Redui	aves (B9) (e and 4B) tes (B13) Odor (C1) neres along ced Iron (C4)	ch has a vegetation xcept Living Roo d Soils (Cd	indicator A1 dark A horiz on and wetla	and F3 with exception of soil hue is ion. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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YDROLOG Vetland Hydrimary India Surface W High Water Mar Suffine Depos Algal Mat of Iron Depos Surface So Inundation	ould squeeze water than required a sequot; partially by dric. GY drology Indicator cators (minimum of ater (A1) r Table (A2) n (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Ima	I for deplete /dric", s: f one requir	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge Oxidizer Recent Stunted	t apply) tapply) tained Lea A 1, 2, 4A, list (B11) Invertebra en Sulfide e d Rhizosph ee of Redui	aves (B9) (e and 4B) tes (B13) Odor (C1) neres along ced Iron (C4) tion in Tille ad Plants (D	ch has a vegetation xcept Living Roo d Soils (Cd	indicator A1 dark A horiz on and wetla	1 and F3 with exception of soil hue is ion. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Primary India Surface W High Water Mar Sediment I Drift Depos Surface So Inundation Sparsely V Field Obser Surface Wat Water Table Saturation P includes cap	ould squeeze water water than required a squot; partially hydric. GY drology Indicator cators (minimum of	gery (B7) urface (B8) es No es No	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presend Stunted Other (E	t apply) t apply) tained Lea A 1, 2, 4A, st (B11) Invertebra en Sulfide e d Rhizosph ce of Reduc iron Reduc or Stresse explain in F	aves (B9) (e and 4B) tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tille d Plants (D Remarks)	ch has a vegetation ve	ots (C3)	and F3 with exception of soil hue is ion. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Primary India Surface W High Water Mar Sediment I Drift Depos Surface So Inundation Sparsely V Field Obser Surface Wat Water Table Saturation P includes cap	ould squeeze water water than required a squot; partially hydric. GY drology Indicator cators (minimum of ater (A1) r Table (A2) n (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) Visible on Aerial Imalegetated Concave Servations: er Present? Present? Y Present? Y Present? Y Present? Y Present? Y	gery (B7) urface (B8) es No es No	ed; check all tha Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presend Stunted Other (E	t apply) t apply) tained Lea A 1, 2, 4A, st (B11) Invertebra en Sulfide e d Rhizosph ce of Reduc iron Reduc or Stresse explain in F	aves (B9) (e and 4B) tes (B13) Odor (C1) neres along ced Iron (C4 ction in Tille d Plants (D Remarks)	ch has a vegetation ve	ots (C3)	and F3 with exception of soil hue is ion. Soil complex is described by NRCS and hydrology, the soil is considered condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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Project/Site: Black Butte Copper	r City/County: White Sulphur Springs/Meagher Sampling Date: 09-03-2014									
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: BBT3-W1						
Investigator(s): L. Larsen, S. Cooper	S	Section, Township, F	Range: S01, T11N, R6E							
Landform: drainage	L	ocal relief (concave	, convex, none): concave	Slope (%): 1-2						
Subregion (LRR): E		7417488	Long: -110.9270198 Datum: WGS84							
Soil Map Unit Name: 1175E Owenspring-Cheadle			NWI classific							
Are climatic/hydrologic conditions on the site typical for	or this time o	fvear? Yes 🗸 N								
Are Vegetation, Soil, or Hydrology significa			"Normal Circumstances"							
Are Vegetation, Soil, or Hydrology naturally	-		needed, explain any answ							
SUMMARY OF FINDINGS – Attach site map s			, .	,						
Hydric Soil Present? Yes ✓ No.	o	Is the Sampl within a Wet		No 🗌						
Remarks: Flowing water from fenced seep above. Photographs: SC 926-929										
VEGETATION – Use scientific names of plan	ts.									
<u>Tree Stratum</u> (Plot size: NA)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test Work							
1			Number of Dominant Sport That Are OBL, FACW,							
2.		MANAGEMENT AND ADDRESS OF THE PARTY OF THE P								
3.			Total Number of Domin Species Across All Stra							
4.			Percent of Dominant Sp							
		_ = Total Cover	That Are OBL, FACW,							
Sapling/Shrub Stratum (Plot size: 0.01 acre	,	54.014	Prevalence Index Wor	ksheet:						
1. Salix bebbiana		FACW	Total % Cover of:							
2. <u>Dasiphora fruticosa</u>			OBL Species 48							
3			FACW Species 18							
4. 5.			FAC Species 21.5	5 x 3 = 64.5						
	1.5	= Total Cover	FACU Species	2 x 4 = 8						
Herb Stratum (Plot size: 0.01 acre)		_	UPL Species							
1. Carex utriculata	30	x OBL	Column Totals: 89.5	5 (A) <u>156.5</u> (B)						
2. Carex nebrascensis	18_	x OBL	Prevalence Index (B/A) = 1.75						
3. Deschampsia cespitosa	12	FACW	Hydrophytic Vegetation	on Indicators:						
4. Phleum pratense	11	FAC	1 - Rapid Test for Hydr	' i						
5. Agrostis stolonifera	6_	FAC	2 - Dominance Test is	>50%						
6. Poa pratensis	4	FAC	✓ 3 - Prevalence Index is	≤3.0¹						
7. Epilobium ciliatum	2	FACW		tations¹ (Provide supporting						
Juncus balticus Symphyotrichum foliaceum	2	FACU	5 - Wetland Non-Vascu	on a separate sheet)						
10. Galium trifidum	0.5	FACW	Problematic Hydrophyti							
11. Viola nephrophylla	0.5	FACW	- ' '	d wetland hydrology must be						
Woody Vine Stratum (Plot size: NA)	88	= Total Cover	present, unless disturbed o							
1			Hydrophytic							
2.			Hydrophytic Vegetation	E PRINCE CALLED TO						
	0	= Total Cover	Present? Yes	✓ No 🗆						
% Bare Ground in Herb Stratum 15		=		r L L						
Remarks: Grazed and trampled by livestock - hummo	ocks, Disturb	ed.								



SOIL				F	Project/Site	e: Black	Butte Coppe	erSampling Point: BBT3-W1
Profile Des	cription: (Describ	e to the c	lepth needed to d	ocumen	t the indi	cator or	confirm the	absence of indicators.)
Depth	Matrix		Re	dox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-6	7.5YR 2.5/1	_100_					SiL	
6-16	7.5YR 2.5/2	60	5YR 7/2	40	CS	M	SL	more coarse sands
						,		
¹Tyne: C=C	oncentration D=D	enletion F	RM=Reduced Matri	x CS=C	overed or	Coated S	Sand Grains	² Location: PL=Pore Lining, M=Matrix
		•	all LRRs, unless o					cators for Problematic Hydric Soils ³ :
Black His Hydrogen Depleted Thick Dar Sandy Mu	ipedon (A2)	A11)	Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi	(S6) lineral (F1) Matrix (F2) (F3) face (F6) Surface (F7		LRA 1)	I N	2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) icators of hydrophytic vegetation and vetland hydrology must be present, unless disturbed or problematic.
Restrictive	Layer (if present):						
Type: Grav	el							
Depth (inch	es): 16						Hydric	Soil Present? Yes 🗹 No 🗌
HYDROLO								yy, the soil is considered hydric.
Wetland Hy	drology Indicato	rs:						
Primary Ind	icators (minimum	of one req	uired; check all tha	t apply)			Se	econdary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) ✓ Surface Water (A1)							6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Field Obse	rvations:							
Surface Wa Water Table Saturation F (includes ca	ater Present? Present? Present? Apillary fringe)	es ✔ No es ✔ No es ✔ No am gauge	Depth (inche	es): 6 es): 0	tos, previo			drology Present? Yes ✓ No ☐
Remarks: F	Flowing water, satu	rated soils	<u></u>					
Nemaiks. F	nowing water, satu	iated SOIIS	.					



Project/Site: Black Butte Copper			Ci	ity/County	։ White Տւ	ulphur Springs/Meagher Sampling Date: 09-03-2014			
Applicant/Owner: Tintina Resources						State: MT Sampling Point: LS-W1			
Investigator(s): K. Scow, D. Barton			S	Section, To	ownship, R	hip, Range: S30, T12N, R7E			
Landform: bottom (hydraulic mine pit)				ocal relie	f (concave,	convex, none): concave Slope (%): 0			
Subregion (LRR): E				7730982		Long: -110.8902758 Datum: WGS84			
Soil Map Unit Name: 1150C Bischoff-N	/lonaberg					NWI classification: PEM			
Are climatic/hydrologic conditions on the		al for	this time o	f vear? Y	es 🗸 No	o (If no, explain in Remarks.)			
Are Vegetation . Soil ., or Hydrolo						"Normal Circumstances" present? Yes ☐ No ✓			
Are Vegetation, Soil, or Hydrolo						needed, explain any answers in Remarks.)			
					·	ations, transects, important features, etc.			
Hydrophytic Vegetation Present?	Yes 🗸	No	=	lo é	he Sample	od Aroo			
Hydric Soil Present? Wetland Hydrology Present?	Yes ✔ Yes ✔	No L	=		hin a Wetl				
Remarks: Hydraulic mine area; plot is				(S 1503-1	506 (N to V				
remarks. Hydradiio mine area, piot is	in pit arca.	1 1101	ograpiis. I	1000-1		(*)			
VEGETATION – Use scientific na	mes of n	ants		,					
	о		Absolute	Dominant	Indicator	Dominance Test Worksheet:			
Tree Stratum (Plot size: NA)		% Cover	<u> </u>		Number of Dominant Species			
1						That Are OBL, FACW, or, FAC:4 (A)			
2	· ···			WWW.41.41WAL-4-4		Total Number of Dominant			
3.						Species Across All Strata: 4 (B)			
4				- Total	Covor	Percent of Dominant Species			
Sapling/Shrub Stratum (Plot size: 0.0	1 acre	1		= Total	Cover	That Are OBL, FACW, or, FAC:100 (A/B)			
1 Saliy habbiana	. 40.0	.,	9	x	FACW	Prevalence Index Worksheet:			
2. Salix boothii			3		FACW	Total % Cover of: Multiply by:			
3.						OBL Species 120 x 1 = 120			
4						FACW Species 39 x 2 = 78			
5						FAC Species 4 x 3 = 12			
	_		12	_ = Total	Cover	FACU Species x 4 =			
Herb Stratum (Plot size: 0.01 acre)					UPL Species x 5 = Column Totals: 163 (A) 210 (B)			
1. Carex utriculata			68_	X	OBL				
Carex nebrascensis Juncus balticus			<u>52</u> 18	X	OBL FACW	Prevalence Index (B/A) = 1.29			
Deschampsia cespitosa			4		FACW	Hydrophytic Vegetation Indicators:			
5. Epilobium ciliatum			4		FACW	☐ 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%			
6. Poa pratensis			3		FAC	✓ 2 - Dominance Test is >50% ✓ 3 - Prevalence Index is ≤3.0¹			
7. Poa palustris			1		FAC	4 - Morphological Adaptations¹ (Provide supporting			
8. Rumex occidentalis			1_		FACW	data in Remarks or on a separate sheet)			
9						5 - Wetland Non-Vascular Plants¹			
10.						Problematic Hydrophytic Vegetation¹ (Explain)			
11						Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size: NA	1		151	_ = Total	Cover	production of productions.			
1									
2.						Hydrophytic Vegetation			
			0	= Total	Cover	Present? Yes ✓ No □			
% Bare Ground in Herb Stratum					===== .				
Remarks:									



SOIL			Р	roject/Site: Black	Butte Copper	Sampling Point: LS-W1
Profile Des	cription: (Describ	e to the dep	th needed to document	the indicator or	confirm the a	bsence of indicators.)
Depth	Matrix	•	Redox Feature			
(inches)	Color (moist)	%	Color (moist) %	Type¹ Loc²	Texture	Remarks
0-7.5	7.5YR 2.5/1	100			Sandy muck	Sapric
7.5-16	7.5YR 4/1	100			Sandy muck	Sapric
1Type: C=C	oncontration D=D	onlotion DM-	Reduced Matrix, CS=Co	vored or Coated 9	Cond Crains	21 costion: DI =Doro Lining M-Matrix
			RRs, unless otherwise			² Location: PL=Pore Lining, M=Matrix ators for Problematic Hydric Soils ³ :
Histosol (/			Sandy Redox (S5)	noted.j.		m Muck (A10)
`	pedon (A2)		Stripped Matrix (S6)			d Parent Material (TF2)
Black Hist		<u></u>	Loamy Mucky Mineral (F1)	(except MLRA 1)	personny	y Shallow Dark Surface (TF12)
=	Sulfide (A4)		Loamy Gleyed Matrix (F2)	(CACCPI MEI V 1)		ner (Explain in Remarks)
	Below Dark Surface (A11)	Depleted Matrix (F3)			(Explain in Normano)
	k Surface (A12)		Redox Dark Surface (F6)		³Indica	ators of hydrophytic vegetation and
	ıcky Mineral (S1)		Depleted Dark Surface (F7)	wet	tland hydrology must be present,
Sandy Gle	eyed Matrix (S4)		Redox Depressions (F8)		unl	ess disturbed or problematic.
Restrictive	Layer (if present)	:				
Type:	•					
Depth (inche	es):				Hydric So	il Present? Yes ✔ No ☐
Remarks:				That I desire a state about		
			'			
HYDROLO	GY					
Wetland Hy	drology Indicator	s:				
Primary Indi	cators (minimum o	of one require	d; check all that apply)		Seco	ondary Indicators (2 or more required)
✓ Surface W	······································	•		una (BO) (avannt		
	er Table (A2)		Water-Stained Lear MLRA 1, 2, 4A,	` ' ' '	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
Saturation	` '		Salt Crust (B11)	anu 46)		4A, and 4B) Prainage Patterns (B10)
Water Mai			Aquatic Invertebrat	ac (R13)	==	Pry-Season Water Table (C2)
= .	Deposits (B2)		Hydrogen Sulfide C			aturation Visible on Aerial Imagery (C9)
Drift Depo			= ' '	eres along Living Ro		Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduc		` ' =	hallow Aguitard (D3)
Iron Depo				tion in Tilled Soils (C	=	AC-Neutral Test (D5)
Surface S	oil Cracks (B6)		_	d Plants (D1) (LRR A	<i>'</i> =	aised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial Ima	gery (B7)	Other (Explain in R	emarks)	. =	rost-Heave Hummocks (D7)
Sparsely \	/egetated Concave S	urface (B8)				
Field Obser	vations:					
Surface Wat	ter Present? Y	es 🗹 No 🗌	Depth (inches): 0	ŀ		
Water Table	Present? Y	es 🗹 No 🗌	Depth (inches): 0			
Saturation P	resent? Y	es 🗹 No 🗌	Depth (inches): 0	v	Vetland Hydro	ology Present? Yes 🗹 🛮 No 🗌
	pillary fringe)					
Describe Re	corded Data (strea	am gauge, m	onitoring well, aerial phot	os, previous inspe	ections), if avail	lable:
Remarks: H	lydraulic mine area	(pit).				

Project/Site: Black Butte Copper		Ci	ity/County:	White Su	ulphur Springs/Meagher Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources			,		State: MT Sampling Point: LS-W2
Investigator(s): K. Scow, D. Barton		S	Section. To	wnship. R	ange: S30, T12N, R7E
Landform: higher terrace					convex, none): concave Slope (%): 0
Subregion (LRR): E			7730478	(Long: -110.8899944 Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-N	lonaberg		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		NWI classification: PEM
Are climatic/hydrologic conditions on the		or this time o	f vear? V	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation ☐, Soil ✓, or Hydrologic			-		"Normal Circumstances" present? Yes ☐ No 🗸
Are Vegetation , Soil , or Hydrolog					eeded, explain any answers in Remarks.)
•				,	ations, transects, important features, etc.
Hydrophytic Vegetation Present?		<u> </u>			
Hydric Soil Present?		o □		he Sample	
Wetland Hydrology Present?	Yes 🗸 No	D	with	nin a Wetl	and? Yes ✔ No 🗌
	d be wetland, b	out disturbed	by hydrau	lic mining.	Hydric soil assumed. Photographs: KS 1503-1506 (N
to W)					
					· · · · · · · · · · · · · · · · · · ·
VEGETATION – Use scientific na	mes of plan	ts.			
Tree Stratum (Plot size: NA	,	Absolute % Cover		Indicator Status	Dominance Test Worksheet:
		70 COVE	- Opecies:	Status	Number of Dominant Species That Are OBL, FACW, or, FAC: 2 (A)
12					
3.					Total Number of Dominant Species Across All Strata: 2 (B)
4.					•
		0	= Total C	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size: NA					Prevalence Index Worksheet:
1					Total % Cover of: Multiply by:
2.					OBL Species 2 x 1 = 2
3.	· · · · · · · · · · · · · · · · · · ·				FACW Species 114 x 2 = 228
4 5.					FAC Species 53 x 3 = 159
3			= Total C	over	FACU Species x 4 =
Herb Stratum (Plot size: 0.01 acre)				UPL Species x 5 =
1. Juncus balticus	······································	58	x	FACW	Column Totals:169(A)389(B)
2. Carex praegracilis		35_	X	FACW	Prevalence Index (B/A) = 2.30
3. Agrostis stolonifera		18_		FAC	Hydrophytic Vegetation Indicators:
4. Deschampsia cespitosa		18_		FACW	1 - Rapid Test for Hydrophytic Vegetation
		14		FAC	2 - Dominance Test is >50%
		10	MARKET TO THE CHIEF OF THE CHIE	FAC	3 - Prevalence Index is ≤3.0¹
		<u>8</u> 3	100 ABANA AND AND AND AND AND AND AND AND AND	FAC FAC	4 - Morphological Adaptations¹ (Provide supporting
Poa pratensis Symphyotrichum subspicatum		3		FACW	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹
10. Eleocharis palustris				OBL	Problematic Hydrophytic Vegetation¹ (Explain)
11.					Indicators of hydric soil and wetland hydrology must be
		169	= Total C	Cover	present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)				
1		<u> </u>			Hydrophytic
2					Vegetation Present?
% Bare Ground in Herb Stratum		0	_ = Total C	Cover	1 resents 165 F NO
	shows this tun	e to he verv	extensive	in the area	a on higher and even lower terraces. Narrower bottom
is Salix or Car utr/Cane. Se	e photo 1507 to	o N - upl star	ts at Dasip	ohora frutio	cosa and then Car nut (for Car nut composition, see
plot LS-U1), then road.					



SOIL		Project/Site: Blac	k Butte Co	pper Sampling Point: LS-W2
Profile Description:	(Describe to the de	pth needed to document the indicator of	or confirm	the absence of indicators.)
Depth	Matrix	Redox Features		,
(inches) Color (Color (moist) % Type¹ Loc²	 Textu	re Remarks
		- Color (Indiaty		
<u>0-16</u> <u>10YF</u>	R 3/1 10	And a second sec	SCL	coarse gravels present
17 0 . 0	D-DI-ti DA	A-Ddud-Matrix OCCovered on Control		21 applies DI - Dave Lining M-Matrix
		M=Reduced Matrix, CS=Covered or Coated		
Hydric Soil Indicator	rs (Applicable to al	LRRs, unless otherwise noted.):	<u> </u>	ndicators for Problematic Hydric Soils³:
Histosol (A1)		Sandy Redox (S5)	L	2 cm Muck (A10)
Histic Epipedon (A2)	[Stripped Matrix (S6)		Red Parent Material (TF2)
Black Histic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1)		Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4	(4	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted Below Dark	Surface (A11)	Depleted Matrix (F3)		
▼ Thick Dark Surface (Redox Dark Surface (F6)	3	Indicators of hydrophytic vegetation and
Sandy Mucky Minera	,	Depleted Dark Surface (F7)		wetland hydrology must be present,
_ ' '	, ,	Redox Depressions (F8)		unless disturbed or problematic.
Sandy Gleyed Matrix		Redox Depressions (Fo)		
Restrictive Layer (if	present):			
Туре:				
Depth (inches):			Hydr	ic Soil Present? Yes 🗸 🛮 No 🗌
	e: hydraulic mining r	esidue. Hydronhytic vegetation present: se	oile previou	sly disturbed by mining. Assume hydric soil
		possibly meets indicator A12 at greater de		sty disturbed by mining. Adounte Hydrio son
to support	welland vegetation,	possibly meets indicator 7112 at greater de	,p.,,	
L				
HYDROLOGY				
Wetland Hydrology	Indicators:			
, .,		red; check all that apply)		Secondary Indicators (2 or more required)
T filliary indicators (iii	minum or one requi	Tou, onook an that apply)		
Surface Water (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A	2)	MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation (A3)		Salt Crust (B11)		Drainage Patterns (B10)
Water Marks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment Deposits (I	32)	Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	/	Oxidized Rhizospheres along Living	Roots (C3)	Geomorphic Position (D2)
Algal Mat or Crust (B	4 \	Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	4)		(C6)	FAC-Neutral Test (D5)
Iron Deposits (B5)		Recent Iron Reduction in Tilled Soils		` '
Surface Soil Cracks		Stunted or Stressed Plants (D1) (LRF	≺ A)	Raised Ant Mounds (D6) (LRR A)
Inundation Visible on		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely Vegetated	Concave Surface (B8)			
Field Observations:				
Surface Water Prese	nt? Yes 🗌 No	✓ Depth (inches):		
Water Table Present	=			
Saturation Present?	Yes No	_	Wetland I	Hydrology Present? Yes ✔ No 🗌
(includes capillary frir	ige)	Depth (inches):		-,
		monitoring well, aerial photos, previous ins	nections) i	f available:
Pesonine Meconded D	ata (stream gauge,	monitoring wen, acriai priotos, previous ins	, pootions, 1	· aranaxio.
Remarks: Capillary a	ction? See above - p	problematic, but distinctly hydrophytic.		

Project/Site: Black Butte Copper		Ci	ity/County	։ White Տւ	ulphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W3
Investigator(s): K.Scow, D. Barton		S	Section, To	ownship, R	Range: S30, T12N, R7E	· <u></u>
Landform: terrace		L	ocal reliet	f (concave,	, convex, none): concave	Slope (%): 0-2
Subregion (LRR): E		Lat: 46.	7719288		Long: -110.8888864	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Monab	era				NWI classific	
Are climatic/hydrologic conditions on the site		his time o	fvear? Y	es 🗸 N		
Are Vegetation . Soil , or Hydrology					"Normal Circumstances"	
Are Vegetation , Soil , or Hydrology	-					
SUMMARY OF FINDINGS – Attach sit					needed, explain any answ ations, transects, imp	·
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes	= =	=	ls t	he Sampl	ed Area	
Wetland Hydrology Present? Yes	✓ No		wit	hin a Wet	land? Yes ✓	No 🗌
Remarks: Stream side of very meandering of very mea					,	
Tree Stratum (Plot size: NA)		Absolute % Cover	Dominant Species?		Dominance Test Worl	
1					 Number of Dominant S That Are OBL, FACW, 	
2.						
3.					Total Number of Domin Species Across All Stra	
4					•	
		0	_ = Total	Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wor	ksheet:
1				***************************************	Total % Cover of:	
2.					OBL Species 9	
3				******	FACW Species 35.	
4 5					FAC Species 4	
·		0	= Total	Cover	FACU Species 2	1 x 4 = 84
Herb Stratum (Plot size: 0.01 acre)			rotar	00101	UPL Species 0.	5 x 5 = 2.5
1. Carex utriculata		76	х	OBL	Column Totals: 19	3 (A) <u>373.5</u> (B)
2. Mentha arvensis		20	x	FACW	Prevalence Index ((B/A) = 1.94
3. Poa pratensis		16	X	FAC	Hydrophytic Vegetation	······
4. Symphyotrichum foliaceum		14_		FACU	1 - Rapid Test for Hydr	
5. Glyceria striata		6		OBL	✓ 2 - Dominance Test is	
6. Agrostis stolonifera				FAC	✓ 3 - Prevalence Index is	s ≤3.0¹
7. Phleum pratense				FAC	4 - Morphological Adap	otations¹ (Provide supporting
8. Potamogeton filiformis		5		OBL		on a separate sheet)
9. Stachys palustris				FACW	5 - Wetland Non-Vasco	
10. Cirsium arvense				FAC	, , ,	ic Vegetation¹ (Explain)
11. Deschampsia cespitosa		4		FACW	present, unless disturbed o	d wetland hydrology must be r problematic.
Woody Vine Stratum (Plot size: NA)	193	_ = Total (
1					Hydrophytic	
2		0	= Total (Cover	Vegetation Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum	_	U	10(a) (COVE		
Remarks:						



SOIL					Project/Sit	e: Black	Butte Co	pper Sampling Point: LS-W3
Profile Des	scription: (Descri	be to the	depth needed to d			the absence of indicators.)		
Depth	Matrix		Re	dox Feat	ures			•
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Textu	ire Remarks
0-16	10YR 2/2	95	7.5YR 5/5	5	_ <u>C</u>	M	SiC	
								
¹Type: C=0	Concentration D=D	enletion	RM=Reduced Matri	x CS=C	overed or	Coated	Sand Gra	ins ² Location: PL=Pore Lining, M=Matrix
			all LRRs, unless					ndicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (S		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Ē	2 cm Muck (A10)
	pipedon (A2)		Stripped Matrix	•			Ē	Red Parent Material (TF2)
Black Hi			Loamy Mucky M		1) (except M	I RA 1)	Ē	Very Shallow Dark Surface (TF12)
=	n Sulfide (A4)		Loamy Gleyed I				Ē	Other (Explain in Remarks)
= : :	Below Dark Surface	(A11)	✓ Depleted Matrix		,			_ Other (Explain in Normano)
_ ·	ark Surface (A12)	(,,,,,	Redox Dark Sur	` '			3	Indicators of hydrophytic vegetation and
=	lucky Mineral (S1)		Depleted Dark S	` '				wetland hydrology must be present,
	leyed Matrix (S4)		Redox Depress	•	',			unless disturbed or problematic.
	E Layer (if present):		10/10 (1 0)				
Туре:								
Depth (incl	nes):						Hvdi	ric Soil Present? Yes 🗸 No 🗌
Pomarks:	Mosts both indicate	oro A11 ou	ad E2 avaant that a	oil buo is	dorkor th	on roqui	rad for do	pleted matrix. Believe this is due to soil type
			,					ators of hydrology and hydrophytic
HYDROLO	OGY							
Wetland H	ydrology Indicato	rs:						
Primary Inc	dicators (minimum	of one rec	juired; check all tha	t apply)				Secondary Indicators (2 or more required)
Surface 1	Water (A1)		Water-S	Stained Le	eaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
=	ter Table (A2)		MLR	A 1, 2, 4A	۸, and 4B) ُ	•		4A, and 4B)
Saturati	• •		Salt Cru	ıst (B11)				✓ Drainage Patterns (B10)
Water M	arks (B1)		_		ates (B13)			Dry-Season Water Table (C2)
	t Deposits (B2)		= '		Odor (C1)			Saturation Visible on Aerial Imagery (C9)
L	osits (B3)		:		heres along	Living Ro	oots (C3)	Geomorphic Position (D2)
	t or Crust (B4)		✓ Presend	e of Red	uced Iron (C	(4)	` ,	Shallow Aguitard (D3)
	osits (B5)				action in Tille	•	C6)	FAC-Neutral Test (D5)
_	Soil Cracks (B6)				ed Plants (I		•	Raised Ant Mounds (D6) (LRR A)
Inundation	on Visible on Aerial Im	agery (B7)	Other (E	Explain in	Remarks)	, ,	•	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)	•	,			
Field Obse		. ,	,					
		Yes □ N	lo 🗸 Depth (inche	es):		İ		
				· —	-			
Water Table Present? Yes ☐ No ✔ Depth (inches): Saturation Present? Yes ☐ No ✔ Depth (inches):							Wetland I	Hydrology Present? Yes ✔ No
(includes c	apillary fringe)							
Describe R	ecorded Data (stre	am gauge	e, monitoring well, a	erial pho	otos, previ	ous insp	ections), i	f available:
Remarks:								



Project/Site: Black Butte Copper		Ci	ty/County:	White Su	ulphur Springs/Meagher	Sampling Date: 08-26-2014	
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W4	
Investigator(s): K.Scow, D. Barton		S	Section, To	wnship, R	ange: S29, T12N, R7E		
Landform: bottom				• •	convex, none): concave	Slope (%): 0-2	
Subregion (LRR): E			7713605	,	Long: -110.8822551 Datum: WGS84		
Soil Map Unit Name: 1150C Bischoff-	Monahera		77 10000			cation: PEM	
Are climatic/hydrologic conditions on t	· · · · · · · · · · · · · · · · · · ·	. Hhin times a	ν				
Are Vegetation , Soil , or Hydrold		-				' present? Yes ✓ No 🗌	
Are Vegetation , Soil , or Hydrold					eeded, explain any answ		
SUMMARY OF FINDINGS – Atta			impiing p	JOINT 10C	ations, transects, im	portant reatures, etc.	
Hydrophytic Vegetation Present?	Yes ✓ No			h - O l	l A		
Hydric Soil Present? Wetland Hydrology Present?	Yes ✔ No Yes ✔ No			he Sample hin a Wetl		No 🗆	
Remarks: Vegetation community alte	rea by mistoric gr	azıng. Auja	iceni creer	wetiand	is unmistakable. Photogra	apris: No 1440-1443 (N to VV)	
VECETATION Lies esignifies n	omas of plants						
VEGETATION – Use scientific n	ames or plants		Daminant		D:	114	
Tree Stratum (Plot size: NA)	Absolute % Cover		Indicator Status	Dominance Test Wor		
1			·	,	 Number of Dominant S That Are OBL, FACW, 		
2.					Total Number of Domir		
3.					Species Across All Str		
4							
		0	_ = Total (Cover	Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)				Prevalence Index Wo		
Dasiphora fruticosa		1		FAC	Total % Cover of:		
2						1000000000000000000000000000000000000	
3						4 x 2 = 28	
4						$\frac{7}{12} \times 3 = \frac{20}{306}$	
5						5 x 4 = 30	
Herb Stratum (Plot size: 0.01 acre)		_ = Total (Jover	UPL Species	x 5 =	
1. Phleum pratense		55	x	FAC	Column Totals: 165.	5 (A) 406 (B)	
2 Detentille ensemine		42		OBL	Prevalence Index		
3. Poa pratensis		25		FAC			
A Agrantia stalanifora		15		FAC	Hydrophytic Vegetati 1 - Rapid Test for Hyd		
E Corox proparacilia		10		FACW	2 - Dominance Test is		
6. Potentilla gracilis		5		FAC	✓ 3 - Prevalence Index is		
7. Juncus balticus		4		FACW		ptations¹ (Provide supporting	
8. Symphyotrichum foliaceum		4		FACU	data in Remarks o	r on a separate sheet)	
9. Taraxacum officinale		3_		FACU	5 - Wetland Non-Vaso	ular Plants¹	
10. Alopecurus pratensis		1		FAC	Problematic Hydrophy	tic Vegetation¹ (Explain)	
11. Sonchus arvensis		0.5		FACU	¹ Indicators of hydric soil ar present, unless disturbed of	nd wetland hydrology must be	
		164.5	_ = Total (Cover	present, unless disturbed t	n problematic.	
Woody Vine Stratum (Plot size: NA)						
1					Hydrophytic		
2			- Total (Vegetation Present? Yes	✓ No 🗌	
% Bare Ground in Herb Stratum			_ = Total (Jover			
Remarks: Marginal WL - problematic	due to alteration	of vegetati	on compo	sition by h	istoric grazing. Adiacent	creek is unmistakable WL (no	
plot).			5,,,,,,,	-: -:: ~ ,		(10	



SOIL			Project/Si	te: <u>Black Bu</u>	itte Coppe	er Sampling Point: <u>LS-W4</u>
Profile Desc	ription: (Descri	be to the depth	needed to document the ind	icator or co	nfirm the	absence of indicators.)
Depth	Matrix		Redox Features			
(inches)	Color (moist)	%C	color (moist) % Type¹	Loc²	Texture	Remarks
0-16	10YR 2/1	100			SiC	
	40					
¹Type: C=Co	ncentration, D=D	epletion, RM=F	Reduced Matrix, CS=Covered or	Coated Sa	nd Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to all Li	RRs, unless otherwise noted.)):	Indi	cators for Problematic Hydric Soils ³ :
Histosol (A	(1)		Sandy Redox (S5)			cm Muck (A10)
Histic Epip	•	一	Stripped Matrix (S6)		F	Red Parent Material (TF2)
Black Hist		一	Loamy Mucky Mineral (F1) (except N	/ILRA 1)	\Box	/ery Shallow Dark Surface (TF12)
	Sulfide (A4)	ī	Loamy Gleyed Matrix (F2)	•	=	Other (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix (F3)			,
	Surface (A12)	···/	Redox Dark Surface (F6)		³Indi	icators of hydrophytic vegetation and
_	cky Mineral (S1)	一	Depleted Dark Surface (F7)			vetland hydrology must be present,
= '	yed Matrix (S4)	H	Redox Depressions (F8)		U	ınless disturbed or problematic.
	Layer (if present		. 1040/ 2 06/100/01/0 (1 0)			
_	Layer (II preserii	.,.				
Type:	-				District of	0-ii D
Depth (inche	es):				Hyaric	Soil Present? Yes ✓ No 🗌
Ve	egetation and we	tland hydrology				
HYDROLOG	3Y					
Wetland Hy	drology Indicate	ors:				
Primary Indi	cators (minimum	of one required	; check all that apply)		Se	econdary Indicators (2 or more required)
				/		NAI-to- Oto-in-oil anno (DO) (ANI DA 4 O
Surface W			Water-Stained Leaves (B9)	(except		Water-Stained Leaves (B9) (MLRA 1, 2,
= •	r Table (A2)		MLRA 1, 2, 4A, and 4B)			4A, and 4B)
Saturatio	• •		Salt Crust (B11)			Drainage Patterns (B10)
Water Mar			Aquatic Invertebrates (B13)			Dry-Season Water Table (C2)
<u>—</u>	Deposits (B2)		Hydrogen Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo			Oxidized Rhizospheres alon		s (C3) 🗹	, ,
	or Crust (B4)		Presence of Reduced Iron (-	H	Shallow Aquitard (D3)
Iron Depos			Recent Iron Reduction in Til	, ,		FAC-Neutral Test (D5)
=	oil Cracks (B6)		Stunted or Stressed Plants	(D1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
=	Visible on Aerial Im		U Other (Explain in Remarks)		~	Frost-Heave Hummocks (D7)
Sparsely \	/egetated Concave	Surface (B8)				
Field Obser	vations:					
Surface Wat	ter Present?	Yes 🗌 No 🗹	Depth (inches):			
Water Table	Present?	Yes 🗌 No 🗹	Depth (inches):			
Saturation P	resent? pillary fringe)	Yes 🗌 No 🗸	Depth (inches):	We	tland Hyd	Irology Present? Yes ✓ No ✓
		eam gauge, mo	nitoring well, aerial photos, prev	ious inspect	ions), if av	/ailable:
Remarks:						

Project/Site: Black Butte Copper		Cit	ty/Cou	inty: White Su	ılphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W5
Investigator(s): K.Scow, D. Barton		s	ection	, Township, R	ange: S29, T12N, R7E	
Landform: bottom		L	ocal re	elief (concave,	convex, none): concave	Slope (%): 0-2
Subregion (LRR): E		 Lat: 46.	77028	65	Long: -110.8792189	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-	-Monaberg				NWI classific	cation: PEM
Are climatic/hydrologic conditions on		this time of	f year?	? Yes ✔ N	o (If no, explain in Re	marks.)
Are Vegetation , Soil , or Hydrol						present? Yes ✓ No
Are Vegetation, Soil, or Hydrol		-			eeded, explain any answ	
SUMMARY OF FINDINGS – Atta				,		•
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ No Yes ✓ No Yes ✓ No			ls the Sample within a Wetl		No 🗌
Remarks: Photographs: KS 1431-14			<u></u>			ALAMAA ANA KIMATAY MATATAY TAY TAY TAY TAY MAKAMATAY MAKAMATAY TAY MAKAMATAY MAKAMATAY TAY MAKAMATAY
rtemarks. Protographis. No 1401 14						
VEGETATION – Use scientific r	names of plants	 S.				
		Absolute	Domir	nant Indicator	Dominance Test World	ksheet:
Tree Stratum (Plot size: NA	-	% Cover			Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC:3 (A)
2.					Total Number of Domir	
3.					Species Across All Stra	ata: 3 (B)
4		0	To	tal Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.	01 acre)				Prevalence Index Wo	
Dasiphora fruticosa				FAC	Total % Cover of:	
2						5 x 1 = 85
3.						8 x 2 = 96
4						$\frac{3}{3}$ $\times 3 = 99$
5.				4-1-0	FACU Species	x 4 =
Herb Stratum (Plot size: 0.01 acre)	4	_ = 10	tal Cover	UPL Species	x 5 =
1. Carex nebrascensis		38	x	OBL	Column Totals: 16	6 (A) <u>280</u> (B)
2. Carex utriculata		28	x		Prevalence Index	(R/A) = 1.69
3. Juncus balticus		26	X	FACW		` '
4. Poa pratensis		20		FAC	Hydrophytic Vegetation 1 - Rapid Test for Hydro	
5. Potentilla anserina		18		OBL	2 - Dominance Test is	, ,
6. Deschampsia cespitosa		10_		FACW	✓ 3 - Prevalence Index is	
7. Stachys palustris		8_		FACW		otations¹ (Provide supporting
8. Mentha arvensis		4		FACW		r on a separate sheet)
9. Potentilla gracilis		4		FAC	5 - Wetland Non-Vasc	
10. Agrostis stolonifera		3		FAC	-	tic Vegetation¹ (Explain)
11. Poa palustris		2		FAC	present, unless disturbed of	d wetland hydrology must be or problematic.
Woody Vine Stratum (Plot size: NA)	162	10	tal Cover	-	<u> </u>
1					Hydronbytic	
2.					Hydrophytic Vegetation	
		0	= To	tal Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum						
Remarks:						



SOIL				ı	Project/Site	e: Black	Butte Copper	Sampling Point: LS-W5
Profile Des	scription: (Descri	be to the o	lepth needed to d					absence of indicators.)
Depth	Matrix			dox Featu				,
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	Remarks
0-16	10YR 2/2	93	5YR	58	C	M	SiC	
						-		
¹Type: C=C	oncentration, D=D	epletion, F	M=Reduced Matri	x, CS=C	overed or	Coated	Sand Grains	² Location: PL=Pore Lining, M=Matrix
			ill LRRs, unless o				···	ators for Problematic Hydric Soils ³ :
Histosol ((A1)		Sandy Redox (S	5)	·			cm Muck (A10)
Histic Epi	ipedon (A2)		Stripped Matrix ((S6)			=	ed Parent Material (TF2)
Black His	stic (A3)		Loamy Mucky M	ineral (F1) (except MI	_RA 1)	Ve	ery Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed N	/latrix (F2))		□ 01	ther (Explain in Remarks)
✓ Depleted	Below Dark Surface	(A11)	✓ Depleted Matrix	(F3)				
Thick Dar	rk Surface (A12)		Redox Dark Sur	face (F6)				ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark S	•	7)			etland hydrology must be present, nless disturbed or problematic.
	eyed Matrix (S4)		Redox Depressi	ons (F8)			uii	ness disturbed of problematic.
	Layer (if present):						
Туре:								
Depth (inch	es):						Hydric S	oil Present? Yes 🗹 🛮 No 🗌
								of hydrology and hydrophytic
HYDROLO								
_	drology Indicato						_	
Primary Ind	icators (minimum	of one requ	ired; check all that	apply)			Sec	condary Indicators (2 or more required)
Surface V			☐ Water-S	tained Le	aves (B9) (e	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLR/	4 1, 2, 4A	, and 4B)			4A, and 4B)
Saturation	on (A3)		Salt Cru	st (B11)				Drainage Patterns (B10)
Water Ma	rks (B1)		Aquatic	Invertebra	ates (B13)			Dry-Season Water Table (C2)
	Deposits (B2)				Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo	, ,				heres along		L	Geomorphic Position (D2)
	or Crust (B4)		=		ced Iron (C4	•		Shallow Aquitard (D3)
Iron Depo	Soil Cracks (B6)				ction in Tille	,	•	FAC-Neutral Test (D5)
	n Visible on Aerial Im	ageny (R7)	=	xplain in I	ed Plants (D	1) (LKK)	<i>'</i>	Raised Ant Mounds (D6) (LRR A)
$\overline{}$	Vegetated Concave S		Other (E	Apiaiii iii i	Nemains)		✓ !	Frost-Heave Hummocks (D7)
Field Obser		- Carrage (20)				T		
		′es 🗌 No	Depth (inche	e).				
Water Table			Depth (inche					
Saturation F			Depth (inche	,		\	Netland Hydr	ology Present? Yes 🗸 No 🗌
Describe Re	ecorded Data (stre	am gauge,	monitoring well, a	erial pho	tos, previo	us inspe	ections), if ava	ilable:
Remarks:								

Project/Site: Black Butte Copper			Ci	ity/County	: White Si	ulphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources						State: MT	Sampling Point: LS-W6
Investigator(s): K.Scow, D. Barton			S	Section, To	wnship, F	Range: S29, T12N, R7E	
Landform: bottom			L	ocal relief	(concave	, convex, none): concave	Slope (%): 0-4
Subregion (LRR): E				76875103		Long: -110.874429316	
Soil Map Unit Name: 1175E Owenspri	ng-Cheadle					NWI classific	
Are climatic/hydrologic conditions on t		al for t	his time o	fvear? V	es 🗾 N		
Are Vegetation , Soil , or Hydrold				-		"Normal Circumstances"	
Are Vegetation, Soil, or Hydrold		-				needed, explain any answ	
SUMMARY OF FINDINGS – Atta						. ,	ŕ
Hydrophytic Vegetation Present?	Yes 🗸	No	_				· · · · · · · · · · · · · · · · · · ·
Hydric Soil Present?	Yes 🗹	No	=	ls t	he Sampl		
Wetland Hydrology Present?	Yes 🗸	No		with	hin a Wet	land? Yes ✓	No 🗌
Remarks:							
VEGETATION – Use scientific n	ames of pl	ants.					
			Absolute		Indicator	Dominance Test World	sheet:
Tree Stratum (Plot size: NA				Species?	Status	Number of Dominant S	
1						That Are OBL, FACW,	or, FAC:4 (A)
2.						Total Number of Domin	
3.						Species Across All Stra	ta: 4 (B)
4			0	= Total (Cover	Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)		Total C	Jovei	That Are OBL, FACW,	or, FAC: 100 (A/B)
4. Designation of the disease		.,	12	x	FAC	Prevalence Index Wor	ksheet:
2.						Total % Cover of:	Multiply by:
3.						OBL Species6	
4						FACW Species2	
5						FAC Species 6	
<u>.</u>			12	_ = Total (Cover	FACU Species	x 4 = x 5 = 2.5
Herb Stratum (Plot size: 0.01 acre)					Column Totals: 158.	
				X	OBL		
Poa pratensis Potentilla anserina			18 16	x	FAC OBL	Prevalence Index (
A Potentilla arnoilia			14		FAC	Hydrophytic Vegetation	
E Circium antoneo			10		FAC	1 - Rapid Test for Hydr	
6 Stockus polyotria			10		FACW	✓ 2 - Dominance Test is ✓ 3 - Prevalence Index is	
7			7		FACW		stations¹ (Provide supporting
8. Geum macrophyllum			4		FAC		on a separate sheet)
9. Polygonum amphibium			4		OBL	5 - Wetland Non-Vascu	ular Plants1
10. Carex nebrascensis			3		OBL	Problematic Hydrophyt	ic Vegetation¹ (Explain)
11. Mentha arvensis			3_		FACW		d wetland hydrology must be
			146.5	_ = Total C	Cover	present, unless disturbed o	r problematic.
Woody Vine Stratum (Plot size: NA)						
1						Hydrophytic	
2				- Total (Cover	Vegetation Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum				_ = Total (Jover		_
Remarks:	***************************************					.1	



SOIL				Pr	roject/Site	: Black	Butte Co	pper	Sampling Point: LS-W6
Profile Des	cription: (Describ	e to the depth	needed to d	ocument	the indic	cator or	confirm	the ab	sence of indicators.)
Depth	Matrix	•		dox Feature					,
(inches)	Color (moist)	% C	color (moist)	%	Type¹	Loc²	Textu	re i	Remarks
0-16	10YR 2.2	90	5YR 5/8	10	RM	M	SCI		
	A		•						
1Tymas C=C	anaontration D-D	anlation DM-E	Dadward Matri				Cond Ore		Lagation, Disposal initiate Manhabit.
	oncentration, D=D Indicators (Appli				···	Joaled 3			Location: PL=Pore Lining, M=Matrix ors for Problematic Hydric Soils³:
Histosol (Sandy Redox (S		notea.j.				Muck (A10)
= '	pedon (A2)	=	Stripped Matrix (•			F	=	Parent Material (TF2)
Black His		=	Loamy Mucky M		(except MI	RA 1)		=	Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed M		(except with		F	= :	r (Explain in Remarks)
= : :	Below Dark Surface (Depleted Matrix				_		(Explain in Termano)
= :	k Surface (A12)		Redox Dark Sur	` '			3	Indicat	ors of hydrophytic vegetation and
_	ıcky Mineral (S1)		Depleted Dark S)			wetla	and hydrology must be present,
C	eyed Matrix (S4)		Redox Depressi					unle	ss disturbed or problematic.
	Laver (if present)								
Type:									
Depth (inch	ac).						Hydr	ric Sail	Present? Yes ✓ No
									matrix. Believe this is due to soil type
,,			, dan Tille						hydrology and hydrophytic
HYDROLO	GY drology Indicato	**							
•				t				0	-dl-dit (0
Primary Indi	cators (minimum o	or one required	; cneck all that	. apply)				Secor	ndary Indicators (2 or more required)
Surface V	• •				ves (B9) (e:	xcept			ater-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLR	4 1, 2, 4A,	and 4B)				4A, and 4B)
Saturation	` '		Salt Cru	, ,				=	ainage Patterns (B10)
Water Ma	` '		= '	Invertebrate				=	y-Season Water Table (C2)
	Deposits (B2)			n Sulfide O					turation Visible on Aerial Imagery (C9)
Drift Depo	` '			•	eres along	•	ots (C3)	$\overline{}$	omorphic Position (D2)
= -	or Crust (B4)		_		ed Iron (C4	•		=	allow Aquitard (D3)
Iron Depo			=		tion in Tilled	,	,	=	C-Neutral Test (D5)
=	oil Cracks (B6)	(DZ)	=		d Plants (D	1) (LRR A	A)	=	ised Ant Mounds (D6) (LRR A)
\equiv	Note that Company Company		Utner (E	xplain in R	emarks)			∐ Fro	st-Heave Hummocks (D7)
	Vegetated Concave S	ourrace (B8)				т т			
Field Obse			Double Coole	- > -					
		'es ∐ No 🔽	Depth (inche						
Water Table		es No 🗸	Depth (inche	· —			Matlamal I	leader 1	December Voc. All No.
_ `	pillary fringe)	′es ∐ No 🗹	Depth (inche						ogy Present? Yes 🗹 No 🗌
Describe Re	ecorded Data (stre	am gauge, mor	nitoring well, a	∍riai photo	os, previo	us inspe	ections), i	t availa	pie:
Remarks: V	Vater table at ∼28"	judging by wat	er level in adja	acent cree	∍k.				

Project/Site: Black Butte Copper		Ci	ty/County:	White Su	Sampling Date: 08-25-2014			
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W7		
Investigator(s): D. Barton, K. Scow, J. Beav	er, D.Culwell, D. Ha	gen S	ection, To	wnship, R	ange: S32, T12N, R7E			
Landform: broad swale		L	ocal relief	(concave,	convex, none): none	Slope (%): 2		
Subregion (LRR): E			7658145	•	Long: -110.873265	Datum: WGS84		
Soil Map Unit Name: 1150C Bischoff-M	onabera				NWI classific			
Are climatic/hydrologic conditions on the		this time o	f vear? Ve	as 🗾 No				
Are Vegetation, Soil, or Hydrolog						present? Yes ✔ No		
· ·						· — —		
Are Vegetation ☐, Soil ☐, or Hydrolog SUMMARY OF FINDINGS – Attack				•	eeded, explain any answ ations. transects. imi	·		
Hydrophytic Vegetation Present?	Yes ✓ No							
Hydric Soil Present?	Yes ✓ No	=	ls th	he Sample	ed Area			
Wetland Hydrology Present?	Yes ✓ No		with	nin a Wetl	and? Yes 🗹	No 🗌		
Remarks: Photographs: JB 2412-2415			i					
VEGETATION - Use scientific na	mes of plants	_						
		Absolute	Dominant	Indicator	Dominance Test World	(sheet:		
Tree Stratum (Plot size: NA	_)	% Cover	Species?	Status	Number of Dominant S	pecies		
1					That Are OBL, FACW,	or, FAC:1 (A)		
2					Total Number of Domin	ant		
3					Species Across All Stra	ata: 1 (B)		
4					Percent of Dominant S			
Sanling/Shruh Stratum (Blot size: 0.01	coro \	0	_ = Total C	Cover	That Are OBL, FACW,	or, FAC: 100 (A/B)		
Sapling/Shrub Stratum (Plot size: 0.01 1. Dasiphora fruticosa	· · · · · · · · · · · · · · · · · · ·	2		FAC	Prevalence Index Wor	ksheet:		
				FAC	Total % Cover of:	Multiply by:		
3.					OBL Species7	1 x 1 = 71		
4.						5 x 2 = 7		
5.					FAC Species			
		2	= Total C	Cover	:	x 4 =		
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =		
1. Carex utriculata		70	x	OBL	Column Totals: 76.	5 (A) <u>84</u> (B)		
Calamagrostis stricta				FACW	Prevalence Index ((B/A) = 1.10		
3. Carex nebrascensis		1_		OBL	Hydrophytic Vegetation	on Indicators:		
4. Juncus balticus		1		FACW	1 - Rapid Test for Hydr			
		0.5		FACW	✓ 2 - Dominance Test is	>50%		
6					✓ 3 - Prevalence Index is	; ≤3.0¹		
7						otations¹ (Provide supporting		
8					5 - Wetland Non-Vasci	on a separate sheet)		
9						tic Vegetation¹ (Explain)		
10. 11					_ , , ,	d wetland hydrology must be		
11		74.5	= Total C	Cover	present, unless disturbed o	r problematic.		
Woody Vine Stratum (Plot size: NA)					,		
1					Hydrophytic			
2.					Vegetation			
		0	= Total C	over	Present? Yes	✓ No 🗌		
% Bare Ground in Herb Stratum 0.5								
Remarks:								



SOIL				Project/Site	∵ Black Βι	utte Copper	Sampling Point: LS-W7
Profile Des	cription: (Describe	e to the depth	needed to docume	nt the indic	ator or co	onfirm the a	bsence of indicators.)
Depth	Matrix		Redox Feat	ures			
(inches)	Color (moist)	% C	olor (moist) %	Type ¹	Loc²	Texture	Remarks
0-16	10YR 3/1	100				OM	sapric
	•						
			educed Matrix, CS=0		Coated Sa		² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indicators (Applic	_	Rs, unless otherwis	se noted.):		Indica	ators for Problematic Hydric Soils ³ :
✓ Histosol (•	=	Sandy Redox (S5)			=	m Muck (A10)
Histic Ep	ipedon (A2)	==	Stripped Matrix (S6)			=	d Parent Material (TF2)
Black His	stic (A3)	=	oamy Mucky Mineral (F.		RA 1)	Vei	ry Shallow Dark Surface (TF12)
Hydroger	Sulfide (A4)	L	oamy Gleyed Matrix (F2	2)		Oth	ner (Explain in Remarks)
Depleted	Below Dark Surface (A		Depleted Matrix (F3)				
	rk Surface (A12)	_	Redox Dark Surface (F6	•			ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark Surface (F7)			tland hydrology must be present, less disturbed or problematic.
Sandy G	eyed Matrix (S4)	F	Redox Depressions (F8)				
Restrictive	Layer (if present):						
Туре:							
Depth (inch	es):					Hydric So	oil Present? Yes 🗸 🛮 No 🗌
Remarks:		<u></u>					
IYDROLO Wetland H	GY /drology Indicators	s:					
Primary Ind	icators (minimum of	f one required;	check all that apply)			Seco	ondary Indicators (2 or more required)
✓ Surface \	Vater (A1)		Water-Stained L	eaves (R9) (e	vcent		Vater-Stained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)		MLRA 1, 2, 4	. , ,	ксері	v	4A, and 4B)
Saturati	, ,		Salt Crust (B11)	ri, and 4D)		Пг	Orainage Patterns (B10)
Water Ma			Aquatic Inverteb	rates (B13)			Ory-Season Water Table (C2)
=	Deposits (B2)		Hydrogen Sulfide	, ,			Saturation Visible on Aerial Imagery (C9)
Drift Dep	. , ,		Oxidized Rhizos		Livina Roots		Geomorphic Position (D2)
	or Crust (B4)		Presence of Red		-		Shallow Aquitard (D3)
Iron Depo			Recent Iron Red		,	=	AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or Stres			=	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Imag	gery (B7)	Other (Explain in	•	., (,		Frost-Heave Hummocks (D7)
=	Vegetated Concave Su			,		<u></u>	,
ield Obse		· · · · · · · · · · · · · · · · · · ·					
Surface Wa	iter Present? Ye	es 🗸 No 🗌	Depth (inches): 0				
		es 🗹 No 🗌	Depth (inches): 0				
Saturation I		es 🗹 No 🗌	Depth (inches): 0		We	tland Hydro	ology Present? Yes 🗹 No 🗌
	······································	m dauge man	itoring well, aerial ph	otoe provio	ue incoat	ione) if avai	ilable:
Describe K	scolucu Dala (Silea	m gauge, mon	itornig weil, aenai pri	olos, previo	us mispect	ions), ii avai	ilabic.
Remarks:							
winains.							

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	Iphur Springs/Meagher	Sampling Date: 08-25-2014	
Applicant/Owner: Tintina Resources		State: MT	Sampling Point: LS-W8				
Investigator(s): D. Barton, K. Scow, J. Bear	er, D.Culwell, D. Ha	gen S	ection, To	ownship, R	ange: S32, T12N, R7E		
Landform: broad swale		L	ocal relief	(concave,	convex, none): convex	Slope (%): 3	
Subregion (LRR): E		1 -4: 46			Long: -110.872891 Datum: WGS84		
Soil Map Unit Name: 1150C Bischoff-N					NWI classifi		
Are climatic/hydrologic conditions on th		this time o	fvear? Y	es 🗸 No			
Are Vegetation , Soil , or Hydrolog	= -		-			present? Yes V No	
Are Vegetation , Soil , or Hydrolog	-	-			eeded, explain any answ		
SUMMARY OF FINDINGS – Attac							
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes V No No Yes V No			he Sample hin a Wetl		No 🗆	
Remarks: Photographs: JB 2416-2419	(N to W)						
VECETATION Line colombific no	mas of plants						
VEGETATION – Use scientific na	mes or plants		Daminant	la dia atau	D!		
Tree Stratum (Plot size: NA)	Absolute % Cover	Species?	Indicator Status	Dominance Test World Number of Dominant S		
1					That Are OBL, FACW,	or, FAC: 3 (A)	
2					Total Number of Domin		
3					Species Across All Stra		
4			= Total	Cover	Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)		_				
1. Dasiphora fruticosa		35	X	FAC	Prevalence Index Wo		
2					Total % Cover of:		
3					OBL Species 7		
4					FAC Species 89.		
5			T. (.)			5 x 4 = 2	
Herb Stratum (Plot size: 0.01 acre)	35	_ = Total (Cover	UPL Species		
1. Juncus balticus	_′	65	x	FACW		3 (A) 416.5 (B)	
2. Poa pratensis	•	45	x	FAC	Prevalence Index	(B/A) = 2.56	
3. Valeriana edulis		6		FAC	Hydrophytic Vegetation	`	
		4		FACW	1 - Rapid Test for Hydr		
5. Agropyron trachycaulum		3		FAC	✓ 2 - Dominance Test is	· · -	
6. Deschampsia cespitosa		3		FACW	✓ 3 - Prevalence Index is		
7. Calamagrostis stricta		1_		FACW	4 - Morphological Ada	ptations¹ (Provide supporting	
				FACU	ļ	r on a separate sheet)	
				FAC	5 - Wetland Non-Vasc		
10.					1	tic Vegetation¹ (Explain) d wetland hydrology must be	
11.		128	= Total	Cover	present, unless disturbed of		
Woody Vine Stratum (Plot size: NA)	140	rotal (Covei			
1					Hydrophytic		
2.					Vegetation		
		0	= Total (Cover	Present? Yes	✓ No □	
% Bare Ground in Herb Stratum							
Remarks:							



SOIL				Project/Site	: Black Bu	tte Copper	Sampling Point: SC-W8
Profile Des	scription: (Desc	ibe to the de	oth needed to docum	ent the indic	ator or co	nfirm the	absence of indicators.)
Depth	Matrix		Redox Fea				,
(inches)	Color (moist)	%	Color (moist) %	Type ¹	Loc²	Texture	Remarks
0-8.5	10YR 2/1	100				С	
8.5-16	10YR 4/1	100				С	
			MANAGE TO SERVICE TO S				
				A-50%			
				meterior representation and a			
¹Type: C=C	Concentration, D=	Depletion, RM	=Reduced Matrix, CS=	:Covered or C	Coated San	d Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soi	l Indicators (Ap	olicable to all	LRRs, unless otherw	ise noted.):		Indic	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			_ 20	cm Muck (A10)
Histic Ep	ipedon (A2)		Stripped Matrix (S6)			Re	ed Parent Material (TF2)
Black His	stic (A3)		Loamy Mucky Mineral (I	F1) (except MLI	RA 1)	Ve	ery Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed Matrix (F	2)		Ot	ther (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix (F3)				
	rk Surface (A12)	L	Redox Dark Surface (F6	•			ators of hydrophytic vegetation and etland hydrology must be present.
	ucky Mineral (S1)	L	Depleted Dark Surface	• •			less disturbed or problematic.
	leyed Matrix (S4)		Redox Depressions (F8)			
_	Layer (if preser	ιτ):			2.00		
Type:			_		Anna Anna Anna Anna Anna Anna Anna Anna		
Depth (inch			_				oil Present? Yes ✓ No 🗌
į i	Assume soil is ny nydric"; also considered hydric	a Mollisol, wl	indicator A12 at great lich has thick, dark A h	er depth. Plo orizon. Giver	t is located i soil type,	in soil type hydrophyti	e described by NRCS as "partially c vegetation, and hydrology, soil is
HYDROLO	GY						
Wetland H	ydrology Indicat	ors:					
1			ed; check all that apply)		Sec	condary Indicators (2 or more required)
	Vater (A1)		Water-Stained I		roont .		
r	er Table (A2)		MLRA 1, 2, 4	, , ,	сері		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturati	, ,		Salt Crust (B11)	•			Drainage Patterns (B10)
Water Ma	` '		Aquatic Inverteb				Dry-Season Water Table (C2)
=	t Deposits (B2)		Hydrogen Sulfic	, ,		\equiv	Saturation Visible on Aerial Imagery (C9)
Drift Depo	osits (B3)		Oxidized Rhizos		iving Roots		Geomorphic Position (D2)
Algal Mat	or Crust (B4)		Presence of Re	duced Iron (C4))		Shallow Aquitard (D3)
Iron Depo	osits (B5)		Recent Iron Rec	duction in Tilled	Soils (C6)		FAC-Neutral Test (D5)
Surface S	Soil Cracks (B6)		Stunted or Stres	sed Plants (D1	I) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Inundatio	n Visible on Aerial I	magery (B7)	Other (Explain i	n Remarks)		✓ 1	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)					
Field Obse							
Surface Wa	iter Present?	Yes No	_ ' '				
Water Table	e Present?	Yes No No	_ ' '				
Saturation I (includes ca	Present? apillary fringe)	Yes No	Depth (inches):	A	Wet	land Hydr	ology Present? Yes ✓ No 🗌
Describe Re	ecorded Data (str	eam gauge, m	onitoring well, aerial pl	notos, previou	us inspection	ons), if ava	ilable:
	•		•	•	•		
Remarks: [Damp in upper 8".						`

Project/Site: Black Butte Copper		Ci	ity/County	y: White Su	ılphur Springs/Meagher	Sampling Date: 08-25-2014		
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W9		
Investigator(s): J. Beaver, K. Scow, D. Ba	rton	S	ection, T	ownship, R	Range: S32, T12N, R7E			
Landform: broad swale					convex, none): none	Slope (%): 4		
Subregion (LRR): E			7646017		Long: -110.8741751	Datum: WGS84		
Soil Map Unit Name: 1150C Bischoff-	Monaberg			-		cation: PSS		
Are climatic/hydrologic conditions on t		r this time o	f vear2 V	/es 🗀 No				
Are Vegetation, Soil, or Hydrok						' present? Yes ✔ No		
Are Vegetation, Soil, or Hydrold					eeded, explain any ansv			
SUMMARY OF FINDINGS - Atta								
Hydrophytic Vegetation Present?	Yes ▼ No					,		
Hydric Soil Present?	Yes ✓ No		Is	the Sample				
Wetland Hydrology Present?	Yes 🗹 No		wit	thin a Wetl	and? Yes ✓	No 🗌		
Remarks: Photographs: JB 2422-242	25		,					
VEGETATION – Use scientific n	ames of plant	s.						
T 0(-1(D)-1		Absolute		t Indicator	Dominance Test Wor	ksheet:		
Tree Stratum (Plot size: NA)		Species?		Number of Dominant S			
1.					That Are OBL, FACW,	or, FAC: (A)		
2.				*	Total Number of Domi			
3 4					Species Across All Str	ata: <u>2</u> (B)		
		0	= Total	Cover	Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)		_ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		That Are OBL, FACW,			
1. Dasiphora fruticosa		45	x	FAC	Prevalence Index Wo			
2					Total % Cover of			
3					OBL Species	x 1 =		
4					FACW Species 34 FAC Species 13			
5						32 x 3 = 396 1 x 4 = 4		
Herb Stratum (Plot size: 0.01 acre	`	45	_ = Total	Cover	UPL Species	x5=		
1. Poa pratensis	<u></u>	65	х	FAC	Column Totals: 167			
2. Thalictrum venulosum		40		FAC	Prevalence Index			
3. Juncus balticus		15		FACW				
4. Symphyotrichum subspicatum		14		FACW	Hydrophytic Vegetati 1 - Rapid Test for Hyd			
5. Potentilla gracilis		5		FAC	✓ 2 - Dominance Test is	· · ·		
6. Deschampsia cespitosa		4		FACW	✓ 3 - Prevalence Index i			
7. Festuca rubra		1_		FAC	4 - Morphological Ada	ptations¹ (Provide supporting		
8. Galium boreale		1_		FACU		r on a separate sheet)		
		1			5 - Wetland Non-Vaso			
				FACW	<u> </u>	tic Vegetation¹ (Explain)		
11				Cauca	present, unless disturbed	nd wetland hydrology must be or problematic.		
Woody Vine Stratum (Plot size: NA)	122.5	_ = Total	Cover		•		
1	 -				Hydrophytic			
2.					Vegetation			
		0	= Total	Cover	Present? Yes	✓ No □		
% Bare Ground in Herb Stratum								
Remarks:								



SOIL					Project/Sit	e: Black I	Butte Co	pper	Sampling Point	t: SC-W9
Profile Des	cription: (Describ	e to the de	oth needed to d	ocumei	nt the indi	cator or	confirm	the absence	of indicators.)	
Depth	Matrix	•		dox Feati						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	re Remarks	.	
0-16	10YR 2/1	98	7.5YR 5/6	2	Type	Loc	OM			
			7.0111070		Туро					
						***************************************			797	

¹Type: C=C	oncentration, D=De	nletion RM	=Reduced Matrix	/ CS=C	`overed or	Coated S	and Gra	inc 2l coetic	n: PL=Pore Linin	a M=Matrix
	Indicators (Applie								Problematic Hy	
Histosol (_		e noted.j.			_	-	uric Solis":
l 🗀 .	•	L	Sandy Redox (S	•			L	2 cm Muck (A	•	
	pedon (A2)	L	Stripped Matrix (() / + N ()	LDA 4\	L	Red Parent N	, ,	_,
Black His	Sulfide (A4)		Loamy Mucky M			LRA 1)	Ļ		Dark Surface (TF12	2)
	` '	\44\ 	Loamy Gleyed M	, ,)		L	Otner (Explai	in in Remarks)	
	Below Dark Surface (A	1 11) <u>▼</u>	Depleted Matrix	• •			3	Indicators of b	v dranhvtia v agat.	ation and
	k Surface (A12) ucky Mineral (S1)	F	□ Redox Dark Surform □ Depleted Dark Surform				1		ydrophytic vegeta Irology must be p	
	eyed Matrix (S4)	-	<u> </u>	,	. 7)				irbed or problema	
	<u> </u>	<u></u>	Redox Depression	JIIS (FO)					•	
	Layer (if present):									
Type:			_							
Depth (inch	es):		_				Hydr	ic Soil Prese	nt? Yes 🗸 🔝 I	No 🔙
Remarks: F	ligh organic matter,	but not end	ough to be histos	ol. Soil i	is too dark	to meet o	depleted	matrix indicate	or, but this is likel	v due to soil
	ype (Mollisol). Hydr									•
		,								
HYDROLO	GY									
Wetland Hy	drology Indicators	s:								
-	cators (minimum of		ed: check all that	apply)				Secondary In	idicators (2 or mo	re required)
		ono require						Gecondary III	dicators (2 or mo	ile required)
Surface V	, ,				aves (B9) (e	except		Water-Stair	ned Leaves (B9) (ML	LRA 1, 2,
emenuma.	er Table (A2)		processory.		v, and 4B)			4A, and	4B)	
✓ Saturation	, ,		Salt Crus	st (B11)					atterns (B10)	
Water Ma	` ,		Aquatic I	nvertebra	ates (B13)				n Water Table (C2)	
Sediment	Deposits (B2)		Hydroge	n Sulfide	Odor (C1)			Saturation \	Visible on Aerial Ima	agery (C9)
Drift Depo	sits (B3)		Oxidized	Rhizosp	heres along	Living Roo	ots (C3)	✓ Geomorphi	c Position (D2)	
Algal Mat	or Crust (B4)		✓ Presence	e of Redu	uced Iron (C	4)		Shallow Aq	uitard (D3)	
Iron Depo	sits (B5)		Recent I	on Redu	ction in Tille	d Soils (C6	6)	FAC-Neutra	al Test (D5)	
Surface S	oil Cracks (B6)		Stunted	or Stress	ed Plants (D	1) (LRR A))	Raised Ant	Mounds (D6) (LRR	A)
Inundation	າ Visible on Aerial Imag	gery (B7)	Other (E	kplain in	Remarks)			✓ Frost-Heave	e Hummocks (D7)	
Sparsely \	egetated Concave Su	ırface (B8)								
Field Obser	vations:									
Surface Wat	ter Present? Ye	es 🗌 No 🛚	Depth (inches	s):						
Water Table	Present? Ye	es 🗸 No 🗌	Depth (inches	s): 18						
Saturation P		es 🗹 No 🗌	Depth (inches			w	etland F	lvdrology Pre	esent? Yes	No
(includes ca	pillary fringe)	,	_ beptil (monet	Suria	ace			.,		
Describe Re	corded Data (strea	m gauge, m	onitoring well, a	erial pho	tos, previo	ous inspec	ctions), if	available:		
	•			•	•		,,			
Remarks:			·							
. tomanto.										

Project/Site: Black Butte Copper		Ci	ity/County	։ White Տւ	ulphur Springs/Meagher Sampling Date: 08-26-201	4
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-W10	
Investigator(s): J. Beaver		S	Section, To	ownship, R	 lange: S31, T12N, R7E	
Landform: floodplain					, convex, none): none Slope (%): 2	
Subregion (LRR): E			7588727	•	Long: -110.8875595 Datum: WGS84	
Soil Map Unit Name: 1150C Bischoff-Mo	nahera		7000727		NWI classification: PSS	
•		thin time o	fvoor? V	You A N		
Are climatic/hydrologic conditions on the			-			
Are Vegetation , Soil , or Hydrology		-			"Normal Circumstances" present? Yes V No	
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS – Attach				·	needed, explain any answers in Remarks.) ations, transects, important features, etc.	
				po		
Hydric Soil Present?	Yes ✔ No Yes ✔ No Yes ✔ No		i	the Sample thin a Wetl		
Remarks: Within 20' of wetland edge. P	hotographs: JE	3 2442-244	5 (N to W	/)		
VEGETATION - Use scientific nam	nes of plants	i .				
	· · · · · ·	Absolute	Dominant	Indicator	Dominance Test Worksheet:	
Tree Stratum (Plot size: NA	.*		Species?		Number of Dominant Species	
1					That Are OBL, FACW, or, FAC:3 (A)	
2.					Total Number of Dominant	
3					Species Across All Strata: 3 (B)	
4					Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 0.01	acro \	0	_ = Total	Cover	That Are OBL, FACW, or, FAC: 100 (A/I	B)
4 5 14 6 11	<u>acie</u>)	45	x	FAC	Prevalence Index Worksheet:	
2. Salix bebbiana				FACW	Total % Cover of: Multiply by:	
3. Salix geyeriana		1		FACW	OBL Species50 x 1 =50	
4					FACW Species 35 x 2 = 70	
5.					FAC Species 64 x 3 = 192	
			= Total	Cover	FACU Species1 x 4 =4	
Herb Stratum (Plot size: 0.01 acre)				UPL Species x 5 =	
1. Carex utriculata		50	x	OBL	Column Totals: 150 (A) 316 (E	B)
2. Geum rivale		20	X	FACW	Prevalence Index (B/A) = 2.11	
3. Poa pratensis		10		FAC	Hydrophytic Vegetation Indicators:	
4. Agrostis stolonifera		4		FAC	1 - Rapid Test for Hydrophytic Vegetation	
				FACW	✓ 2 - Dominance Test is >50%	
				FACW	✓ 3 - Prevalence Index is ≤3.01	
0 0				FAC	4 - Morphological Adaptations¹ (Provide supporting	
0 0 " / /				FACU FACU	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹	
40 0				FAC	Problematic Hydrophytic Vegetation¹ (Explain)	
11. Solidago canadensis var. salebrosa				FAC	Indicators of hydric soil and wetland hydrology must be	
11. Condago canaderisis var. Salebrosa		98	= Total		present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: NA)		_ 10101	00101		
1	,				Hydrophytic	
2.					Vegetation	
		0	_ = Total	Cover	Present? Yes ✓ No ☐	
% Bare Ground in Herb Stratum						
Remarks: gets wetter approaching creel	k					



Profile Des					1000 0110	DIACK DUL	te Copper	Sampling Point: LS-W10
	oription: (Describ	e to the d	depth needed to de	ooument t	he indicat	or or cor	nfirm the a	absence of indicators.)
Depth	Matrix		Rec	dox Features	;			·
(inches)	Color (moist)	%	Color (moist)	%	Type¹ L	.oc²	Texture	Remarks
0-6.5	10YR 2/1	100					С	
6.5-16	10YR 4/1	95	10YR 5/3	5	С	M	С	
¹Type: C=C	oncentration, D=D	epletion, R	RM=Reduced Matrix	c, CS=Cove	ered or Co	ated San	d Grains	² Location: PL=Pore Lining, M=Matrix
			all LRRs, unless o					ators for Problematic Hydric Soils ³ :
Histosol ((A1)		Sandy Redox (S	5)			_ 20	cm Muck (A10)
Histic Epi	ipedon (A2)		Stripped Matrix (S6)			Re	ed Parent Material (TF2)
Black His			Loamy Mucky Mi	ineral (F1) (e	except MLRA	. 1)	☐ Ve	ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed M	• •			∐ Ot	her (Explain in Remarks)
	Below Dark Surface	(A11)	✓ Depleted Matrix				31 ndia	store of hydrophytic vegetation and
	rk Surface (A12)		Redox Dark Surf	` '			"Indic	ators of hydrophytic vegetation and etland hydrology must be present,
= :	ucky Mineral (S1) eyed Matrix (S4)		Depleted Dark S Redox Depression	. ,				less disturbed or problematic.
	Layer (if present	١٠		5113 (1 0)		···		
Type:	Layer (ii present	,.						
	es):						Hydric S	oil Present? Yes 🗸 No 🗍
Remarks:	cs).						riyane o	on resent: res 🖳
	GY		· 					
	GY ydrology Indicato	rs:						
Wetland Hy	drology Indicato		uired; check all that				Sec	condary Indicators (2 or more required)
Wetland Hy Primary Ind	drology Indicato		uired; check all that		ng (PR) (over			condary Indicators (2 or more required)
Wetland Hy Primary Ind Surface V	/drology Indicato icators (minimum of Vater (A1)		☐ Water-S	tained Leave		pt		Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Ind Surface V High Wate	drology Indicato icators (minimum o Vater (A1) er Table (A2)		☐ Water-Si	tained Leave A 1, 2, 4A, ar		ppt		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Ind Surface V High Wate Saturation	ydrology Indicato icators (minimum o Vater (A1) er Table (A2) on (A3)		☐ Water-Si MLR/ ☐ Salt Crus	tained Leave A 1, 2, 4A, ar st (B11)	nd 4B)	ppt		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma	ydrology Indicato icators (minimum o Vater (A1) er Table (A2) on (A3)		Water-Si MLRA Salt Crus Aquatic	tained Leave A 1, 2, 4A, ar	nd 4B)	ept		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2)		Water-Si MLR/ Salt Crus Aquatic I Hydroge	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates	nd 4B) s (B13) or (C1)			Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy Primary Ind Surface V High Wate Saturatio Water Ma Sediment Drift Depo	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2)		Water-Si MLRA Salt Crus Aquatic I Hydroge Oxidized	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od	nd 4B) s (B13) or (C1) es along Liv		(C3) 2	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Primary Ind Surface V High Wate Saturatic Water Ma Sediment Drift Depo	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5)		Water-Si MLRA Salt Crus Aquatic I Hydroge Oxidized Presence	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen	nd 4B) s (B13) for (C1) es along Liv d Iron (C4)	ing Roots ((C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Ind Surface V High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6)	of one requ	Water-Si MLRA Salt Crus Aquatic I Hydroge Oxidized Presenci Recent I Stunted	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizospher e of Reduced ron Reductio or Stressed I	and 4B) s (B13) or (C1) es along Liv d Iron (C4) en in Tilled S Plants (D1)	ing Roots ((C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface V High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Im-	of one requ agery (B7)	Water-Si MLRA Salt Crus Aquatic I Hydroge Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio	and 4B) s (B13) or (C1) es along Liv d Iron (C4) en in Tilled S Plants (D1)	ing Roots ((C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse	vdrology Indicatoricators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Importance Servations:	agery (B7) Surface (B8)	Water-Si MLR/ Salt Crus Aquatic I Hydroge ✓ Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reducet ron Reductio or Stressed I xplain in Rer	and 4B) s (B13) or (C1) es along Liv d Iron (C4) en in Tilled S Plants (D1)	ing Roots ((C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse Surface Wa	vdrology Indicatoricators (minimum of vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Importance Servations: atter Present?	agery (B7) Surface (B8)	Water-Si MLR/ Salt Crus Aquatic I Hydroge V Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio or Stressed I xplain in Rer	and 4B) s (B13) or (C1) es along Liv d Iron (C4) en in Tilled S Plants (D1)	ing Roots ((C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse Surface Wa Water Table Saturation F	vdrology Indicatoricators (minimum of icators	agery (B7) Surface (B8) Yes	Water-Si MLR/ Salt Crus Aquatic I Hydroge V Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio or Stressed I xplain in Rer	and 4B) s (B13) or (C1) es along Liv d Iron (C4) en in Tilled S Plants (D1)	ing Roots (oils (C6)	(C3) V (Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
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Wetland Hy Primary Ind Surface V High Wate Saturatic Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse Surface Water Table Saturation F (includes ca	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Im Vegetated Concave S rvations: ater Present?	agery (B7) Surface (B8) Yes No	Water-Si MLR/ Salt Crus Aquatic I Hydroge V Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio or Stressed I xxplain in Rer s): s):	s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1) marks)	ing Roots (oils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface V High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse Surface Wa Water Table Saturation F (includes ca	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) it Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial Imi Vegetated Concave S rvations: ater Present? er Present? or Present? or present? or present of the pr	agery (B7) Surface (B8) /es	Water-Si MLR/ Salt Crus Aquatic I Hydroge V Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio or Stressed I xplain in Rer s): s):	s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1) marks)	ing Roots (oils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface V High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Obse Surface Wa Water Table Saturation F (includes ca	vdrology Indicato icators (minimum of Vater (A1) er Table (A2) on (A3) arks (B1) it Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial Imi Vegetated Concave S rvations: ater Present? er Present? or Present? or present? or present of the pr	agery (B7) Surface (B8) /es	Water-Si MLRA Salt Crus Aquatic I Hydroge V Oxidized Presence Recent I Stunted Other (E	tained Leave A 1, 2, 4A, ar st (B11) Invertebrates n Sulfide Od I Rhizosphen e of Reduced ron Reductio or Stressed I xplain in Rer s): s):	s (B13) or (C1) es along Liv d Iron (C4) on in Tilled S Plants (D1) marks)	ing Roots (oils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Black Butte Copper	Ci	ty/County: W	hite Sulphur Springs/Meagl	ner Sampling Date: 09-04-2014
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: LS-W11
Investigator(s): J. Beaver, D. Culwell	s	ection, Towns	ship, Range: S31, T12N, R	 7E
Landform: floodplain			ncave, convex, none): cond	
Subregion (LRR): E		7576702	Long: -110.89127	
Soil Map Unit Name: 1150C Bischoff-Monaberg	Lat. <u>+0.</u>	7570702		ssification: PEM
· · · · · · · · · · · · · · · · · · ·	far this time of	funar? Van E		
Are climatic/hydrologic conditions on the site typical to				
Are Vegetation , Soil , or Hydrology signification				ces" present? Yes ✓ No
Are Vegetation , Soil , or Hydrology naturally			(If needed, explain any a	,
SUMMARY OF FINDINGS – Attach site map		mpling poli	nt locations, transects,	important features, etc.
	lo 🗌	la tha S	Compled Area	
	lo lo		Sampled Area a Wetland?	∕ No □
Remarks: Site is upslope of an old beaver pond. We Photographs: JB 2586-2589	et meadow on	I CARUTRISA	ALBOO. Surrounding wellar	id is DASFRO dominated.
VECETATION Use exicutific names of plan	-4-			
VEGETATION – Use scientific names of plan		D		Ar. 1 . I
Tree Stratum (Plot size: NA)	Absolute % Cover		dicator Dominance Test \	
1	-		Number of Domina That Are OBL, FAG	
2.			Total Number of D	
3			Species Across Al	
4			Percent of Domina	
	0	_ = Total Cov	er That Are OBL, FAC	
Sapling/Shrub Stratum (Plot size: 0.01 acre)			Prevalence Index	
1. Salix boothii	8		Total % Cove	
2. Dasiphora fruticosa	1	FA	OD! Cresies	73 x 1 = 73
3. Salix bebbiana	1		EACIN/ Consider	
4. Juniperus scopulorum	0.5_	(U	PL) FAC V Species	10.5 x 3 = 31.5
5	10.5	= Total Cove	EACH Species	x 4 =
Herb Stratum (Plot size: 0.01 acre		_ = Total Cove	UPL Species	0.5 x 5 = 2.5
1. Carex utriculata	70	х ОЕ	Column Totals:	116.5 (A) 172 (B)
2. Juncus balticus				dex (B/A) = 1.48
3. Geum macrophyllum	9	FA		·······
4. Petasites frigidus	6	FA		etation Indicators: Hydrophytic Vegetation
5. Viola nephrophylla	4	FA	ACW 2 - Dominance Te	
6. Glyceria striata	2	OE		
7. Deschampsia cespitosa	2	<u>FA</u>	-CM =	Adaptations¹ (Provide supporting
8. Mentha arvensis	1		CW data in Rema	rks or on a separate sheet)
9. Bromus ciliatus	0.5	FA		
10. Rumex occidentalis		<u>FA</u>		ophytic Vegetation¹ (Explain)
11		T-1-10	present unless distur	oil and wetland hydrology must be bed or problematic.
Woody Vine Stratum (Plot size: NA)	106	_ = Total Cove	er	1 *****
,			U., alva wh4! -	
1 2			Hydrophytic Vegetation	
		= Total Cove	D	Yes 🗹 No 🗌
% Bare Ground in Herb Stratum 0.5				
Remarks: High moss cover (~75%). Typical of wetter	est part of wet	land.	· · · · · · · · · · · · · · · · · · ·	TILLER OF THE MAN TO SEE SEEL TO S
		•		



	scrintion: (Descri	he to the d	enth needed to	documen	t the indi	cator or c	Butte Coppe	absence of indicators.)	
Depth	Matrix	NO 10 1110 G		edox Featu		outer or c		absorice of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks	
0-5	2.5Y 2.5/1	100					OM	highly organic	
5-18	10YR 2/1	100					SiCL		
3-10	1011(2/1				****		SICL		
								<u> </u>	
								_	
1Tuna. C=C		Namination D	M-Dadwaad Mat			O4-4 O		21 K DJ D 1 '- ' B4 B4 L'	
	Concentration, D=D il Indicators (Appl							² Location: PL=Pore Lining, M=Matri	
Histosol		ilcable to a	Sandy Redox (i noteu.).			cators for Problematic Hydric Soils ³	
	pipedon (A2)		Stripped Matrix					cm Muck (A10) ed Parent Material (TF2)	
Black Hi			Loamy Mucky		(except M	LRA 1)		ery Shallow Dark Surface (TF12)	
=	n Sulfide (A4)		Loamy Gleyed	٠,	(,	=	ther (Explain in Remarks)	
Depleted	Below Dark Surface	(A11)	Depleted Matri	x (F3)					
Thick Da	ark Surface (A12)		Redox Dark Su	urface (F6)				cators of hydrophytic vegetation and	
	lucky Mineral (S1)		Depleted Dark	•	')		wetland hydrology must be present, unless disturbed or problematic.		
	leyed Matrix (S4)		Redox Depres	sions (F8)			u	ness disturbed of problematic.	
	Layer (if present	t):							
Туре:									
	nes): 0-5" highly or		**************************************				Hydric S	oil Present? Yes 🗸 No 🗌	
			**************************************				Hydric S	oil Present? Yes 🗹 No 🗌	
Remarks:	0-5" highly or	rganic - ver	**************************************				Hydric S	oil Present? Yes 🗸 No 🗌	
Remarks: IYDROLC Wetland H	0-5" highly or DGY ydrology Indicato	rganic - ver	y dark below.	of apply)					
Remarks: IYDROLO Wetland H Primary Inc	0-5" highly or DGY ydrology Indicato dicators (minimum	rganic - ver	y dark below. iired; check all th					condary Indicators (2 or more required	
Remarks: IYDROLO Wetland H Primary Ind Surface	0-5" highly or OGY ydrology Indicato dicators (minimum) Water (A1)	rganic - ver	y dark below. iired; check all th	Stained Lea		except		condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2,	
Remarks: IYDROLO Wetland H Primary Ind Surface High Wa	O-5" highly or OGY ydrology Indicato dicators (minimum Water (A1) ter Table (A2)	rganic - ver	y dark below. ired; check all th Water-	Stained Lea		except		condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
Remarks: IYDROLO Wetland H Primary Ind ✓ Surface ☐ High Wa ✓ Saturat	O-5" highly or O-5&qu	rganic - ver	y dark below. ired; check all th Water- MLI Salt Cr	Stained Lea RA 1, 2, 4A, rust (B11)	and 4B)	except		condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)	
Remarks: IYDROLO Wetland H Primary Ind Surface High Wa Saturat Water M	O-5" highly or O-5&qu	rganic - ver	y dark below. ired; check all th Water- MLI Salt Cr	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra	and 4B) tes (B13)	except		Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)	
Remarks: IYDROLO Wetland H Primary Ind V Surface High Wa V Saturat Water M Sedimen	O-5" highly or O-5&qu	rganic - ver	y dark below. ired; check all th Water- MLI Salt Cr Aquatic	Stained Lea RA 1, 2, 4A, rust (B11)	and 4B) tes (B13) Odor (C1)		See	Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)	
Remarks: IYDROLO Wetland H Primary Ind Surface High Wa Saturat Water M Sedimen Drift Dep	O-5" highly or O-5&qu	rganic - ver	y dark below. ired; check all th Water- MLI Salt Cr Aquati Hydrog Oxidize	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide	and 4B) tes (B13) Odor (C1) neres along	Living Roof	See	Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)	
IYDROLO Wetland H Primary Ind High Wa Saturat Water M Sedimen Drift Dep Algal Ma	O-5" highly or O-5&qu	rganic - ver	y dark below. irred; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide (ed Rhizosph	and 4B) tes (B13) Odor (C1) neres along ced Iron (C	Living Roof 4)	See	Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)	
IYDROLO Wetland H Primary Ind High Wa Saturat Water M Sedimen Drift Dep Algal Ma Iron Dep Surface	O-5" highly or O-5&qu	rganic - ver ors: of one requ	y dark below. irred; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide ed Rhizosph ace of Reduct t Iron Reduct d or Stresse	and 4B) tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille	Living Root 4) d Soils (C6)	See	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
Primary Ind Surface High Water M Sedimen Drift Dep Algal Ma Iron Dep Inundation	O-5" highly or O-5&qu	rganic - ver ors: of one requ	y dark below. irred; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide ed Rhizosph ace of Reduct t Iron Reduc	and 4B) tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille	Living Root 4) d Soils (C6)	See	Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	
Primary Ind Vetland H Primary Ind Vetland H Surface High Wa Veter M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	O-5" highly or O-5&qu	rganic - ver ors: of one requ	y dark below. irred; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide ed Rhizosph ace of Reduct t Iron Reduct d or Stresse	and 4B) tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille	Living Root 4) d Soils (C6)	See	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
Remarks: IYDROLO Wetland H Primary Ind Surface High Wa Saturat Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundation Sparsely	O-5" highly or O-5&qu	rganic - very	y dark below. tired; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide e ed Rhizosph nce of Redur t Iron Redur d or Stresse (Explain in F	and 4B) tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille	Living Root 4) d Soils (C6)	See	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	
HYDROLO Wetland H Primary Ind ✓ Surface High Wa ✓ Saturat Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatid Sparsely Field Obse Surface W	O-5" highly or O-5&qu	rganic - very	y dark below. tired; check all th Water- MLI Salt Cr Aquatir Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide of ed Rhizosph nice of Redur t Iron Reduc d or Stresse (Explain in F	and 4B) tes (B13) Odor (C1) neres along ced Iron (C- ction in Tille	Living Root 4) d Soils (C6)	See	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)	

Remarks: Saturated to surface, running water 15 ft to the south.

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Project/Site: Black Butte Copper		Ci	ty/County:	White Su	ılphur Springs/Meagher	Sampling Date: 08-26-2014		
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W12		
Investigator(s): J. Beaver, D. Hagen		s	ection, To	wnship, R	ange: S25, T12N, R6E			
Landform: floodplain		L	ocal relief	(concave,	convex, none): none	Slope (%): 2		
Subregion (LRR): E		 Lat: 46.	7561905		Long: -110.8926899	Datum: WGS84		
Soil Map Unit Name: 1150C Bischoff-Moi	nabero					cation: PEM		
Are climatic/hydrologic conditions on the		his time o	f vear? Ye	es 🗸 No				
Are Vegetation, Soil, or Hydrology						present? Yes V No		
Are Vegetation , Soil , or Hydrology					eeded, explain any answ			
SUMMARY OF FINDINGS - Attach				,	•	•		
, , ,	Yes ✓ No ☐	=	ie ti	he Sample	ad Area			
Ť	Yes ✓ No _	_		hin a Wetl		No 🗌		
Remarks: Some cattle grazing evident.			ide by 8" c	leen on ec	ige of plot. Photographs:	IB 2465-2468		
Tromano. Some saule grazing straona.	oman on our a	pp.ox 2 11		1000 011 00	igo or plot: / flotographis:	UD 2-100 2-100		
VEGETATION – Use scientific nam	es of plants.							
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worl			
-	,				Number of Dominant S That Are OBL, FACW,			
1 2						, , , , , , , , , , , , , , , , , , , ,		
3.					Total Number of Domir Species Across All Stra			
4					·			
		0	= Total C	Cover	Percent of Dominant S That Are OBL, FACW,			
Sapling/Shrub Stratum (Plot size: 0.01 a	acre)				Prevalence Index Wor			
Dasiphora fruticosa			x	FAC	Total % Cover of:	İ		
			X	FACW		· · · · · · · · · · · · · · · · · · ·		
				(UPL)	OBL Species 6 FACW Species 13.			
4. Salix boothii		0.5		FACW	FAC Species 4			
5		12	= Total C		FACU Species			
Herb Stratum (Plot size: 0.01 acre)	1Z	Total C	Jovei	UPL Species 0.			
1 Carey utriculate	•	65	x	OBL	Column Totals: 12	5 (A) 229.5 (B)		
2. Agrostis stolonifera		20		FAC	Prevalence Index ($(R/\Delta) = 1.84$		
3. Poa palustris		15		FAC				
1 Coum rivolo		5		FACW	Hydrophytic Vegetation 1 - Rapid Test for Hydro			
5. Mentha arvensis		5		FACW	2 - Dominance Test is			
6. Carex nebrascensis		2		OBL	✓ 3 - Prevalence Index is			
7. Symphyotrichum ascendens		1		FACU	4 - Morphological Adag	otations¹ (Provide supporting		
8						r on a separate sheet)		
9.					5 - Wetland Non-Vasc			
10.						tic Vegetation¹ (Explain)		
11.		110			present, unless disturbed of	d wetland hydrology must be or problematic.		
Woody Vine Stratum (Plot size: NA	١	113	= Total C	over		•		
1	,				Hydronbytic			
2.					Hydrophytic Vegetation			
		0	= Total C	Cover	Present? Yes	✓ No □		
% Bare Ground in Herb Stratum								
Remarks: Vegetation grazed ±30-40% ut	tilization.							



SOIL					Project/Site	e: Black	Butte Coppe	er Sampling Point: LS-W12
Profile Des	cription: (Describ	e to the d	epth needed to d	ocume	nt the indi	cator or	confirm the	e absence of indicators.)
Depth	Matrix		Re	dox Feat	ures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-7.5	10YR 2/1	100					CL	
7.5-16	10YR 3/1	92	10YR 4/6	. 8	С	М	CL	
						Date:		
¹Type: C=C	oncentration, D=D	epletion, R	M=Reduced Matri	x, CS=C	Covered or	Coated	Sand Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	cable to a	III LRRs, unless o	therwis	se noted.):		indi	icators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S	S5)				2 cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix	(S6)				Red Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky M	lineral (F	1) (except MI	LRA 1)	=	Very Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed I	Matrix (F2	2)			Other (Explain in Remarks)
	Below Dark Surface	A11)	✓ Depleted Matrix				21	Protono of building built or analytical and
	k Surface (A12)		Redox Dark Sui					licators of hydrophytic vegetation and wetland hydrology must be present,
	ucky Mineral (S1)		Depleted Dark S	•	F7)			unless disturbed or problematic.
	eyed Matrix (S4)		Redox Depress	ions (F8)				
	Layer (if present)):						
Туре:								
Depth (inch	es):						Hydric	Soil Present? Yes ✓ No ☐
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
-	icators (minimum		uired; check all tha	it apply)			S	econdary Indicators (2 or more required)
			F					
=	Vater (A1)		_		eaves (B9) (e A, and 4B)	except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation	er Table (A2)			ust (B11)	rt, and 4D)		✓	
Water Ma	, ,		=	, ,	rates (B13)			Dry-Season Water Table (C2)
\equiv	t Deposits (B2)		= :		e Odor (C1)			Saturation Visible on Aerial Imagery (C9)
✓ Drift Depo			= : :		pheres along	Living Ro	oots (C3)	- · · · · ·
	or Crust (B4)		=		luced Iron (C	_	` _	Shallow Aquitard (D3)
Iron Depo	` '		Recent	Iron Red	uction in Tille	ed Soils (C	C6)	FAC-Neutral Test (D5)
_ `	Soil Cracks (B6)		Stunted	or Stres	sed Plants (E	01) (LRR	A)	Raised Ant Mounds (D6) (LRR A)
Inundation	n Visible on Aerial Im	agery (B7)	. Other (I	Explain in	Remarks)		✓	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave S	Surface (B8)						
Field Obse	rvations:		-					
Surface Wa	ater Present?	res 🗹 N	Depth (inche	es): 8				
Water Table	e Present?	res 🗹 N	Depth (inche	es): 20				
	apillary fringe)	res 🗹 N						drology Present? Yes ✓ No
Describe Re	ecorded Data (stre	am gauge	, monitoring well, a	aerial ph	otos, previ	ous insp	ections), if a	vailable:
Remarks: S	Stream							

Project/Site: Black Butte Copper		С	ity/County	y: White Su	llphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-W13
Investigator(s): L. Larsen, S. Cooper			Section, T	ownship, R	ange: S1, T11N, R6E	
Landform: terrace		L	ocal relie	f (concave,	convex, none): none	Slope (%): 3-4
Subregion (LRR): E		Lat: 46	.7427204		Long: -110.9071197	Datum: WGS84
Soil Map Unit Name: 1175E Owensprir	ng-Cheadle	-			NWI classific	ation: PEM
Are climatic/hydrologic conditions on the		or this time o	of vear? Y	res ✔ No	(If no. explain in Rer	marks.)
Are Vegetation, Soil, or Hydrolo					"Normal Circumstances"	•
Are Vegetation, Soil, or Hydrolo					eeded, explain any answ	
SUMMARY OF FINDINGS – Attac						
Hydrophytic Vegetation Present?	Yes ✓ No					
Hydric Soil Present?				the Sample		[
Wetland Hydrology Present?				thin a Wetl		No 🗌
Remarks: Terrace 25-30' above flowing	ng stream (heav	ily grazed)	and well o	leveloped h	ydrophytic vegetation. Ho	owever, plot located in area
meeting all three criteria, ar	nd includes app	HOIL CO XOI	siope bre	eak to slope	e break. Photographs: SC	, 947-950
						· · · · · · · · · · · · · · · · · · ·
VEGETATION – Use scientific na	mes of plant	ts.				arrama, ama a a a a a a a a a a a a a a a a
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?		Dominance Test Work	
1			 		Number of Dominant Sp That Are OBL, FACW, or	
2.				-		
3.					Total Number of Domin Species Across All Stra	
4.						
		0	_ = Total	Cover	Percent of Dominant Sp That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size: NA					Prevalence Index Wor	
1					Total % Cover of:	
2						4 x 1 = 4
3						6 x 2 = 12
4. 5.					FAC Species 10°	
J			= Total	Cover		9 x 4 = 36
Herb Stratum (Plot size: 0.01 acre)			00101	UPL Species	x 5 =
1. Trifolium repens	· · ·	40	×	FAC	Column Totals:120	0 (A) <u>355</u> (B)
2. Agrostis stolonifera		24	×	FAC	Prevalence Index (B/A) = 2.96
3. Phleum pratense		21	NET .	FAC	Hydrophytic Vegetation	,
4. Poa pratensis		16_		FAC	1 - Rapid Test for Hydro	
				FACW	✓ 2 - Dominance Test is	>50%
l .				FACU	✓ 3 - Prevalence Index is	. ≤3.01
				OBL		otations¹ (Provide supporting
				FACU	data in Remarks or 5 - Wetland Non-Vascu	on a separate sheet)
9					Problematic Hydrophyti	
10 11					_ , , ,	d wetland hydrology must be
		120	= Total	Cover	present, unless disturbed of	
Woody Vine Stratum (Plot size: NA)					A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1					Hydrophytic	
2					Vegetation	
0/ Dana Onana 12 14 1 02 1		0	_ = Total	Cover	Present? Yes	✓ No L
% Bare Ground in Herb Stratum						
Remarks: Heavily grazed (esp. Car ut stream.	r - no heads), d	ensley vege	etated. Lo	cated adjac	ent to well developed hyd	rophytic vegetation near
Subani.						



SOIL			Р	roject/Sit	e: Black I	Butte Coppe	Sampling Point: LS-W13	
Profile Description:	(Describe to the	depth needed to d				r confirm the absence of indicators.)		
Depth	Matrix		dox Featur				·	
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc²	Texture	Remarks	
0-18 7.5YR	2.5/1 80	7.5YR 4/6			M	SCL	high coarse fragments (sand)	
Type: C=Concentrati Hydric Soil Indicator Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Thick Dark Surface (and Sandy Mucky Mineral Sandy Gleyed Matrix Restrictive Layer (iffores)	rs (Applicable to) Surface (A11) A12) (S1) (S4)		otherwise (S6) (S6) Ineral (F1) Matrix (F2) (F3) face (F6) Surface (F7	noted.):		Indic 2 R V 0	² Location: PL=Pore Lining, M=Matrix cators for Problematic Hydric Soils ² : cm Muck (A10) ed Parent Material (TF2) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) cators of hydrophytic vegetation and etland hydrology must be present, nless disturbed or problematic.	
						Liudria C	oil Present? Vee A No	
Remarks:						nyaric S	OII Present? Yes V No	
IYDROLOGY								
Wetland Hydrology I								
Primary Indicators (mi	nimum of one req	uired; check all that	apply)			Sec	condary Indicators (2 or more required)	
Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (Inundation Visible on	i2) I) B6) Aerial Imagery (B7)	MLR/ Salt Crue Aquatic Hydroge Oxidized Presence Recent I Stunted Other (E	Invertebrate n Sulfide C I Rhizosphe e of Reduct ron Reduct	es (B13) Odor (C1) eres along ed Iron (C4 tion in Tille d Plants (D	Living Roo	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)	
Field Observations:								
Surface Water Presen		Depth (inches			ĺ			
Vater Table Present? Saturation Present? ncludes capillary fring	Yes 🗌 N	Depth (inches			w	etland Hydr	ology Present? Yes 🗹 No 🗌	
Describe Recorded Da	ata (stream gauge	, monitoring well, a	erial photo	os, previo	us inspec	tions), if ava	ilable:	
Remarks: Wetland ex it meets we	tends ~65' from ba tland criteria	ase of slope to base	of slope.	. This plo	located i	in what appe	ars to be more mesic portion, however	



Project/Site: Black Butte Copper	c	ity/Count	y: White Su	Ilphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: LS-W14
Investigator(s): L. Larsen, S. Cooper		Section, T	ownship, R	ange: S1, T11N, R6E	
Landform: drainage			•	convex, none): concave	Slope (%): 2-3
Subregion (LRR): E		.7404415	•		· ` ` /
Soil Map Unit Name: 1175E Owenspring-Cheadle		., 404410		NWI classific	
Are climatic/hydrologic conditions on the site typical for	or this time o	of year?	Voc M		
Are Vegetation , Soil , or Hydrology significa				"Normal Circumstances"	· — —
Are Vegetation , Soil , or Hydrology naturally SUMMARY OF FINDINGS – Attach site map s				eeded, explain any answ	
		ampinig	point ioc	auons, transects, imp	Jordani leatures, etc.
	o∐ o∏	le	the Sample	ad Area	
	。 		thin a Wetl		No 🗌
Remarks: Flowing stream; 10' wetland fringe from sp		above Pr	notographs:	SC 941-944	
Tromand: Froming Stream, To World Hings Holl of	ormigrocopo (20000.77	iotograpiio.	00011071	
VEGETATION – Use scientific names of plan	te				
	Absolute	Dominar	nt Indicator	Dominance Test Work	schoot.
Tree Stratum (Plot size: NA)		Species'		Number of Dominant S	
1				That Are OBL, FACW,	
2				Total Number of Domin	ant
3				Species Across All Stra	
4				Percent of Dominant Sp	necies
	0	_ = Total	Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wor	ksheet:
1			***	Total % Cover of:	Multiply by:
2					5 x 1 = 0.5
3				FACW Species 40	
4. 5.					1 x 3 = 183
<u> </u>		= Total	Cover	FACU Species2	2 x 4 = 8
Herb Stratum (Plot size: 0.01 acre)	,			UPL Species	x 5 =
Deschampsia cespitosa	22	x	FACW	Column Totals: 103.5	5 (A) <u>271.5</u> (B)
2. Poa pratensis	18	X	FAC	Prevalence Index (B/A) = 2.62
3. Trifolium repens	18	х	FAC	Hydrophytic Vegetation	on Indicators:
4. Agrostis stolonifera	15_		FAC	1 - Rapid Test for Hydro	l l
5. Epilobium ciliatum	12		FACW	✓ 2 - Dominance Test is	>50%
6. Poa palustris	6_		FAC	✓ 3 - Prevalence Index is	≤3.0¹
7. Juncus balticus	4		FACW	4 - Morphological Adap	otations¹ (Provide supporting
8. Calamagrostis canadensis	2		FACW	I —	on a separate sheet)
9. Carex microptera	2		FACU	5 - Wetland Non-Vascu	
10. Hordeum jubatum	2	-	FAC		ic Vegetation¹ (Explain)
11. Agropyron trachycaulum	<u>1</u> 103.5	- Total	FAC	present, unless disturbed of	d wetland hydrology must be r problematic.
Woody Vine Stratum (Plot size: NA)	103.5	_ = Total	Cover		
1				Hudrophytio	
2.				Hydrophytic Vegetation	
	0	= Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum 18					
Remarks:					



SOIL				Project/Sit	e: Black E	Butte Copper	Sampling Point: LS-W14
Profile Des	cription: (Desc	ribe to the d	lepth needed to do				absence of indicators.)
Depth	Matrix			lox Features			
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks
0-14	10YR 2/1	100				CL	coarse fragments
					-		
							
¹Type: C=Co	oncentration, D=	Depletion, R	M=Reduced Matrix	. CS=Covered or	Coated Sa	and Grains	² Location: PL=Pore Lining, M=Matrix
			II LRRs, unless of				ators for Problematic Hydric Soils ³ :
Histosol (A			Sandy Redox (St				cm Muck (A10)
Histic Epip	pedon (A2)		Stripped Matrix (•			ed Parent Material (TF2)
Black Hist	tic (A3)		Loamy Mucky Mi	neral (F1) (except M	LRA 1)	Ve	ery Shallow Dark Surface (TF12)
Hydrogen	Suifide (A4)		Loamy Gleyed M	atrix (F2)		Ot	ther (Explain in Remarks)
_	Below Dark Surfac	e (A11)	Depleted Matrix (F3)			
\equiv	k Surface (A12)		Redox Dark Surfa			³Indic	cators of hydrophytic vegetation and
_	cky Mineral (S1)		Depleted Dark St	` '			etland hydrology must be present, iless disturbed or problematic.
	eyed Matrix (S4)	- 4 \ -	Redox Depressio	ns (F8)			
	Layer (if preser	•					
	e fragments >2"						
Depth (inche							oil Present? Yes 🗸 No 🗌
Remarks: N	o saturation in p	it. Soil type i	s a Mollisol, which	has thick, dark A	horizon; p	ossible soil r	meets indicator A12 below restrictive
ıa	iyer. Presence o	t nyaropnytic	vegetation and we	etland hydrology;	presume s	soil to be hyd	Iric.
**********					******		
HYDROLOG	3Y						
Wetland Hy	drology Indicat	ors:		***************************************			
_			ired; check all that	apply)		Sec	condary Indicators (2 or more required)
✓ Surface W							
	r Table (A2)			ained Leaves (B9) (e . 1, 2, 4A, and 4B)	except		Water-Stained Leaves (B9) (MLRA 1, 2,
Saturatio			Salt Crus	•		. [-]	4A, and 4B) Drainage Patterns (B10)
✓ Water Mar	, ,		=	ivertebrates (B13)			Dramage Patterns (BT0) Dry-Season Water Table (C2)
	Deposits (B2)			Sulfide Odor (C1)		<u></u>	Saturation Visible on Aerial Imagery (C9)
✓ Drift Depos				Rhizospheres along	Livina Root		Geomorphic Position (D2)
Algal Mat	or Crust (B4)			of Reduced Iron (C			Shallow Aquitard (D3)
Iron Depos	sits (B5)			on Reduction in Tille		=	FAC-Neutral Test (D5)
Surface So	oil Cracks (B6)		Stunted o	r Stressed Plants (D	1) (LRR A)	I	Raised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial In	magery (B7)	Other (Ex	plain in Remarks)		✓ F	Frost-Heave Hummocks (D7)
	egetated Concave	Surface (B8)					
Field Obser		P					
Surface Wat		Yes 🗹 No): adjacent 1-2 ft			
Water Table		Yes No	' '				
Saturation P (includes car		Yes ∐ No	✓ Depth (inches): not in pit	\ We	etiand Hydro	ology Present? Yes 🗹 No 🗌
		eam gauge	monitoring well, ae	rial photos, previo	nus inspec	tions) if ava	ilahle:
	/51	33-1	g //on, do	pstoo, provid		,,	
Remarks: Pi	it is 2 feet from f	lowing water					
	= 700; 1101111		-				

Project/Site: Black Butte Copper		С	ity/County	: White Si	ulphur Springs/Meagher	Sampling Date	e: 09-04-2	2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Poir	nt: LST1-V	W1
Investigator(s): J. Beaver, D. Culwell		S	Section, To	ownship, R	tange: S30, T12N, R7E			
Landform: slope		L	ocal reliet	f (concave	, convex, none): concave	s	lope (%):	5
Subregion (LRR): E		Lat: 46.	.77118233	375	Long: -110.900890178	B Da	tum: WG	S84
Soil Map Unit Name: 1175E Owenspr	ing-Cheadle				NWI classific	cation: PEM	***************************************	
Are climatic/hydrologic conditions on	the site typical for	this time o	f year? Y	es 🗸 N	o (If no, explain in Re	marks.)		
Are Vegetation ☐ , Soil ☐ , or Hydrol			-		"Normal Circumstances"	·	✓ No	7
Are Vegetation ☐, Soil ☐, or Hydrol		-			needed, explain any answ			_
SUMMARY OF FINDINGS - Atta				•	• •		•	; .
Hydrophytic Vegetation Present?	Yes ✔ No							
Hydric Soil Present?	Yes 🗹 No			he Sampl				
Wetland Hydrology Present?	Yes ✓ No			hin a Wet		No 🗔		
Remarks: Interesting keyhole shape wetland below. Photograp VEGETATION Use scientific n	hs: JB 2591-2597	; <u> </u>						
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?		Dominance Test Worl			
1			· · ·		Number of Dominant S That Are OBL, FACW,		3 ((A)
2.					Total Number of Domin			` ,
3					Species Across All Stra		3 ((B)
4	 				Percent of Dominant S That Are OBL, FACW,		100 ((A/B)
Sapling/Shrub Stratum (Plot size: 0.0	01 acre)				Prevalence Index Wo			
	 			FAC	Total % Cover of:		ply by:	
2.						5 x 1 =	35	_
3					FACW Species 5.		11	_
4.					FAC Species 72.			_
5.		8	= Total	Cover		2 x 4 =		_
Herb Stratum (Plot size: 0.01 acre)		/ 0.0	00101	UPL Species	x 5 =		_
1. Poa pratensis	·	45	x	FAC	Column Totals: 11	5(A)	271.5	(B)
2. Carex pellita		35	X	OBL	Prevalence Index	(B/A) = 2.36		
3. Phleum pratense		6_		FAC	Hydrophytic Vegetation	on Indicators:		_
4. Agrostis stolonifera		4		FAC	1 - Rapid Test for Hydr		n	
5. Alopecurus pratensis		4		FAC	2 - Dominance Test is	>50%		
6. Poa palustris		4		FAC	✓ 3 - Prevalence Index is	s ≤3.0¹		
7. Deschampsia cespitosa		3		FACW	4 - Morphological Adap			j
8. Carex microptera		2		FACU	data in Remarks or	·	neet)	
Stachys palustris Hordeum jubatum				FACW FAC	5 - Wetland Non-Vasc		valoia)	
11. Geum macrophyllum		0.5		FAC	¹Indicators of hydric soil an	- '		۵
11. <u>Jeun maeropnynam</u>		107	= Total (present, unless disturbed of		ygy mast bt	Ü
Woody Vine Stratum (Plot size: NA)							
1.					Hydrophytic			
2.					Vegetation			
% Bare Ground in Herb Stratum 0.5		0	_ = Total (Cover	Present? Yes	✓ No l		
Remarks:								



SOIL				F	Project/Site	: Black E	Butte Co	pper	Sampling Point: LST1-W1
Profile Des	cription: (Descri	he to the de	epth needed to d	ocumen	t the indic	ator or c	onfirm	the a	bsence of indicators.)
Depth	Matrix			dox Featu					·
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	ıre	Remarks
0-2.5	10YR 2/1	100					ON	1	
2.5-9	10YR 2/1	100					С		
9-14.5	2.5Y 3/1	100					С		
14.5-16	2.5Y 5/4	95	7.5YR 5/8	5		M	С		
					. — .				
									
						 .			
			M=Reduced Matri			Coated Sa	and Gra	ins	² Location: PL=Pore Lining, M=Matrix
	,	licable to al	II LRRs, unless o	therwise	e noted.):			ndica 	ators for Problematic Hydric Soils ³ :
Histosol (A	•		Sandy Redox (S	•				=	m Muck (A10)
	pedon (A2)		Stripped Matrix (,			Ĺ	Red	d Parent Material (TF2)
Black Hist			Loamy Mucky M			.RA 1)	Ĺ	=	ry Shallow Dark Surface (TF12)
	Sulfide (A4)	44.40	Loamy Gleyed N				L	Oth	ner (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix	. ,			3	Indiac	store of hydrophytic vocatation and
	k Surface (A12) zcky Mineral (S1)		Redox Dark Sur		71				ators of hydrophytic vegetation and tland hydrology must be present,
	eyed Matrix (S4)		Depleted Dark S Redox Depressi	•	()				less disturbed or problematic.
	Layer (if present	١.	Nedox Depressi	ons (Fo)					
Type:	Layer (ii present	.,.							
	oc).						Llud	ria Sa	oil Present? Yes 🗸 No 🗌
Depth (inche									hil Present? Yes ✓ No ☐ hroma is high for depleted matrix, but
			as well as hydrop						
HYDROLO	GY								
Wetland Hy	drology Indicate	rs:							
			red; check all that	apply)				Seco	ondary Indicators (2 or more required)
Surface W		·			aves (B9) (e:	vcent			Vater-Stained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)		_	4 1, 2, 4A,	, , ,	ксері		□ •	4A, and 4B)
Saturation	` '		Salt Crus		, a.i.a .b,			Пр	Orainage Patterns (B10)
Water Mai	, ,			Invertebra	tes (B13)				Ory-Season Water Table (C2)
	Deposits (B2)		= :		Odor (C1)				Saturation Visible on Aerial Imagery (C9)
Drift Depo	sits (B3)		********		neres along	Living Root	ts (C3)		Geomorphic Position (D2)
Algal Mat	or Crust (B4)		· · · · · · · · · · · · · · · · · · ·		ced Iron (C4			=	Shallow Aquitard (D3)
Iron Depos	sits (B5)		Recent I	ron Reduc	ction in Tilled	Soils (C6))		AC-Neutral Test (D5)
	oil Cracks (B6)		Stunted	or Stresse	ed Plants (D	1) (LRR A)		□ R	Raised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial Im	agery (B7)	Other (E	xplain in F	Remarks)			F	rost-Heave Hummocks (D7)
Sparsely \	egetated Concave	Surface (B8)							
Field Obser	vations:								
Surface Wat	ter Present? `	Yes 🗌 No	✓ Depth (inche)	s):					
Water Table	Present?	Yes 🗌 No	Depth (inche)	s):					
Saturation P		Yes 🗌 No	Depth (inches	s):		W	etland i	lydro	ology Present? Yes 🗸 No 🗌
	pillary fringe)	om ac::===	manitarin = ···-!! -	ا جاء اماسم				c · · ·	
Describe Re	colded Data (Stre	am gauge, i	monitoring well, a	eriai phoi	ιοs, previo	us inspec	πions), i	r avail	iable:
Daniel	tel		1 1 1 2 2						
Remarks: A	itnough only mee	is secondary	y nydrology indica	tors, spe	culate wet	land hydr	rology b	ased (on hydrophytic vegetation and soils.



Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST1-W2
Investigator(s): J. Beaver, D. Hagen		S	ection, To	ownship, R	ange: S30, T12N, R7E	
Landform: swale		L	ocal relief	(concave,	convex, none): none	Slope (%): 2
Subregion (LRR): E		Lat: 46.	7674507		Long: -110.9014878	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Mon	aberg				NWI classifi	cation: PEM
Are climatic/hydrologic conditions on the s	ite typical for	this time o	f year? Y	es 🗸 No	 o ☐ (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology [' present? Yes ✔ No
Are Vegetation . Soil , or Hydrology					eeded, explain any answ	
SUMMARY OF FINDINGS – Attach s					-	
	es 🗸 No			•		,
	es 🗹 No			he Sample		_
Wetland Hydrology Present? Y	es 🗸 No		wit	hin a Wetl	and? Yes ✓	No 🗆
Remarks: Interesting SALBEB/CARUTR	c.t. Several de	ead SALBI	EB, but m	any young	shrubs. Photographs: JE	3 2551-2554; 2555 of soil
VEGETATION – Use scientific name	es of plants	•				
Tree Stratum (Plot size: NA)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Wor	
1		70 00001	Opecies:	- Otatus	Number of Dominant S That Are OBL, FACW,	
2.						
3.					Total Number of Domin	
4.						 1 1
		0	_ = Total (Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 ac	cre)				Prevalence Index Wo	
1. Salix bebbiana		15_	X	FACW	Total % Cover of	i
2. Dasiphora fruticosa		4		FAC		88 x 1 = 68
Salix geyeriana Salix boothii				FACW FACW		38 x 2 = 76
5. Juniperus communis		0.5		UPL		6 x 3 = 18
C. Camporae Commune		22.5	= Total (FACU Species	1 x 4 = 4
Herb Stratum (Plot size: 0.01 acre)					UPL Species0.	
1. Carex utriculata		60	x	OBL	Column Totals: 113.	.5 (A) <u>168.5</u> (B)
2. Juncus balticus		12_		FACW	Prevalence Index	(B/A) = 1.48
3. Carex nebrascensis		8_		OBL	Hydrophytic Vegetati	on Indicators:
4. Petasites frigidus		4		FACW	1 - Rapid Test for Hyd	rophytic Vegetation
C Des mustamais		•		FACW	2 - Dominance Test is	4
6. Poa pratensis 7. Geum rivale		4		FAC FACW	✓ 3 - Prevalence Index is	
0 0 1 111 6"				FACU		ptations¹ (Provide supporting r on a separate sheet)
9.					5 - Wetland Non-Vaso	· ' ' ' ' ' '
10.					Problematic Hydrophy	tic Vegetation¹ (Explain)
11						nd wetland hydrology must be
		91	_ = Total (Cover	present, unless disturbed of	or problematic.
Woody Vine Stratum (Plot size: NA)					
1					Hydrophytic	
2			= Total (Vegetation Present? Yes	✓ No □
% Bare Ground in Herb Stratum 0.5			_ = TOTAL	JUVEI		-
Remarks:					1	



SOIL			Project/Site: Bla	ack Butte Cop	per Sampling Point: LST1-W2
Profile Desc	cription: (Describ	oe to the dep	th needed to document the indicator	or confirm th	ne absence of indicators.)
Depth	Matrix	-	Redox Features		,
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc	Z Texture	e Remarks
0-12.5	10YR 3/1	100		OM	peat; increased fibers
12.5-18	10YR 4/1	100	- Adda Maria and Adda	SiCL	
					
					- Application of the second of
			Dadasad Matrix 000 Occasion of the Control		21
			Reduced Matrix, CS=Covered or Coate		
		icable to all L	RRs, unless otherwise noted.):	In	dicators for Problematic Hydric Soils ³ :
Histosol (A	•	<u></u>	Sandy Redox (S5)	L.	2 cm Muck (A10)
✓ Histic Epip		<u></u>	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Hist	` '	<u></u>	Loamy Mucky Mineral (F1) (except MLRA 1)	' ⊢	Very Shallow Dark Surface (TF12)
	Sulfide (A4)	(A11)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
= '	Below Dark Surface	(ATT)	Depleted Matrix (F3) Redox Dark Surface (F6)	3In	ndicators of hydrophytic vegetation and
=	k Surface (A12) cky Mineral (S1)	<u> </u>	Depleted Dark Surface (F7)		wetland hydrology must be present,
	eyed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.
	Layer (if present	١٠	Tredox Depressions (1 0)		
	Layer (II present).			
Type:		·-·		l les aluis	Soil Drosowt2 Voc 🗷 No 🗔
Depth (inche	es):			Hyaric	Soil Present? Yes 🗸 No 🗌
	GY				
Wetland Hy	drology Indicato	rs:			
Primary Indi	cators (minimum	of one require	d; check all that apply)	:	Secondary Indicators (2 or more required)
Surface W	lator (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)		MLRA 1, 2, 4A, and 4B)	L	4A, and 4B)
Saturatio	, ,		Salt Crust (B11)	Г	Drainage Patterns (B10)
Water Mar	` '		Aquatic Invertebrates (B13)	Γ	Dry-Season Water Table (C2)
=	Deposits (B2)		Hydrogen Sulfide Odor (C1)	Ī	Saturation Visible on Aerial Imagery (C9)
Drift Depo	. , ,		Oxidized Rhizospheres along Living	Roots (C3)	✓ Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Depos	sits (B5)		Recent Iron Reduction in Tilled Soils	s (C6)	FAC-Neutral Test (D5)
Surface S	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LR	RR A)	Raised Ant Mounds (D6) (LRR A)
_	Visible on Aerial Im	agery (B7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely \	egetated Concave	Surface (B8)			
Field Obser	vations:				
Surface Wat	ter Present?	Yes 🗌 No 🔽	Depth (inches):		
Water Table	Present?	Yes 🗸 No 🗌	Depth (inches): 20		
	pillary fringe)	Yes ✔ No	· · · · · · · · · · · · · · · · · · ·		ydrology Present? Yes 🗸 No 🗌
Describe Re	corded Data (stre	am gauge, m	onitoring well, aerial photos, previous in	spections), if	available:
Remarks: S	urface water pres	ent in stream	3" deep. Stream is about 2-3' wide and	1 2-4' deep	
r torriarito. O	unace water pro-			acch.	
rtomanto. O	unace mater pres			чоор.	

Project/Site: Black Butte Copper	White Sulphur Springs/Meagher Sampling Date: 08-27-2				
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: LST1-W3
Investigator(s): J. Beaver, D. Hagen	S	ection, To	wnship, R	ange: S31, T12N, R7E	
Landform: terrace				convex, none): none	Slope (%): 2
Subregion (LRR): E		7650011	•	Long: -110.9059995	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Monaberg				NWI classific	
Are climatic/hydrologic conditions on the site typical for t	his time o	f vear? V	es 🗾 No		***************************************
Are Vegetation , Soil , or Hydrology significantly					present? Yes V No
Are Vegetation , Soil , or Hydrology naturally pr				eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site map sho			•		•
					, , , , , , , , , , , , , , , , , , ,
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No	=	ls ti	ne Sample	ed Area	
Wetland Hydrology Present? Yes ✓ No	=		nin a Wetl		No 🗌
Remarks: Upper edge of wetland above creek. Salix mo	ore comm	on downst	ream, alth	ough many are dead. Ph	otographs: JB 2538-2541
0				,	
VEGETATION – Use scientific names of plants.					
	Absolute	Dominant	Indicator	Dominance Test Worl	ksheet:
Tree Stratum (Plot size: NA)	% Cover	Species?	Status	Number of Dominant S	
				That Are OBL, FACW,	or, FAC:4 (A)
2				Total Number of Domir	
3				Species Across All Stra	ata: 4 (B)
4		= Total (Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.01 acre)		10tart	ovei	That Are OBL, FACW,	or, FAC:100 (A/B)
1. Dasiphora fruticosa	28	x	FAC	Prevalence Index Wo	rksheet:
2				Total % Cover of:	Multiply by:
3.					27 x 1 =27
4.				FACW Species	
5					9 x 3 = 267
	28	_ = Total (Cover	FACU Species	
Herb Stratum (Plot size: 0.01 acre				UPL Species	
Agrostis stolonifera	30_	X	FAC	Column Totals: 13	0 (A) <u>335</u> (B)
2. Poa pratensis	28	X	FAC	Prevalence Index	(B/A) = <u>2.58</u>
3. Carex nebrascensis	25_	X	OBL	Hydrophytic Vegetation	on Indicators:
4. Juncus balticus	8		FACU FACU	1 - Rapid Test for Hyd	
Trifolium pratense Carex utriculata			OBL	2 - Dominance Test is	
7. Potentilla gracilis	2		FAC	3 - Prevalence Index is	
8. Taraxacum officinale			FACU		ptations¹ (Provide supporting r on a separate sheet)
9. Phleum pratense			FAC	5 - Wetland Non-Vasc	
10. Symphyotrichum campestre	1		(UPL)	Problematic Hydrophy	tic Vegetation¹ (Explain)
11.			·	¹Indicators of hydric soil an	nd wetland hydrology must be
	102	= Total 0	Cover	present, unless disturbed of	or problematic.
Woody Vine Stratum (Plot size: NA)					
1				Hydrophytic	
2				Vegetation	n
9/ Para Cround in black Strature 0.5	0	_ = Total (Cover	Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum 0.5					
Remarks:					



SOIL				Project/S	ite: Black I	Butte Copper	Sampling Point: LST1-W3			
Profile Des	cription: (Descri	ibe to the d	epth needed to de	ocument the inc	licator or o	confirm the a	bsence of indicators.)			
Depth	Matrix		Red	lox Features						
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks			
0-8	10YR 2/1	100				SC				
8-18	10YR 2/1	100				grav. SC	much higher coarse fragments			
	Indicators (App		M=Reduced Matrix II LRRs, unless o	therwise noted.		Indica	² Location: PL=Pore Lining, M=Matrix itors for Problematic Hydric Soils ³ : m Muck (A10)			
	pedon (A2)		Stripped Matrix (•			d Parent Material (TF2)			
Black His	• •		= ''	neral (F1) (except N	/ILRA 1)	=	y Shallow Dark Surface (TF12)			
Hydrogen	Sulfide (A4)		Loamy Gleyed M		•		ner (Explain in Remarks)			
	Below Dark Surface	(A11)	Depleted Matrix	(F3)						
	k Surface (A12)		Redox Dark Surf	` '			ators of hydrophytic vegetation and			
	ucky Mineral (S1)		Depleted Dark S	` '		we	tland hydrology must be present, ess disturbed or problematic.			
 	eyed Matrix (S4)	<u>.</u>	Redox Depression	ons (F8)		<u> </u>				
	Layer (if presen									
Type:										
Depth (inch							epth. Redox features could be masked			
HYDROLO	GY									
Wetland Hy	drology Indicate	ors:								
Primary Indi	icators (minimum	of one requ	ired; check all that	apply)		Seco	ondary Indicators (2 or more required)			
Surface V	Vater (A1)		☐ Water-St	ained Leaves (B9)	(excent		Vater-Stained Leaves (B9) (MLRA 1, 2,			
=	er Table (A2)			1, 2, 4A, and 4B)	Схоорг	·	4A, and 4B)			
✓ Saturation	on (A3)		Salt Crus	•			Prainage Patterns (B10)			
Water Ma	rks (B1)		Aquatic I	nvertebrates (B13)		Drainage Patterns (B10) Dry-Season Water Table (C2)				
=	Deposits (B2)			n Sulfide Odor (C1)			aturation Visible on Aerial Imagery (C9)			
☐ Drift Depo	` '		Learner	Rhizospheres alon		ots (C3) 🗹 G	eomorphic Position (D2)			
= -	or Crust (B4)		F	of Reduced Iron (0	•		hallow Aquitard (D3)			
Iron Depo	oil Cracks (B6)			on Reduction in Till	•	' =	AC-Neutral Test (D5)			
	บก Cracks (Bo) า Visible on Aerial Im	agery (R7)		or Stressed Plants (oplain in Remarks)	D1) (LRR A)	=	aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)			
	/egetated Concave			plan in Remarks)		V	iost-neave nunimocks (D7)			
Field Obser										
		Yes 🗌 No	✓ Depth (inches	s):						
Water Table		Yes ✓ No								
Saturation F	resent? pillary fringe)	Yes 🗹 No	Depth (inches	5): 10.5	W	etland Hydro	logy Present? Yes 🗹 No 🗌			
	<u> </u>	am gauge,	monitoring well, ae	rial photos, prev	ious inspec	ctions), if avail	able:			
Remarks: A	ssumed water tak	ole based or	າ saturation; sand/ເ	gravels are satura	ated.					

Project/Site: Black Butte Copper		Ci	ity/County	: White Su	lphur Springs/Meagher	Sampling Date: 08-27-2014		
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LST1-W4			
Investigator(s): J. Beaver, D. Hagen		S	Section, To	ownship, R	ip, Range: S31, T12N, R7E			
Landform: swale/seep		L	ocal relief	f (concave,	convex, none): concave	Slope (%): 6		
Subregion (LRR): E			76445039		Long: -110.915350181			
Soil Map Unit Name: 171E Surdal-Poin					NWI classific			
Are climatic/hydrologic conditions on the	site typical for	this time o	f vear? Y	′es ✔ No	(If no, explain in Re			
Are Vegetation , Soil , or Hydrolog	= -		-		_ · · ·	present? Yes ✓ No 🗌		
Are Vegetation , Soil , or Hydrolog					eeded, explain any answ			
SUMMARY OF FINDINGS – Attach					•	·		
	Yes ✓ No	_		<u>-</u>		***************************************		
•	Yes ✓ No [he Sample				
	Yes ⊻ No L			hin a Wetl		No 🗆		
Remarks: Head of seep, flowing water.			annel abo	ut 3' deep	by 4' wide. Wetland vege	tation in channel with flowing		
water. Photographs: JB 2530	J-2533, 2536-25	137						
VEGETATION – Use scientific nar	nes of plants	•			T			
Tree Stratum (Plot size: NA	1	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test World			
1			_ 		Number of Dominant S That Are OBL, FACW,			
2.				<u> </u>				
3.					Total Number of Domin Species Across All Stra			
4.								
		0	= Total	Cover	Percent of Dominant Sport That Are OBL, FACW,			
Sapling/Shrub Stratum (Plot size: 0.01	acre)				Prevalence Index Wor			
				FAC	Total % Cover of:			
0 0-15 habbles				FACU		0 x 1 = 50		
				FACW		6 x 2 = 52		
4 5.						2 x 3 = 66		
· ·		7	= Total	Cover	FACU Species	1 x 4 = 4		
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =		
1. Carex utriculata		35	x	OBL	Column Totals: 9	9 (A) <u>172</u> (B)		
2. Juncus balticus		25	x	FACW	Prevalence Index ((B/A) = <u>1.74</u>		
3. Carex nebrascensis		15_		OBL	Hydrophytic Vegetation	on Indicators:		
4. Agrostis stolonifera		8_		FAC	1 - Rapid Test for Hydr			
5. Geum macrophyllum		5		FAC	✓ 2 - Dominance Test is	>50%		
7 5 4 17 17 17 17				FAC	✓ 3 - Prevalence Index is	, ≤3.0¹		
				FAC		otations¹ (Provide supporting r on a separate sheet)		
8. 9.					5 - Wetland Non-Vasci			
10						tic Vegetation¹ (Explain)		
11.					¹Indicators of hydric soil an	d wetland hydrology must be		
		92	= Total	Cover	present, unless disturbed o	r problematic.		
Woody Vine Stratum (Plot size: NA)							
1					Hydrophytic			
2					Vegetation Present? Yes	✓ No □		
% Bare Ground in Herb Stratum 3		0	_ = Total (Cover	riesent: 165			
Remarks:								
Tomano.								



Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth	SOIL				Project/Sit	e: Black B	Butte Copper	Sampling Point: LST1-W4
Depth Matrix Redox Features	Profile Des	scription: (Describ	e to the dept	h needed to do				
O-8.5 10YR 2/1 100 SC SC grav. S little soil, mostly saturated sand & grav. S little soil, mostly saturated san	Depth							·
8.5-18 10YR 2/2 100 grav. S little soil, mostly saturated sand & grav. S little soil mostly saturated sand & grav. S little soil mostly saturated sand & grav. S little soil mostly saturated sand & grav. S little soil mostly saturated sand & grav. S little soil mostly saturated sand & grav. S little soil mostly saturated saturated saturated sand & grav. S little soil mostly saturated saturated saturated saturated saturated saturated saturated saturated saturated satur				Color (moist)	%Type¹_	Loc ²	Texture	Remarks
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains **Location: PL=Pore Lining, M=Mi Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.):	0-8.5	10YR 2/1	100				SC	-
Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted.): Histosol (A1)	8.5-18	10YR 2/2	100				grav. S	little soil, mostly saturated sand & gravel
Histosol (A1)								² Location: PL=Pore Lining, M=Matrix
Histic Epipedon (A2)	: —				-		-	
Black Histic (A3)	Histic Epi	pedon (A2)		- '	•			, ,
Depleted Below Dark Surface (A11)	Black His	tic (A3)		Loamy Mucky Mir	neral (F1) (except M	LRA 1)		
✓ Thick Dark Surface (A12) Redox Dark Surface (F6) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) unless disturbed or problematic. Restrictive Layer (if present): Type: Unless disturbed or problematic. Depth (inches): Hydric Soil Present? Yes ✓ No □ Remarks: Dark soil profile; may meet indicator A12 at depth (soil type is Mollisol). Redox concentrations for depleted matrix may have been masked by saturation. Given hydrophytic vegetation and wetland hydrology, assume soil is hydric. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) ✓ Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) AA, and 4B) Drinage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D5) <td></td> <td>` '</td> <td></td> <td>Loamy Gleyed Ma</td> <td>atrix (F2)</td> <td></td> <td>Ott</td> <td>ner (Explain in Remarks)</td>		` '		Loamy Gleyed Ma	atrix (F2)		Ott	ner (Explain in Remarks)
Sandy Mucky Mineral (S1)			A11) [•			
□ Sandy Gleyed Matrix (S4) □ Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: □ Depth (inches): □ Hydric Soil Present? Yes ☑ No □ Remarks: Dark soil profile; may meet indicator A12 at depth (soil type is Mollisol). Redox concentrations for depleted matrix may have been masked by saturation. Given hydrophytic vegetation and wetland hydrology, assume soil is hydric. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required): □ Surface Water (A1) □ Water-Stained Leaves (B9) (except □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) 4A, and 4B) ☑ Saturation (A3) □ Salt Crust (B11) ☑ Drainage Patterns (B10) ☑ Water Marks (B1) □ Aquatic Invertebrates (B13) □ Dry-Season Water Table (C2) □ Sediment Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Saturation Visible on Aerial Imagery (C9) □ Iff Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Shallow Aquitand (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A)					` '		3Indica	ators of hydrophytic vegetation and
Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes V No Remarks: Dark soil profile; may meet indicator A12 at depth (soil type is Mollisol). Redox concentrations for depleted matrix may have been masked by saturation. Given hydrophytic vegetation and wetland hydrology, assume soil is hydric. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required): Indicators (minimum of one required): Indicators (minimum of one required): Indicators (2 or more requ				•	` '			
Type:				Redox Depressio	ns (F8)			- Problematic.
Depth (inches):								
Remarks: Dark soil profile; may meet indicator A12 at depth (soil type is Mollisol). Redox concentrations for depleted matrix may have been masked by saturation. Given hydrophytic vegetation and wetland hydrology, assume soil is hydric. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Indicators (2 or more required; check all that apply) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) At, and 4B) Parainage Patterns (B10) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Prift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Raised Ant Mounds (D6) (LRR A)								
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Image: Mater (A1) Image: High Water Table (A2) Image: Micro (A3) I							1 -	
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) High Water Table (A2) Saturation (A3) Satt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Vater-Sta	HYDROLO	GY						
✓ Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) ✓ Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) ✓ Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	Wetland Hy	drology Indicators	3:					
✓ Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ✓ High Water Table (A2) MLRA 1, 2, 4A, and 4B) 4A, and 4B) ✓ Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) ✓ Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	Primary Ind	icators (minimum of	one required	; check all that	apply)		Seco	ondary Indicators (2 or more required)
High Water Table (A2) MLRA 1, 2, 4A, and 4B) A4A, and 4B) Vater Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) MLRA 1, 2, 4A, and 4B) A4A, and 4B) A4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Researt Iron Reduction in Tilled Soils (C6) Raised Ant Mounds (D6) (LRR A)	_		•			voont		
✓ Saturation (A3) Salt Crust (B11) ✓ Drainage Patterns (B10) ✓ Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) ✓ Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)		` '			, , ,	хсері	V	
Water Marks (B1) Aquatic Invertebrates (B13) Dry-Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Pry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)		` '			•		.	,
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roots (C3) Presence of Reduced Iron (C4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Hydrogen Sulfide Odor (C1) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	=	, ,		=	. ,			
□ Drift Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) ☑ Geomorphic Position (D2) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A)	Sediment	Deposits (B2)			` '			, ,
☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ FAC-Neutral Test (D5) ☐ Surface Soil Cracks (B6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Raised Ant Mounds (D6) (LRR A)	= :	, ,		Oxidized I	Rhizospheres along	Living Roots		• , , ,
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A)	Algal Mat	or Crust (B4)		Presence	of Reduced Iron (C-	I)	□ s	hallow Aquitard (D3)
Tables / It Mounts (Bo) (Ertit A)						. ,	□ F.	AC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B/) Other (Explain in Remarks) Frost-Heave Hummocks (D7)	=	` '	(7)		•	1) (LRR A)	_	` ' ' ' ' '
Sparsely Vegetated Concave Surface (B8)		`	rost-Heave Hummocks (D7)					
			nace (bo)				11784844	
Field Observations: Surface Water Present? Yes ✓ No ☐ Depth (inches): 1			o Mo 🗆	Denth (inches)	١٠ ، ١			
Surface Water Present? Yes ☑ No ☐ Depth (inches): 1 Water Table Present? Yes ☑ No ☐ Depth (inches): 22								
Saturation Present? (includes capillary fringe) Yes No Depth (inches): 9.5 Wetland Hydrology Present? Yes No No C								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			n gauge, mo	nitoring well, aer	rial photos, previo	us inspect	ions), if avail	able:
Domarka: Hooduston of coop similar transfer at the site of the sit	Domorko: 11	andwaters -f	-lu-il f					
Remarks: Headwaters of seep, similar type of seep to the south over the ridge. See photos JB2528-2829. Photo JB 2527 is a picture above that seep.	rtemarks: H	eadwaters of seep, bove that seep.	similar type o	ਹਾ seep to the sc	outh over the ridge	e. See pho	tos JB2528-	2829. Photo JB 2527 is a picture

Project/Site: Black Butte Copper	Ci	ty/County:	White Su	ulphur Springs/Meagher Sampling Date: 08-26-2014			
Applicant/Owner: Tintina Resources				State: MT Sampling Point: LST2-W1			
Investigator(s): J. Beaver, D. Hagen	S	ection, To	wnship, R	 lange: S32, T12N, R7E			
Landform: swale	L	ocal relief	(concave,	convex, none): none Slope (%): 2			
Subregion (LRR): E	 Lat: 46.	7654881		Long: -110.8832202 Datum: WGS84			
Soil Map Unit Name: 1150C Bischoff-Monaberg				NWI classification: PEM			
Are climatic/hydrologic conditions on the site typical	I for this time o	f vear? Ye	es 🗸 No				
Are Vegetation . Soil , or Hydrology signific				"Normal Circumstances" present? Yes ✓ No □			
Are Vegetation , Soil , or Hydrology natura	•			needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map							
Hydric Soil Present? Yes ✓	No 🗌 No 🗌 No 🗌		ne Sample nin a Wetl				
Remarks: Very wet CARUTR swale. Photographs: VEGETATION – Use scientific names of pla							
	Absolute	Dominant		Dominance Test Worksheet:			
Tree Stratum (Plot size: NA)		Species?	Status	Number of Dominant Species			
1.				That Are OBL, FACW, or, FAC: (A)			
2				Total Number of Dominant			
3. 4.				Species Across All Strata: 2 (B)			
	0	= Total C	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B)			
Sapling/Shrub Stratum (Plot size: 0.01 acre)		_					
1. Salix bebbiana	5	x	FACW	Prevalence Index Worksheet:			
2. Dasiphora fruticosa	1		FAC	Total % Cover of: Multiply by:			
3.				OBL Species 90 x 1 = 90 FACW Species 9 x 2 = 18			
4.				FACW Species 9 x 2 = 18 FAC Species 1 x 3 = 3			
5.				FACU Species x 4 =			
Herb Stratum (Plot size: 0.01 acre)	6	_ = Total C	over	UPL Species x 5 =			
1. Carex utriculata	80	x	OBL	Column Totals: 100 (A) 111 (B)			
2. Carex nebrascensis	10		OBL	Prevalence Index (B/A) = 1.11			
3. Carex praegracilis	3		FACW	Hydrophytic Vegetation Indicators:			
4. Deschampsia cespitosa	0.5		FACW	1 - Rapid Test for Hydrophytic Vegetation			
5. Viola nephrophylla			FACW	✓ 2 - Dominance Test is >50%			
6				✓ 3 - Prevalence Index is ≤3.0¹			
7				4 - Morphological Adaptations¹ (Provide supporting			
8				data in Remarks or on a separate sheet)			
9		-		5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain)			
10 11				Indicators of hydric soil and wetland hydrology must be			
	94		Cover	present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size: NA)	· · · · · · · · · · · · · · · · · · ·	_					
1				Hydrophytic			
2				Vegetation			
0/ Para Cround in Harb Charles 0.5	0	_ = Total C	Cover	Present? Yes 🗹 No 🔙			
% Bare Ground in Herb Stratum 0.5			<u>.</u>				
Remarks:							



SOIL				Project/	Site: Black E	Butte Copper	Sampling Point: LST2-W1
Profile Des	cription: (Descri	oe to the de	oth needed to do	cument the ir	ndicator or o	confirm the a	bsence of indicators.)
Depth	Matrix		Red	ox Features			
(inches)	Color (moist)	%	Color (moist)	% Type	Loc²	Texture	Remarks
0-4.5	10YR 2/1	100				OM	peat? increased root fiber
4.5-12	2.5Y 2.5/1	100				С	totally saturated
	A. A. A. A. A. A. A. A. A. A. A. A. A. A						
			- ,				
							
	p						
¹Type: C=Ce	oncentration, D=D	epletion, RM	l=Reduced Matrix	, CS=Covered	or Coated S	and Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to all	LRRs, unless of	herwise note	d.):	Indica	ators for Problematic Hydric Soils³:
Histosol (/	A 1)		Sandy Redox (S	5)		2 c	m Muck (A10)
Histic Epi	oedon (A2)		Stripped Matrix (S6)		Re	d Parent Material (TF2)
Black Hist	tic (A3)		Loamy Mucky Mi	neral (F1) (excep	t MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed M	atrix (F2)		Oth	her (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)			
Thick Dar	k Surface (A12)	Ĺ	Redox Dark Surfa				ators of hydrophytic vegetation and
= '	icky Mineral (S1)	Ĺ	Depleted Dark S	` '			tland hydrology must be present, less disturbed or problematic.
	eyed Matrix (S4)	<u>L</u>	Redox Depression	ons (F8)		1	
	Layer (if present):					
Type:			-				
Depth (inche	es):					Hydric Sc	oil Present? Yes ✓ No ☐
Remarks: A	lthough OM is no	t 8 inches, sa	aturation and low	chroma in com	bination with	OM and hyd	rophytic vegetation indicate this is a
F	listic Epipedon.						
							
HYDROLO	GY						
	drology Indicate	re'					
-	cators (minimum		ed: check all that	anniv)		Sec	ondary Indicators (2 or more required)
		or one requi					
✓ Surface V			_	ained Leaves (B	, , ,	□ v	Nater-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			1, 2, 4A, and 4E	i)		4A, and 4B)
✓ Saturation	• •		Salt Crus	` ,	0)	==	Orainage Patterns (B10)
Water Ma	rks (B1) Deposits (B2)		agains .	nvertebrates (B1: n Sulfide Odor (C	,		Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Drift Depo				Rhizospheres al			Geomorphic Position (D2)
= :	or Crust (B4)		=	of Reduced Iron		` =	Shallow Aquitard (D3)
Iron Depo	• •		=	on Reduction in	, ,	=	FAC-Neutral Test (D5)
	oil Cracks (B6)		=	or Stressed Plant	•	. =	Raised Ant Mounds (D6) (LRR A)
\equiv	n Visible on Aerial Im	agery (B7)	=	kplain in Remark:		_	Frost-Heave Hummocks (D7)
=	/egetated Concave				-7		ζ,
Field Obse							
		Yes 🗹 No [Depth (inches	s): 2			
Water Table		Yes 🗸 No [Depth (inches				
Saturation F		Yes 🗹 No [Depth (inches		w	etland Hydro	ology Present? Yes ✔ No 🗌
(includes ca	pillary fringe)			-,· <u>v</u>			
Describe Re	corded Data (stre	am gauge, n	nonitoring well, a	erial photos, pr	evious inspe	ctions), if ava	ilable:
Remarks:							

Project/Site: Black Butte Copper		Ci	ity/County	: White Su	ulphur Springs/Meagher	Sampling Date: 08-26-2014			
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LST2-W2				
Investigator(s): J. Beaver, D. Hagen	·	S	Section, To	wnship, R	Range: S31, T12N, R7E				
Landform: terrace/toe slope		L	ocal relief	(concave	, convex, none): none	Slope (%): 1			
Subregion (LRR): E			7619023		Long: -110.8942241	Datum: WGS84			
Soil Map Unit Name: 1175E Owenspr	ing-Cheadle					cation: PSS			
Are climatic/hydrologic conditions on t	he site typical	for this time o	f year? Y	es 🗸 N	o (If no, explain in Re	marks.)			
Are Vegetation ☐ , Soil ☐ , or Hydrold			-		_ ,	present? Yes ✔ No			
Are Vegetation, Soil, or Hydrok		-			needed, explain any answ				
SUMMARY OF FINDINGS – Atta				·	•	ŕ			
Hydrophytic Vegetation Present?	Yes ✓ I	No 🗌							
Hydric Soil Present?	Yes 🗹 🛚 1	No 🗌		he Sampl		 1			
Wetland Hydrology Present?	Yes 🗸 🛚 I	No 🗌	witi	hin a Wetl	land? Yes ✓	No 🗀			
Remarks: Some deceased shrubby of indistinct. Shrub cover on VEGETATION – Use scientific n	plot not repres	entative of sur							
Tree Charters (Diet siese 0.4	`	Absolute			Dominance Test Wor	ksheet:			
Tree Stratum (Plot size: 0.1 acre)		Species?	Status FACU	Number of Dominant S				
1. Populus tremuloides		3_			That Are OBL, FACW,				
2. 3.					Total Number of Domir Species Across All Stra				
4.					-				
		3	= Total (Cover	Percent of Dominant S That Are OBL, FACW,				
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)								
Dasiphora fruticosa		15	X	FAC	Prevalence Index Wo Total % Cover of:				
				UPL					
				(UPL)	OBL Species 2 FACW Species 10.	5 x 1 = 25 5 x 2 = 21			
				FACW	1	4 x 3 = 192			
5					·	3 x 4 = 12			
Herb Stratum (Plot size: NA)		_ = Total (Jover		2 x 5 = 10			
1. Agrostis stolonifera	— ′	20	×	FAC	Column Totals: 104.	5 (A) 260 (B)			
2. Carex nebrascensis			X	OBL	Prevalence Index	(B/A) = 2.49			
3. Phleum pratense		15	X	FAC	Hydrophytic Vegetati				
4. Poa pratensis		12		FAC	1 - Rapid Test for Hyd				
5. Symphyotrichum subspicatum		10		FACW	✓ 2 - Dominance Test is				
6. Carex utriculata		5		OBL	✓ 3 - Prevalence Index is	s ≤3.0¹			
				FAC	4 - Morphological Ada	ptations¹ (Provide supporting			
8. Poa palustris				FAC		r on a separate sheet)			
9					5 - Wetland Non-Vasc				
10						tic Vegetation¹ (Explain) Id wetland hydrology must be			
11		84	= Total (Over	present, unless disturbed of				
Woody Vine Stratum (Plot size: NA)		10tai C	20vei					
1.					Hydrophytic				
2.					Vegetation				
		0	= Total C	Cover	Present? Yes	✓ No □			
% Bare Ground in Herb Stratum						17 T 77 Mile .			
Remarks: Most Pop tre are dead/sna	gs. Grazing 70	0-90%. Lots of	snags an	d down tin	nber.				



SOIL					Project/Sit	e: Black	Butte C	copper Sampling Point: LST2-W2		
Profile Des	scription: (Desc	ribe to the d	epth needed to d		· · · · · · · · · · · · · · · · · · ·			n the absence of indicators.)		
Depth	Matrix			dox Featu				,		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ture Remarks		
0-5	10YR 2/1	100					Ol	M sapric		
5-12	2.5Y 3/1	100						2		
12-16	10YR 5/1	90	5YR 5/8	10			`			
	1011/3/1		3113/6	10	<u>C</u>	M				
							-			
1T 0 0			84 P3 1 184 4 1							
			M=Reduced Matri				Sand Gr			
<u> </u>		plicable to a	II LRRs, unless o		e noted.):			Indicators for Problematic Hydric Soils ³ :		
Histosol (•		Sandy Redox (S	•				2 cm Muck (A10)		
_ :	ipedon (A2)		Stripped Matrix	,	\$ / 1 8 # 1			Red Parent Material (TF2)		
Black His	suc (A3) 1 Sulfide (A4)		Loamy Mucky M			LRA 1)		Very Shallow Dark Surface (TF12)		
= ' '	Below Dark Surface	ο (Δ11)	Loamy Gleyed M Depleted Matrix	, ,	ļ			Other (Explain in Remarks)		
= .	rk Surface (A12)	C (ATT)	Redox Dark Sur					³ Indicators of hydrophytic vegetation and		
	ucky Mineral (S1)		Depleted Dark S		7)			wetland hydrology must be present.		
	eyed Matrix (S4)		Redox Depressi	,	',			unless disturbed or problematic.		
	Layer (if preser	nt)·		()						
Type:		-								
Depth (inch							Llva	dria Sail Dragant? Van J		
· · · · · · · · · · · · · · · · · · ·								dric Soil Present? Yes ✓ No ☐ nd hydrophytic vegetation indicate this is a		
HYDROLO	GV.									
-	drology Indicat									
Primary Ind	icators (minimum	of one requ	ired; check all that	apply)				Secondary Indicators (2 or more required)		
Surface V	Vater (A1)		☐ Water-S	tained Le	aves (B9) (e	xcept	Water-Stained Leaves (B9) (MLRA 1, 2,			
	er Table (A2)		MLR	A 1, 2, 4A	, and 4B)			4A, and 4B)		
✓ Saturation	on (A3)		Salt Cru	st (B11)				Drainage Patterns (B10)		
Water Ma	` '		Aquatic	nvertebra	ates (B13)		Dry-Season Water Table (C2)			
=	Deposits (B2)				Odor (C1)			Saturation Visible on Aerial Imagery (C9)		
Drift Depo	• •				heres along		oots (C3)	Geomorphic Position (D2)		
	or Crust (B4)				iced Iron (C	•		Shallow Aquitard (D3)		
☐ Iron Depo					ction in Tille	•	•	FAC-Neutral Test (D5)		
	ioil Cracks (B6)	(DZ)			ed Plants (D	1) (LRR A	4)	Raised Ant Mounds (D6) (LRR A)		
_	n Visible on Aerial II	. , , ,	U Other (E	xpiain in i	Remarks)			Frost-Heave Hummocks (D7)		
	Vegetated Concave	Surface (B8)								
Field Obse		v 🗆 v	Danile /in the	- > -		-				
	ter Present?	Yes No								
Water Table		Yes ✓ No	•			,				
Saturation F (includes ca	resent? pillary fringe)	Yes 🗹 No	☐ Depth (inche)	s): <u>5.5</u>		V	wetiand	Hydrology Present? Yes ✓ No _		
·	<u> </u>	eam gauge	monitoring well, a	erial nho	tos previo	us insne	ections)	if available:		
		ggo,		pii0	-50, picvic	ao mape	- J. J. J. J. J. J. J. J. J. J. J. J. J.	a sandoro.		
Remarks: fl	owing water nort	h of plot								
romano. Il	Owning water none	ii oi piot								

Project/Site: Black Butte Copper		Ci	ity/County	։ White Տւ	ılphur Springs/Meagher	Sampling Date: 09-04-2014		
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LST2-W3			
Investigator(s): J. Beaver, D. Culwell		S	Section, To	ownship, R	ange: S31, T12N, R7E			
Landform: toe slope		L	ocal reliet	f (concave,	convex, none): concave	Slope (%): 3		
Subregion (LRR): E		Lat: 46.	7613347		Long: -110.9003275	Datum: WGS84		
Soil Map Unit Name: 1175E Owenspring	j-Cheadle				NWI classifi	cation: PSS		
Are climatic/hydrologic conditions on the	site typical for	this time o	f year? Y	es 🗸 No	o [] (If no, explain in Re	marks.)		
Are Vegetation, Soil, or Hydrology	y	ly disturbed	d?	Are	"Normal Circumstances"	present? Yes 🗸 No		
Are Vegetation, Soil, or Hydrology	/ naturally p	roblematic	?	(If n	eeded, explain any answ	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach	ı site map sh	owing sa	ampling	point loc	ations, transects, im	portant features, etc.		
Hydric Soil Present?	Yes V No No No Yes V No			he Sample		No 🗔		
Remarks: DASFRU c.t. near head of w	et drainage. Th	ere is a sp	ring appro	ximately 2	00-300 feet updrainage.	Upper margin of seep/spring		
wetland. Some grazing. Phot			J			- FF		
VEGETATION - Use scientific nar	nes of plants	i.						
		Absolute	Dominant		Dominance Test Wor	ksheet:		
Tree Stratum (Plot size: NA		% Cover	 		Number of Dominant S			
1					That Are OBL, FACW,	or, FAC:5 (A)		
2					Total Number of Domir			
3. 4.					Species Across All Stra			
		0	= Total	Cover	Percent of Dominant S That Are OBL, FACW,			
Sapling/Shrub Stratum (Plot size: 0.01	acre)				Prevalence Index Wo			
				FAC	Total % Cover of:			
2.						2 x 1 = 12		
3				· · · · · · · · · · · · · · · · · · ·	·	5 x 2 = 70		
4 5.					FAC Species 10	4 x 3 = 312		
		27	= Total	Cover	FACU Species	8 x 4 = 32		
Herb Stratum (Plot size: 0.01 acre	_)				UPL Species	x 5 =		
1. Juncus balticus		35	X	FACW	Column Totals:15	9 (A) <u>426</u> (B)		
2. Agrostis stolonifera		30	X	FAC	Prevalence Index	(B/A) = <u>2.68</u>		
3. Phleum pratense		15	X	FAC	Hydrophytic Vegetati	on Indicators:		
Poa palustris Geum macrophyllum		<u>15</u> 12	X	FAC FAC	1 - Rapid Test for Hyd			
6. Carex pellita		10		OBL	2 - Dominance Test is			
7 Dotontillo errocilio		F		FAC	3 - Prevalence Index is			
O Company of the company		-		FACU		ptations¹ (Provide supporting r on a separate sheet)		
0.00		_		FACU	5 - Wetland Non-Vasc	ular Plants¹		
10. Carex nebrascensis		2		OBL	Problematic Hydrophy	tic Vegetation¹ (Explain)		
11.					¹Indicators of hydric soil ar present, unless disturbed of	d wetland hydrology must be		
NAVa a du Nije a Otantuwa (Diat aina) NA	,	132	_ = Total (Cover	present, unless disturbed (n problematic.		
Woody Vine Stratum (Plot size: NA)							
1 2.					Hydrophytic Vegetation			
2.		0	= Total (Cover	Present? Yes	✓ No □		
% Bare Ground in Herb Stratum <5								
Remarks: Shrub cover at plot below 30	% but overall th	is wetland	is a PSS.					



SOIL							Butte Copp	
Profile Dee	scription: (Describ Matrix	e to the d		locument dox Featur		cator or	confirm th	ne absence of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	Remarks
0-5	10YR 2/1	100					CL	no redox
5-10.5	10YR 2/2	95	7.5YR 5/8	5			SCL	
		90	7.5YR 5/8	10			SCL	
10.5-16	2.5Y 3/1		7.518.5/0					
	- don't min							
Type: C=C	Concentration, D=D	epletion, R	M=Reduced Matr	ix, CS=Co	overed or	Coated S	Sand Grain	s ² Location: PL=Pore Lining, M=Matrix
	I Indicators (Appl							dicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)				2 cm Muck (A10)
_	ipedon (A2)		Stripped Matrix	-				Red Parent Material (TF2)
Black Hi	stic (A3)		Loamy Mucky M	/lineral (F1)	(except M	LRA 1)		Very Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)		Loamy Gleyed	Matrix (F2)				Other (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3)				
Thick Da	rk Surface (A12)		Redox Dark Su	rface (F6)			³in	dicators of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface (F7	')			wetland hydrology must be present, unless disturbed or problematic.
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F8)				diffess disturbed of problematic.
Restrictive	Layer (if present	:):						
Гуре:								
Depth (inch	nes):						Hydrid	: Soil Present? Yes ✔ No 🗌
	nov.							
IYDROLC Wetland H	ydrology Indicato	ors:						
	dicators (minimum		uired; check all tha	at apply)				Secondary Indicators (2 or more required
Surface	Water (A1)		☐ Water-	Stained Lea	aves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table (A2)		MLF	RA 1, 2, 4A,	and 4B)			4A, and 4B)
Saturat	ion (A3)			ust (B11)				Drainage Patterns (B10)
Water M	arks (B1)		Aquatio	Invertebra	tes (B13)			Dry-Season Water Table (C2)
Sedimer	t Deposits (B2)		= -	en Sulfide			_	✓ Saturation Visible on Aerial Imagery (C9)
	osits (B3)		=	ed Rhizosph	-	_	ots (C3)	✓ Geomorphic Position (D2)
= *	t or Crust (B4)		=	ce of Redu	•	•		Shallow Aquitard (D3)
= '	osits (B5)			Iron Reduc		•		FAC-Neutral Test (D5)
===	Soil Cracks (B6)	(22)		d or Stresse)1) (LRR A	*) [Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial Im		Utner (Explain in F	Remarks)		L	Frost-Heave Hummocks (D7)
=:-	Vegetated Concave	Surrace (B8)						
Field Obse		v. 🗆	. Domith /im-l-	۰۵۱:				
			Depth (inch					
			Depth (inch				Notiona U	ydrology Present? Yes 🗸 No 🗌
	apillary fringe)		Depth (inch					
Describe F	lecorded Data (stre	eam gauge	, monitoring well,	aeriai pho	tos, previ	ous inspe	ections), if	avaliable:
Remarks:	No water or satura	tion to 18".	Cattle hummocks	5.				

Project/Site: Black Butte Copper		Ci	ity/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-26-2014		
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LST3-W1			
Investigator(s): J. Beaver, D. Hagen		S	Section, To	ownship, R	ange: S31, T12N, R7E			
Landform: swale					convex, none): concave	Slope (%): 3		
Subregion (LRR): E			7554647		Long: -110.8956267 Datum: WGS84			
Soil Map Unit Name: Surdal-Poin-Libe	1				NWI classifi			
Are climatic/hydrologic conditions on the		this time o	fvear? Y	′es. ✓ No	 			
Are Vegetation , Soil , or Hydrolo						present? Yes V No		
Are Vegetation , Soil , or Hydrolo					eeded, explain any answ	,		
SUMMARY OF FINDINGS - Attac						•		
Hydrophytic Vegetation Present?	Yes ✓ No			<u>-</u>				
Hydric Soil Present?	Yes ✓ No	=	is t	the Sample		_		
Wetland Hydrology Present?	Yes 🗹 No		wit	hin a Wetl	and? Yes ✔	No 🗌		
Remarks: As with LST3-W2, margina	wetland, but me	ets criteria	. Photogr	aphs: JB 2	459-2462			
	·							
VEGETATION - Use scientific na	mes of plants	3.						
		Absolute	Dominant		Dominance Test World	ksheet:		
Tree Stratum (Plot size: NA)		Species?		Number of Dominant S			
1					That Are OBL, FACW,	or, FAC: (A)		
2.					Total Number of Domir			
3 4					Species Across All Stra	ata: <u>2</u> (B)		
			= Total	Cover	Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)				That Are OBL, FACW,			
1. Dasiphora fruticosa		40	X	FAC	Prevalence Index Wo	ļ		
2					Total % Cover of:			
3					OBL Species	x 1 =		
4					'	$68 \times 2 = 136$ $2 \times 3 = 216$		
5					-	$\frac{2}{1} \times 4 = \frac{210}{4}$		
Herb Stratum (Plot size: 0.01 acre	\	40	_ = Total	Cover	UPL Species	x 5 =		
1. Juncus balticus	- '.	60	x	FACW	Column Totals: 14			
2. Potentilla gracilis		12		FAC	Prevalence Index	(B/A) = 2.52		
3. Poa pratensis		10		FAC				
4. Carex praegracilis		8		FACW	Hydrophytic Vegetation 1 - Rapid Test for Hydro			
5. Phleum pratense		5		FAC	✓ 2 - Dominance Test is			
6. <i>Poa palustris</i>		3_		FAC	✓ 3 - Prevalence Index is	s ≤3.0¹		
7. Agrostis stolonifera		2		FAC	4 - Morphological Ada	ptations¹ (Provide supporting		
		1_		FACU		r on a separate sheet)		
9.					5 - Wetland Non-Vasc			
10.					1	tic Vegetation¹ (Explain) nd wetland hydrology must be		
11			= Total	Cover	present, unless disturbed of			
Woody Vine Stratum (Plot size: NA)	101	= TOTAL	- COVE				
1					Hydrophytic			
2.					Vegetation	_		
		0	= Total	Cover	Present? Yes	✓ No 🗌		
% Bare Ground in Herb Stratum								
Remarks:								



SOIL				Proje	ect/Site: Bla	ack Butte	Copper	Sampling Point: LST3-W1
Profile Des	scription: (Describ	e to the dep	oth needed to					absence of indicators.)
Depth	Matrix			edox Features				,
(inches)	Color (moist)	%	Color (moist)	%T	ype¹ Loc	C ² Te	exture	Remarks
0-16	10YR 2/1	_100					SC	·
¹Type: C=C	oncentration, D=De	epletion, RM	=Reduced Matr	ix. CS=Cove	red or Coate	ed Sand (Grains	² Location: PL=Pore Lining, M=Matrix
	Indicators (Appli							ators for Problematic Hydric Soils ³ :
Histosol (Ē	Sandy Redox (cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix	(S6)			\equiv	ed Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky N	/lineral (F1) (ex	cept MLRA 1))	=	ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed	Matrix (F2)			□ Ot	ther (Explain in Remarks)
!= '	Below Dark Surface (A11)	Depleted Matrix	(F3)				
	k Surface (A12)	Ļ	Redox Dark Su	` '				ators of hydrophytic vegetation and
1 = '	ucky Mineral (S1)	<u>_</u>	Depleted Dark	. ,			We	etland hydrology must be present, nless disturbed or problematic.
	eyed Matrix (S4)	<u>L</u>	Redox Depress	ions (F8)				
i	Layer (if present)	:				ĺ		
Туре:	,		-					_
Depth (inch						1 -	-	oil Present? Yes ✔ No 🗌
Remarks: S	Soil is Mollisol with	dark A horizo	on. May meet in	idicator A12 a	at depth. As	sume hyd	dric soil	since hydrophytic vegetation and
V	vetland hydrology p	resent.						
HYDROLO	GY							
Wetland Hy	drology Indicator	s:				***************************************		
	icators (minimum o		d: check all tha	t apply)			Sec	condary Indicators (2 or more required)
Surface V	vater (A1) er Table (A2)			Stained Leaves A 1, 2, 4A, and	` ' ' '		Ц,	Water-Stained Leaves (B9) (MLRA 1, 2,
Saturation	, ,			.A 1, 2, 4A, and ust (B11)	46)			4A, and 4B)
Water Ma	` '		_	Invertebrates (R13)			Drainage Patterns (B10) Dry-Season Water Table (C2)
	Deposits (B2)		= .	en Sulfide Odor	,			Saturation Visible on Aerial Imagery (C9)
Drift Depo				d Rhizospheres	. ,	Roots (C3		Geomorphic Position (D2)
Algal Mat	or Crust (B4)			e of Reduced I		(+-,		Shallow Aquitard (D3)
Iron Depo	sits (B5)		Recent	Iron Reduction	in Tilled Soils	s (C6)		FAC-Neutral Test (D5)
Surface S	oil Cracks (B6)		Stunted	or Stressed Pla	ants (D1) (LR	RA)	F	Raised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial Ima	gery (B7)	Other (E	Explain in Rema	arks)			Frost-Heave Hummocks (D7)
Sparsely \	/egetated Concave Si	urface (B8)						
Field Obser	vations:		_					
Surface Wa		es 🗌 No 🛂	= ' '					
Water Table	Present? You	es 🗌 No 🛂		es):				_
Saturation F	resent? Your Your Your Your Your Your Your Your	es 🗌 No 🗹	Depth (inche	es):		Wetlan	d Hydro	ology Present? Yes 🗹 No 🗌
		m dauge m	nitorina wall -	orial phates	province:	 	\ ;£ =	Hala
Describe Ke	corded Data (strea	ın yauye, mo	וונטוווט well, a	enai pnotos,	previous ins	spections), it ava	ilabie:
Domadia								
Remarks: m	ıaıgınaı							

Project/Site: Black Butte Copper		С	ity/County	: White Si	ulphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST3-W2
Investigator(s): J. Beaver, D. Hagen		5	Section, To	wnship, R	Range: S31, T12N, R7E	
Landform: swale		L	ocal relief	(concave	, convex, none): concave	Slope (%): 4
Subregion (LRR): E		 Lat: 46	.7543256		Long: -110.900238	Datum: WGS84
Soil Map Unit Name: Surdal-Poin-Libeg	I				NWI classifi	cation: PSS
Are climatic/hydrologic conditions on th		this time o	of year? Y	es 🗸 N	o	marks.)
Are Vegetation ☐, Soil ☐, or Hydrolog	7.7		-			present? Yes ✓ No
Are Vegetation , Soil , or Hydrolog	•				needed, explain any answ	
SUMMARY OF FINDINGS – Attac				-		·
Hydrophytic Vegetation Present?	Yes ✓ No					
Hydric Soil Present?	Yes 🔽 No			he Sampl		
Wetland Hydrology Present?	Yes ✓ No		wit	hin a Wet	land? Yes ✓	No 🗆
Remarks: Marginal wetland, but meets	s criteria. Photo	graphs: JB	2453-2456	6 (N to W)		
VEGETATION – Use scientific na	mes of plant	s.				
		Absolute	Dominant		Dominance Test World	ksheet:
Tree Stratum (Plot size: NA		% Cover	Species?	Status	Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC:3 (A)
2					Total Number of Domir	
3.					Species Across All Stra	ata: 3 (B)
4		0	= Total (Cover	Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.01	l acre)		10tai (00101	That Are OBL, FACW,	or, FAC:100 (A/B)
4 70 11 6 11	,	35	х	FAC	Prevalence Index Wo	
2.					Total % Cover of:	
3					OBL Species	x 1 =
4						7 x 2 = 74
5						3 x 3 = 249 5 x 4 = 20
		35	_ = Total (Cover	FACU Species UPL Species	5 x 4 =20 x 5 =
Herb Stratum (Plot size: 0.01 acre	_)	0.5		E4 014/	Column Totals: 12	
1. Juncus balticus		35 30	X	FACW FAC		
Poa palustris Poa pratensis		15	x	FAC	Prevalence Index	
Symphyotrichum foliaceum		5		FACU	Hydrophytic Vegetation	
5 A to				FAC	 1 - Rapid Test for Hydr ✓ 2 - Dominance Test is	, , , , , , , , , , , , , , , , , , ,
6. Geum rivale				FACW	✓ 3 - Prevalence Index is	
/ /		1		FAC		otations¹ (Provide supporting
8						on a separate sheet)
9					5 - Wetland Non-Vasc	ular Plants¹
10					_ , , ,	tic Vegetation¹ (Explain)
11.					¹Indicators of hydric soil an present, unless disturbed of	d wetland hydrology must be
Mandy Vine Chrotum (Diet circ) NA	,	90	_ = Total (Cover	present, unless distarbed t	r productiatio.
Woody Vine Stratum (Plot size: NA						
1 2					Hydrophytic Vegetation	
- -		0	= Total (Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum			_	-0401		
Remarks: marginal						
-						



SOIL				Project/Si	te: Black Bu	tte Cop	per Sampling Point: LST3-W2
Profile Des	cription: (Describ	e to the de	oth needed to				he absence of indicators.)
Depth	Matrix			edox Features			,
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks
0-16	10YR 3/1	_100 _				SC	
					red or Coated Sand Grains Coated Sand Grains PL=Pore Lining, M=Matroted.): Indicators for Problematic Hydric Soils 2 cm Muck (A10) Red Parent Material (TF2)		
				•			
l ———							
				-			
¹Type: C=C	oncentration D=D4	enletion RM	=Reduced Matr	iv CS=Covered or	Coated San	d Crain	21 contion: DI =Doro Lining M=Metric
	Indicators (Appli						
Histosol (Sandy Redox (-	•		
 	pedon (A2)	F	Stripped Matrix	•		⊢	• •
Black His		F	5 ''	/lineral (F1) (except M	(LRA 1)		
1 ===	Sulfide (A4)	Ē	Loamy Gleyed			H	. ,
Depleted	Below Dark Surface (A11) [Depleted Matrix				, care (a premi m remaine)
✓ Thick Dar	k Surface (A12)		Redox Dark Su	rface (F6)		³ln	ndicators of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Depleted Dark	Surface (F7)			wetland hydrology must be present,
Sandy Gl	eyed Matrix (S4)		Redox Depress	ions (F8)			unless disturbed or problematic.
Restrictive	Layer (if present)	:					
Туре:			_				
Depth (inch	es):	77.1	_			Hydrid	c Soil Present? Yes 🗹 No 🗌
Remarks: S	Soil is a Mollisol with	h natural dai	k A horizon: ma	av meet indicator A	12 at greate	r depth.	Marginal but hydrophytic vegetation and
v	etland hydrology p	resent. Assı	ıme hydric soil.		Ŭ	•	S and the second and the second and
					2		
HYDROLO	GY						
	drology Indicator	e•					
l -	icators (minimum o		ad: check all tha	it apply)			Speedow Indicators (2 or many many in all
		i one require	o, check all tha	it apply)			Secondary Indicators (2 or more required)
Surface V	, ,		_	Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A, and 4B)		_	4A, and 4B)
Saturation	• •		=	ust (B11)		<u> </u>	✓ Drainage Patterns (B10)
Water Ma	` '		= '	Invertebrates (B13)		L	Dry-Season Water Table (C2)
Drift Depo	Deposits (B2)		= · ·	en Sulfide Odor (C1)	r Livina Doots	(Ca) [Saturation Visible on Aerial Imagery (C9)
	or Crust (B4)		_	d Rhizospheres along se of Reduced Iron (C		(C3)	Geomorphic Position (D2)
Iron Depo			=	Iron Reduction in Tille	•	Ļ	Shallow Aquitard (D3)
	oil Cracks (B6)		_	or Stressed Plants (I	• •	F	FAC-Neutral Test (D5) ☐ Raised Ant Mounds (D6) (LRR A)
_	Visible on Aerial Ima	aerv (B7)		Explain in Remarks))	F	Frost-Heave Hummocks (D7)
	egetated Concave Su					L.,	
Field Obser	vations:						
Surface Wa		es 🗌 No 🕟	Depth (inche	es):			
Water Table		es 🗌 No 🔽	= ' '				
Saturation F		es 🗌 No 🔽			Wet	land Hy	/drology Present? Yes ✔ No 🗌
	pillary fringe)					_	
Describe Re	corded Data (strea	m gauge, m	onitoring well, a	erial photos, previ	ous inspection	ons), if a	available:
Remarks: N	larginal, but meets	criteria.					

Project/Site: Black Butte Copper	Cit	ty/County: White	Sulphur Springs/Meagher	Sampling Date: 09-04-2014						
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: LST4-W1						
Investigator(s): L. Larsen, S. Cooper	s	ection, Township,	Range: S01, T11N, R6E							
Landform: old seep/headcut			e, convex, none): concave	Slope (%): 2-3						
Subregion (LRR): E		7493839	Long: -110.9143345	Datum: WGS84						
Soil Map Unit Name: 1176E Kimpton-Zade				cation: PEM						
Are climatic/hydrologic conditions on the site typica	I for this time of	vear? Yes	No ☐ (If no, explain in Re							
Are Vegetation, Soil, or Hydrology signific		· —	re "Normal Circumstances"							
Are Vegetation , Soil , or Hydrology natura			needed, explain any answ							
SUMMARY OF FINDINGS – Attach site map				•						
	No 🗆									
	No	Is the Sam		_						
Wetland Hydrology Present? Yes ✓	No 🗌	within a We	etland? Yes ✓	No 🗀						
Remarks: Probable seep with localized moisture to support wetland. Located above incised drainage with wetland below. Marginal wetland; heacut above empties into wetland. Conservative estimate of wetlands in this drainage. Photographs: SC 976-979 EGETATION – Use scientific names of plants.										
	Absolute	Dominant Indicato	Dominance Test World	ksheet:						
Tree Stratum (Plot size: NA)	% Cover	Species? Status								
1			_ That Are OBL, FACW,	or, FAC: (A)						
2			Total Number of Domir							
3			Species Across All Stra	ata: 2 (B)						
4	0	= Total Cover	Percent of Dominant S							
Sapling/Shrub Stratum (Plot size: NA)		_ = Total Cover	That Are OBL, FACW,	or, FAC:100 (A/B)						
1			Prevalence Index Wo	rksheet:						
2.			Total % Cover of:	Multiply by:						
3.			OBL Species	x 1 =						
4			_ '	9 x 2 = 98						
5				6 x 3 = 228						
	0	= Total Cover	FACU Species							
Herb Stratum (Plot size: 0.01 acre	_		UPL Species Column Totals: 12	$\frac{1}{6}$ $x = 5$						
1. Agrostis stolonifera	40	x FAC								
2. Deschampsia cespitosa	38_	x FACW FAC		· · · 						
Phleum pratense Poa pratensis	<u>18</u> 10	FAC	- Hydrophytic Vegetation							
Foa praterisis Carex praegracilis		FACW	1 - Rapid Test for Hydr							
6. Juncus balticus		FACW	2 - Dominance Test is							
7. Hordeum jubatum	A	FAC	→ 3 - Prevalence Index is	s ≤3.0° otations¹ (Provide supporting						
8. Potentilla gracilis	2	FAC		on a separate sheet)						
9. Rumex crispus	1	FAC	5 - Wetland Non-Vasc	ular Plants¹						
10. Symphyotrichum campestre		(UPL)	Problematic Hydrophy	ic Vegetation¹ (Explain)						
11.			¹ Indicators of hydric soil an present, unless disturbed of	d wetland hydrology must be						
Manda Man Ot at an Oblat alma NA	126	= Total Cover	present, unless disturbed t	n problematic.						
Woody Vine Stratum (Plot size: NA)										
1			_ Hydrophytic Vegetation							
2	0	= Total Cover	Present? Yes	✓ No 🗌						
% Bare Ground in Herb Stratum 2		_ TOTAL OUVE								
Remarks:										



SOIL				Project/Si	te: <u>Black B</u>	lutte Copper	Sampling Point: LST4-W1
Profile Des	cription: (Descri	be to the dept	h needed to de	ocument the ind	icator or c	onfirm the a	bsence of indicators.)
Depth	Matrix	•		dox Features			•
(inches)	Color (moist)	<u></u> %	Color (moist)	% Type ¹	Loc²	Texture	Remarks
0-16	10YR 2/2	100				CL	few small coarse fragments
¹Type: C=C	oncentration, D=[enletion RM=	Reduced Matrix	CS=Covered or	Coated Sa	and Graine	² Location: PL=Pore Lining, M=Matrix
	Indicators (App	•					tors for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (S	-	•		m Muck (A10)
1=	pedon (A2)			•		=	, ,
Black His		H	Stripped Matrix (ineral (F1) (except N	M DA 4\		d Parent Material (TF2)
! ===	Sulfide (A4)	느			ILKA I)		y Shallow Dark Surface (TF12)
1 == -	Below Dark Surface	/A11\	Loamy Gleyed M Depleted Matrix			Our	ner (Explain in Remarks)
1= :	k Surface (A12)		Redox Dark Surf	` ,		3Indica	ators of hydrophytic vegetation and
1=	ucky Mineral (S1)	片	Depleted Dark S	` '			tland hydrology must be present,
1 = '	eyed Matrix (S4)	H	Redox Depression	. ,			ess disturbed or problematic.
	· · · · · · · · · · · · · · · · · · ·	<u>. </u>	Nedox Deplession) (1 0)		1	
_	Layer (if presen	.,.					
Type:							
Depth (inch	es):					Hydric So	il Present? Yes 🗹 No 🗌
		pth. May meet	indicator A12 a	t greater depth. H	łydrophytic	vegetation a	nd hydrology present; assume soils
a	re hydric.						
HYDROLO	GY						
Wetland Hy	drology Indicate	ors:					
Primary Indi	icators (minimum	of one require	d; check all that	apply)		Seco	ondary Indicators (2 or more required)
					·		
Surface V				tained Leaves (B9) (except	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
Saturation	er Table (A2)			A 1, 2, 4A, and 4B)			4A, and 4B)
	` '		Salt Crus			=	Orainage Patterns (B10)
Water Ma	, ,			nvertebrates (B13)			Ory-Season Water Table (C2)
	Deposits (B2)			n Sulfide Odor (C1)	a Lindaa Daat		saturation Visible on Aerial Imagery (C9)
Drift Depo	, ,		=	Rhizospheres along		` ' =	Geomorphic Position (D2)
_	or Crust (B4)		=	e of Reduced Iron (C	•		hallow Aquitard (D3)
Iron Depo				ron Reduction in Till		(Ferrority)	AC-Neutral Test (D5)
=	ioil Cracks (B6)		==	or Stressed Plants (I	DT) (LKK A)	_	taised Ant Mounds (D6) (LRR A)
	n Visible on Aerial In		☐ Other (E	xplain in Remarks)		V F	rost-Heave Hummocks (D7)
	Vegetated Concave	Surface (Bo)					
Field Obse							
		Yes 📙 No 🗹		•			
Water Table		Yes 📙 No 🗹					🗔 🗆
Saturation F	Present?	Yes 📙 No 🗹	Depth (inche:	s):	We	etland Hydro	ology Present? Yes ✓ No ☐
	pillary fringe)						
Describe Re	ecorded Data (stre	earn gauge, mo	nitoring well, a	eriai pnotos, previ	ious inspec	tions), if avail	iable:
Remarks: S	suspected seep/h	eadcut at uppe	rend of incised	drainage (WUS)	and wetlan	d below. Hold	ds water seasonally.

Project/Site: Black Butte Copper	Ci	ty/County	y: White Su	ılphur Springs/Meagher	Sampling Date: 08-14-2014
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SC-W1
Investigator(s): J. Beaver, K. Scow	S	ection, T	ownship, R	ange: S24, T12N, R6E	
Landform: floodplain, terrace	L	ocal relie	f (concave,	convex, none): none	Slope (%): 2
Subregion (LRR): E		7829798		Long: -110.9078632	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-R				NWI classific	
Are climatic/hydrologic conditions on the site typica		f vear? Y	∕es ✓ No		
Are Vegetation, Soil, or Hydrology signifi					present? Yes 🗸 No
Are Vegetation , Soil , or Hydrology natura				eeded, explain any answ	-
SUMMARY OF FINDINGS – Attach site ma					·
Hydrophytic Vegetation Present? Yes ✔	No				
Hydric Soil Present? Yes ✓	No 🗌		the Sample		
Wetland Hydrology Present? Yes ✓	No 🗌	Wil	thin a Wetl	and? Yes ✓	No 🗆
Remarks: Plot on wetland side of UPL/WL bounds	ary, approximate	ely 20 ft.	Photograph	ns: JB 2315-2318 (N to W	Ŋ

VEGETATION – Use scientific names of pl	ants.				
Tree Stratum (Plot size: NA)	Absolute % Cover		t Indicator Status	Dominance Test Worl	
1				Number of Dominant S That Are OBL, FACW,	
2.					
3.				Total Number of Domin	
4					
		_ = Total	Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA)			Prevalence Index Wor	
1				Total % Cover of:	
2					2 x 1 = 12
3				,	1 x 2 = 142
4. 5.					8 x 3 = 294
O		= Total	Cover	FACU Species 3	6 x 4 = 144
Herb Stratum (Plot size: 0.01 acre)			0010.	UPL Species	x 5 =
1. Phleum pratense	52_	x	FAC	Column Totals: 21	7 (A)592 (B)
2. Juncus balticus	36	x	FACW	Prevalence Index ((B/A) = 2.73
3. Trifolium hybridum	26_	X	FAC	Hydrophytic Vegetation	on Indicators:
4. Taraxacum officinale	24		FACU	1 - Rapid Test for Hydr	rophytic Vegetation
5. Geum rivale	16		FACW	✓ 2 - Dominance Test is	>50%
6. Carex nebrascensis	8		OBL	✓ 3 - Prevalence Index is	3 ≤3.01
7. Deschampsia cespitosa	<u>8</u> 8		FACU		otations¹ (Provide supporting
Schedonorus pratensis Carex praegracilis	<u> </u>		FACU FACW	5 - Wetland Non-Vasci	r on a separate sheet)
10. Poa palustris			FAC		tic Vegetation¹ (Explain)
11. Potentilla gracilis	6		FAC		d wetland hydrology must be
3	217	= Total		present, unless disturbed of	
Woody Vine Stratum (Plot size: NA)					
1				Hydrophytic	
2				Vegetation	
9/ Para Craund in Harb Stratus	0	_ = Total	Cover	Present? Yes	✓ No L
% Bare Ground in Herb Stratum		1	-41		
Remarks: Wetter portion of meadow. This plot app	pears to be ~20	within w	etiand bout	шагу.	



SOIL				Р	roject/Sit	e: <u>Black</u>	Butte Co	pper	Sampling Point: SC-W1
Profile Des	cription: (Descri	be to the dept	h needed to	document	the indi	cator or	confirm	the at	osence of indicators.)
Depth	Matrix		R	edox Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	re	Remarks
0-6	2.5Y 2/1	100					CL		increased fine roots
6-14.5	7.5YR 2/1	100					С		
14.5-16	2.5Y 5/2	100					C		
	oncentration, D=E								² Location: PL=Pore Lining, M=Matrix tors for Problematic Hydric Soils ³ :
Histosol (Histic Epil Black Hist Hydrogen Depleted Thick Dar Sandy Mu Sandy Gle Restrictive Type: Clay Depth (inche	A1) pedon (A2) tic (A3) Sulfide (A4) Below Dark Surface k Surface (A12) tcky Mineral (S1) eyed Matrix (S4) Layer (if present	(A11) (A11)	Sandy Redox (Stripped Matrix Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark St Depleted Dark Redox Depress	S5) ((S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8)	(except M	LRA 1)	Hydr May meet	2 cm Red Ven Oth Indica wet unle	in Muck (A10) Parent Material (TF2) y Shallow Dark Surface (TF12) er (Explain in Remarks) tors of hydrophytic vegetation and land hydrology must be present, ess disturbed or problematic. il Present? Yes No ator A12 at greater depth. Plot is in so ent for depleted matrix at 14.5-
1 HYDROLO Wetland Hy	6", but no re	edox features o	bserved.						ndary Indicators (2 or more required)
Surface V High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	Jater (A1) er Table (A2) on (A3) rks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) oil Cracks (B6) n Visible on Aerial Im	nagery (B7)	Water- MLI Salt Cr Aquatic Hydrog Oxidize Preser Recen Stunte	Stained Lea RA 1, 2, 4A, rust (B11) c Invertebra gen Sulfide of ed Rhizosph nice of Reduct t Iron Reduct d or Stresse (Explain in F	and 4B) tes (B13) Odor (C1) neres along ced Iron (C ction in Tille d Plants (I	ı Living Ro 4) ed Soils (C	C6)	□ W □ D □ D □ S □ S □ S □ F □ R	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Field Obse Surface Wa Water Table Saturation F	ter Present? Present?	Yes No Yes No Yes No Yes No Yes No Yes	Depth (inch	es):			<i>N</i> etland I	Hydro	logy Present? Yes ☑ No □

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

table not observed in conjunction with saturation; possibly b/c of clay layer.

Remarks: Based on soils and veg., it seems reasonable the area is saturated at the root zone for 12.5% of growing season. High water

Project/Site: Black Butte Copper	Ci	ity/County	: White Su	ılphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SC-W2
Investigator(s): J. Beaver	S	Section, To	wnship, R	ange: S19, T12N, R7E	
Landform: floodplain/terrace			-	convex, none): none	Slope (%): 1
Subregion (LRR): E		7829643	` '	Long: -110.9049333	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfis				NWI classifi	
Are climatic/hydrologic conditions on the site typical for		f vear? V	es 🗸 Na		
Are Vegetation , Soil , or Hydrology significant					<u> </u>
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally p					present? Yes V No
SUMMARY OF FINDINGS – Attach site map sh				eeded, explain any answ ations, transects, im	·
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No		ls t	he Sample hin a Wetl	ed Area and? Yes ✔	No 🗌
Remarks: Typical of dense Salix around Sheep Creek VEGETATION – Use scientific names of plants		ohs: JB 16	34726-1647	708	
TECENTIAN COCCONICIONALICO DI PIANTA	Absolute	Dominant	Indicator	Dominance Test World	ksheet:
Tree Stratum (Plot size: NA)		Species?	Status	Number of Dominant S	
1.				That Are OBL, FACW,	
2				Total Number of Domir	nant
3.				Species Across All Stra	ata: 3 (B)
4		= Total (Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre)				Prevalence Index Wo	
Salix eriocephala var. mackenzieana		X	OBL	Total % Cover of:	
2. Salix geyeriana		X	FACW	OBL Species 95.	
3.				FACW Species 3	
4.					$\frac{3}{7}$ x 3 = $\frac{72}{21}$
5	85	= Total (4 x 4 = 16
Herb Stratum (Plot size: 0.01 acre)		_ = 10tart	Jovei	UPL Species	x 5 =
1 Caray utriaulata	35	x	OBL	Column Totals: 142.	5 (A) 204.5 (B)
Carex utriculata Mentha arvensis			FACW	Prevalence Index	$\langle R/\Delta \rangle = 1 M$
3. Poa palustris	5		FAC		
4. Viola canadensis	4		FACU	Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Test for Hydrophy	
5. Deschampsia cespitosa	2		FACW	2 - Dominance Test is	• •
6. Cirsium arvense	4		FAC	✓ 3 - Prevalence Index is	
7. Geum macrophyllum	1_		FAC		otations¹ (Provide supporting
8. Anthoxanthum hirtum			FACW		r on a separate sheet)
9. Canadanthus modestus	0.5		FACW	5 - Wetland Non-Vasc	
10. Juncus nodosus	0.5		OBL		tic Vegetation¹ (Explain)
11.				¹Indicators of hydric soil an	d wetland hydrology must be
Woody Vine Stratum (Plot size: NA)	57.5	_ = Total (Cover	present, unless disturbed C	1 problematic.
1				Hydrophytic	
2				Vegetation	
0/ Boro Creamed in Lloub Strature 2.5	0	_ = Total C	Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum 0.5					The Market St., and all Market St., and the Prince of St.
Remarks: Dense Salix/Car utr stand.					



SOIL				F	Project/Site	e: Black E	Butte Copper	Sampling Point: SC-W2
Profile Des	cription: (Descri	be to the de	opth needed to d					absence of indicators.)
Depth	Matrix			dox Featu				and an indicators,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-11	10YR 3/1	98	5YR 4/6	2	С	М	С	
11-12.5	10YR 2/1	100					OM	sapric
12.5-16	3/10Y	75	5YR 4/6	25	RM	M	CL	
16-20	4/N	90	5YR	10	C		S	
10-20	7/18		JIK			<u>M</u>		
		·						
¹Type: C=C	oncentration, D=D	epletion, RI	M=Reduced Matri	x, CS=C	overed or	Coated S	and Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to al	l LRRs, unless o	therwise	e noted.):	-	Indic	ators for Problematic Hydric Soils ³ :
Histosol (•		Sandy Redox (S	•			_ 20	cm Muck (A10)
	pedon (A2)		Stripped Matrix					ed Parent Material (TF2)
Black His	· ,		Loamy Mucky M			.RA 1)	☐ Ve	ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed N				∐ Ot	her (Explain in Remarks)
L	Below Dark Surface	1	Depleted Matrix				31 malia	store of burden bution and the second
	rk Surface (A12) ucky Mineral (S1)		✓ Redox Dark Sur Depleted Dark S		71			ators of hydrophytic vegetation and etland hydrology must be present,
	eyed Matrix (S4)		Redox Depressi	•	()			less disturbed or problematic.
	Layer (if present	١٠.		0113 (1 0)				
Type:	_u, o. (procon	. , ,.						
Depth (inch			_				Liudeia Ca	oil Present? Yes ✔ No
	nteresting thin laye		_				-	oil Present? Yes ✔ No 🗌
IYDROLO								
	drology Indicato						_	
Primary ind	icators (minimum	or one requi	red; check all that	t apply)			Sec	ondary Indicators (2 or more required)
Surface V	* *				aves (B9) (e:	cept	\ \	Water-Stained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)			A 1, 2, 4A,	and 4B)			4A, and 4B)
✓ Saturatio	` ,		Salt Cru				=	Orainage Patterns (B10)
Water Ma				Invertebra	, ,			Ory-Season Water Table (C2)
	Deposits (B2)			n Sulfide (os estimation of		Saturation Visible on Aerial Imagery (C9)
☐ Drift Depo	or Crust (B4)			-	neres along	•	` ' =	Geomorphic Position (D2)
Iron Depo	` '		=		ced Iron (C4 ction in Tilled	,		Shallow Aquitard (D3)
	oil Cracks (B6)		=		ed Plants (D	` '	=	FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
_	Nisible on Aerial Im	agery (B7)		xplain in F	•	i) (LIXIX A)	_	Frost-Heave Hummocks (D7)
_	Vegetated Concave S				torriarito)			TOSETTEAVE TRAININGERS (DT)
Field Obse								
Surface Wa	ter Present?	∕es □ No	Depth (inche	s):				
Water Table		es No		· —				
Saturation F (includes ca	resent? \ pillary fringe)	′es 🗸 No	Depth (inches			We	etland Hydro	ology Present? Yes 🗹 No 🗌
	corded Data (stre	am gauge, r	monitoring well, as	erial phot	os, previo	us inspec	tions), if avai	ilable:
Remarks:								

Project/Site: Black Butte Copper	Ci	ty/County	։ White Տւ	ulphur Springs/Meagher	Sampling Date: 08-17-2014
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SC-W3
Investigator(s): K. Scow, E. Darfler	S	ection, To	wnship, R	Range: S25, T12N, R6E	·
Landform: bottom	L	ocal relief	(concave,	, convex, none): none	Slope (%): 0-1
Subregion (LRR): E		7807285		Long: -110.9080948	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfis					ication: PSS
Are climatic/hydrologic conditions on the site typical for		f vear? Y	es 🗸 No		
Are Vegetation . Soil , or Hydrology significantl					" present? Yes ✓ No
Are Vegetation , Soil , or Hydrology naturally p	=			needed, explain any ansv	
SUMMARY OF FINDINGS – Attach site map sh			,		•
Hydrophytic Vegetation Present? Yes ✔ No			<u> </u>		
Hydric Soil Present? Yes ✓ No	=		he Sample		
Wetland Hydrology Present? Yes ✓ No		Wit	hin a Wetl	land? Yes ✓	No 🗆
Remarks:					
VEGETATION – Use scientific names of plants	•				
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Wor	
1				Number of Dominant S That Are OBL, FACW,	Species . or, FAC: 3 (A)
2					· · · · · · · · · · · · · · · · · · ·
3.				Total Number of Domin	
4				· .	
	0	= Total (Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre)				Prevalence Index Wo	
1. Salix bebbiana		X	FACW	Total % Cover of	
2. Salix geyeriana			FACW		04 x 1 = 104
3. Ribes setosum	8		FACW		95 x 2 = 190
Dasiphora fruticosa Salix boothii	6 5		FAC FACW	-	18 x 3 = 54
3. Saiix pooliiii		= Total (FACU Species	x 4 =
Herb Stratum (Plot size: 0.01 acre)		10tai (Jovei	UPL Species	x 5 =
1. Carex utriculata	74	x	OBL	Column Totals: 21	17 (A) <u>348</u> (B)
2. Carex pellita	28	x	OBL	Prevalence Index	(B/A) = 1.60
3. Geum macrophyllum	4		FAC	Hydrophytic Vegetati	<u> </u>
4. Poa palustris	4		FAC	1 - Rapid Test for Hyd	
5. Poa pratensis	4		FAC	✓ 2 - Dominance Test is	
6. Symphyotrichum boreale			OBL	✓ 3 - Prevalence Index i	is ≤3.0¹
7. Viola nephrophylla			FACW		ptations¹ (Provide supporting
8				-	or on a separate sheet)
9.				5 - Wetland Non-Vaso	
10.					tic Vegetation¹ (Explain) nd wetland hydrology must be
11		= Total (Cover	present, unless disturbed	
Woody Vine Stratum (Plot size: NA)		_ iotal t	J J V C I		
1.				Hydrophytic	
2.				Vegetation	
	0	_ = Total (Cover	Present? Yes	No 🗌
% Bare Ground in Herb Stratum					
Remarks: a Salix terrace near Sheep Creek					



SOIL				P	roject/Site	e: Black	Butte Co	opper Sampling Point:	SC-W3
Profile Des	cription: (Descrik	e to the	depth needed to d					the absence of indicators.)	
Depth	Matrix		Re	dox Featu	es			·	
(inches)	Color (moist)	%	Color (moist)	%	_Type¹	Loc²	Text	ure Remarks	
0-21	2.5YR 2.5/1	_100					L	high OM	
¹Type: C=C	oncentration, D=D	epletion, F	RM=Reduced Matrix	c, CS=Cc	vered or	Coated S	Sand Gra	ains ² Location: PL=Pore Lining,	M=Matrix
			all LRRs, unless o					Indicators for Problematic Hydr	
Histosol (/	A1)		Sandy Redox (S	5)	•		[2 cm Muck (A10)	
Histic Epi	pedon (A2)		Stripped Matrix (S6)			į	Red Parent Material (TF2)	
Black Hist	ic (A3)		Loamy Mucky M	neral (F1)	(except MI	LRA 1)	[Very Shallow Dark Surface (TF12)	
Hydrogen	Sulfide (A4)		Loamy Gleyed M	latrix (F2)			. [Other (Explain in Remarks)	
	Below Dark Surface (A11)	Depleted Matrix	(F3)					
_	k Surface (A12)		Redox Dark Sur					3Indicators of hydrophytic vegetati	
=	cky Mineral (S1)		Depieted Dark S	•	")			wetland hydrology must be pre unless disturbed or problemati	
	eyed Matrix (S4)		Redox Depression	ons (F8)					
	Layer (if present)	:							
Туре:			- Later Control of the Control of th						
Depth (inche	es):						Hyd	ric Soil Present? Yes 🗹 🛮 No	o □
Remarks: N	o rocks or gravel.	Lots of or	ganic material. Red	ox likely	below 21	inches. \$	Soil is m	olisol with hydrophytic vegetation.	
HYDROLO	ΒΥ								
Wetland Hv	drology Indicator	's:							
-			uired; check all that	apply)				Secondary Indicators (2 or more	required)
		. 0110 109							
Surface W					ves (B9) (e	xcept		Water-Stained Leaves (B9) (MLR	A 1, 2,
✓ Saturation	r Table (A2)			1, 2, 4A,	and 4B)			4A, and 4B)	
Water Mai	` '		Salt Crus	• ,	(D42)			Drainage Patterns (B10)	
=	Deposits (B2)		_ :	nvertebrat	` '			Dry-Season Water Table (C2)	(00)
Drift Depo	, , ,			n Sulfide (Rhizoeph	eres along	Living Bo	oto (C3)	Saturation Visible on Aerial Image Geomorphic Position (D2)	ery (C9)
	or Crust (B4)		L		eres along ed Iron (C		uis (C3)	✓ Geomorphic Position (D2) Shallow Aquitard (D3)	
Iron Depos			_		tion in Tille	•	6)	FAC-Neutral Test (D5)	
= :	oil Cracks (B6)		_		d Plants (D	•	•	Raised Ant Mounds (D6) (LRR A)	,
C	Visible on Aerial Ima	gery (B7)	=	xplain in R	•	., (,	Frost-Heave Hummocks (D7)	
	egetated Concave S				,				
Field Obser	vations:								
Surface Wat	er Present? Y	es 🔲 No	Depth (inches	s):					
Water Table		es 🔽 No							
Saturation P	resent? Y	es 🗹 No	_	· —		V	Vetland	Hydrology Present? Yes 🗹	No 🗌
· · · · · · · · · · · · · · · · · · ·	pillary fringe)								
Describe Re	corded Data (strea	ım gauge	monitoring well, as	erial phot	os, previo	us inspe	ctions),	if available:	

				ace has	dried up a	lot in the	e past co	ouple of weeks. 1" of water in the	pit after 20
m	in. Water appears	when soi	is pinched.						

Project/Site: Black Butte Copper	Ci	ty/County	: White Su	ulphur Springs/Meagher	Sampling Date: 08-27-	2014	
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SC-W4		
Investigator(s): K.Scow, D. Barton	s	ection, To	wnship, R	ange: S30, T12N, R7E			
Landform: terrace		ocal relief	(concave,	convex, none): concave	Slope (%)	 : 0-1	
Subregion (LRR): E		7802341	, ,	Long: -110.9024818		Datum: WGS84	
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redchi				NWI classific			
Are climatic/hydrologic conditions on the site typical for t		fvear? V	es 🗸 No				
Are Vegetation , Soil , or Hydrology significantly						_	
Are Vegetation , Soil , or Hydrology naturally pr				e "Normal Circumstances" present? Yes 🗹 No 🗌 needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map sho						c.	
Hydrophytic Vegetation Present? Yes ✔ No Hydric Soil Present? Yes ✔ No Wetland Hydrology Present? Yes ✔ No			he Sample		No 🗌		
Remarks: Mowed hay field near creek. Photographs: no	o photogra	phs					
VEGETATION – Use scientific names of plants							
Tree Stratum (Plot size: NA	Absolute % Cover		Indicator Status	Dominance Test Work			
Tree Stratum (Plot size: NA)				Number of Dominant Sp That Are OBL, FACW, of		(A)	
2						(~)	
3.				Total Number of Domin Species Across All Stra		(B)	
4.						(5)	
	0	_ = Total (Cover	Percent of Dominant Sp That Are OBL, FACW,		(A/B)	
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wor			
1				Total % Cover of:			
2.				OBL Species 14		-	
3.				FACW Species 26		*******	
4				FAC Species 103		-	
5	0	= Total (Cover	FACU Species 74			
Herb Stratum (Plot size: 0.01 acre		Total v	Jovei	UPL Species	x 5 =		
1. Phleum pratense	55	x	FAC	Column Totals: 217	7 (A) 671	_ (B)	
2. Poa pratensis	40	×	FAC	Prevalence Index (B/A) = 3.09		
3. Trifolium pratense	40	×	FACU	Hydrophytic Vegetation			
4. Carum carvi	26		FACU	1 - Rapid Test for Hydr			
5. Juncus balticus	18		FACW	✓ 2 - Dominance Test is	>50%		
6. Carex utriculata			OBL	3 - Prevalence Index is	≤3.0¹		
7. Carex praegracilis			FACW		otations¹ (Provide supportin	ıg	
8. <u>Trifolium hybridum</u>	-		FAC		on a separate sheet)		
9. Taraxacum officinale			FACU FACU	5 - Wetland Non-Vascu			
10. Symphyotrichum foliaceum 11.			FACU	Indicators of hydric soil and	ic Vegetation¹ (Explain) d wetland bydrology must b	ne	
	217	= Total (Cover	present, unless disturbed o			
Woody Vine Stratum (Plot size: NA)							
1		,		Hydrophytic			
2				Vegetation			
	0	_ = Total (Cover	Present? Yes	✓ No 🗆		
% Bare Ground in Herb Stratum							
Remarks: Vegetation meets the Dominance Test, but the mesic meadow. On balance this area appear			is slightly	greater than 3.0. Site is	a mosaic of wetland ar	ıd	



SOIL				Pro	ject/Site	: Black I	Butte Co	pper	Sampling Po	oint: SC-W4
Profile Des	cription: (Descri	be to the d	epth needed to d	locument ti	ne indic	ator or	confirm	the abs	sence of indicators.)
Depth	Matrix			dox Features						,
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc²	Textu	re R	Remarks	
0-16	7.5YR 3/1	97	5YR 4/6	3	С	М	SiC	:		
										
										
									·	
						Coated S			_ocation: PL=Pore Li	
		licable to a	II LRRs, unless o		otea.):			_	ors for Problematic	Hydric Solls":
Histosol (/	•		Sandy Redox (S	-			Ļ	=	Muck (A10)	
=	pedon (A2)		Stripped Matrix	` '		D (4)	F		Parent Material (TF2)	
Black Hist	• •		Loamy Mucky N		xcept ivit	.RA 1)	-	= '	Shallow Dark Surface (T	F12)
= -	Sulfide (A4)	/A11)	Loamy Gleyed I✓ Depleted Matrix				L	_ Other	(Explain in Remarks)	
= :	Below Dark Surface k Surface (A12)	(A11)	✓ Depleted Matrix Redox Dark Sur	` '			3	Indicato	ors of hydrophytic ve	netation and
	cky Mineral (S1)		Depleted Dark						and hydrology must b	
Co	eyed Matrix (S4)		Redox Depress					unles	ss disturbed or proble	ematic.
	Layer (if presen	·····	<u> </u>	(/			T			
Type:	Layer (ii precen	-,.								
			<u> </u>				Hydr	ic Soil	Present? Yes	No 🗍
Depth (inche		• • • •								
									natrix. Believe this is	
(1	violiisoi), which h	as naturany	thick, dark A non	zon. Alea m	eets ou	iei wella	na maica	itois oi	hydrology and hydro	priyuc
							-			
HYDROLO	GY									
	drology Indicate	ors:								
•	•		ired; check all tha	it anniv)				Secon	dary Indicators (2 or	more required)
		or one requ							`	· · · · · · · · · · · · · · · · · · ·
Surface V	, ,		_	Stained Leave		xcept		_	ter-Stained Leaves (B9)	(MLRA 1, 2,
= -	er Table (A2)			A 1, 2, 4A, ar	1d 4B)				4A, and 4B)	
Saturation	, ,		=	ust (B11)	.=			=	ninage Patterns (B10)	
Water Ma	• •			Invertebrates					-Season Water Table (C	•
=	Deposits (B2)		_	en Sulfide Od d Rhizospher		Livina Bo	oto (C2)		turation Visible on Aerial	imagery (C9)
Drift Depo	` '		=	ce of Reduced	•	•	ois (C3)	=	omorphic Position (D2) allow Aquitard (D3)	
Iron Depo	or Crust (B4)		==	Iron Reduction	•	•	6)	\equiv	C-Neutral Test (D5)	
	oil Cracks (B6)			or Stressed		•	•	\equiv	sed Ant Mounds (D6) (L	RR A)
=	n Visible on Aerial Ir	nagery (B7)		Explain in Rer		i) (Litter)	9		st-Heave Hummocks (D	•
\equiv	Vegetated Concave								(2	.,
Field Obser										
	ter Present?	Yes 🗌 No	Depth (inche	es):						
Water Table			Depth (inche		. <u>. </u>					
Saturation F			Depth (inche			V	Vetland i	Hvdrold	ogy Present? Yes	✓ No 🗌
(includes ca	pillary fringe)	103 100	Deptil (illolik					,	3,	
		eam gauge,	monitoring well, a	aerial photos	s, previo	us inspe	ections), i	f availa	ble:	
	-									
Remarks:										

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-14-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC-W5
Investigator(s): J. Beaver, K. Scow		S	ection, To	ownship, R	ange: S30, T12N, R7E	
Landform: floodplain swale			ocal relief	(concave,	convex, none): concave	Slope (%): 1
Subregion (LRR): E		Lat: 46.	7769518		Long: -110.9041934	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Fo	xgulch-Redfish	 า			NWI classific	cation: PEM
Are climatic/hydrologic conditions on the s			f year? Y	es 🗸 No	o (If no, explain in Re	marks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ["Normal Circumstances"	
Are Vegetation , Soil , or Hydrology					eeded, explain any answ	· — —
SUMMARY OF FINDINGS – Attach s				,		•
Hydrophytic Vegetation Present? You Hydric Soil Present? You	es V No Ces V No Ces V No Ces V		ls t	he Sample	ed Area	No □
Remarks: Plot in unmowed portion of mea 2329-2332	adow as soil to	oo soit. Sv	vale exter	ias to norti	n (see aenai photo) to SC	-U1. Photographs: JB
VEGETATION – Use scientific name	es of plants.					
<u>Tree Stratum</u> (Plot size: NA		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test World	
1.			· · · · · · · · · · · · · · · · · · ·	-	Number of Dominant S That Are OBL, FACW,	
2.						
3.					Total Number of Domin Species Across All Stra	
4					Percent of Dominant S	
		0	_ = Total (Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wor	ksheet:
1 2					Total % Cover of:	Multiply by:
3.					OBL Species8	0 x 1 = 80
4.					FACW Species3	1 x 2 = 62
5.					FAC Species7	
		0	= Total (Cover		2 x 4 =8
Herb Stratum (Plot size: 0.01 acre					UPL Species Column Totals: 18	X 5 =(B)
1. Alopecurus arundinaceus	· · · · · · · · · · · · · · · · · · ·	70_	X	FAC		
Carex utriculata Carex praegracilis		<u>58</u> 22	X	OBL FACW	Prevalence Index (
Carex praegraciis Carex nebrascensis		18		OBL	Hydrophytic Vegetation	i
5. Juncus balticus		7		FACW	1 - Rapid Test for Hydr✓ 2 - Dominance Test is	· · · · · · · · · · · · · · · · · · ·
C Flandania naturatria		4		OBL	✓ 3 - Prevalence Index is	
7. Poa palustris				FAC		otations¹ (Provide supporting
8. Mentha arvensis				FACW		on a separate sheet)
		2_		FACU	5 - Wetland Non-Vasci	
10. Trifolium hybridum				FAC		ic Vegetation¹ (Explain)
11.				2	rindicators of hydric soil an present, unless disturbed o	d wetland hydrology must be r problematic.
Woody Vine Stratum (Plot size: NA)	189	_ = Total (Jover		
1					Hydrophytic	
2.					Vegetation	
		0	= Total (Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum						
Remarks:						



SOIL				F	Project/Site	e: Black E	Butte Copper	Sampling Point: SC-W5
Profile Des	scription: (Describ	e to the dept	th needed to d	ocumen	t the indi	cator or c	onfirm the a	absence of indicators.)
Depth	Matrix			dox Featu				,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-12.5	10YR 2/1	100					OM	<17% fibers (rubbed), greasy; also CL
12.5-16	2.5Y 2.5/1	80	7.5YR 4/6	20	С	M		
	#-10-0-							
		-						
¹Type: C=C	oncentration, D=D	epletion, RM=	Reduced Matri	x, CS=C	overed or	Coated Sa	and Grains	² Location: PL=Pore Lining, M=Matrix
	Indicators (Appl							ators for Problematic Hydric Soils ³ :
Histosol ((A1)		Sandy Redox (S	5)			2 c	em Muck (A10)
✓ Histic Ep	ipedon (A2)		Stripped Matrix ((S6)			Re	d Parent Material (TF2)
Black His	• •		Loamy Mucky M	ineral (F1)	(except MI	_RA 1)	☐ Ve	ry Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed N	/latrix (F2)			Oth	ner (Explain in Remarks)
	Below Dark Surface ((A11)	Depleted Matrix					
1=	rk Surface (A12)		Redox Dark Sur				3Indica	ators of hydrophytic vegetation and
1 = '	ucky Mineral (S1)	H	Depleted Dark S	-	7)			tland hydrology must be present, less disturbed or problematic.
	eyed Matrix (S4)		Redox Depressi	ons (F8)			7	
	Layer (if present)):						
Type: Clay								
Depth (inch	es): <u>12.5</u>						Hydric Sc	oil Present? Yes ✓ No 🗌
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
_	icators (minimum o		1: check all that	(vlane:			900	andany Indicators (2 or more required)
		one required						ondary Indicators (2 or more required)
	Vater (A1)				ives (B9) (e	xcept	<u></u> ∨	Vater-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A,	and 4B)			4A, and 4B)
✓ Saturation Water Ma	` '		Salt Crus		han (D40)			Orainage Patterns (B10)
	Deposits (B2)			Invertebrat n Sulfide (` '			Ory-Season Water Table (C2)
Drift Depo	. , ,					Living Root		Saturation Visible on Aerial Imagery (C9)
	or Crust (B4)				ced Iron (C			Seomorphic Position (D2) Shallow Aquitard (D3)
Iron Depo	, ,				•	d Soils (C6)		AC-Neutral Test (D5)
	oil Cracks (B6)				d Plants (D	• •	=	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Ima	agery (B7)		xplain in R	•	., (=,	=	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concave S	urface (B8)	,	•	,			(4,7)
Field Obse	rvations:			•••				
Surface Wa	ter Present? Y	es 🔲 No 🗸	Depth (inches	s):				
Water Table	Present? Y	es 🗌 No 🗸	Depth (inches	s): previ	ously			
Saturation F		es 🔲 No 🗹				We	etland Hydro	ology Present? Yes 🗹 No 🗌
	pillary fringe)							-
Describe Re	ecorded Data (strea	am gauge, mo	nitoring well, a	erial phot	os, previo	us inspect	tions), if avai	lable:
Remarks: F	ligh water table and	d saturation fo	r 12.5% of grov	ving seas	son is ass	umed bas	sed on soils,	veg, and damp soils on survey date.

Project/Site: Black Butte Copper		Ci	ty/County	y: White Su	lphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC-W6
Investigator(s): K.Scow, D. Barton		S	ection T	ownship R	ange: S25, T12N, R6E	<u></u>
Landform: terrace					convex, none): concave	Slope (%): 0-2
Subregion (LRR): E	endele Dealfiele		7766959		Long: -110.9005538	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Fox					NWI classific	
Are climatic/hydrologic conditions on the sit			•	_	[] (If no, explain in Re	,
Are Vegetation , Soil , or Hydrology				Are	"Normal Circumstances"	present? Yes 🗸 No
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS – Attach si					eeded, explain any answ	·
			mpinig	point ioca	ations, transects, imp	portant reatures, etc.
T	s✔ No s✔ No	_		the Sample		
Wetland Hydrology Present? Yes	s 🗸 No		wi	thin a Wetl	and? Yes ✓	No 🗌
Remarks: Next to creek (dark signatures o	n aerial photo). Photog	raphs: K	S1459-1462	2 (N to W)	
	<u></u>					
VEGETATION - Use scientific names	s of plants.					
		Absolute	Dominan	t Indicator	Dominance Test Work	sheet:
Tree Stratum (Plot size: NA)		% Cover			Number of Dominant S	pecies
1					That Are OBL, FACW,	or, FAC: (A)
2					Total Number of Domin	ant
3					Species Across All Stra	ata: 3 (B)
4					Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size: NA	,	0	_ = Total	Cover	That Are OBL, FACW,	or, FAC:67 (A/B)
	<i>)</i>				Prevalence Index Wor	ksheet:
1. 2.					Total % Cover of:	Multiply by:
3.					OBL Species	6 x1= 6
4.						7 x 2 = 114
5.					FAC Species7	5 x 3 = 225
		0	= Total	Cover	FACU Species 86.	5 x 4 = 346
Herb Stratum (Plot size: 0.01 acre)					UPL Species	x 5 =
1. Phleum pratense		60	x	FAC	Column Totals: 224.	5 (A) <u>691</u> (B)
2. Juncus balticus		45_	x	FACW	Prevalence Index (B/A) = 3.08
3. Trifolium pratense		40	X	FACU	Hydrophytic Vegetation	on Indicators:
4. Rhinanthus crista-galli		26		FACU	1 - Rapid Test for Hydr	
5. Taraxacum officinale		88		FACU	✓ 2 - Dominance Test is	>50%
6. Viola nephrophylla		8		FACW	3 - Prevalence Index is	≤3.0¹
				OBL		otations¹ (Provide supporting
8. Trifolium hybridum		6		FAC		on a separate sheet)
Dactylis glomerata Poa pratensis		<u>5</u> 5		FACU FAC	5 - Wetland Non-Vascu	
11. Agrostis stolonifera		4		FAC		ic Vegetation¹ (Explain) d wetland hydrology must be
, ngreette sterenmera			= Total		present, unless disturbed o	
Woody Vine Stratum (Plot size: NA)	221.0	_ 10.0.	0010.		
1	,				Hydrophytic	
2					Vegetation	
		0	= Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum						
Remarks: Vegetation meets the Dominanc				x is slightly	greater than 3.0. Site is	a mosaic of wetland and
mesic meadow. On balance this	area appear	s to be we	enand.			



Depth							utte Copper	Sampling Point: SC-W6
	scription: (Describ	e to the de	oth needed to d	locumen	t the indi	cator or c	onfirm the a	absence of indicators.)
	Matrix		Re	edox Featur				
(inches)	Color (moist)		Color (moist)	%	_Type¹	Loc²	Texture	Remarks
0-12	7.5YR 3/1	100					SiC	
12-16.5	10YR 4/2	97	5YR 5/8	3	C	M	SL	with redox
The transfer of the transfer o								
	A-90-21							
1Tuno: C=C	`ancontration D-D	anletion PM	I-Paduaad Matr	iv CS-C	word or	Coated Se	and Crains	21 continue DI - Doro Lining M-Matrix
	Concentration, D=De I Indicators (Appli							² Location: PL=Pore Lining, M=Matrix ators for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (notea.,.			cm Muck (A10)
	ipedon (A2)	Ė	Stripped Matrix				=	ed Parent Material (TF2)
Black His	. , ,	Ī	Loamy Mucky N	. ,	(except MI	RA 1)	=	ery Shallow Dark Surface (TF12)
Hydroger	n Sulfide (A4)		Loamy Gleyed	Matrix (F2)			□ Ot	her (Explain in Remarks)
Depleted	Below Dark Surface (A11)	Depleted Matrix	(F3)				
	rk Surface (A12)	Ļ	Redox Dark Su	` '				ators of hydrophytic vegetation and etland hydrology must be present,
= '	ucky Mineral (S1)	L	Depleted Dark	•	")			less disturbed or problematic.
	leyed Matrix (S4)	L	Redox Depress	ions (F8)				
	Layer (if present)	:						•
Type:			Mana				Libratuia C	all Dranama Van 🗷 - Na 🗔
Depth (inch	nes):						Hydric S	oil Present? Yes 🗸 No 🗌
HYDROLO)GY							
-	ydrology Indicator	re.		-				
-	licators (minimum o		ed: check all tha	it apply)			Sec	condary Indicators (2 or more required)
					(DO) (a	t		
=	Nater (A1) ter Table (A2)		_	Stained Lea RA 1, 2, 4A,	. , .	хсері		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
	, ,			ust (B11)	ana 15)			Drainage Patterns (B10)
	` '		=	Invertebra	tes (B13)			Dry-Season Water Table (C2)
Saturati Water Ma	arks (B1)							Dry-Season Water Table (C2)
Saturati Water Ma	arks (B1) t Deposits (B2)		Hydrog	en Sulfide (, ,			Saturation Visible on Aerial Imagery (C9)
Saturati Water Ma	, ,				Odor (C1)	Living Root	~	• • • • • • • • • • • • • • • • • • • •
Saturation Water Mater	t Deposits (B2) osits (B3) t or Crust (B4)		Oxidize Present	d Rhizosph ce of Reduc	Odor (C1) eres along ced Iron (C	1)	rs (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Saturati Water Ma Sediment Drift Depo Algal Mat	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		Oxidize Present	d Rhizosph ce of Reduc Iron Reduc	Odor (C1) teres along ced Iron (Ca ction in Tille	l) d Soils (C6)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	2007/ (P7)	Oxidize Present Recent Stunted	d Rhizosph ce of Reduc Iron Reduc I or Stresse	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	1)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima	• ,	Oxidize Present Recent Stunted	d Rhizosph ce of Reduc Iron Reduc	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	l) d Soils (C6)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Saturati Water Ma Sediment Drift Dept Algal Mat Iron Dept Surface S Inundatio Sparsely	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial Ima Vegetated Concave S	• ,	Oxidize Present Recent Stunted	d Rhizosph ce of Reduc Iron Reduc I or Stresse	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	l) d Soils (C6)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water Ma Sediment Drift Depot Algal Mat Iron Depot Surface S Inundatio Sparsely Field Obse	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S ervations:	urface (B8)	Oxidize Present Recent Stunted Other (I	d Rhizosph ce of Reduc Iron Reduc I or Stresse Explain in F	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	l) d Soils (C6)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water Ma Sediment Drift Dept Algal Mat Iron Depc Surface S Inundatio Sparsely Field Obse Surface Wa	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S ervations: ater Present?	urface (B8)	Oxidize Present Recent Stunted Other (I	d Rhizosph ce of Reduc Iron Reduc I or Stresse Explain in F	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	l) d Soils (C6)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water Ma Sediment Drift Depot Algal Mat Iron Depot Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S ervations: ater Present? Present? Y Present?	urface (B8)	Oxidize Present Recent Stunted Other (I	d Rhizosph ce of Reduc Iron Reduc I or Stresse Explain in F	Odor (C1) teres along ced Iron (Cotion in Tille d Plants (D	4) d Soils (C6) 1) (LRR A)	s (C3)	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Saturati Water Ma Sediment Drift Depot Algal Mat Iron Depot Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes ca	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S ervations: ater Present? Present? Y Present? apillary fringe)	urface (B8) /es	Oxidize Present Recent Stunted Other (I	d Rhizosphoe of Reduction Reduction Reduction Stresse Explain in Fees):	Odor (C1) leres along ced Iron (C- tition in Tille d Plants (C Remarks)	t) d Soils (C6) 1) (LRR A)	s (C3) V	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ology Present? Yes No
Saturati Water Ma Sediment Drift Depot Algal Mat Iron Depot Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes ca	t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S ervations: ater Present? Present? Y Present?	urface (B8) /es	Oxidize Present Recent Stunted Other (I	d Rhizosphoe of Reduction Reduction Reduction Stresse Explain in Fees):	Odor (C1) leres along ced Iron (C- tition in Tille d Plants (C Remarks)	t) d Soils (C6) 1) (LRR A)	s (C3) V	Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7) ology Present? Yes No

Project/Site: Black Butte Copper		С	itv/Countv	: White Su	ulphur Springs/Meagher	Sampling Date	: 08-26-2014
Applicant/Owner: Tintina Resources			,		State: MT	Sampling Point	
Investigator(s): K.Scow, D. Barton			Section. To	ownship. R	ange: S29, T12N, R7E	. 0	
Landform: terrace					convex, none): concave	Slo	ope (%): 0-1
Subregion (LRR): E			.7763757	(Long: -110.8974223		um: WGS84
Soil Map Unit Name: 1110D Moosefla	at-Foxquich-Re		.,,,,,,,,			cation: PSS	um. <u>11000</u> 4
Are climatic/hydrologic conditions on			of vear? V	es M			
Are Vegetation, Soil, or Hydrol			-		"Normal Circumstances"	•	
							_
Are Vegetation ☐, Soil ☐, or Hydrol SUMMARY OF FINDINGS – Atta				,	eeded, explain any answ ations, transects, im		•
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🗸 N	No	ls t	he Sampl	ed Area	No 🗌	<u> </u>
Remarks: Sheep Creek. Photograph			no nhoto i	n E directi	on)		
		·					
VEGETATION – Use scientific r	ames of pla	nts.					
Tree Stratum (Plot size: NA	١	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Wor		
1					Number of Dominant S That Are OBL, FACW,		5 (A)
2					Total Number of Domin	nant	
3					Species Across All Str	ata:	5 (B)
4		0	= Total (Cover	Percent of Dominant S That Are OBL, FACW,		00 (A/B)
Sapling/Shrub Stratum (Plot size: 0.		70		EA (C) A (Prevalence Index Wo	rksheet:	
			X	FACW	Total % Cover of:	: Multip	oly by:
2. <u>Salix drummondiana</u>		22	X	FACW	OBL Species 8.	.5 x 1 =	8.5
3 4						29 x 2 =	258
5.					FAC Species 3	36 x 3 =	108
		100	= Total (Cover	FACU Species	x 4 =	
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =	
1. Poa pratensis		16	x	FAC	Column Totals: 173.	.5 (A) <u>3</u>	374.5 (B)
2. Calamagrostis canadensis		14_	x	FACW	Prevalence Index	(B/A) = 2.16	
3. Cirsium arvense		14_	X	FAC	Hydrophytic Vegetati	on Indicators:	
4. Carex utriculata		8		OBL	1 - Rapid Test for Hyd		n
5. Poa palustris		6_		FAC	✓ 2 - Dominance Test is	>50%	
6. Symphyotrichum subspicatum				FACW	✓ 3 - Prevalence Index is	s ≤3.0¹	
				FACW	4 - Morphological Ada		
9 Arnina chamicannia		2		FACW FACW	5 - Wetland Non-Vaso	r on a separate she	et)
10 Phalaris arundinacea		1		FACW	Problematic Hydrophy		nlain)
11. Cicuta maculata		0.5	***************************************	OBL	*Indicators of hydric soil ar	, ,	
		73.5	= Total (present, unless disturbed of		5,
Woody Vine Stratum (Plot size: NA)			÷ *			
1					Hydrophytic		
2					Vegetation		\neg
% Bare Ground in Herb Stratum		0	_ = Total (Cover	Present? Yes	✓ No L	
Remarks: absolute cover of Salix = 9	95% (strat. = 10	00%)					
	- \	/					



SOIL				F	Project/Site	e: <u>Black I</u>	Butte Cop	pper Sampling Point: SC-W7
Profile Des	cription: (Descr	ibe to the c	lepth needed to d	ocumen	t the indi	cator or o	confirm t	the absence of indicators.)
Depth	Matrix		Re	dox Featu	res			,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Textur	re Remarks
0-8.5	10YR 3/2	100			,		SC	
8.5-16	10YR 3/2	95	10YR 5/8	5		M	SL	
0.0 10	101110,2							
1Tuno: C=C	noontrotion D-	— ——— Domintian D	Mar Dadward Matri			Cooked C	·and Cuni	ing 21 agation, DI - Dans Linius, 84-84-4
			M=Reduced Matri	· · · · · · · · · · · · · · · · · · ·				
		ilicable to a	III LRRs, unless o		e notea.).		- "	ndicators for Problematic Hydric Soils ³ :
Histosol (A	nedon (A2)		Sandy Redox (S	•			<u></u>	2 cm Muck (A10) ☐ Red Parent Material (TF2)
Black Hist	• •		Loamy Mucky M	,) (evcent M	I DA 1\	L.	<u>`</u> '
	Sulfide (A4)		Loamy Gleyed N	, ,	, , ,	LINA I)	F	☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
	Below Dark Surface	Δ11\	✓ Depleted Matrix	. ,			L	_ Other (Explain in Nemarks)
=	k Surface (A12)	. ((())	Redox Dark Sur				3	Indicators of hydrophytic vegetation and
	cky Mineral (S1)		Depleted Dark S		7)			wetland hydrology must be present,
	yed Matrix (S4)		Redox Depressi	•	• 7			unless disturbed or problematic.
Restrictive	Layer (if preser	nt):						
Type:	, , ,	•						
Depth (inche	76).		-				Hydri	ric Soil Present? Yes ✔ No
		\44 \ F 0				-1-5 0-11		
								Mollisol, with dark A horizon. NRCS ded. Presence of redox features,
			etland hydrology.	L, (30 % I	iyunc) and	u occasioi	nany noo	ded. Fleselice of ledox leatures,
	,,							
HYDROLOG	ΒΥ							
Wetland Hv	drology Indicat	ors:						
_			uired; check all that	t annly)				Secondary Indicators (2 or more required)
		or one requ						
Surface W	• •				aves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
=	r Table (A2)			4 1, 2, 4A	, and 4B)			4A, and 4B)
Saturatio	. ,		Salt Cru	` '	. (5.46)			Drainage Patterns (B10)
Water Mar	. ,				ites (B13)			Dry-Season Water Table (C2)
	Deposits (B2)				Odor (C1)	Living Dec	-4- (00)	Saturation Visible on Aerial Imagery (C9)
Drift Depo	or Crust (B4)		=	•	heres along ced Iron (C	•	ois (C3)	Geomorphic Position (D2)
Iron Depos			=		ction in Tille	•	21	Shallow Aquitard (D3) FAC-Neutral Test (D5)
	oil Cracks (B6)		=		ed Plants (E	•	•	Raised Ant Mounds (D6) (LRR A)
=	Visible on Aerial Ir	mageny (B7)	=	xplain in F	•) (LIXIX A)	,	Frost-Heave Hummocks (D7)
_	egetated Concave			.хрюлг пт т	tornarto,			Trock fleave flammoske (B7)
Field Obser	···-							
Surface Wat		Yes 🗌 No	Depth (inche	s).				
Water Table		=	Depth (inche					
Saturation P			Depth (inche			w	/etland H	-lydrology Present? Yes ✔ No
(includes ca	pillary fringe)	163 [] 140	Deptil (iliche	o). 				., and one of the control of the con
Describe Re	corded Data (str	eam gauge,	monitoring well, a	erial pho	tos, previ	ous inspe	ctions), if	f available:
		- '				-	-	
Remarks:							,	



Project/Site: Black Butte Copper	Ci	ty/County:	: White Su	ulphur Springs/Meagher	Sampling Date: 09-03-2	2014
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SC-W	8
Investigator(s): K. Scow, D. Barton	s	ection, To	wnship, R	ange: S29, T12N, R7E		
Landform: terrace				, convex, none): concave	Slope (%):	1-2
Subregion (LRR): E		7734003		Long: -110.872041	Datum: WG	
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-R					cation: PSS	
Are climatic/hydrologic conditions on the site typica		f vear? Ye	es 🗸 N			
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ signifi		=		"Normal Circumstances"	·	7
Are Vegetation ☐, Soil ☐, or Hydrology ☐ natura	-			needed, explain any answ		_
SUMMARY OF FINDINGS – Attach site maj				•	·	: .
Hydrophytic Vegetation Present? Yes ✔	No			· · · · · · · · · · · · · · · · · · ·		
Hydric Soil Present? Yes ✓	No 🗌	ls ti	he Sampl	ed Area	_	
Wetland Hydrology Present? Yes ✓	No 🗌	witi	hin a Wetl	land? Yes ✓	No 🗌	
Remarks: Dasiphora fruticosa terrace wetland, hu	mmocky. Photo	graphs: K	S 1515-15	518 (N to W)		
. '	,	.		,		
·						
VEGETATION – Use scientific names of pl	ants.					
	Absolute	Dominant	Indicator	Dominance Test Wor	ksheet:	
Tree Stratum (Plot size: NA)	% Cover	Species?	Status	Number of Dominant S	Species	
1.				That Are OBL, FACW,		(A)
2				Total Number of Domir	nant	
3				Species Across All Stra	ata: <u>3</u>	(B)
4				Percent of Dominant S	pecies	
Senting/Shruh Stratum (Plot size: 0.01 core	0	_ = Total (Cover	That Are OBL, FACW,	or, FAC:100	(A/B)
Sapling/Shrub Stratum (Plot size: 0.01 acre 1. Dasiphora fruticosa	, 62	x	FAC	Prevalence Index Wo	rksheet:	
2.			170	Total % Cover of:	Multiply by:	_
3.				OBL Species 3	88 x 1 = 38	_
4.				FACW Species8	11 x 2 = 162	_
5.				FAC Species 9	06 x 3 =288	_
	62	= Total C	Cover	· —	5 x 4 =20	_
Herb Stratum (Plot size: 0.01 acre				UPL Species	x 5 =	
Carex praegracilis	44_	X	FACW	Column Totals: 22	.0 (A) <u>508</u>	_ (B)
2. Carex utriculata	38_	X	OBL	Prevalence Index	(B/A) = <u>2.31</u>	_
3. Poa pratensis	22		FAC	Hydrophytic Vegetati	on Indicators:	
4. Deschampsia cespitosa	16		FACW	1 - Rapid Test for Hyd	rophytic Vegetation	
5. Symphyotrichum subspicatum	12		FACW	2 - Dominance Test is	>50%	
6. Juncus balticus	<u></u>		FACW FAC	3 - Prevalence Index is	s ≤3.0¹	
7. Potentilla gracilis 8. Fragaria virginiana		-	FACU		ptations¹ (Provide supporting r on a separate sheet)	g
O Des astrolais			FAC	5 - Wetland Non-Vaso	•	
10. Bromus inermis			FAC		tic Vegetation¹ (Explain)	
11. Festuca rubra			FAC		nd wetland hydrology must b	е
	158	= Total C	Cover	present, unless disturbed of	or problematic.	
Woody Vine Stratum (Plot size: NA)		_				
1				Hydrophytic		
2				Vegetation	·	
WB 8 W W 15:	0	_ = Total C	Cover	Present? Yes	✓ No □	
% Bare Ground in Herb Stratum			-			
Remarks:						



SOIL				Proje	ect/Site: B	lack Butte C	Copper Sampling Point: SC-W8
Profile Des	scription: (Descr	ibe to the dep	th needed to	document the	e indicato	or or confirm	n the absence of indicators.)
Depth	Matrix	-		edox Features			·
(inches)	Color (moist)	%	Color (moist)	% T	ype¹ Lo	oc² Tex	ture Remarks
0-8.5	10YR 2/1	100				(
8.5-16	10YR 4/1	100					 C
	•						
				- — —			
	E						
¹Type: C=C	Concentration, D=	Depletion, RM	=Reduced Matr	ix, CS=Cover	red or Coa	ited Sand Gr	rains ² Location: PL=Pore Lining, M=Matrix
Hydric Soi	il Indicators (App	olicable to all	LRRs, unless	otherwise no	oted.):		Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			2 cm Muck (A10)
Histic Ep	pipedon (A2)		Stripped Matrix	(S6)			Red Parent Material (TF2)
Black His	stic (A3)		Loamy Mucky	∕lineral (F1) (ex	cept MLRA	1)	☐ Very Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)		Loamy Gleyed	Matrix (F2)			Other (Explain in Remarks)
Depleted	i Below Dark Surface	e (A11)	Depleted Matrix	(F3)			
=	ark Surface (A12)		Redox Dark Su	rface (F6)			3Indicators of hydrophytic vegetation and
= '	lucky Mineral (S1)		Depleted Dark	, ,			wetland hydrology must be present, unless disturbed or problematic.
	leyed Matrix (S4)		Redox Depress	ions (F8)			unless distarbed of problematic.
Restrictive	Layer (if preser	nt):					
Type:			_				
Depth (inch	nes):		_			Hy	dric Soil Present? Yes ✔ No 🗌
	hydric"; also considered hydric		ich has thick, d	ark A horizor	i. Given so	oil type, hydr	rophytic vegetation, and hydrology, soil is
HYDROLC							
	ydrology Indicat						0 1 1 1 1 1 1 1
Primary Inc	dicators (minimun	n of one require	ed; check all tha	at apply)			Secondary Indicators (2 or more required)
Surface 1	Water (A1)		☐ Water-	Stained Leaves	; (B9) (exce	ot	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)		MLF	RA 1, 2, 4A, and	d 4B)		4A, and 4B)
Saturat	ion (A3)		=	ust (B11)			Drainage Patterns (B10)
=	arks (B1)			Invertebrates	` '		Dry-Season Water Table (C2)
=	t Deposits (B2)			jen Sulfide Odo			Saturation Visible on Aerial Imagery (C9)
	oosits (B3)			ed Rhizosphere	-	ng Roots (C3)	✓ Geomorphic Position (D2)
	t or Crust (B4)			ce of Reduced	, ,		Shallow Aquitard (D3)
= :	osits (B5)		=	Iron Reduction		` '	FAC-Neutral Test (D5)
=	Soil Cracks (B6)	(DZ)		d or Stressed P	, , ,	LRR A)	Raised Ant Mounds (D6) (LRR A)
=	on Visible on Aerial I Vegetated Concave			Explain in Rem	aiks)		Frost-Heave Hummocks (D7)
		Sunace (Bo)					
Field Obse		V N-	Donth (inch	00/:			
	ater Present?	Yes ☐ No No		-		_	
	le Present?	Yes No No				Wetland	i Hydrology Present? Yes ✓ No
Saturation (includes c	Present? apillary fringe)	Yes No No	✓ Depth (inch	əs): 			anyanology i losciliti 165 💌 140 🗌
Describe R	Recorded Data (st	ream gauge, m	onitoring well,	aerial photos,	, previous	inspections)	, if available:
	`		.	. ,		. ,	
Remarks:	Damp in upper 8"						
	p appor 0	-					

Project/Site: Black Butte Copper	C	City/County: White Sulphur Springs/Meagher Sampling Date: 09-03-2014							
Applicant/Owner: Tintina Resources		State: MT Sampling Point: SC-W9							
Investigator(s): K. Scow, D. Barton	S	Section, Township, Range: S29, T12N, R7E							
Landform: bottom	L	.ocal relief	Slope (%): 0-2						
Subregion (LRR): E		.77326865		Long: -110.867344473	Datum: WGS84				
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfis				NWI classification: PEM					
Are climatic/hydrologic conditions on the site typical for		fvear? V	es 📝 No						
Are Vegetation . Soil ., or Hydrology significantl					2 Van de Na 🗔				
				"Normal Circumstances" present					
Are Vegetation, Soil, or Hydrology naturally parts. SUMMARY OF FINDINGS – Attach site map sh			,	eeded, explain any answers in R ations, transects, important	,				
Hydrophytic Vegetation Present? Yes ✓ No									
Hydric Soil Present? Yes V No	=	ls t	he Sample	ed Area					
Wetland Hydrology Present? Yes ✓ No		wit	hin a Wetl	and? Yes 🗹 No					
Remarks: Photographs: KS 1531-1534 (N to W)					*				
. ,									
VEGETATION – Use scientific names of plants									
	Absolute	Dominant	Indicator	Dominance Test Worksheet:					
Tree Stratum (Plot size: NA)	% Cover	Species?	Status	Number of Dominant Species					
1.				That Are OBL, FACW, or, FAC	:3 (A)				
2.				Total Number of Dominant					
3.				Species Across All Strata:	3 (B)				
4		= Total (Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC	: 100 (A/B)				
Sapling/Shrub Stratum (Plot size: 0.01 acre									
1. Salix boothii	50	X	FACW	Prevalence Index Worksheet:					
2. Salix bebbiana ,	30	X	FACW	Total % Cover of:					
3. <u>Salix eriocephala var. mackenzieana</u>			OBL	OBL Species 87 x FACW Species 95 x					
4. <u>Dasiphora fruticosa</u>	2		FAC		3 = 39				
5				FACU Speciesx					
Herb Stratum (Plot size: 0.01 acre)	86	_ = Total (Jover	UPL Speciesx					
1. Carex utriculata	80	x	OBL		A) 316 (B)				
Viola nephrophylla			FACW	Prevalence Index (B/A) =					
3. Poa palustris	6		FAC	``					
4. Geum rivale	3		FACW	Hydrophytic Vegetation Indic					
5. Poa pratensis			FAC	✓ 2 - Dominance Test is >50%	egetation				
6. Calamagrostis canadensis	2		FACW	✓ 3 - Prevalence Index is ≤3.01					
7. Glyceria grandis	2		OBL	4 - Morphological Adaptations¹	Provide supporting				
8. Cicuta maculata	1_		OBL	data in Remarks or on a sep					
9. Epilobium ciliatum	1_		FACW	5 - Wetland Non-Vascular Plant	S ¹				
10. Phleum pratense			FAC	Problematic Hydrophytic Vegeta	ition¹ (Explain)				
11. Rumex occidentalis	1		FACW	Indicators of hydric soil and wetland present, unless disturbed or problem					
Mande Vine Otentum (Dlot :==: NA	109	_ = Total (Cover	prosent, unless disturbed of problem	iatio.				
Woody Vine Stratum (Plot size: NA)									
1				Hydrophytic					
2		= Total (Cover	Vegetation Present? Yes ✓	No 🗌				
% Bare Ground in Herb Stratum 1		_ = 10tai (Sover						
Remarks: willow carr with Pic eng			***						



SOIL					Project/Sit	e: Black	k Butte Coppe	er Sampling Point: SC-W9
Profile Des	cription: (Desc	ribe to the o	lepth needed to d					absence of indicators.)
Depth	Matrix			dox Featu				absolute of maioators.
(inches)	Color (moist)	%	Color (moist)	<u> </u>	Type ¹	Loc²	- Texture	Remarks
0-16	10YR 2/1	98	7.5YR 5/6	2	Type	Loc	ОМ	
							_	
	·							
1Tvpe: C=C	oncentration D=	Depletion F	RM=Reduced Matri	x CS=C	covered or	Coated	Sand Grains	² Location: PL=Pore Lining, M=Matrix
			all LRRs, unless o					cators for Problematic Hydric Soils3:
Histosol (p	Sandy Redox (S		io notou.,.			2 cm Muck (A10)
	pedon (A2)		Stripped Matrix (•				Red Parent Material (TF2)
Black His			Loamy Mucky M	. ,	1) /evcent M	I PA 1)	=	Very Shallow Dark Surface (TF12)
77777	Sulfide (A4)		Loamy Gleyed N	•	, , ,	LIVA I)		
	Below Dark Surfac	e (A11)	✓ Depleted Matrix		,		(Other (Explain in Remarks)
	k Surface (A12)	C ((()	Redox Dark Sur	. ,			³Indi	icators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark S	` ,			v	vetland hydrology must be present,
	eyed Matrix (S4)		Redox Depression	•	',			inless disturbed or problematic.
	Layer (if prese	nt)·		3113 (1 0)				
Гуре:	Layer (ii presei	167.					•	
							10	9-11 P
Depth (inch								Soil Present? Yes No trix indicator, but this is likely due to soil
YDROLO	GV				-			
	drology Indicat	tors:				•••		
-			uired; check all that	(vlage:			Se	econdary Indicators (2 or more required)
_								
☐ Surface V	` '				aves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)				, and 4B)			4A, and 4B)
	` '		Salt Crus	, ,	. (5.45)			Drainage Patterns (B10)
Water Ma			= .		ates (B13)			Dry-Season Water Table (C2)
_	Deposits (B2)				Odor (C1)	1 to to D		Saturation Visible on Aerial Imagery (C9)
☐ Drift Depo	or Crust (B4)		_		heres along	-	oots (C3)	Geomorphic Position (D2)
Iron Depo			=		uced Iron (C4	,)	Shallow Aquitard (D3)
	oil Cracks (B6)		=		ction in Tille		, =	FAC-Neutral Test (D5)
=	r Visible on Aerial I	magen/(R7)			ed Plants (D Remarks)	/I) (LKK /	· =	Raised Ant Mounds (D6) (LRR A)
_,	✓egetated Concave	, ,	Other (E	хріані ін і	Remarks)		\checkmark	Frost-Heave Hummocks (D7)
ield Obse		o danade (Bo)						
	ter Present?	Yes 🗌 No	Depth (inches	e).				
Vater Table		Yes ✓ No						
Saturation F		Yes V No			ace		Wetland Hyd	rology Present? Yes 🗸 No 🗌
		eam gauge,	monitoring well, as	 ∍rial pho	tos, previc	ous insp	ections), if av	ailable:
V274.1								
Remarks:								

WETLAND DETERMINATION DATA FORM-Western Mountains, Valleys, and Coast Region

Project/Site: Black Butte Copper	Cit	y/County	: White Su	lphur Springs/Meagher S	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources				State: MT S	Sampling Point: SCT1-W1
Investigator(s): J. Beaver	S	ection, To	wnship, R	ange: S19, T12N, R7E	
Landform: terrace/spring		ocal relief	(concave,	convex, none): none	Slope (%): 0-3
Subregion (LRR): E	.at: 46.7	78386878	04	Long: -110.900704242	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfish				NWI classifica	
Are climatic/hydrologic conditions on the site typical for this	time of	year? Y	es 🗸 No	(If no, explain in Rem	narks.)
Are Vegetation . Soil , or Hydrology significantly die		-		"Normal Circumstances" p	
Are Vegetation , Soil , or Hydrology naturally problem			(If n	eeded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showi			•		•
Hydrophytic Vegetation Present? Yes ✔ No					
Hydric Soil Present? Yes ✓ No ☐			he Sample		
Wetland Hydrology Present? Yes ✓ No _			hin a Wetla	-	No L
Remarks: Site is a fen within a PSS complex. Other spring		ea, but 2 s	springs wel	Il-up here to create organic	c matter fen. Somewhat
spongy/quaking. Photographs: JB 151800-1508	54				
VEGETATION – Use scientific names of plants.				Ţ	
	solute Cover	Dominant Species?	Indicator Status	Dominance Test Works	
1.		•		Number of Dominant Spartnat Are OBL, FACW, o	
2.					
3.				Total Number of Domina Species Across All Strat	
4				Percent of Dominant Spe	
		= Total (That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 0.01 acre	_			Prevalence Index Work	sheet:
1. Salix geyeriana			FACW	Total % Cover of:	
2. Salix planifolia			OBL	OBL Species 84	
3. 4.				FACW Species12.5	
5.					x 3 = 9
	12	= Total (Cover	FACU Species	x 4 =
Herb Stratum (Plot size: 0.01		-		UPL Species	x 5 =
1. Carex nebrascensis	40	х	OBL	Column Totals: 99.5	(A) <u>118</u> (B)
2. Carex simulata	38	X	OBL	Prevalence Index (B	3/A) = <u>1.19</u>
3. Viola nephrophylla	5		FACW	Hydrophytic Vegetation	n Indicators:
4. Poa palustris			FAC	1 - Rapid Test for Hydro	phytic Vegetation
5. Deschampsia cespitosa	1 1		FACW FAC	2 - Dominance Test is >	50%
6. <u>Muhlenbergia richardsonis</u> 7. Spiranthes romanzoffiana	0.5		FACW	✓ 3 - Prevalence Index is s	
8				4 - Morphological Adapta data in Remarks or o	ations¹ (Provide supporting on a separate sheet)
9.				5 - Wetland Non-Vascul	·
10.				Problematic Hydrophytic	∨egetation¹ (Explain)
11.				1Indicators of hydric soil and	
		= Total (Cover	present, unless disturbed or	problematic.
Woody Vine Stratum (Plot size: NA)					
1				Hydrophytic	
2				Vegetation Present? Yes	✓ No □
% Bare Ground in Herb Stratum 0.5	0	= Total (Jover		
Remarks: Very high moss cover, depauperate species.					
, , , , , , , , , , , , , , , , , , ,					



SOIL	•		Project/Site: Blace	ck Butte C	opper Sampling Point: SCT1-W1
Profile Des	scription: (Describ	e to the de	pth needed to document the indicator	or confirn	n the absence of indicators.)
Depth	Matrix		Redox Features		
(inches)	Color (moist)		Color (moist) % Type¹ Loc²		ture Remarks
0-12	10YR 2/4				M peat; increased living roots & decomposed
12-20	10YR 3/1	100		0	M peat
-					
¹Type: C=C	oncentration, D=D	epletion, Ri	M=Reduced Matrix, CS=Covered or Coated	d Sand Gr	rains ² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indicators (Appl	icable to al	I LRRs, unless otherwise noted.):		Indicators for Problematic Hydric Soils ³ :
✓ Histosol	. ,		Sandy Redox (S5)		2 cm Muck (A10)
	ipedon (A2)		Stripped Matrix (S6)		Red Parent Material (TF2)
Black His	stic (A3) 1 Sulfide (A4)		Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2)		✓ Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix (F3)		Other (Explain in Remarks)
	rk Surface (A12)	(* ())	Redox Dark Surface (F6)		³ Indicators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.
Restrictive	Layer (if present):			
Туре:			<u> </u>		
Depth (inch	nes):			Hy	dric Soil Present? Yes 🗹 💮 No 🗌
HYDROLO	JGY ydrology Indicato				
			red; check all that apply)		Secondary Indicators (2 or more required)
		or one requ			
✓ Surface \	rvater (A1) ter Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		
Saturati	. ,		Sait Crust (B11)		Drainage Patterns (B10)
Water Ma			Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sedimen	t Deposits (B2)		✓ Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
	osits (B3)		Oxidized Rhizospheres along Living	Roots (C3)	Geomorphic Position (D2)
	t or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	osits (B5)		Recent Iron Reduction in Tilled Soils	. ,	FAC-Neutral Test (D5)
_	Soil Cracks (B6)	ogon/ (P7)	Stunted or Stressed Plants (D1) (LRIOther (Explain in Remarks)	R A)	Raised Ant Mounds (D6) (LRR A)
=	on Visible on Aerial Im Vegetated Concave \$		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Field Obse	 				
		∕es 🗹 No	Depth (inches): 0.5		
Water Tabl		res ☑ No			
Saturation		∕es 🔽 No		Wetland	l Hydrology Present? Yes ✔ No 🗌
	apillary fringe)		· ` ` -		16
Describe R	ecorded Data (stre	am gauge,	monitoring well, aerial photos, previous ins	spections)	, it available:
Domarka					
Remarks:					

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 09-03-2014	
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT2-W1	
Investigator(s): J. Beaver		S	ection, To	wnship, R	ange: S30, T12N, R7E	1. E. E.	
Landform: floodplain/terrace		L	ocal relief	(concave,	convex, none): none	Slope (%): 1	
Subregion (LRR): E		Lat: 46.	7786432		Long: -110.8965125	Datum: WGS84	
Soil Map Unit Name: 1110D Mooseflat-Foxo	gulch-Redfish					cation: PSS	
Are climatic/hydrologic conditions on the site	e typical for th	is time o	f vear? Y	es 🗸 No	☐ (If no. explain in Re	marks.)	
Are Vegetation , Soil , or Hydrology						present? Yes V No	
Are Vegetation , Soil , or Hydrology					eeded, explain any answ		
SUMMARY OF FINDINGS – Attach si							
Hydric Soil Present? Yes	No No No No			he Sample hin a Wetl		No 🗌	
Remarks: Large DASPHO/CARUTR wet m	neadow adjace	ent to Sh	eep Creel	k. Photogra	phs: JB 134205-134214		
VEGETATION – Use scientific names	s of plants.						
	<u> </u>	Absolute		Indicator	Dominance Test Wor	ksheet:	
Tree Stratum (Plot size: NA	_		Species?		Number of Dominant S		
1					That Are OBL, FACW,	or, FAC: (A)	
2. 3.					Total Number of Domir Species Across All Stra		
4							
	_		= Total	Cover	Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 0.01 acro				5 40	Prevalence Index Wo	rksheet:	
Dasiphora fruticosa				FAC	Total % Cover of:		
2.						8 x 1 = 78	
3				 ,	· — — — — — — — — — — — — — — — — — — —	9 x 2 = 18	
4. 5.						3 x 3 = 99	
		30	= Total (Cover	FACU Species	x 4 =	
Herb Stratum (Plot size: 0.01 acre)	.		_		UPL Species	x 5 =	
1. Carex utriculata		60	x	OBL	Column Totals: 12	0 (A) 195 (B)	
2. Carex pellita		18	x	OBL	Prevalence Index	(B/A) = <u>1.62</u>	
3. Deschampsia cespitosa		88		FACW	Hydrophytic Vegetation	on Indicators:	
4. Geum macrophyllum		1		FAC	1 - Rapid Test for Hyd	rophytic Vegetation	
5. Mentha arvensis				FACW	2 - Dominance Test is	>50%	
6. Potentilla gracilis		0.5		FAC	3 - Prevalence Index is	§≤3.0¹	
7. Poa palustris 8. Thalictrum venulosum		~ -		FAC FAC		ptations¹ (Provide supporting r on a separate sheet)	
9.				170	5 - Wetland Non-Vasc	•	
10.						tic Vegetation¹ (Explain)	
11.					¹Indicators of hydric soil an	nd wetland hydrology must be	
		90	= Total (Cover	present, unless disturbed of	or problematic.	
Woody Vine Stratum (Plot size: NA)						
1					Hydrophytic		
2					Vegetation Present? Yes	✓ No □	
% Bare Ground in Herb Stratum 2	=	0	_ = Total (Jover	, , coone, les		
Remarks: Typical of meadow portion this si	ide of Sheep	Creek.			L.,		
	•						



SOIL					F	Project/Site	e: Blacl	k Butte C	opper	Sampling Point: SCT2-W1
Profile Des	cription: (Desci	ribe to t	he dept	h needed to d						absence of indicators.)
Depth	Matrix	:		Re	dox Featu	ires				·
(inches)	Color (moist)	%		Color (moist)	%	Type ¹	Loc²	Tex	ture	Remarks
0-10	10YR 2/1	100						_ Si	CL	
10-16	10YR 2/1	100)							
						-			•	
						-				
	oncentration, D=							Sand Gr		² Location: PL=Pore Lining, M=Matrix
	Indicators (App	olicable	to all L			e noted.):			Indic	ators for Problematic Hydric Soils ³ :
Histosol (•			Sandy Redox (S	•				_	cm Muck (A10)
	pedon (A2)		님	Stripped Matrix					=	ed Parent Material (TF2)
Black His	tic (A3) Sulfide (A4)		님	Loamy Mucky M			_RA 1)		_	ery Shallow Dark Surface (TF12)
= ' '	Below Dark Surface	· /A11)	님	Loamy Gleyed No Depleted Matrix					∐ Ot	ther (Explain in Remarks)
= :	k Surface (A12)	- (A11)	H	Redox Dark Sur	` '				3Indic	ators of hydrophytic vegetation and
	cky Mineral (S1)		H	Depleted Dark S	` '	7)				etland hydrology must be present.
= '	eyed Matrix (S4)		Ħ	Redox Depressi	•	· <i>,</i>				less disturbed or problematic.
	Layer (if preser	it):			(/					
Type:		•								
Depth (inche								Hyc	iric Se	oil Present? Yes 🗸 No 🗌
		ithout de	nlotod .	ar aloued meter	ise I ilealis		liaataa 6			depth. Soil unit (1110D, Mooseflat-
HYDROLO	ssumed hydric b	y preser	ice of n	raropnytic veg	etation a	nd wetiand	a nyaroi	ogy.		
Wetland Hy	drology Indicat	ors:								
Primary Indi	cators (minimum	of one	required	: check all that	(vlage				Sec	condary Indicators (2 or more required)
Surface W		·····								
	er Table (A2)				4 1, 2, 4A,	aves (B9) (e.	xcept		□ '	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
✓ Saturatio				Salt Cru		, and 4D)			Пг	Drainage Patterns (B10)
Water Mai	rks (B1)			=	Invertebra	tes (B13)				Dry-Season Water Table (C2)
Sediment	Deposits (B2)			= :	n Sulfide (` '				Saturation Visible on Aerial Imagery (C9)
Drift Depo	sits (B3)			Oxidized	Rhizosph	neres along	Living Ro	oots (C3)		Geomorphic Position (D2)
Algal Mat	or Crust (B4)					ced Iron (C4			<u> </u>	Shallow Aquitard (D3)
Iron Depo:	sits (B5)			Recent I	ron Reduc	ction in Tilled	d Soils (C	C6)	F	FAC-Neutral Test (D5)
r1	oil Cracks (B6)			Stunted	or Stresse	ed Plants (D	1) (LRR	A)		Raised Ant Mounds (D6) (LRR A)
r	Visible on Aerial In		•	U Other (E	xplain in F	Remarks)			✓ F	Frost-Heave Hummocks (D7)
	/egetated Concave	Surface (B8)							1000
Field Obser			🗖							
Surface Wat		Yes ∐	=	Depth (inche						
Water Table	· ·	Yes 📋	No 🗹	Depth (inche				87-41		
Saturation P (includes ca	resent? pillary fringe)	Yes 🗸	NO L	Depth (inche	s): <u>14</u>		'	vvetiand	nyara	ology Present? Yes 🗹 No 🗌
	corded Data (str	eam gau	ige, moi	nitoring well, a	erial phot	tos, previo	us insp	ections),	if avai	ilable:
Remarks:					***************************************					

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 09	-03-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC	CT3-W1
Investigator(s): K. Scow, D. Barton		S	Section, To	ownship, R	ange: S29, T12N, R7E		
Landform: swale/spring/seep		L	ocal relief	(concave,	convex, none): concave	Slope	(%): 1-4
Subregion (LRR): E		Lat: 46.	77138757	'96	Long: -110.869551856	•	WGS84
Soil Map Unit Name: 164D Hardhart-Fa	rlin. stony-Ch					ication: PEM	
Are climatic/hydrologic conditions on the			f vear? Y	es 🗸 No			
Are Vegetation, Soil, or Hydrolog					"Normal Circumstances'		No□
Are Vegetation , Soil , or Hydrolog		-			eeded, explain any answ	· —	
SUMMARY OF FINDINGS – Attack	-					,	etc.
Hydric Soil Present?	Yes 🔽 N	o		he Sample hin a Wetl		No 🗌	
Remarks: Neat wetland perched on hill	slope. Photog	graphs: KS 1	523-1526	(N to W)			
VEGETATION – Use scientific nar	nes of plan	Absolute	Dominant	Indicator	Daminana Tast Man	de bast.	
Tree Stratum (Plot size: NA	_)		Species?	Indicator Status	Dominance Test Wor Number of Dominant S		
1					That Are OBL, FACW,		(A)
2					Total Number of Domin		
3					Species Across All Str	ata: 3	(B)
4		0	= Total (Cover	Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 0.01	acre)						
1. Salix bebbiana		36	x	FACW	Prevalence Index Wo		
2. Dasiphora fruticosa		6_		FAC	Total % Cover of		
3					OBL Species 13 FACW Species 44		
4						$8 \times 3 = 24$	
5		42	= Total (FACU Species	x 4 =	<u>. </u>
Herb Stratum (Plot size: 0.01 acre)		_ = TOtal t	Cover	UPL Species	x 5 =	
1. Carex nebrascensis	_′	86	x	OBL	Column Totals: 182.	.5 (A) 243	3 (B)
2. Carex simulata		44	x	OBL	Prevalence Index	(B/A) = 1.33	
3. Viola nephrophylla		7		FACW	Hydrophytic Vegetati	. ,	
4. Festuca rubra		11_		FAC	1 - Rapid Test for Hyd		
5. Solidago canadensis var. salebrosa		1_		FAC	✓ 2 - Dominance Test is	• •	
		1_		FACW	✓ 3 - Prevalence Index is	s ≤3.0¹	
	<u> </u>	0.5_		FACW		ptations¹ (Provide supp	orting
8.						or on a separate sheet)	
9.					5 - Wetland Non-Vaso		,
10					¹Indicators of hydric soil ar	rtic Vegetation¹ (Explain	•
11			= Total (Cover	present, unless disturbed		usi De
Woody Vine Stratum (Plot size: NA)						
1					Hydrophytic		
2					Vegetation		
% Bare Ground in Herb Stratum		0		Cover	Present? Yes	No □	
Remarks:							
nomano.							



SOIL				P	roject/Sit	e: Black E	Butte Cop	pper Sampling Point: SCT3-W1
Profile Des	cription: (Describ	e to the de	oth needed to d					the absence of indicators.)
Depth	 Matrix			dox Featui				,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textur	re Remarks
0-10	10YR 2/2	100					OM	histic
10-16	10YR 2/2	100					SiL	loamy mucky mineral
	1011(2/2						OIL	Today maday minoral
								* * * * · · · · · · · · · · · · · · · ·
		· 						
	oncentration, D=D							
	Indicators (Appli	cable to all	_		noted.):		Ir.	ndicators for Problematic Hydric Soils ³ :
Histosol (•	Ļ	_ Sandy Redox (S	•			Ļ	2 cm Muck (A10)
Histic Epi		Ļ	Stripped Matrix			. =	F	☐ Red Parent Material (TF2)
Black His		<u>\</u>	= ' '		(except M	LRA 1)	F	Uery Shallow Dark Surface (TF12)
= -	Sulfide (A4)	(444)	Loamy Gleyed N				L	Other (Explain in Remarks)
_	Below Dark Surface (rk Surface (A12)	(A11) [Depleted Matrix	` '			3]	Indicators of hydrophytic vegetation and
	ucky Mineral (S1)	L		` '	7)		,	wetland hydrology must be present,
	eyed Matrix (S4)		Redox Depressi	* .	,			unless disturbed or problematic.
	Layer (if present	<u> </u>	Redox Depressi	0113 (1 0)				
_	Layer (II present)•						
Type:			_				I leaded	t- 0-11 P
	es):						Hyari	ric Soil Present? Yes 🗸 No 🗌
Remarks:								
HYDROLO	GY							
Wetland Hy	/drology Indicato	re:						
	icators (minimum		ed: check all tha	t annly)			-	Secondary Indicators (2 or more required)
		one requir						Secondary Indicators (2 or more required)
=	Vater (A1)				aves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)			A 1, 2, 4A,	and 4B)			4A, and 4B)
Saturation	` '		∐ Salt Cru					Drainage Patterns (B10)
Water Ma	` '			Invertebra				Dry-Season Water Table (C2)
	t Deposits (B2)		✓ Hydroge			. I finite a Dans	t- (OO)	Saturation Visible on Aerial Imagery (C9)
Drift Depo	วรแร (B3) : or Crust (B4)		_	-	neres along ced Iron (C	Living Roo	ts (C3)	Geomorphic Position (D2)
Iron Depo	` '		=		`	ed Soils (C6	1	Shallow Aquitard (D3)
 	Soil Cracks (B6)		=			01) (LRR A)	•	FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im	anery (B7)	_	explain in F	,) (LIXIX A)		Frost-Heave Hummocks (D7)
=	Vegetated Concave S	,		.xpiaiii iii i	(Ciriarita)			Trost-reave riummocks (b)
								-
Field Obse		′es ☐ No [✓ Depth (inche	e).				
		′es 🔲 No 년 ′es 🗹 No [= ' '	· ——				
Water Table						w	etland H	Hydrology Present? Yes ✔ No 🗌
Saturation F (includes ca	apillary fringe)	′es 🗹 No [Depth (inche	s): surfa	ice		enana n	lydrology r resent: Tes 💌 No 🗀
	ecorded Data (stre	am gauge, n	nonitoring well. a	erial pho	tos, previ	ous inspec	ctions), if	f available:
		J: -J-1 ··	9, -	- F	-,		/,	
Remarks:								
. tomanto.								

Project/Site: Black Butte Copper		Ci	ity/County	y: White Տւ	ulphur Springs/Meagher Sampling Date: 09-05-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: SCT4-W1
Investigator(s): J. Beaver		S	Section, T	ownship, R	ange: S24, T12N, R6E
Landform: upper slope					convex, none): none Slope (%): 3-25
Subregion (LRR): E			7879381		Long: -110.9194623 Datum: WGS84
Soil Map Unit Name: 1142C Redchiefs	stony				NWI classification: PEM
Are climatic/hydrologic conditions on the		r this time o	f vear? Y	∕es 🗸 No	o (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrolog			-		"Normal Circumstances" present? Yes ✓ No
Are Vegetation, Soil, or Hydrolog		-			eeded, explain any answers in Remarks.)
				,	ations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes ✓ No				
Hydric Soil Present?	Yes 🗹 No	=		the Sample	
Wetland Hydrology Present?	Yes ✓ No			thin a Wetl	
	water at top, the	en standing	water, th	en saturation	on, then mesic as you go downhill. Photographs: JB
2610-12; 2614-17					
VEGETATION – Use scientific na	mes of plants	s.			
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?	t Indicator Status	Dominance Test Worksheet:
1		4	.		Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A)
2.					
3.					Total Number of Dominant Species Across All Strata: 3 (B)
4					
		0	_ = Total	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)	_			Prevalence Index Worksheet:
1. Salix boothii				FACW	Total % Cover of: Multiply by:
2					OBL Species 50 x 1 = 50
3 4					FACW Species 4
5.					FAC Species 20 x 3 = 60
		3	= Total	Cover	FACU Species x 4 =
Herb Stratum (Plot size: 0.01 acre)		_		UPL Species x 5 =
1. Carex nebrascensis		30_	x	OBL	Column Totals:74 (A)118 (B)
2. Carex pellita		20	X	OBL	Prevalence Index (B/A) = 1.59
3. Phleum pratense		15	x	FAC	Hydrophytic Vegetation Indicators:
4. Poa palustris		3		FAC	1 - Rapid Test for Hydrophytic Vegetation
				FAC	2 - Dominance Test is >50%
				FACW	✓ 3 - Prevalence Index is ≤3.0¹
7. 8.					4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.					5 - Wetland Non-Vascular Plants¹
10.					Problematic Hydrophytic Vegetation¹ (Explain)
11.					¹Indicators of hydric soil and wetland hydrology must be
		71	_ = Total	Cover	present, unless disturbed or problematic.
)				
1					Hydrophytic
2		0	= Total	Covor	Vegetation Present?
% Bare Ground in Herb Stratum 20			10(a)	Cover	
Remarks: Bottom of seep is Agr sto/C	ar neb.				J
, -					



SOIL				F	Project/Site	e: Black I	Butte Copper	Sampling Point: SCT4-W1
Profile Des	scription: (Descri	be to the de	pth needed to d	locumen	t the indi	cator or o	confirm the	absence of indicators.)
Depth	Matrix		Re	dox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-8.5	10YR 2/1	100					C	
_8.5-11.5	2.5Y 5/1		7.5YR 5/8	30	RM	M	С	rejected by cobbles at 11.5
¹Type: C=C	oncentration, D=D	epletion, RN	/I=Reduced Matri	x, CS=C	overed or	Coated S	and Grains	² Location: PL=Pore Lining, M=Matrix
	I Indicators (App	licable to all	LRRs, unless	otherwise	e noted.):		Indic	ators for Problematic Hydric Soils ³ :
Histosol (,		Sandy Redox (S5)			_ 20	cm Muck (A10)
Histic Epi	ipedon (A2)		Stripped Matrix	(S6)			☐ Re	ed Parent Material (TF2)
Black His	, ,	اِ	Loamy Mucky M		(except MI	_RA 1)	Ve	ery Shallow Dark Surface (TF12)
	Sulfide (A4)	Ĺ	Loamy Gleyed I	` '			☐ Ot	ther (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix				.	
=	rk Surface (A12)	Ĺ	Redox Dark Sur	. ,				ators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)								etland hydrology must be present, lless disturbed or problematic.
	eyed Matrix (S4)		Redox Depress	ions (F8)				problematic.
	Layer (if present	:):						
Type: Rock			_				İ	
Depth (inch	es): <u>11.5</u>		_				Hydric S	oil Present? Yes 🗸 No 🗌
Remarks: F	Presume depleted	matrix exten	ds below 11.5 to	meet 6&	quot; thicl	cness crit	erion of indic	ator F3
HYDROLO	GY							
Wetland Hy	drology Indicate	rs:					*****	
-	icators (minimum		ed: check all tha	t annly)			Sec	condary Indicators (2 or more required)
		o. 0.10 10qu						
✓ Surface V	` '				eves (B9) (e	xcept	'	Water-Stained Leaves (B9) (MLRA 1, 2,
Saturation	er Table (A2)			A 1, 2, 4A,	and 4B)			4A, and 4B)
✓ Water Ma			Salt Cru		to= (D40)			Drainage Patterns (B10)
	: Deposits (B2)		= :	Invertebra en Sulfide	` '			Dry-Season Water Table (C2)
Drift Depo					neres along	Livina Roo		Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
	or Crust (B4)		\equiv	•	ced fron (C	•	` ` =	Shallow Aquitard (D3)
Iron Depo	` '		_		ction in Tille	•		FAC-Neutral Test (D5)
_ :	Soil Cracks (B6)				ed Plants (D	•	· =	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im	agery (B7)		xplain in F		, (,	=	Frost-Heave Hummocks (D7)
\equiv	Vegetated Concave S	• • • •		•	,			(2.)
Field Obse	rvations:						· · · · · · · · · · · · · · · · · · ·	BAMIN BAMIN BAMIN
		res 🗸 No [Depth (inche	es): 2				
Water Table		res ✔ No	Depth (inche					
Saturation F	Present? upillary fringe)	res 🗹 No [· ——		w	etland Hydro	ology Present? Yes 🗹 No 🗌

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dries out further downhill.

Project/Site: Black Butte Copper		Ci	ty/County:	White Su	lphur Springs/Meagher	Sampling Date: 08-17-2014		
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: SCT5-W1				
Investigator(s): K. Scow, E. Darfler		s	ection, To	wnship, R	p, Range: S25, T12N, R6E			
Landform: bottom		L	ocal relief	(concave,	convex, none): concave	Slope (%): 5-8		
Subregion (LRR): E			7781354	•	Long: -110.9096405	Datum: WGS84		
Soil Map Unit Name: 1110D Mooseflat-F	oxaulch-Redfis				NWI classific			
Are climatic/hydrologic conditions on the			fyear? V	as 📈 No				
Are Vegetation, Soil, or Hydrology			-					
						present? Yes V No		
Are Vegetation , Soil , or Hydrology SUMMARY OF FINDINGS – Attach				•	eeded, explain any answ ations, transects, imi	·		
	Yes ✓ No		, , ,					
	Yes ✓ No		ls t	he Sample	ed Area			
-	Yes 🗸 No		wit	hin a Wetl	and? Yes 🗸	No 🗌		
Remarks: Historically disturbed - just up	ostream of corra	als. Photog	raphs: KS	1403-1406	6 (N to W)	 		
VEGETATION - Use scientific name	nes of plants							
	•	Absolute	Dominant	Indicator	Dominance Test World	ksheet:		
Tree Stratum (Plot size: NA	_)	% Cover	Species?	Status	Number of Dominant S			
1					That Are OBL, FACW,	or, FAC:6 (A)		
2.					Total Number of Domin			
3					Species Across All Stra	ata: 6 (B)		
4					Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 0.01	acre \	0	_ = Total (Jover	That Are OBL, FACW,	or, FAC:100 (A/B)		
4 0 11 1 11 1		12	x	FACW	Prevalence Index Wor	rksheet:		
0 0 "				FACW	Total % Cover of:	Multiply by:		
3					OBL Species 2	4 x 1 = 24		
4.					FACW Species 2	6 x 2 = 52		
5.					FAC Species 12			
		20	= Total (Cover		2 x 4 = 48		
Herb Stratum (Plot size: 0.01 acre	_)				UPL Species	x 5 =		
1. Poa pratensis		54_	X	FAC	Column Totals:18	4 (A) 490 (B)		
2. Bromus inermis		22	X	FAC	Prevalence Index	(B/A) = <u>2.66</u>		
3. Carex nebrascensis		16	X	OBL	Hydrophytic Vegetation	on Indicators:		
4. Solidago canadensis var. salebrosa		16	X	FAC	1 - Rapid Test for Hydi	rophytic Vegetation		
5. Heracleum lanatum		14		FAC	2 - Dominance Test is	>50%		
6. Carex utriculata	.	8 8	·	OBL FAC	✓ 3 - Prevalence Index is			
0.00 / ///				FACU		ptations¹ (Provide supporting r on a separate sheet)		
		^		FACW	5 - Wetland Non-Vasc	,		
40 4		-		FAC	Problematic Hydrophy	tic Vegetation¹ (Explain)		
11. Taraxacum officinale		4		FACU		nd wetland hydrology must be		
		164	= Total (Cover	present, unless disturbed of	or problematic.		
Woody Vine Stratum (Plot size: NA) ·							
1					Hydrophytic			
2					Vegetation			
9/ Page Control in Harb Charles		0	_ = Total (Cover	Present? Yes	✓ No L		
% Bare Ground in Herb Stratum						A LONG THE THAT WAS MUCH		
Remarks:								
						· ·		



SOIL							Butte Copp	
Profile Des	scription: (Descri	be to the de				cator or	confirm th	e absence of indicators.)
Depth (inches)	Matrix			dox Featu				
	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	
0-6	10YR 3/1	_ 100					SiL	fine and coarse roots, coarse sands
6-17	7.5 YR 3/1	100					SL	fine roots, coarse sands and gravels
17-18	10YR 2/2	100	1-10-10-10-10-10-10-10-10-10-10-10-10-10				SCL	cobbles
	-				-			
					-			
	oncentration, D=D							
	I Indicators (Appl	licable to a	_		e noted.):		Inc	dicators for Problematic Hydric Soils ³ :
Histosol (. ,		Sandy Redox (S	•			Ц	2 cm Muck (A10)
Black His	ipedon (A2)		Stripped Matrix Loamy Mucky N		\ (ovcont MI	DÁ 1\	H	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)
\equiv	n Sulfide (A4)		Loamy Gleyed I	•		LIVA I)		Other (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix	, ,			لسا	Offici (Explain in Normality)
	rk Surface (A12)		Redox Dark Su	• •			³Ind	dicators of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface (F	7)			wetland hydrology must be present,
Sandy GI	leyed Matrix (S4)	Redox Depress	ions (F8)				unless disturbed or problematic.	
Restrictive	Layer (if present	t):						
Type: Cobb	oles		_					
Depth (inch	es): 18						Hydric	Soil Present? Yes 🗸 No 🗌
8	Plot is in so norizon. Hydrophyt	il type chara	cterized as &quo	t;partially	/ hydric&q	uot; by N	RCS and a	quot;. May meet indicator A12 at depth. Ilso a Mollisol, with naturally thick, dark A
Wetland Hy	drology Indicate	ors:						
Primary Ind	icators (minimum	of one requi	red; check all tha	t apply)			s	Secondary Indicators (2 or more required)
Surface V	Vater (A1)		☐ Water-9	Stained Le	aves (B9) (e	excent		Water-Stained Leaves (B9) (MLRA 1, 2,
C	er Table (A2)			A 1, 2, 4A		жоорг		4A, and 4B)
Saturation	on (A3)		Salt Cru	ıst (B11)	•			Drainage Patterns (B10)
Water Ma	arks (B1)		Aquatic	Invertebra	ates (B13)			Dry-Season Water Table (C2)
Sediment	t Deposits (B2)		Hydroge	en Sulfide	Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo			Oxidize	d Rhizosp	heres along	Living Roo	ots (C3)	Geomorphic Position (D2)
= '	or Crust (B4)		=		ced Iron (C	•		Shallow Aquitard (D3)
Iron Depo					ction in Tille	•	. =	FAC-Neutral Test (D5)
	Soil Cracks (B6)	(57)			ed Plants (D	1) (LRR A)) <u> </u>	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		U Otner (E	Explain in	Remarks)			Frost-Heave Hummocks (D7)
	Vegetated Concave	ouriace (B8)						
Field Obse		Voo 🗆 Na	Donth (inch	ve).				
Water Table		Yes ∐ No		· —	· · · · · · · · · · · · · · · · · · ·			
Saturation F		Yes ☑ No Yes ☑ No	_ · ·			\ w	etland Hv	drology Present? Yes ✓ No
(includes ca	apillary fringe) ecorded Data (stre							

Remarks: Adjacent stream channel is 6" to 18" across, approx 3" deep. No water in soil pit, however.

Project/Site: Black Butte Copper		Ci	ty/County:	: White Su	ulphur Springs/Meagher	Sampling Date: 09-04-2014		
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT5-W2		
Investigator(s): L. Larsen, S. Cooper		S	Section, To	wnship, R	tange: S24, T12N, R6E			
Landform: terrace and toe slope		L	ocal relief	(concave	, convex, none): none	Slope (%): 2-3		
Subregion (LRR): E		Lat: 46.	7825811		Long: -110.918435	Datum: WGS84		
Soil Map Unit Name: 1175E Owensprii	ng-Cheadle				NWI classifi			
Are climatic/hydrologic conditions on the		r this time o	f vear? Y	es 🗸 N				
Are Vegetation ☐, Soil ☐, or Hydrolo						present? Yes ✓ No		
Are Vegetation ☐, Soil ☐, or Hydrolo					needed, explain any answ			
SUMMARY OF FINDINGS – Attac								
Hydrophytic Vegetation Present?	Yes ✓ No		pg					
Hydric Soil Present?	Yes V No	_	ls t	he Sampl	ed Area			
Wetland Hydrology Present?	Yes ✓ No	=		hin a Wet		No 🗌		
Remarks: Picea wetland between toe	slope and strear	n. Photogra	phs: SC 9	87-990				
	,	J	•					
VEGETATION – Use scientific na	ames of plant	S.						
	•	Absolute	Dominant	Indicator	Dominance Test Work	ksheet:		
Tree Stratum (Plot size: 0.1 acre)	% Cover		Status	Number of Dominant S	pecies		
				FAC	That Are OBL, FACW,	or, FAC: (A)		
2					Total Number of Domir			
3					Species Across All Stra	ata: 3 (B)		
4		45			Percent of Dominant S			
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)	45	_ = Total (Jover	That Are OBL, FACW,	or, FAC: 67 (A/B)		
1 Pibes setesum	,	1		FACW	Prevalence Index Wo	rksheet:		
				FACU	Total % Cover of:	Multiply by:		
3.					OBL Species	1 x 1 =1		
4						0 x 2 = 120		
5					FAC Species 48.			
		1.5	_ = Total 0	Cover	FACU Species 42.			
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =(P)		
1. Carex disperma			X	FACW	Column Totals:15			
2. Linnaea borealis			X	FACU	Prevalence Index	(B/A) = <u>2.87</u>		
Symphyotrichum subspicatum Orthilia secunda		- <u>7</u> 5		FACU FACU	Hydrophytic Vegetation			
5. Carex microptera		3		FACU	1 - Rapid Test for Hyd			
6. Osmorhiza chilensis		3		FACU	2 - Dominance Test is			
7. Calamagrostis canadensis		2		FACW	✓ 3 - Prevalence Index is	s ≤3.0° otations¹ (Provide supporting		
8. Smilacina stellata		2		FAC		r on a separate sheet)		
9. Geum macrophyllum		1		FAC	5 - Wetland Non-Vasc	ular Plants¹		
10. Glyceria striata		1		OBL	Problematic Hydrophy	tic Vegetation¹ (Explain)		
11. Crepis runcinata		0.5		FACU		d wetland hydrology must be		
		105.5	_ = Total C	Cover	present, unless disturbed of	or problematic.		
Woody Vine Stratum (Plot size: NA)							
1					Hydrophytic			
2		0	= Total 0	Cover	Vegetation Present? Yes	✓ No □		
% Bare Ground in Herb Stratum 2			10(a) (JOVEI				
Remarks:								



SOIL				F	roject/Sit	e: Black B	Butte Co	opper Sampling Point: SCT5-W2
Profile De	scription: (Descri	be to the dept	th needed to d					the absence of indicators.)
Depth	Matrix	•		edox Featur				,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	ure Remarks
0-20	10YR 2/1	90	10R 3/4	10	C	PL	L	gravelly below 16"
	•							
	-							
4.7								,
	Concentration, D=D							<u></u>
	il Indicators (Appl	icable to all L			e notea.):			Indicators for Problematic Hydric Soils³:
Histosol	` '		Sandy Redox (S	-			Ļ	2 cm Muck (A10)
! == '	pipedon (A2)	H	Stripped Matrix				L	Red Parent Material (TF2)
===	istic (A3)		Loamy Mucky N		(except M	LRA 1)	Ļ	Very Shallow Dark Surface (TF12)
	en Sulfide (A4)	(A44)	Loamy Gleyed I				L	Other (Explain in Remarks)
	d Below Dark Surface	(A11)	Depleted Matrix	. ,			9	Standing to the standard of th
C	ark Surface (A12)		Redox Dark Sur					Indicators of hydrophytic vegetation and
_	Mucky Mineral (S1)		Depleted Dark S	•	7)			wetland hydrology must be present, unless disturbed or problematic.
	Bleyed Matrix (S4)		Redox Depress	ions (F8)				unless disturbed of problematic.
Restrictive	e Layer (if present):						
Туре:								
Depth (inc	hes):						Hydr	ric Soil Present? Yes ✓ No
HYDROLO	soil type (Mollisol).					JII 13 00113		
	lydrology Indicato	re.						7 A 104
	dicators (minimum		d: check all tha	it apply)				Secondary Indicators (2 or more required)
	Water (A1)			Stained Lea	ves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
=	iter Table (A2)			A 1, 2, 4A,		жоорг		4A, and 4B)
	ion (A3)			ust (B11)				Drainage Patterns (B10)
	larks (B1)			Invertebra	tes (R13)			Dry-Season Water Table (C2)
	nt Deposits (B2)		= '	en Sulfide (. ,			Saturation Visible on Aerial Imagery (C9)
	posits (B3)		p			Living Roo	te (C3)	Geomorphic Position (D2)
	at or Crust (B4)		F	ce of Reduc	_	_	13 (00)	Shallow Aquitard (D3)
	osits (B5)				•	d Soils (C6	۸	FAC-Neutral Test (D5)
	Soil Cracks (B6)		etterna.			1) (LRR A)	-	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial Im	ageny (R7)	=	Explain in R	,	, , (LIXIX A)		Frost-Heave Hummocks (D7)
	Vegetated Concave S		Outlot (E		(Ciliants)			1 Tost-Heave Hummocks (D1)
		Surface (Bo)						
Field Obse		/oo 🗆 No 📝	Donth (inche	· • · · ·				
		∕es ☐ No 🗹						
		∕es 🗹 No 🗌	Depth (inche					Ulataban Bara (O.V. 🗐 N. 🗇
Saturation (includes c	Present? apillary fringe)	∕es 🗸 No 🗌	Depth (inche	es): <u>5</u>		VV	etiand F	Hydrology Present? Yes ✓ No 🗌
Describe R	Recorded Data (stre	am gauge, mo	nitoring well, a	erial phot	os, previo	ous inspec	ctions), it	if available:
Domestra							***	
Remarks:								

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 08-17-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT5-W3
Investigator(s): K. Scow, E. Darfler		S	ection, To	ownship, Ra	ange: S25, T12N, R6E	
Landform: hillside brook			ocal relief	(concave,	convex, none): concave	Slope (%): 6-7
Subregion (LRR): E		Lat: 46.	7776722		Long: -110.9149591	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-F	nxaulch-Redfis					cation: PSS
Are climatic/hydrologic conditions on the			fvear? V	es 🗸 No		
Are Vegetation . Soil , or Hydrology			-			
Are Vegetation , Soil , or Hydrology		-				' present? Yes ✓ No
SUMMARY OF FINDINGS – Attach				·	eeded, explain any answ ations, transects, im	·
	Yes ✓ No					
, , ,	Yes ✓ No	=	ls t	he Sample	ed Area	
- ·	Yes ✓ No	 ,		hin a Wetla		No 🗌
Remarks: Stream is 0.5-2.5 ft wide. We	tland boundary	is approx	size of ve	g plot (0.01	acre) on the N and S e	dges. No grazing at this
location. Photographs: KS13	93-1396 (N to V	V)			,	
VEGETATION - Use scientific nan	nes of plants	_				
		Absolute	Dominant	Indicator	Dominance Test Wor	ksheet:
Tree Stratum (Plot size: NA	_)		Species?		Number of Dominant S	
1					That Are OBL, FACW,	
2.					Total Number of Domin	nant
3					Species Across All Str	ata: 4 (B)
4					Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size: 0.01	aoro \	0	_ = Total (Cover	That Are OBL, FACW,	or, FAC: 100 (A/B)
4 O-15 b-16		34	x	FACW	Prevalence Index Wo	rksheet:
2 Desighans fundiones				FAC	Total % Cover of	: Multiply by:
0 1		_		UPL	OBL Species 7	<u>71 </u>
4 D		•	***************************************	FACU	FACW Species 5	58 x 2 = 116
5. Ribes setosum		1		FACW	FAC Species 12	28 x 3 = 384
		50	= Total (Cover		4 x 4 =56
Herb Stratum (Plot size: 0.01 acre	_)					5 x 5 = 25
Poa pratensis		58_	X	FAC	Column Totals: 27	(B) 652
2. Carex utriculata		38_	X	OBL	Prevalence Index	(B/A) = <u>2.36</u>
3. Phleum pratense		36_	X	FAC	Hydrophytic Vegetati	on Indicators:
4. Carex nebrascensis		26_		OBL	1 - Rapid Test for Hyd	rophytic Vegetation
5. Trifolium hybridum		18_		FAC	2 - Dominance Test is	>50%
Symphyotrichum subspicatum Taraxacum officinale		<u>16</u> 8		FACU FACU	3 - Prevalence Index is	§ ≤3.0¹
O Changin stricts		7		OBL		ptations¹ (Provide supporting r on a separate sheet)
O A				FAC	5 - Wetland Non-Vaso	,
				FACU		rtic Vegetation¹ (Explain)
11. Juncus balticus		4		FACW		nd wetland hydrology must be
		226	= Total (Cover	present, unless disturbed	or problematic.
Woody Vine Stratum (Plot size: NA)		_		1	
1					Hydrophytic	
2					Vegetation	
0/ Page Crayer dia Usab Cr		0	_ = Total (Cover	Present? Yes	✓ No L
% Bare Ground in Herb Stratum						
Remarks: unnamed tributary to Sheep (Jreek					



SOIL			Project/Site: Bla	ick Butte Copper	Sampling Point: SCT5-W3
Profile Desc	cription: (Descri	be to the d	epth needed to document the indicator	or confirm the a	absence of indicators.)
Depth	Matrix		Redox Features		,
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc	² Texture	Remarks
0-5	2.5Y 2.5/1	100		SiCL	fine to larger roots
5-16	2.5Y 2.5/1				
<u> </u>	2.51 2.5/1	100		SiCL	with small gravel
-		-			
		· · · · · · · ·			
¹Type: C=Cc	ncentration D=D	enletion P	M=Reduced Matrix, CS=Covered or Coate	d Sand Crains	21 continue DI = Doro Lining Manual
			II LRRs, unless otherwise noted.):		² Location: PL=Pore Lining, M=Matrix
r		icable to a			ators for Problematic Hydric Soils ³ :
Histosol (A	•		Sandy Redox (S5)		m Muck (A10)
Histic Epip	. ,		Stripped Matrix (S6)		d Parent Material (TF2)
Black Histi	` '		Loamy Mucky Mineral (F1) (except MLRA 1)	=	ry Shallow Dark Surface (TF12)
	Sulfide (A4)	(444)	Loamy Gleyed Matrix (F2)	☐ Oti	ner (Explain in Remarks)
	Below Dark Surface	(ATT)	Depleted Matrix (F3)	3India.	otoro of budrophytic variation and
	Surface (A12)		Redox Dark Surface (F6)		ators of hydrophytic vegetation and tland hydrology must be present,
	cky Mineral (S1)		Depleted Dark Surface (F7)		less disturbed or problematic.
	yed Matrix (S4)		Redox Depressions (F8)		
	Layer (if present):			•
Туре:			_		
Depth (inche	es):		<u> </u>	Hydric So	oil Present? Yes 🗹 🛮 No 🗌
Remarks: B	lack soil. No large	rocks at 1	6". Soils have uniform color through	out. May meet inc	licator A12 at depth. :Plot is in
so	oil type characteri	zed as &qu	ot;partially hydric" by NRCS and also	o a Mollisol, with	naturally thick, dark A horizon.
			etland hydrology present, assume hydric s		•
HYDROLOG	ЭΥ				
Wetland Hy	drology Indicato	rs:			
-			ired; check all that apply)	Soc	andany Indicators (2 or more required)
		or one requ	med, check an that apply)		ondary Indicators (2 or more required)
Surface W	ater (A1)		Water-Stained Leaves (B9) (except	\ \	Vater-Stained Leaves (B9) (MLRA 1, 2,
= -	r Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)
✓ Saturatio	n (A3)		Salt Crust (B11)		Orainage Patterns (B10)
Water Mar	, ,		Aquatic Invertebrates (B13)		Ory-Season Water Table (C2)
Sediment I	Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Depos	, ,		Oxidized Rhizospheres along Living	Roots (C3)	Geomorphic Position (D2)
Algal Mat o	or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Depos	sits (B5)		Recent Iron Reduction in Tilled Soils	(C6) F	AC-Neutral Test (D5)
Surface So	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LR	R A) 📗 F	Raised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial Im	agery (B7)	Other (Explain in Remarks)	F	rost-Heave Hummocks (D7)
Sparsely V	egetated Concave S	Surface (B8)			
Field Obser	vations:				
Surface Wat	er Present?	res 🗹 No	Depth (inches): creek		
Water Table		∕es 🗌 No			
Saturation P		res 🔽 No		Wetland Hydro	ology Present? Yes ✔ No 🗌
(includes cap	oillary fringe)				
Describe Red	corded Data (stre	am gauge,	monitoring well, aerial photos, previous ins	spections), if avai	lable:
	•	- '	- · · · · ·	•	
Remarks: No	water in nit \\/\/2	ter is flowin	g in the adjacent stream channel. Fine to	narsa gravel in o	tream had
	III pit. vva	COLIG HOVVIII	g and daydoont stream onamies. Title to t	Joanse graver iil S	nicalli Deg.

Project/Site: Black Butte Copper		C	ity/County	y: White Su	ılphur Springs/Meagher	Sampling Date: 08-17-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT5-W4
Investigator(s): K. Scow, E. Darfler			Section, T	ownship, R	ange: S25, T12N, R6E	
Landform: toe slope and bottom					convex, none): convex	Slope (%): 8-20
Subregion (LRR): E			.7744218	•	Long: -110.9174913	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat	Foygulch Pedfi		.7744210			ication: PSS
			.f., \	/oo 🗐 Ni		
Are climatic/hydrologic conditions on the			-			·
Are Vegetation , Soil , or Hydrolo		-				' present? Yes ✓ No ☐
Are Vegetation, Soil, or Hydrolo SUMMARY OF FINDINGS - Attac					eeded, explain any ansv	·
				ponit ioo		portant reatures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes ✓ No Yes ✓ No		ls	the Sample	ed Area	
Wetland Hydrology Present?	Yes 🗸 No		wit	thin a Wetl	and? Yes ✓	No 🗌
Remarks: No grazing at this location.	Photographs: K	S1386-1389	9 (W, N, E	Ξ, S)		
					· · · · · · · · · · · · · · · · · · ·	
VEGETATION - Use scientific na	mes of plants	s.				
		Absolute	Dominan	t Indicator	Dominance Test Wor	ksheet:
Tree Stratum (Plot size: NA)	% Cover			Number of Dominant S	
1					That Are OBL, FACW,	or, FAC:6 (A)
2					Total Number of Domi	
3					Species Across All Str	ata: 6 (B)
4			~		Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.0	1 acre \	0	_ = Total	Cover	That Are OBL, FACW,	or, FAC:100 (A/B)
1. Betula glandulosa	·	22	x	OBL	Prevalence Index Wo	rksheet:
Designa grandulosa Dasiphora fruticosa		44	^x	FAC	Total % Cover of	: Multiply by:
3. Salix bebbiana		40	X	FACW	OBL Species 9	95 x 1 = 95
A 0-15				FACW	FACW Species3	35 x 2 =70
5.					FAC Species 5	58 x 3 = 174
		51	= Total	Cover		3 x 4 = <u>52</u>
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =
1. Carex pellita		36	X	OBL	Column Totals: 20	01 (A) <u>391</u> (B)
2. Carex utriculata		28	X	OBL	Prevalence Index	(B/A) = 1.95
3. Agrostis stolonifera		12	X	FAC	Hydrophytic Vegetati	on Indicators:
4. Juncus balticus		10_		FACW	1 - Rapid Test for Hyd	
5. Phleum pratense		10		FAC	2 - Dominance Test is	>50%
6. Symphyotrichum foliaceum		9		FACU	✓ 3 - Prevalence Index i	s ≤3.0¹
O Companioner wish and a set		,		FAC		ptations¹ (Provide supporting
8. <u>Geranium richardsonii</u> 9. Geum macrophyllum				FAC FAC	5 - Wetland Non-Vaso	or on a separate sheet)
10 Data site a fairciatura				FACW		rtic Vegetation¹ (Explain)
11. Taraxacum officinale		4		FACU		nd wetland hydrology must be
Tit Tarakasam smorrars		150	= Total		present, unless disturbed	
Woody Vine Stratum (Plot size: NA)					
1					Hydrophytic	
2					Vegetation	
		0	_ = Total	Cover	Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum						
Remarks: unnamed tributary to Sheep						



SOIL				Pr	oject/Site	e: Black	Butte Copper	Sampling Point: SCT5-W4			
Profile Des	cription: (Descri	e to the d	depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			dox Feature				· · · · · · · · · · · · · · · · · · ·			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks			
0-9	5Y 2.5/1	100					SiCL	fine roots w/ some sand and gravel			
Hydric Soil Histosol (Histic Epi Black His Hydrogen Depleted Thick Dan Sandy Mu Sandy Gl	pedon (A2)	icable to a		otherwise (S6) (S6) Ineral (F1) Matrix (F2) (F3) face (F6) Surface (F7)	noted.):		Indic 2 2 Rec Ve 0 01	² Location: PL=Pore Lining, M=Matrix sators for Problematic Hydric Soils ³ : cm Muck (A10) ed Parent Material (TF2) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) cators of hydrophytic vegetation and etland hydrology must be present, nless disturbed or problematic.			
Type: Bould Depth (inch Remarks: E s	der es): <u>9</u> Black soil. Large bo and and gravel. S as "partially h	oulders app oil color un ydric"	iform throughout. & ; by NRCS and als	Ma	y meet in	dicator A	ne surface at	oil Present? Yes No this plot as well. Soils have coarse Plot is in soil type characterized horizon. Hydrophytic vegetation and			
HYDROLO Wetland Hy	GY /drology Indicato icators (minimum o	rs:		t anniv)			Sac	condary Indicators (2 or more required)			
		ono roqu				.					
Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	er Table (A2) on (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) ioil Cracks (B6) n Visible on Aerial Imi	• • • •	MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Leav A 1, 2, 4A, a st (B11) Invertebrate in Sulfide O if Rhizosphe e of Reducti or Stressed xplain in Re	es (B13) dor (C1) eres along ed Iron (C4 ion in Tiller I Plants (D	Living Roo 4) d Soils (Co	ots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)			
Field Obse		,	_ 5	- >							
Water Table Saturation F (includes ca	Present? \ Present? \ Present? \ Present()	′es 🔽 No	Depth (inches	s): 0				ology Present? Yes ☑ No ☐			
Describe Re	ecorded Data (stre	am gauge,	monitoring well, a	eriai photo	s, previo	us inspe	ctions), if ava	ulable:			
Remarks: N	lo water in pit after	20 minute	s. Soil is moist thro	oughout p	rofile. Wa	ater runn	ing down sma	all channels and in the cattle trails.			

Project/Site: Black Butte Copper		Ci	ity/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-16-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT5-W5
Investigator(s): K. Scow, E. Darfler		S	Section, To	ownship, R	ange: S25, T12N, R6E	
Landform: head of swale				•	convex, none): convex	Slope (%): 5-7
Subregion (LRR): E		Lat: 46.	7709366	•	Long: -110.9201268	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-l					-	cation: PSS
Are climatic/hydrologic conditions on the			f vear? Y	es 🗸 No		
Are Vegetation, Soil, or Hydrolog			-			resent? Yes ✔ No
Are Vegetation , Soil , or Hydrolog					eeded, explain any answ	
SUMMARY OF FINDINGS – Attack					•	·
Hydrophytic Vegetation Present?	Yes ✓ No					
Hydric Soil Present?	Yes ✓ No	=		he Sample		
Wetland Hydrology Present?	Yes ✓ No		wit	hin a Weti	and? Yes ✓	No 🗔
Remarks: Heavily grazed this summer.	Photographs:	KS1380-13	83 (N to V	N)		
VEGETATION – Use scientific nar	mes of plants	s .				
Tree Stratum (Plot size: NA	.	Absolute % Cover		Indicator	Dominance Test Wor	ksheet:
	_		···		Number of Dominant S	
1. 2.					That Are OBL, FACW,	
3.					Total Number of Domir Species Across All Stra	_
4.					•	 · · ·
			= Total	Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01	acre)				Prevalence Index Wo	
Dasiphora fruticosa				FAC		
				FACW	Total % Cover of:	
	,			FACW	OBL Species 7 FACW Species 10	$\frac{79}{100} \times 1 = \frac{79}{100} \times 2 = \frac{79}{100}$
4. Salix candida		2		OBL		55 x 3 = 165
5		36	= Total	Cover		5 x 4 = 20
Herb Stratum (Plot size: 0.01 acre)		10tai ·	Cover	UPL Species	x 5 =
1. Carex pellita	- ′	56	x	OBL	Column Totals: 23	9 (A) <u>464</u> (B)
2. Juncus balticus		42	x	FACW	Prevalence Index	(B/A) = 1.94
3. Carex nebrascensis		18	x	OBL	Hydrophytic Vegetati	
4. Viola nephrophylla		18_	x	FACW	1 - Rapid Test for Hyd	
5. Agrostis stolonifera		16		FAC	✓ 2 - Dominance Test is	>50%
6. Juncus longistylis		14		FACW	✓ 3 - Prevalence Index is	3 ≤3.01
				FAC		ptations¹ (Provide supporting
Phleum pratense Symphyotrichum subspicatum		- <u>8</u> 5		FAC FACW	data in Remarks o	r on a separate sheet)
10 Corov utrioulate				OBL		tic Vegetation¹ (Explain)
11. Fragaria virginiana		3		FACU		nd wetland hydrology must be
Tragana viiginiana		203	= Total (present, unless disturbed of	
Woody Vine Stratum (Plot size: NA)			==		
1					Hydrophytic	
2.					Vegetation	
		0		Cover	Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum						
Remarks: unnamed tributary to Sheep	Creek			,		
						a a second



SOIL	·· · · · · · · · · · · · · · · · · · ·						
Profile Des	scription: (Describ	oe to the dept	th needed to docu	ment the indi	cator or cor	nfirm the	absence of indicators.)
Depth	Matrix		Redox F	eatures			
(inches)	Color (moist)		Color (moist)	% Type¹	Loc ²	Texture	Remarks
0-7	5YR 2.5/1	100				SiL	fine roots
7-11	5YR 2.5/1	100				SL	fine roots and coarse sand
11-15	5YR 2.5/1	100				SiCL	fine gravels
1Tvpe: C=C	Concentration, D=D	epletion, RM=	Reduced Matrix, C	S=Covered or	Coated San	d Grains	² Location: PL=Pore Lining, M=Matri
			RRs, unless other		Juliu Juli		ators for Problematic Hydric Soils
Histosol			Sandy Redox (S5)			_	cm Muck (A10)
	pipedon (A2)		Stripped Matrix (S6)				ed Parent Material (TF2)
Black His			Loamy Mucky Minera	ıl (F1) (except ML	.RA 1)		ery Shallow Dark Surface (TF12)
Hydroger	n Sulfide (A4)		Loamy Gleyed Matrix		,		ther (Explain in Remarks)
	Below Dark Surface ((A11)	Depleted Matrix (F3)	÷ *		~	, ,
✓ Thick Da	rk Surface (A12)		Redox Dark Surface	(F6)		³Indic	cators of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark Surface	ce (F7)			etland hydrology must be present,
Sandy G	leyed Matrix (S4)	. 🗆	Redox Depressions (F8)		ur	less disturbed or problematic.
Type:							
Depth (inch Remarks: I	Black soil. No redox is in soil type chara	cterized as &c	15". May mee quot;partially hydric nd hydrology prese	" by NRC	S and also	r saturatio	oil Present? Yes No n in 11-15 horizon masked redox. Plowith naturally thick, dark A horizon.
Depth (inch Remarks: E i i i i i i i i i i i i i i i i i i i	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicato	cterized as &ction and wetla	uot;partially hydricand hydrology prese	" by NRC ent, assume hy	S and also	or saturatio a Mollisol,	on in 11-15 horizon masked redox. Plo with naturally thick, dark A horizon.
Depth (inch Remarks: I i i i i i i i i i i i i i i i i i i i	Black soil. No redoon is in soil type chara Hydrophytic vegeta GGY ydrology Indicato dicators (minimum of	cterized as &ction and wetla	quot;partially hydricand hydrology prese	" by NRC ent, assume hy	S and also a	or saturation a Mollisol,	on in 11-15 horizon masked redox. Plo with naturally thick, dark A horizon.
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface W	Black soil. No redood is in soil type chara Hydrophytic vegeta OGY ydrology Indicato dicators (minimum of Mater (A1)	cterized as &ction and wetla	quot;partially hydricand hydrology prese	" by NRC ent, assume hy bly) d Leaves (B9) (e	S and also a	or saturation a Mollisol,	on in 11-15 horizon masked redox. Plowith naturally thick, dark A horizon. Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2,
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface V High Wat	Black soil. No redood is in soil type chara Hydrophytic vegeta OGY ydrology Indicator (minimum of Mater (A1) ter Table (A2)	cterized as &ction and wetla	guot;partially hydricand hydrology prese	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B)	S and also a	saturatic a Mollisol,	on in 11-15 horizon masked redox. Plowith naturally thick, dark A horizon. Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface V High Wat Saturation	Black soil. No redood is in soil type chara Hydrophytic vegeta OGY ydrology Indicator dicators (minimum of Mater (A1) ter Table (A2) on (A3)	cterized as &ction and wetla	guot;partially hydricand hydrology presend; check all that app Water-Staine MLRA 1, 2 Salt Crust (B	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11)	S and also a	saturatic a Mollisol,	on in 11-15 horizon masked redox. Plowith naturally thick, dark A horizon. Condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Depth (inch Remarks: E I I IYDROLO Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma	Black soil. No redood is in soil type chara Hydrophytic vegeta DGY ydrology Indicator dicators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1)	cterized as &ction and wetla	guot; partially hydricand hydrology presends; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13)	S and also a	set Sec	on in 11-15 horizon masked redox. Plowith naturally thick, dark A horizon. condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface V High Wat V Saturati Water Ma Sediment	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	cterized as &ction and wetla	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lfide Odor (C1)	S and also adric soil.	saturatic a Mollisol,	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface V High Wat V Saturati Water Ma Sediment Drift Depo	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	cterized as &ction and wetla	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lfide Odor (C1) zospheres along	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface V High Wat V Saturati Water Ma Sediment Drift Depo	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicator dicators (minimum of Alarer (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	cterized as &ction and wetla	guot; partially hydricand hydrology prese d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lfide Odor (C1)	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Depth (inch Remarks: E i H HYDROLO Wetland Hy Primary Ind Surface W High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicator dicators (minimum of Alarer (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	cterized as &ction and wetla	guot; partially hydricand hydrology presedu; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C4)	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Depth (inch Remarks: E i H IYDROLO Wetland H Primary Ind Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicator dicators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial Ima	rs: of one required	guot; partially hydricand hydrology prese d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B) Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C4 Reduction in Tiller	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inch Remarks: E IYDROLO Wetland Hy Primary Ind Surface V High Wat Vater Ma Sediment Drift Depc Algal Mat Iron Depc Surface S Inundatio Sparsely	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicato licators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave S	rs: of one required	guot; partially hydricand hydrology prese d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B) Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C4 Reduction in Tiller ressed Plants (D	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inch Remarks: E IYDROLO Wetland Hy Primary Ind Surface V High Water Ma Sediment Drift Depc Algal Mat Iron Depc Surface S Inundatio Sparsely Field Obse	Black soil. No redox is in soil type chara Hydrophytic vegeta OGY ydrology Indicato licators (minimum of Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oxits (B3) t or Crust (B4) oxits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave Servations:	cterized as &ction and wetland	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C4 Reduction in Tiller ressed Plants (D	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inch Remarks: I I I I I I I I I I I I I I I I I I I	Black soil. No redox is in soil type chara Hydrophytic vegeta DGY ydrology Indicator licators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oxits (B3) t or Crust (B4) oxits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave Servations: ater Present?	cterized as &ction and wetland	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C4 Reduction in Tiller ressed Plants (D n in Remarks)	S and also adric soil. xcept Living Roots (Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inch Remarks: I I I I I I I I I I I I I I I I I I I	Black soil. No redox is in soil type chara Hydrophytic vegeta PGY ydrology Indicato dicators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oxits (B3) t or Crust (B4) oxits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave Servations: ater Present? Yee Present?	cterized as &ction and wetland	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C2 Reduction in Tiller ressed Plants (D n in Remarks)	S and also adric soil. Except Living Roots (1) d Soils (C6) 1) (LRR A)	Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Depth (inch Remarks: E IYDROLO Wetland Hy Primary Ind Surface V High Water Ma Sediment Drift Depc Algal Mat Iron Depc Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes call	Black soil. No redox is in soil type chara Hydrophytic vegeta DGY ydrology Indicator licators (minimum of Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oxits (B3) t or Crust (B4) oxits (B5) Soil Cracks (B6) on Visible on Aerial Ima Vegetated Concave Servations: ater Present? Present? Present? Yesent? print in March 1 in March 2 in	cterized as &ction and wetlad rs: rs: of one required as &ction and wetlad rs: agery (B7) Surface (B8) res No res	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) lifide Odor (C1) zospheres along Reduced Iron (C2 Reduction in Tillet ressed Plants (D n in Remarks)	S and also adric soil. Except Living Roots (1) d Soils (C6) 1) (LRR A) Wetl	Sec	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Depth (inch Remarks: E IYDROLO Wetland Hy Primary Ind Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Saturation If (includes ca	Black soil. No redood is in soil type chara Hydrophytic vegeta Hydrophytic vegeta Hydrology Indicator (Mater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Visible on Aerial Ima Vegetated Concave Servations: ater Present? Yee Present? Yee Present? Yee present? Yee corded Data (stream in the soil type of the soil Cracks (B6) in Visible on Aerial Ima Vegetated Concave Servations: ater Present? Yee Present? Yee present? Yee present? Yee corded Data (stream in the soil type of the soil Cracks (B6) in Visible on Aerial Ima Vegetated Concave Servations: ater Present? Yee present? Yee present? Yee present? Yee present? Yee present? Yee present? Yee present? Yee present? Yee present? Yee present?	cterized as &ction and wetlad rs: rs: of one required agery (B7) surface (B8) Yes No You am gauge, mo	d; check all that app Water-Staine MLRA 1, 2 Salt Crust (B Aquatic Inver Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Stunted or St Other (Explai	" by NRC ent, assume hy bly) d Leaves (B9) (e 2, 4A, and 4B) 11) tebrates (B13) ifide Odor (C1) zospheres along Reduced Iron (C2 Reduction in Tiller ressed Plants (D n in Remarks) 15-18 photos, previo	S and also adric soil. Except Living Roots (1) d Soils (C6) 1) (LRR A) Wetling was inspection	Sec (C3)	condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

BLACK BUTTE COPPER Upland Plots

WETLAND DETERMINATION DATA FORMS

Western Mountains, Valleys, and Coast Region

Project/Site: Black Butte Copper		Ci	ity/Count	y: White Su	ulphur Springs/Meagher Sampling Date: 08-14-2014
Applicant/Owner: Tintina Resources			•		State: MT Sampling Point: BB-U1
Investigator(s): J. Beaver, K. Scow	1 10 11 11	S	Section. 7	Fownship. R	tange: S26, T12N, R6E
Landform: terrace					convex, none): none Slope (%): 3
Subregion (LRR): E			7664691	,	Long: -110.9470005 Datum: WGS84
	lunton Moodo		7004091		NWI classification: UPL
Soil Map Unit Name: 501B Manixlee-C		***************************************	£	V [7] N	
Are climatic/hydrologic conditions on the			-		
Are Vegetation , Soil , or Hydrolo		•			"Normal Circumstances" present? Yes V No
Are Vegetation, Soil, or Hydrolo					eeded, explain any answers in Remarks.) ations, transects, important features, etc.
			unping	point ioc	auons, transects, important reatures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrolagy Present?	Yes 🗸 N	lo []		the Sample	
Wetland Hydrology Present?		lo '			
Remarks: Low terrace above creek. N	lesic but not v	vetland. Photo	ographs:	JB 2334-23	37; 2338 soil
VEGETATION – Use scientific na	ames of plar	nts.			
Tree Stratum (Plot size: NA	1	Absolute % Cover	Dominar Species	nt Indicator ? Status	Dominance Test Worksheet:
1					Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A)
2.					MATERIAL AND AND AND AND AND AND AND AND AND AND
3.					Total Number of Dominant Species Across All Strata: 3 (B)
4.					
Sapling/Shrub Stratum (Plot size: 0.0		0	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC:(A/B)
4 5	1 4010	26	х	FAC	Prevalence Index Worksheet:
2					Total % Cover of: Multiply by:
3.				AND COMMISSION OF THE PROPERTY	OBL Species x 1 =
4.					FACW Species 15 x 2 = 30
5					FAC Species 182 x 3 = 546
		26	= Total	Cover	FACU Species 67 x 4 = 268
Herb Stratum (Plot size: 0.01 acre)				UPL Species x 5 =
1. Phleum pratense		66	x	FAC	Column Totals: 264 (A) 844 (B)
2. Poa pratensis		58	X	FAC	Prevalence Index (B/A) = 3.20
3. Taraxacum officinale		28		FACU	Hydrophytic Vegetation Indicators:
4. Trifolium pratense		14 10		FACU FAC	1 - Rapid Test for Hydrophytic Vegetation
Danthonia californica Potentilla gracilis		10		FAC	✓ 2 - Dominance Test is >50%
7 Fragaria virginiana		8		FACU	3 - Prevalence Index is ≤3.01
8. Iris missouriensis	nakananiar iku 1 mjeljah provinci ikonomining a provinci nakana provinci provinci provinci provinci nakana nak	8		FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9. Astragalus agrestis		7		FACW	5 - Wetland Non-Vascular Plants¹
10. Symphyotrichum foliaceum		5	*******	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
11. Agrostis stolonifera		4		FAC	¹Indicators of hydric soil and wetland hydrology must be
		238	= Total	Cover	present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)				
1.					Hydrophytic
2					Vegetation
0/ Para Cround in Hash Charter		0	_ = Total	Cover	Present? Yes 🗸 No 🗌
% Bare Ground in Herb Stratum					
Remarks: Vegetation meets the Domi The PI and professional jud					However, vegetation fails the Prevalence Index (PI).
p. e. ee ee ee ee	J	, - 5 - 101			



Profile Des	scription: (Desc	ribe to the dep	th needed to d	ocument	the indi	cator or o	confirm	the absence of indicators.)
Depth	Matrix	<u> </u>	Re	dox Featur	es	****		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	re Remarks
0-9.5	10YR 2/1						CL	
9.5-16	2.5Y 6/2	60	10YR 6/8	20	С	M	SC	
9.5-16	10YR 2/1	20						
	Concentration, D=							
Histosol	I Indicators (Ap	plicable to all L			notea.):		- 11	ndicators for Problematic Hydric Soils ³ :
	ipedon (A2)	<u> </u>	Sandy Redox (S Stripped Matrix					」2 cm Muck (A10) ☐ Red Parent Material (TF2)
Black His			Loamy Mucky M		(except M	RΔ 1)	늗	Very Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed N		(CACCPI IVI		_	Other (Explain in Remarks)
	Below Dark Surfac	e (A11)	Depleted Matrix				L.	_ Care (Explain in Normalia)
	rk Surface (A12)	· · · · /	Redox Dark Sur				3	ndicators of hydrophytic vegetation and
=	ucky Mineral (S1)		Depleted Dark S	, ,)			wetland hydrology must be present,
	leyed Matrix (S4)		Redox Depressi		,			unless disturbed or problematic.
Restrictive	Layer (if prese	nt):						
Type:							,	
Depth (inch							Hvdr	ic Soil Present? Yes ✔ No
ļ	Remnant hydric s	oil as veg and l	ydrology not n	recent Di	noto IR23	१२८		
remains.	reminant nyano s	on as veg and i	iyarology not pi	icaciii. i i	1010 3020	,50		
HYDROLO				dad . A			*******************************	
	ydrology Indica		d. ala ala all dia.	4				0
	licators (minimun	n of one require	u; cneck all tha	t apply)				Secondary Indicators (2 or more required
Surface V	Vater (A1)		☐ Water-S	tained Lea	ves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
= -	ter Table (A2)			A 1, 2, 4A,	and 4B)			4A, and 4B)
Saturati			Salt Cru					Drainage Patterns (B10)
Water Ma	- ,			Invertebrat				Dry-Season Water Table (C2)
Francisco	t Deposits (B2)			en Sulfide (Saturation Visible on Aerial Imagery (C9)
Drift Depo						Living Roo	ots (C3)	Geomorphic Position (D2)
Iron Depo	t or Crust (B4)		,	e of Reduc		•	••	Shallow Aquitard (D3)
	Soil Cracks (B6)					d Soils (C6		FAC-Neutral Test (D5)
	on Visible on Aerial I	mageny (R7)		explain in R	•	91) (LRR A))	Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
	Vegetated Concave		Other (E	.xpiaiii iii i	ierriarks)			Trost-freave Huminocks (D7)
Field Obse								
1	ater Present?	Yes 🗌 No 🗸	Depth (inche	s):				
20 Daliace Ans								
1	e Present?	Yes No V	Depth (inche					
Water Table		Yes No V				w	etland H	lydrology Present? Yes 🗌 No 🗸
Water Table Saturation I		Yes No V				w	etland H	lydrology Present? Yes 🗌 No 🗸
Water Table Saturation I (includes ca	Present?	Yes ☐ No 🗹	Depth (inche	s):	os, previo			
Water Table Saturation I (includes ca	Present? apillary fringe)	Yes ☐ No 🗹	Depth (inche	s):	os, previo			
Water Table Saturation I (includes ca	Present? apillary fringe)	Yes ☐ No 🗹	Depth (inche	s):	os, previo			
Water Table Saturation I (includes ca Describe Re	Present? apillary fringe)	Yes ☐ No 🗹	Depth (inche	s):	os, previo			

Project/Site: Black Butte Copper		Cit	ty/County	։ White Տւ	ılphur Springs/Meagher	Sampling Date: 09-02-2014
Applicant/Owner: Tintina Resources		***************************************		consequent of endantite most describe	State: MT	Sampling Point: BB-U2
Investigator(s): S. Cooper, L. Larsen		S	ection, To	ownship, R	tange: S35,T12, R6E	
Landform: terrace			ocal reliet	f (concave,	convex, none): concave	Slope (%): 2-3
Subregion (LRR): E		Lat: 46.	763669		Long: -110.9398686	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-	Monaberg				NWI classific	cation: UPL
Are climatic/hydrologic conditions on		r this time of	f vear? Y	es 🗸 N	Accomplete common and contract the seconds	
Are Vegetation, Soil, or Hydrol						present? Yes V No
Are Vegetation , Soil , or Hydrol					needed, explain any answ	
SUMMARY OF FINDINGS – Atta				,		,
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ No Yes No Yes No	✓		he Sampl		No ✓
Remarks: Margin of wetland/upland.	Photographs: SC	911-914 (N	l to W)			an angampangangangan a a a angan garang mayar agam ayar an angan angan akaban angan akaban an angan angan masa Angan angan gangangangan a a angan garang mayar agam angan angan angan akaban angan akaban angan angan masa ma
VEGETATION - Use scientific n	ames of plant	s.				
Troo Stratum (Diet sine: NA		Absolute			Dominance Test Worl	
Tree Stratum (Plot size: NA	Administration of the second o	% Cover			Number of Dominant S	
1.		manufacture and a second of the	***************************************		That Are OBL, FACW,	
3.	Change and the Medical Association and the soft of Medical as a series as an association in the Association and the Associatio	a decimal announced announced decimal			Total Number of Domir Species Across All Stra	
4.			Toda Milana Sananana		•	
		0	= Total	Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: N/					Prevalence Index Wo	
1.					Total % Cover of:	
2.					OBL Species	······································
3.					FACW Species	
4						5 x 3 = 274.5
5.		0	= Total	Cover		1 x 4 = 44
Herb Stratum (Plot size: 0.01 acre)		TOLAI	Cover	UPL Species	x 5 =
1 Pag protopois	*	50	x	FAC	Column Totals: 103.	5 (A) 320.5 (B
2 Phloum protonog		30	x	FAC	Prevalence Index	(B/A) = 3.10
3. Potentilla gracilis		11		FAC	Hydrophytic Vegetation	
4. Symphyotrichum foliaceum		7_		FACU	1 - Rapid Test for Hydr	
5. Achillea millefolium		3		FACU	✓ 2 - Dominance Test is	>50%
				FACU	3 - Prevalence Index is	§ ≤3.0¹
				FACW		ptations¹ (Provide supporting
				FAC		r on a separate sheet)
9.					5 - Wetland Non-Vasc	tic Vegetation¹ (Explain)
10						nd wetland hydrology must be
11.			= Total	Cover	present, unless disturbed of	
Woody Vine Stratum (Plot size: NA)					
1					Hydrophytic	
2					Vegetation	
		0	_ = Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum 1						
Remarks: Vegetation meets the Don The PI and professional ju						the Prevalence Index (PI).
The FF and professional ju	agment maleate	at vegetat	ion is the	olo pat 110t	wouldnu.	



Profile Desc				: Black B		
TOILLE DESC	ription: (Describ	e to the depth	needed to document the indic	ator or c	onfirm the a	absence of indicators.)
Depth	Matrix		Redox Features			·
(inches)	Color (moist)	% C	olor (moist) % Type¹	Loc²	Texture	Remarks
0-16	10YR 2/2	100			CL	

Type: C=Co	ncentration, D=D	epletion, RM=R	educed Matrix, CS=Covered or	Coated Sa	nd Grains	² Location: PL=Pore Lining, M=Matrix
lydric Soil I	ndicators (Appl	icable to all LR	Rs, unless otherwise noted.):		Indic	ators for Problematic Hydric Soils ³ :
Histosol (A	1)		Sandy Redox (S5)		_ 20	em Muck (A10)
Histic Epipe	edon (A2)		Stripped Matrix (S6)		Re	ed Parent Material (TF2)
Black Histic	c (A3)		Loamy Mucky Mineral (F1) (except ML	.RA 1)	_ Ve	ry Shallow Dark Surface (TF12)
Hydrogen S	Sulfide (A4)	l	Loamy Gleyed Matrix (F2)		Ot	her (Explain in Remarks)
Depleted B	elow Dark Surface	(A11) 🔲 [Depleted Matrix (F3)			
Thick Dark	Surface (A12)	F	Redox Dark Surface (F6)			ators of hydrophytic vegetation and
	ky Mineral (S1)		Depleted Dark Surface (F7)			etland hydrology must be present, less disturbed or problematic.
	ed Matrix (S4)		Redox Depressions (F8)			
Restrictive L	_ayer (if present):				
Гуре:						
Depth (inche:	s):				Hydric S	oil Present? Yes No 🗸
un		on Worldbergy a	s predominantly non-hydric (hyd	ric solls co	omprise 15%	o o son unit).
		on Monascray a	s predominantly non-nyune (nyu	TIC SOIIS CO	omprise 15%	o Son unit).
YDROLOG			s predominantly non-nyune (nyu	ric solls co	omprise 15%	o Son unit).
YDROLOG Wetland Hyd	GY drology Indicato	rs:	check all that apply)	ric solis co		ondary Indicators (2 or more required)
YDROLOG Vetland Hyd	SY drology Indicato ators (minimum o	rs:	check all that apply)		Sec	ondary Indicators (2 or more required)
YDROLOG Vetland Hyc Primary Indic	GY drology Indicato cators (minimum dater (A1)	rs:	check all that apply) Water-Stained Leaves (B9) (e		Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOG Vetland Hyc Primary Indic	drology Indicato ators (minimum dater (A1)	rs:	check all that apply)		Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water	drology Indicato eators (minimum of ater (A1) Table (A2) n (A3)	rs:	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B)		Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark	drology Indicato eators (minimum of ater (A1) Table (A2) n (A3)	rs:	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) cs (B1) Deposits (B2)	rs:	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	xcept	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) cs (B1) Deposits (B2)	rs:	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	xcept Living Root	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) cs (B1) Deposits (B2) cits (B3) or Crust (B4) its (B5)	rs:	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) ss (B1) Deposits (B2) sits (B3) or Crust (B4) its (B5) il Cracks (B6)	rs: of one required;	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4)	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
YDROLOG Vetland Hyd Trimary Indice Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So Inundation	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) ss (B1) Deposits (B2) sits (B3) or Crust (B4) its (B5) il Cracks (B6) Visible on Aerial Im	rs: of one required; agery (B7)	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLOG Vetland Hyc Primary Indice Surface Wa High Water Saturation Water Mark Sediment D Drift Depose Algal Mat o Iron Depose Surface So Inundation Sparsely Ve	drology Indicato eators (minimum of ater (A1) Table (A2) In (A3) Opposits (B2) iits (B3) In Crust (B4) its (B5) il Cracks (B6) Visible on Aerial Imagegetated Concave S	rs: of one required; agery (B7)	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Stunted or Stressed Plants (D	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So Inundation Sparsely Veicled Observ	drology Indicators (minimum of atter (A1) Table (A2) In (A3) Is (B1) Deposits (B2) In (B3) In Crust (B4) It (B5) It (B5) It (B6) Visible on Aerial Image egetated Concave Sevations:	rs: of one required; agery (B7) Surface (B8)	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Stunted or Stressed Plants (D	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So Inundation Sparsely Veter	drology Indicators (minimum of ater (A1) Table (A2) n (A3) (s (B1) Deposits (B2) iits (B3) ir Crust (B4) iit (B5) iil Cracks (B6) Visible on Aerial Imegetated Concave Systems: er Present?	rs: of one required; agery (B7) Surface (B8)	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks)	xcept Living Root I) d Soils (C6)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So Inundation Sparsely Water Gurface Water Vater Table	drology Indicators (minimum of ater (A1) Table (A2) n (A3) ss (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) sil Cracks (B6) Visible on Aerial Impegatated Concave Servations: er Present?	rs: of one required; agery (B7) Surface (B8) res	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches):	xcept Living Root I) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyc Primary Indice Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat oo Iron Deposi Surface So Inundation Sparsely Veter Gurface Water Vater Table Saturation Pr	drology Indicators (minimum of ater (A1) Table (A2) Tab	rs: of one required; agery (B7) Surface (B8)	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4) Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks)	xcept Living Root I) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
YDROLOG Vetland Hyce Primary Indice Surface Water High Water Saturation Water Mark Sediment D Drift Depose Algal Mat of Iron Depose Surface So Inundation Sparsely Water Gurface Water Vater Table Saturation Princludes cap	drology Indicators (minimum of ater (A1) Table (A2) In (A3) Is (B1) Deposits (B2) It (B3) In Crust (B4) It (B5) It (Cracks (B6) Visible on Aerial Impegtated Concave Serations: It (B5) It (B5) It (B5) It (B5) It (B6	rs: of one required; agery (B7) Surface (B8) res	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches):	Living Root i) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyce Primary Indice Surface Water High Water Saturation Water Mark Sediment D Drift Depose Algal Mat of Iron Depose Surface So Inundation Sparsely Water Gurface Water Vater Table Saturation Princludes cap	drology Indicators (minimum of ater (A1) Table (A2) In (A3) Is (B1) Deposits (B2) It (B3) In Crust (B4) It (B5) It (Cracks (B6) Visible on Aerial Impegtated Concave Serations: It (B5) It (B5) It (B5) It (B5) It (B6	rs: of one required; agery (B7) Surface (B8) res	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): Depth (inches):	Living Root i) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Vetland Hyc Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Surface So Inundation Sparsely Veter Gurface Water Vater Table Saturation Princludes cap Describe Reco	drology Indicators (minimum of ater (A1) Table (A2) In (A3) Is (B1) Deposits (B2) It (B3) In Crust (B4) It (B5) It (Cracks (B6) Visible on Aerial Impegtated Concave Serations: It (B5) It (B5) It (B5) It (B5) It (B6	rs: of one required; agery (B7) Surface (B8) /es	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): Depth (inches):	Living Root i) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
YDROLOG Wetland Hyce Primary Indice Surface Water Saturation Water Market Sediment Deposed Iron Deposed Surface So Inundation Sparsely Veter Surface Water Water Table Saturation Princludes cap Describe Rec	drology Indicato cators (minimum of ater (A1) Table (A2) n (A3) ss (B1) Deposits (B2) sits (B3) or Crust (B4) its (B5) il Cracks (B6) Visible on Aerial Imegetated Concave Sevations: er Present? Present? Sillary fringe) corded Data (stre	rs: of one required; agery (B7) Surface (B8) /es	check all that apply) Water-Stained Leaves (B9) (e MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Tille Stunted or Stressed Plants (D Other (Explain in Remarks) Depth (inches): Depth (inches):	Living Root i) d Soils (C6) 1) (LRR A)	Sec	ondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



Project/Site: Black Butte Copper		Cit	ty/County:	White Su	lphur Springs/Meagher	Sampling Date: 09-03-2014		
Applicant/Owner: Tintina Resources					State: MT Sampling Point: BBT3-U			
Investigator(s): S. Cooper, L. Larsen		S	ection, To	wnship, Ra	ange: S01, T11N, R6E			
Landform: terrace/floodplain		L	ocal relief	(concave,	convex, none): concave	Slope (%): 4-5		
Subregion (LRR): E			7416545		Long: -110.9270052	Datum: WGS84		
Soil Map Unit Name: 501B Mannixlee-C	:lunton-Meadow				NWI classific			
Are climatic/hydrologic conditions on th			fvear? Ve	se M				
Are Vegetation, Soil, or Hydrolog	- ·					present? Yes ✓ No		
Are Vegetation , Soil , or Hydrolog						-		
SUMMARY OF FINDINGS – Attac					eeded, explain any answ	·		
	Yes ✔ No							
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No No		1	ne Sample nin a Wetla	F	No 🗹		
Remarks: Photographs: SC922-925			area e e e e e e e e e e e e e e e e e e					
VECETATION Line opiontific no		Market Assessment and the second	CONTRACTOR OF THE PROPERTY OF		PET TOLER RECORDED PROGRAMMENT N. 1 No. 2 TO MARK. BY A MARKY SHOWN AND AND AND A MARKY SHOWN AND A MA			
VEGETATION – Use scientific na	mes or plants	Absolute	Dominant	Indicator	Dominance Test Worl			
Tree Stratum (Plot size: NA)	% Cover		Status	Number of Dominant S			
1.					That Are OBL, FACW,			
2	tamber (1915) de minute men es en en en en en en en en en en en en en				Total Number of Domin			
3. <u>/</u>					Species Across All Stra	ata: 2 (B)		
4			= Total C	Cover	Percent of Dominant S That Are OBL, FACW,			
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wo			
1					Total % Cover of:			
2.						x 1 =		
3.				***	FACW Species	x 2 =		
4			AND 10 TO 100 TO	**************************************	FAC Species 9	AND PARTY OF THE P		
5.			= Total C	`over	FACU Species	The man community and the second seco		
Herb Stratum (Plot size: 0.01 acre)		_ Total C	OVEI	UPL Species	x 5 =		
1 Pag protopolo		43	×	FAC	Column Totals: 9	3 (A) 282 (B)		
^			X	FAC	Prevalence Index ((B/A) = 3.03		
2. Detentille executio		2		FAC	Hydrophytic Vegetation			
4. Symphyotrichum foliaceum		2	The second secon	FACU	1 - Rapid Test for Hydi			
5. Achillea millefolium		1		FACU	✓ 2 - Dominance Test is	· · ·		
6. Agropyron trachycaulum				FAC	✓ 3 - Prevalence Index is	; ≤3.0¹		
4		1		FAC	4 - Morphological Adap	otations¹ (Provide supporting		
		1		FAC	·	on a separate sheet)		
9.					5 - Wetland Non-Vasc			
10.			F-00000007 - 000000000000000000000000000			tic Vegetation¹ (Explain)		
11.		93		`aa.	present, unless disturbed of	d wetland hydrology must be or problematic.		
Woody Vine Stratum (Plot size: NA	,	93	= Total C	ovei		, , , , , , , , , , , , , , , , , , ,		
1.	,				Hydrophytic			
2.				***************************************	Vegetation	!		
		0	= Total C	over	Present? Yes	✓ No □		
% Bare Ground in Herb Stratum 0.5	COSA MANAGO COSTRACIONAS ANTO							
Remarks: On gentle (4-5%) slope above	ve flowing draina	age - mesic	•					
						!		



SOIL				P	roject/Site	e: Black	Butte Co	pper	Sampling Point: BBT3-U1
Profile Desc	cription: (Describ	e to the dep	th needed to d	ocumen	the indi	cator or	confirm	the al	bsence of indicators.)
Depth	Matrix		Re	dox Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	ıre	Remarks
0-16	7.5YR 2.5/2	100					L		Higher coarse fragments (20-25%) 11-16"
	oncentration, D=De								² Location: PL=Pore Lining, M=Matrix tors for Problematic Hydric Soils ³ :
Histosol (A	\1)		Sandy Redox (S	S5)				2 cr	m Muck (A10)
Histic Epip	pedon (A2)		Stripped Matrix	(S6)				Rec	d Parent Material (TF2)
Black Hist	• •		Loamy Mucky M		(except MI	_RA 1)		Ver	y Shallow Dark Surface (TF12)
-	Sulfide (A4)		Loamy Gleyed N	, ,			L	Oth	er (Explain in Remarks)
	Below Dark Surface (k Surface (A12)	A11)	Depleted Matrix				3	Indica	ators of hydrophytic vegetation and
	cky Mineral (S1)	L	Redox Dark Sur Depleted Dark S	, ,	'				tland hydrology must be present,
	yed Matrix (S4)		Redox Depressi	•	,				ess disturbed or problematic.
	Layer (if present)	:							
Type:	, , ,								
Depth (inche	es):		-				Hydi	ric So	il Present? Yes ✔ No
<u> </u>		6" lacking d	enleted or aleve	ed matrix	May me	et indica	tor A12 a	t area	ter depth. NRCS mapping lists soil un
HYDROLOG	501B Manixlee-Clu								
Wetland Hv	drology Indicator	's:							
i -	cators (minimum o		ed: check all tha	t apply)				Seco	ondary Indicators (2 or more required)
Surface W					ves (B9) (e	vcent			Vater-Stained Leaves (B9) (MLRA 1, 2,
	r Table (A2)			A 1, 2, 4A,		xcept		v	4A, and 4B)
Saturatio	· ·			ıst (B11)				Пр	Prainage Patterns (B10)
Water Mar	ks (B1)		Aquatic	Invertebra	tes (B13)				ery-Season Water Table (C2)
Sediment	Deposits (B2)		Hydroge	en Sulfide (Odor (C1)			s	aturation Visible on Aerial Imagery (C9)
Drift Depo			=	•	eres along	·	ots (C3)	✓ G	Seomorphic Position (D2)
	or Crust (B4)				ced Iron (C	•			hallow Aquitard (D3)
Iron Depos	oil Cracks (B6)				tion in Tille d Plants (D	•	•	\equiv	AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
	∪ Visible on Aerial Ima	gery (B7)		Explain in F	•	(LIXIX P	٦)		rost-Heave Hummocks (D7)
	egetated Concave S	. ,		-xpiair iii i	iomarko,			∵	reave Hammooks (B1)
Field Obser	vations:								
Surface Wat		es 🗌 No 🔽	Depth (inche	es):					
Water Table	Present? Y	es 🗌 No 🔽	_	es):					
<u> </u>	pillary fringe)	es 🗌 No 🔽							ology Present? Yes No
Describe Re	corded Data (strea	am gauge, m	onitoring well, a	erial phot	os, previo	ous inspe	ections), i	if avail	lable:
Remarks: S	lope above flowing	drainage (4	-5%), so geomo	rphic pos	ition is m	arginal.			



Project/Site: Black Butte Copper		C	ity/County	: White St	Ilphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-U1
Investigator(s): D. Barton, K. Scow		5	Section, To	wnship, R	ange: S30, T12N, R7E	\
Landform: ridge - hydraulic tailings		L	ocal relief	(concave,	convex, none): undulatir	ng Slope (%): 2-5
Subregion (LRR): E		 Lat: 46.	7722123		Long: -110.8926498	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-N	lonaberg				NWI classific	
Are climatic/hydrologic conditions on th		I for this time o	f vear? Y	es 🗸 No	(If no, explain in Re	
Are Vegetation , Soil , or Hydrolog						present? Yes ☐ No ✓
·		-			eeded, explain any answ	
Are Vegetation , Soil , or Hydrolog SUMMARY OF FINDINGS – Attac				•	, ,	,
Hydrophytic Vegetation Present?		No 🗸				
Hydric Soil Present? Wetland Hydrology Present?	Yes	No 🗸		he Sampl hin a Wetl		No 🗹
Remarks: Musk thistle weed patch on		***	lly disturbe	ed site. Ph	otographs: KS 1499-150	2 (N to W)
remarks. Wask thistic weed pater on	riyaraano ta	iiings, mstorica	ny distant	ca site. I II	otographis. No 1405-1002	2 (IV to VV)
VEGETATION - Use scientific na	mes of ni	ante				
VEGETATION – Use scientific ha	ines or pro	Absolute	Dominant	Indicator	Dominance Test Worl	zahanti
Tree Stratum (Plot size: NA)		Species?		Number of Dominant S	
1.					That Are OBL, FACW,	
2					Total Number of Domin	nant
3			****		Species Across All Stra	
4.					Percent of Dominant S	necies
Sapling/Shrub Stratum (Plot size: 0.0	1 acre	0	_ = Total (Cover	That Are OBL, FACW,	or, FAC: 50 (A/B)
4 4 4		4		(UPL)	Prevalence Index Wor	
2					Total % Cover of:	
3				·	OBL Species	x 1 =
4					FACW Species	
5						4 x 3 = 282 5 x 4 = 6
		4	= Total (Cover	FACU Species 1. UPL Species 8	202200000000000000000000000000000000000
Herb Stratum (Plot size: 0.01 acre)			=40	Column Totals: 184.	
1. Poa pratensis		86	X	FAC	The bodge introduction of	
Carduus nutans Cirsium arvense		<u>84</u> 8	X	UPL FAC	Prevalence Index ((B/A) = <u>3.97</u>
				FACU	Hydrophytic Vegetation	
Silene latifolia				(UPL)	1 - Rapid Test for Hydr	
6. Achillea millefolium		· · · · · · · · · · · · · · · · · · ·		FACU	2 - Dominance Test is	
7.					3 - Prevalence Index is	
8.						otations¹ (Provide supporting r on a separate sheet)
9.					5 - Wetland Non-Vasc	ular Plants¹
10.					Problematic Hydrophyt	tic Vegetation¹ (Explain)
11						d wetland hydrology must be
			= Total (Cover	present, unless disturbed of	or problematic.
)					
1.				***************************************	Hydrophytic	
2					Vegetation Present? Yes	□ No ✓
% Bare Ground in Herb Stratum		0	= Total (Jover	1.030111: 103	_ NO Œ
Remarks:					i	The state of the s
i Ciliains.						



SOIL			Project/Site: Blac	ck Butte Co	pper Sampling Point: LS-U1	
Profile Desc	cription: (Desci	ibe to the d	epth needed to document the indicator of	or confirm	the absence of indicators.)	
Depth	Matrix		Redox Features		,	
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc²	Textu	ire Remarks	
0-16	7.5YR 4/1	100		SL		
	7.511(4/1				- Course gravers	

¹Type: C=Co	oncentration, D=	Depletion, R	M=Reduced Matrix, CS=Covered or Coated	d Sand Gra	ins ² Location: PL=Pore Lining, M=Mat	rix
Hydric Soil	Indicators (App	olicable to a	II LRRs, unless otherwise noted.):	1	ndicators for Problematic Hydric Soils	3:
Histosol (A	A1)		Sandy Redox (S5)		2 cm Muck (A10)	
Histic Epip	pedon (A2)		Stripped Matrix (S6)		Red Parent Material (TF2)	
Black Hist	ic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1)	Ī	Very Shallow Dark Surface (TF12)	
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)	Ī	Other (Explain in Remarks)	
	Below Dark Surfac	e (A11)	Depleted Matrix (F3)	_	_ , ,	
	k Surface (A12)	. ,	Redox Dark Surface (F6)	3	Indicators of hydrophytic vegetation and	
	cky Mineral (S1)		Depleted Dark Surface (F7)		wetland hydrology must be present,	
	eyed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.	
	Layer (if preser	nt).	Land Control of the C			AND THE REAL PROPERTY.
Type:	_a, c. (p. ccc.	,.				
				وامدرانا	sia Sail Dragant2 Van 🗆 Na 📝	
Depth (inche					ric Soil Present? Yes No 🗸	
			e & chroma for depleted matrix, but lacking			
			escribes unit (1150C, Bischoff-Monaberg) a	s predomin	antly non-hydric (hydric soils are 15% of	map
uı	nit). Historic hyd	raulic mining	area?			
,						
HYDROLOG	ΒΥ					
Wetland Hy	drology Indicat	ors:				
-			ired; check all that apply)		Secondary Indicators (2 or more require	ed)
			process			
Surface W			Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,	
	er Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)	
Saturatio	` '		Salt Crust (B11)		Drainage Patterns (B10)	
Water Mar	• •		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)	
Sediment	Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)	
Drift Depo:			Oxidized Rhizospheres along Living I	Roots (C3)	Geomorphic Position (D2)	
Algal Mat	or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)	
Iron Depos	sits (B5)		Recent Iron Reduction in Tilled Soils	(C6)	FAC-Neutral Test (D5)	
Surface So	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LRF	R A)	Raised Ant Mounds (D6) (LRR A)	
Inundation	Visible on Aerial I	magery (B7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)	
☐ Sparsely \	egetated Concave	Surface (B8)				
Field Obser	vations:					
Surface Wat	ter Present?	Yes No	✓ Depth (inches):			
Water Table	Present?	Yes No	✓ Depth (inches):			
Saturation P	resent?		Depth (inches):	Wetland I	Hydrology Present? Yes 🔲 No 🗸	•]
(includes cap	pillary fringe)	,				
Describe Re	corded Data (st	eam gauge,	monitoring well, aerial photos, previous ins	pections), i	f available:	
		- 1				
Remarks:						



Project/Site: Black Butte Copper		Ci	ty/County:	White Su	lphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-U2
Investigator(s): D. Barton, K. Scow		s	ection, To	wnship, R	ange: S30, T12N, R7E	
Landform: terrace		L	ocal relief	(concave,	convex, none): none	Slope (%): 0-1
Subregion (LRR): E	L	at: 46.	7716348		Long: -110.8888051	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Monaberg					NWI classifi	cation: UPL
Are climatic/hydrologic conditions on the site type	ical for this	time of	f year? Ye	es 🗸 No	(If no, explain in Re	marks.)
Are Vegetation , Soil , or Hydrology sig	nificantly di	sturbed	! ?	Are	"Normal Circumstances"	present? Yes 🗸 No
Are Vegetation . Soil . or Hydrology . na					eeded, explain any answ	
SUMMARY OF FINDINGS – Attach site r	• •					
Hydrophytic Vegetation Present? Yes ✓ Hydric Soil Present? Yes ☐ Wetland Hydrology Present? Yes ☐	No ☑ No ☑ No ☑			ne Sample nin a Wetl		No 🗹
Remarks: Photographs: KS 1467-1470 (N to V	<i>(</i>)	SALES CONTRACTOR CONTRACTOR	THE THE PETER TH			
VEGETATION – Use scientific names of		osolute	Dominant	Indicator	Dominance Test Wor	la basti
Tree Stratum (Plot size: NA)			Species?	Status	Number of Dominant S	
1.					That Are OBL, FACW,	
2.			***************************************		Total Number of Domir	nant
3.					Species Across All Stra	ata: 2 (B)
4		0	= Total (Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre)	_			Prevalence Index Wo	
Dasiphora fruticosa				FAC	Total % Cover of:	
2				THE IN STREET WILLIAMS	OBL Species	x 1 =
3.				And I I I I I May I Will college II Therein.	·	0 x 2 = 20
5.					FAC Species 18	2 x 3 = 546
	AND ARRANGE AND ARRANGE AND THE REAL PROPERTY AND ARRANGE AND ARRA	2	= Total 0	Cover	FACU Species 3	66 x 4 = 144
Herb Stratum (Plot size: 0.01 acre)	1 Mariant	STATE OF THE PERSON NAMED IN THE			UPL Species	x 5 =
1. Phleum pratense		70	X	FAC	Column Totals: 22	8 (A) 710 (B)
2. Poa pratensis		65	X	FAC	Prevalence Index	(B/A) = 3.11
3. Taraxacum officinale		28		FACU	Hydrophytic Vegetati	on Indicators:
4. Potentilla gracilis		18		FAC	1 - Rapid Test for Hyd	
5. Cirsium arvense		14		FAC	✓ 2 - Dominance Test is	>50%
6. Solidago canadensis var. salebrosa		12		FAC	3 - Prevalence Index is	s ≤3.0¹
7. Juncus balticus		^		FACW		ptations¹ (Provide supporting
8. Fragaria virginiana				FACU FAC	5 - Wetland Non-Vasc	r on a separate sheet)
9. Zizia aptera				170		tic Vegetation¹ (Explain)
10. 11.					1	nd wetland hydrology must be
		226	= Total C	Cover	present, unless disturbed of	
Woody Vine Stratum (Plot size: NA	_)					
1					Hydrophytic	
2					Vegetation	
% Bare Ground in Herb Stratum	on the same of the	0	_ = Total 0	Cover	Present? Yes	✓ No L
Remarks: Vegetation meets the Dominance Te The PI and professional judgment in						s the Prevalence Index (PI).



SOIL				Project	/Site: Black	Butte Coppe	er Sampling Point: LS-U2
Profile Des	cription: (Describ	e to the de	pth needed to d	ocument the i	ndicator or	confirm the	absence of indicators.)
Depth	Matrix		Re	dox Features		-	
(inches)	Color (moist)	%	Color (moist)	% Type	e¹ Loc²	Texture	Remarks
0-16	10YR 2/1	100				SiCL	

							45-95-95-95-95-95-95-95-95-95-95-95-95-95

¹Type: C=C	oncentration, D=D	epletion, RM	l=Reduced Matri	x, CS=Covered	or Coated	Sand Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appli	cable to all	LRRs, unless of	therwise note	d.):	Indi	icators for Problematic Hydric Soils³:
Histosol (41)		Sandy Redox (S	S5)			2 cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix	(S6)			Red Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky M	lineral (F1) (excer	ot MLRA 1)		Very Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed N	Matrix (F2)			Other (Explain in Remarks)
	Below Dark Surface (A11)	Depleted Matrix	(F3)			
	k Surface (A12)	Ļ	Redox Dark Sur				icators of hydrophytic vegetation and wetland hydrology must be present,
	icky Mineral (S1)	Ļ	Depleted Dark S				unless disturbed or problematic.
	eyed Matrix (S4)			ons (F8)			
1	Layer (if present)	:					
Type:			_				
Depth (inche				**************************************			Soil Present? Yes No 🗸
							soil at greater depth (indicator A12). Soil
u	nit (1150C Bischot	t-Monaberg)	is caegorized a	s predominanti	y non-hydric	: (15% hydric	soil component) by NRCS.
Ĺ							
HYDROLO	GY						
Wetland Hy	drology Indicato	rs:			***************************************		
-	cators (minimum		ed; check all tha	t apply)		Se	econdary Indicators (2 or more required)
					0) (ayaant		1
Surface W	er Table (A2)			Stained Leaves (B A 1, 2, 4A, and 4		L	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation	` '		_	n, 2, 4n, and 41 est (B11)	-)		Drainage Patterns (B10)
Water Ma	• •			Invertebrates (B1	3)		Dry-Season Water Table (C2)
(managed)	Deposits (B2)			en Sulfide Odor (C	•		Saturation Visible on Aerial Imagery (C9)
Drift Depo				d Rhizospheres a	•	oots (C3)	Geomorphic Position (D2)
[manual	or Crust (B4)		Presenc	e of Reduced Iron	n (C4)		Shallow Aquitard (D3)
Iron Depo	sits (B5)		Recent	Iron Reduction in	Tilled Soils (C	(6)	FAC-Neutral Test (D5)
Surface S	oil Cracks (B6)		Stunted	or Stressed Plant	ts (D1) (LRR A	A)	Raised Ant Mounds (D6) (LRR A)
Inundation	r Visible on Aerial Ima	agery (B7)	Other (E	Explain in Remark	s)		Frost-Heave Hummocks (D7)
Sparsely \	egetated Concave S	urface (B8)				~~	
Field Obser	vations:						
Surface Wa	ter Present? Y	es 📙 No 🛚		es):			
Water Table		es 🗌 No 🛚	_ · ·				
Saturation F	resent? Y pillary fringe)	es 🗌 No 🛚	✓ Depth (inche	es):	\	Wetland Hyd	drology Present? Yes ☐ No ✓
	corded Data (stre	am gauge m	nonitoring well a	erial photos pr	evious inspe	ections) if a	vailable:
20001100110		gaago, II	Hom, a	p.,, pi	o nous mopt	- chons, ii ai	· william (o)
Remarks: N	licro-undulations is	surface by	it would not defin	ne se hummool	e No field a	hearvations	of primary indicators of wetland
	ydrology.	, Juliaut, Dl	it would not delif	io ao manimpok	ITO HEIU C	, Doci ValiUIIS	or primary indicators or wetlatio
	. ••						



Project/Site: Black Butte Copper			Ci	ty/County:	White Su	ulphur Springs/Meagher Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources						State: MT Sampling Point: LS-U3
Investigator(s): D. Barton, K. Scow			S	Section, To	wnship, R	ange: S30, T12N, R7E
Landform: terrace						convex, none): convex Slope (%): 3-6
Subregion (LRR): E				7716089	,	Long: -110.886528 Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-	Monahera			1710000		NWI classification: UPL
Are climatic/hydrologic conditions on t		al for	thic time o	fyoor? V	oc Me	□ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrold						"Normal Circumstances" present? Yes ✔ No
Are Vegetation . Soil , or Hydrold			•			
					•	eeded, explain any answers in Remarks.) ations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes 🗸	No [
Hydric Soil Present?	Yes	No		İst	he Sample	ed Area
Wetland Hydrology Present?	Yes	No		witl	nin a Wetl	and? Yes ☐ No ✔
Remarks: Photographs: KS 1511-15	14 (N to W)					ACTION OF THE PROPERTY OF THE
VEGETATION - Use scientific n	ames of pl	ants	•			
			Absolute		Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA)			Species?	Status	Number of Dominant Species
1.						That Are OBL, FACW, or, FAC:1 (A)
2.					AMERICAN TO A SECRET COMMERCIAL	Total Number of Dominant
3. A STATE OF THE	Charles for the Management of the Contraction of th		Mari in annual management		TO THE CAMPBELL OF THE CONTRACTOR	Species Across All Strata: 1 (B)
4.	elementary of the transfer index transfer transfer elementary	TO THE PARTY OF TH	0	= Total (Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)		_ = 10tar (Jovei	That Are OBL, FACW, or, FAC:100 (A/B)
4. Designations for the second		. /	4		FAC	Prevalence Index Worksheet:
2.			THE CONTRACT MENT OF THE PERSON NAMED IN	THE PERSON OF TH	The second second second second	Total % Cover of: Multiply by:
3.					MARKATURA ATRA DATE DATE	OBL Species x 1 =
4					TO BEET WINE EXTENSION TO A STANDARD	FACW Species 2 x 2 = 4
5						FAC Species 88 x 3 = 264
			4	_ = Total (Cover	FACU Species 24 x 4 = 96
Herb Stratum (Plot size: 0.01 acre)					UPL Species 28 x 5 = 140 Column Totals: 142 (A) 504 (B)
1. Poa pratensis			72	X	FAC	acatemoralisation of the control of
2. Poa secunda			12		FACU	Prevalence Index (B/A) = 3.55
3. Pyrrocoma integrifolia			12		(UPL)	Hydrophytic Vegetation Indicators:
Solidago missouriensis Oxytropis splendens			10		(UPL) FAC	1 - Rapid Test for Hydrophytic Vegetation
Symphyotrichum ascendens			6		FACU	✓ 2 - Dominance Test is >50%
7 Agranuran amithii			4		FACU	3 - Prevalence Index is ≤3.0¹
8. Agropyron trachycaulum			3		FAC	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9. Antennaria microphylla			3		(UPL)	5 - Wetland Non-Vascular Plants ¹
10. Deschampsia cespitosa			2		FACW	Problematic Hydrophytic Vegetation¹ (Explain)
11. Koeleria macrantha			2	Mary Lat Markett - Cartin an Abadeal School	(UPL)	¹Indicators of hydric soil and wetland hydrology must be
			138	_ = Total (Cover	present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)					
1						Hydrophytic
2						Vegetation Present? Yes ✓ No □
% Bare Ground in Herb Stratum			0	_ = Total (Jover	, resent: 100 E NO
	inance Test	india	ating the	ite ac hyd	ronhytic	However, vegetation fails the Prevalence Index (PI).
The PI and professional ju						
			•			



SOIL				F	roject/Site	e: <u>Black B</u>	Butte Co	opper Sampling Point: LS-U3
Profile Des	cription: (Describ	e to the dept	h needed t	o documen	t the indi	cator or o	onfirm	the absence of indicators.)
Depth	Matrix			Redox Featu	res			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Textu	ure Remarks
0-16	7.5YR 3/2	100			***************************************		SiC	L
The same of the sa								

					·			
¹Type: C=C	oncentration, D=De	epletion, RM=I	Reduced M	atrix, CS=C	overed or	Coated S	and Gra	ains ² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appli	cable to all L	RRs, unles	s otherwise	e noted.):		1	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redo					2 cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Ma					Red Parent Material (TF2)
Black His	tic (A3)		Loamy Muck	y Mineral (F1)	(except Mi	-RA 1)		Very Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleye	ed Matrix (F2)				Other (Explain in Remarks)
Depleted	Below Dark Surface (A11) 📙	Depleted Ma				_	
==	k Surface (A12)			Surface (F6)			3	Indicators of hydrophytic vegetation and
	ucky Mineral (S1)	닐		rk Surface (F	7)			wetland hydrology must be present, unless disturbed or problematic.
	eyed Matrix (S4)		Redox Depre	essions (F8)		~~~~		arriode distarbed of problematic.
	Layer (if present)	:						
Type:								
Depth (inch	es):						Hydi	ric Soil Present? Yes No 🗸
	1150C, Bischoff-Mo	onaperg) as pi	edominanti	y non-nyark	c (nyaric s	olls are 1	5% of m	nap unit).
HYDROLO	GY							
Wetland Hy	drology Indicator	'S:	·					
1	icators (minimum c		check all	that apply)				Secondary Indicators (2 or more required)

Surface V				er-Stained Lea		xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
Saturation	er Table (A2)		,	ILRA 1, 2, 4A, Crust (B11)	and 46)			4A, and 4B)
Water Ma	` '		=	atic Invertebra	tae (R13)			Drainage Patterns (B10) Dry-Season Water Table (C2)
	Deposits (B2)			ogen Sulfide	, ,			Saturation Visible on Aerial Imagery (C9)
Drift Depo	` ',			ized Rhizosph		Livina Roo	ts (C3)	Geomorphic Position (D2)
	or Crust (B4)			ence of Redu			10 (00)	Shallow Aguitard (D3)
Iron Depo	, ,		promoterna	ent Iron Reduc)	FAC-Neutral Test (D5)
Surface S	oil Cracks (B6)			ted or Stresse		•	•	Raised Ant Mounds (D6) (LRR A)
Inundation	n Visible on Aerial Ima	igery (B7)	Othe	r (Explain in F	Remarks)			Frost-Heave Hummocks (D7)
Sparsely \	Vegetated Concave S	urface (B8)						
Field Obse	rvations:							7/2/2014/04/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/2014/04/04/04/04/04/04/04/04/04/04/04/04/04
Surface Wa	ter Present? Y	es 🗌 No 🗹	Depth (inc	ches):				
Water Table	Present? Y	es 🗌 No 🗹	Depth (inc	ches):				
Saturation F (includes ca	Present? Y pillary fringe)	es 🗌 No 🗹	Depth (inc	ches):		w	etland l	Hydrology Present? Yes ☐ No 🗹
Describe Re	corded Data (strea	am gauge, mo	nitoring wel	l, aerial pho	tos, previo	us inspec	ctions), i	if available:
Remarks: P	lot is approximatel	y 40' from the	drainage b	ottom.				



Project/Site: Black Butte Copper		C	ity/County:	White Su	lphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-U4
Investigator(s): K. Scow			Section, To	wnship, R	ange: S30, T12N, R7E	
Landform: tarraca					convex, none): none	Slope (%): 1-2
Subregion (LRR): E		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.7719959		Long: -110.8852916	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-M	onaberg				NWI classific	
Are climatic/hydrologic conditions on the		r this time c	of vear? Ve	se 🕡 No		
Are Vegetation . Soil , or Hydrolog			•			<u> </u>
		-				present? Yes No
Are Vegetation , Soil , or Hydrolog SUMMARY OF FINDINGS – Attac					eeded, explain any answ	
		,	P3 F			
Hydrophytic Vegetation Present? Hydric Soil Present?			ls th	ne Sample	ed Area	
Wetland Hydrology Present?		V		in a Wetl		No 🗸
Remarks: Hay meadow (composition s	severely altered	d) with wetla	and elemen	ts. Does r	not meet wetland hydrolog	gv. Photographs: KS
1444-1447 (N to W)		.,			,,	gyr / Here graphier tre
VEGETATION - Use scientific na	mes of plant	s.				
		Absolute	Dominant	Indicator	Dominance Test Worl	ksheet:
Tree Stratum (Plot size: NA)	% Cover		Status	Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC: (A)
2					Total Number of Domir	iant
3.					Species Across All Stra	ata: 2 (B)
4					Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: NA	,	0	= Total C	over	That Are OBL, FACW,	or, FAC: 100 (A/B)
					Prevalence Index Wo	rksheet:
1. 2.					Total % Cover of:	Multiply by:
3.					OBL Species 1	2 x 1 = 12
4.					FACW Species	The Control of the Co
5.					FAC Species 15	
		0	= Total C	Cover	FACU Species	
Herb Stratum (Plot size: 0.01 acre)				UPL Species	x 5 =
1. Phleum pratense		68	X	FAC	Column Totals: 17	8 (A) 504 (B)
l .			X	FAC	Prevalence Index	(B/A) = <u>2.83</u>
				FAC	Hydrophytic Vegetation	on Indicators:
4. Potentilla anserina		12		OBL	1 - Rapid Test for Hydi	ophytic Vegetation
5. Schedonorus arundinaceus		12		FAC	✓ 2 - Dominance Test is	>50%
		3		FAC FACW	✓ 3 - Prevalence Index is	
7. Symphyotrichum subspicatum 8. Carex praegracilis		· · · · · · · · · · · · · · · · · · ·		FACW	4 - Morphological Adap	otations¹ (Provide supporting r on a separate sheet)
O Junava haltiava				FACW	5 - Wetland Non-Vasc	• •
40 7:01:				FACU		tic Vegetation¹ (Explain)
11					1	d wetland hydrology must be
		178	= Total C	over	present, unless disturbed of	
Woody Vine Stratum (Plot size: NA)				*	
1			****		Hydrophytic	!
2					Vegetation	
9/ Baro Ground in Hosh Stratum		0	_ = Total C	over	Present? Yes	✓ No □
% Bare Ground in Herb Stratum		allane -	TORREST CONTRACTOR OF THE PROPERTY OF THE PROP		<u> </u>	
Remarks: Site is hay meadow - compo	sition severely	anered.				
						•
						1



				Project/Site	e: Black Bu	itte Copper	Sampling Point: LS-U4
Profile Des	scription: (Descril	e to the dept	h needed to do				absence of indicators.)
Depth	Matrix		Redo	ox Features			·
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks
0-16	10YR 2/1	100				SiCL	
		· 					

¹Type: C=C	Concentration, D=D	epletion, RM=	Reduced Matrix,	CS=Covered or	Coated Sar	nd Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indicators (Appl	icable to all L	RRs, unless ot	herwise noted.):		Indic	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5	•		2	cm Muck (A10)
	pipedon (A2)		Stripped Matrix (S	•			ed Parent Material (TF2)
Black His	` '			eral (F1) (except MI	-RA 1)		ery Shallow Dark Surface (TF12)
	n Sulfide (A4)	📙	Loamy Gleyed Ma	. ,		□ 0	ther (Explain in Remarks)
= :	Below Dark Surface	(A11)	Depleted Matrix (I			31ndia	cators of hydrophytic vegetation and
	rk Surface (A12) lucky Mineral (S1)		Redox Dark Surfa Depleted Dark Su	` '			etland hydrology must be present,
	leyed Matrix (S4)	H	Redox Depression				nless disturbed or problematic.
	Layer (if present	<u> </u>	redux Depression				
Type:	- Lay 0. (11 p. 000110	,.					
Depth (inch						Hydric S	oil Present? Yes ☐ No 🗸
i	163).					11yuno o	on resent: 163 Ro @_
Remarks:							
HYDROLO)GY						
	JGY ydrology Indicato	rs:					
Wetland H			d; check all that	apply)		Sec	condary Indicators (2 or more required)
Wetland Hy	ydrology Indicato			apply)	xcept	· · · · · · · · · · · · · · · · · · ·	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Ind	ydrology Indicato dicators (minimum		Water-Sta		xcept	· · · · · · · · · · · · · · · · · · ·	
Wetland Hy Primary Ind	ydrology Indicato licators (minimum o Water (A1) ter Table (A2)		Water-Sta	ained Leaves (B9) (e 1, 2, 4A, and 4B)	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary Ind Surface W High Wat	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3)		Water-Sta MLRA Salt Crust	ained Leaves (B9) (e 1, 2, 4A, and 4B)	xcept		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary Ind Surface W High Wat Saturati Water Ma Sediment	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2)		Water-Sta MLRA Salt Crust Aquatic Ir	ained Leaves (B9) (e 1, 2, 4A, and 4B) (B11) evertebrates (B13) Sulfide Odor (C1)	·		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sedimen Drift Depo	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3)		Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized	sined Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along	Living Roots	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sedimen Drift Depu	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence	sined Leaves (B9) (e 1, 2, 4A, and 4B) (B11) (vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4)	· Living Roots 4)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Iro	sined Leaves (B9) (e 1, 2, 4A, and 4B) (B11) (vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (Con Reduction in Tille	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	of one required	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ird Stunted o	ained Leaves (B9) (e 1, 2, 4A, and 4B) (B11) avertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im-	of one required	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ird Stunted o	sined Leaves (B9) (e 1, 2, 4A, and 4B) (B11) (vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (Con Reduction in Tille	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im- Vegetated Concave S	of one required	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ird Stunted o	ained Leaves (B9) (e 1, 2, 4A, and 4B) (B11) avertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mate Iron Depo Surface S Inundatio Sparsely Field Obse	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im- Vegetated Concave Servations:	of one required agery (B7) Surface (B8)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ird Stunted o Other (Ex	ained Leaves (B9) (e 1, 2, 4A, and 4B) (B11) evertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D plain in Remarks)	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present?	agery (B7) Surface (B8)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex	nined Leaves (B9) (e 1, 2, 4A, and 4B) (B11) Ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D plain in Remarks)	Living Roots ‡) d Soils (C6)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Water Table	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present?	agery (B7) Surface (B8) Yes \(\sum \) No \(\vec \)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irc Stunted o Other (Ex	sined Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) avertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D plain in Remarks)	Living Roots I) d Soils (C6) 1) (LRR A)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present?	agery (B7) Surface (B8)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Irc Stunted o Other (Ex	sined Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) avertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille r Stressed Plants (D plain in Remarks)	Living Roots I) d Soils (C6) 1) (LRR A)	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary Ind Surface N High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes ca	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im- Vegetated Concave Servations: ater Present?	agery (B7) Surface (B8) Yes \(\sum \) No \(\sum \) Yes \(\sum \) No \(\sum \)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inches Depth (inches	ained Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) Ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille tr Stressed Plants (D plain in Remarks)):):):	Living Roots 4) d Soils (C6) 1) (LRR A) Wef	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface N High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes ca	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present? Present?	agery (B7) Surface (B8) Yes \(\sum \) No \(\sum \) Yes \(\sum \) No \(\sum \)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inches Depth (inches	ained Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) Ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille tr Stressed Plants (D plain in Remarks)):):):	Living Roots 4) d Soils (C6) 1) (LRR A) Wef	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface N High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Water Table Saturation I (includes ca	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present? Present?	agery (B7) Surface (B8) Yes \(\sum \) No \(\sum \) Yes \(\sum \) No \(\sum \)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inches Depth (inches	ained Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) Ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille tr Stressed Plants (D plain in Remarks)):):):	Living Roots 4) d Soils (C6) 1) (LRR A) Wef	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary Ind Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse Surface Wa Water Table Saturation I (includes ca Describe Re	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Im Vegetated Concave Servations: ater Present? Present?	agery (B7) Surface (B8) Yes \(\sum \) No \(\sum \) Yes \(\sum \) No \(\sum \)	Water-Sta MLRA Salt Crust Aquatic Ir Hydrogen Oxidized Presence Recent Ir Stunted o Other (Ex Depth (inches Depth (inches	ained Leaves (B9) (e 1, 2, 4A, and 4B) t (B11) Ivertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4 on Reduction in Tille tr Stressed Plants (D plain in Remarks)):):):	Living Roots 4) d Soils (C6) 1) (LRR A) Wef	(C3) V	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Black Butte Copper		Cit	ty/County	/: White Su	Iphur Springs/Meagher	Sampling Dat	e: 09-02-	-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Poi	nt: LS-U5	
Investigator(s): K. Scow, D. Barton		S	ection, T	ownship, R	ange: S29, T12N, R7E			
Landform: terrace				•	convex, none): concave	S	Slope (%)	: 1-2
Subregion (LRR): E		*******	7707091	•	Long: -110.8818339		atum: WG	
1	Ionahara	Lat. 40.	7707031				ituiii. VVC	
Soil Map Unit Name: 1150C Bischoff-N	<u>_</u>			/ [] N	NWI classific	***************************************		
Are climatic/hydrologic conditions on the								
Are Vegetation, Soil, or Hydrolog					"Normal Circumstances"	•		
Are Vegetation , Soil , or Hydrolog					eeded, explain any answ			
SUMMARY OF FINDINGS – Attac	n site map	showing sa	mpling	point loca	ations, transects, imp	portant feati	ures, etc	C.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes N	lo _ lo _ lo _		the Sample thin a Wetl	provency	No 🗹		
Remarks: Photograph: KS 1483-1486	(N to W)							
VEGETATION – Use scientific na	mes of plar							
Tree Stratum (Plot size: NA)	Absolute % Cover		t Indicator Status	Dominance Test Worl			
1.			<u> </u>		Number of Dominant S That Are OBL, FACW,	or. FAC:	4	(A)
2.					Total Number of Domir	***************************************		. ` .
3.					Species Across All Stra		4	(B)
4				B. W. of Section and Co. Section Black Co.				
			= Total	Cover	Percent of Dominant S That Are OBL, FACW,		100	(A/B)
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)				Prevalence Index Wor			
Dasiphora fruticosa		42	X	FAC	Total % Cover of:		iply by:	!
2								-
3			described interiors and inscharge de		1	8 x 1 = 5 x 2 =	18 50	
4						2 x 3 =	486	
5				the framework and assessment and		2 x 4 =	8	
Harb Stratum (Plot airo: 0.01 aara	\	42	_ = Total	Cover		4 x 5 =	20	
Herb Stratum (Plot size: 0.01 acre)	70	v	FAC	Column Totals: 21		582	(B)
Poa pratensis Carex praegracilis			X	FACW				
3. Cirsium arvense		20	x	FAC	Prevalence Index	. , , , , , , , , , , , , , , , , , , ,		
4. Potentilla anserina		18		OBL	Hydrophytic Vegetation			
5. Zizia aptera	ingeneration hand I handle van de die Transie de Wie dere van de and authorité de des les actives de des les d	16		FAC	1 - Rapid Test for Hydr✓ 2 - Dominance Test is		on	
6. Phleum pratense		10		FAC	✓ 3 - Prevalence Index is			
7. Antennaria microphylla		4		(UPL)	4 - Morphological Adap		o cupportir	\a
8. Potentilla gracilis		3		FAC	data in Remarks of			ig
9. Symphyotrichum subspicatum		3		FACW	5 - Wetland Non-Vasc	ular Plants¹		
10. Juncus balticus		2		FACW	Problematic Hydrophy	tic Vegetation¹ (E	xplain)	
11. Taraxacum officinale		2		FACU	¹Indicators of hydric soil an		logy must	be
		169	= Total	Cover	present, unless disturbed of	or problematic.		
Woody Vine Stratum (Plot size: NA)				i I			
1					Hydrophytic			
2					Vegetation Present? Yes	✓ No		
% Bare Ground in Herb Stratum 1		0	_ = Total	Cover	i resent: 165	<u>~</u> 140	LJ	
Remarks:								



SOIL				Р	roject/Site	e: Black Bu	utte Copp	per Sampling Point: LS-U5
Profile Descript	ion: (Describ	e to the de	epth needed to d	ocumen	t the indi	cator or co	onfirm th	e absence of indicators.)
Depth	Matrix		Red	dox Featur	es			
(inches) C	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-16	10YR 2/1	100					CL	
¹Type: C=Conce	ntration D=De	nletion Ri	M=Reduced Matrix	/ CS=Cr	wered or	Coated Sa	nd Grains	s ² Location: PL=Pore Lining, M=Matrix
			II LRRs, unless o	<u> </u>				dicators for Problematic Hydric Soils ³ :
Histosol (A1)	cators (Appli	cable to a	Sandy Redox (S		, notea.,.			2 cm Muck (A10)
Histic Epipedor	n (Δ2)		Stripped Matrix (•			님	Red Parent Material (TF2)
Black Histic (A:	• •		Loamy Mucky M		(except MI	RA 1)	H	Very Shallow Dark Surface (TF12)
Hydrogen Sulfic	•		Loamy Gleyed N	, ,	(CXCCPt WIL	_,,,	H	Other (Explain in Remarks)
	v Dark Surface (/	A11)	Depleted Matrix	, ,				Caro. (Explain in Normance)
Thick Dark Sur	•	,	Redox Dark Sur				³Ind	dicators of hydrophytic vegetation and
Sandy Mucky M	, ,		Depleted Dark S	, ,	')			wetland hydrology must be present,
Sandy Gleyed I			Redox Depressi	ons (F8)	•			unless disturbed or problematic.
Restrictive Laye	er (if present)	<u> </u>						
Type:								
Depth (inches):							Hydric	Soil Present? Yes ☐ No 🗸
Remarks:								
. tomanto.								
HYDROLOGY							The state of the s	
Wetland Hydrol	ogy Indicator	s:						
Primary Indicato	rs (minimum o	f one requ	ired; check all that	apply)			S	Secondary Indicators (2 or more required)
Surface Water	(A1)		Water-S	tained Lea	ıves (B9) (e	xcent		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Tat	• •			4 1, 2, 4A,		жосрі	L.	4A, and 4B)
Saturation (A	· ·		Salt Cru					Drainage Patterns (B10)
Water Marks (B	,			Invertebra	tes (B13)			Dry-Season Water Table (C2)
Sediment Depo	•			n Sulfide (, ,		Ē	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (I						Living Roots	(C3)	
Algal Mat or Cr	-		pranting		ced Iron (C			Shallow Aquitard (D3)
Iron Deposits (E	35)		Recent I	ron Reduc	tion in Tille	d Soils (C6)		FAC-Neutral Test (D5)
Surface Soil Cr	acks (B6)		Stunted	or Stresse	d Plants (D	1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
Inundation Visit	ole on Aerial Ima	gery (B7)	Other (E	xplain in F	Remarks)			Frost-Heave Hummocks (D7)
Sparsely Veget	ated Concave S	urface (B8)						
Field Observation	ons:							
Surface Water P	resent? Y	es 🗌 No	✓ Depth (inche)	s):		1		
Water Table Pre	sent? Y	es 🗌 No	✓ Depth (inche	s):				
Saturation Prese	nt? Y		✓ Depth (inche	-		We	tland Hy	drology Present? Yes ☐ No 🗹
(includes capillar								
Describe Record	led Data (strea	ım gauge,	monitoring well, a	erial phot	os, previo	ous inspect	ions), if a	vailable:
Remarks: Some	micro-relief, b	ut not hun	nmocky; perhaps o	old remna	ant of prev	vious wetla	nd area.	



Project/Site: Black Butte Copper		Cir	ty/County	: White Su	lphur Springs/Meagher Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U6
Investigator(s): D. Barton, K. Scow		S	ection. To	wnship. Ra	ange: S29, T12N, R7E
Landform: toe slope - terrace edge					convex, none): concave Slope (%): 2-4
Subregion (LRR): E		 Lat: 46.		(0000.0)	Long: -110.8810509 Datum: WGS84
	longhora	Lat. 40.	103031		
Soil Map Unit Name: 1150C Bischoff-M				[a] N-	NWI classification: UPL
Are climatic/hydrologic conditions on the					· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrolog		-			"Normal Circumstances" present? Yes 🗹 No 🗌
Are Vegetation , Soil , or Hydrolog					eeded, explain any answers in Remarks.)
			mpiing	point loca	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ No Yes No No No No No No No No No No No No No	7		he Sample hin a Wetla	
Remarks: Photograph: KS 1435-1438;	1439 nearby sp	ring (N)			
VEGETATION - Use scientific na	mes of plants				
		Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA	'	% Cover		Status	Number of Dominant Species
1.					That Are OBL, FACW, or, FAC:5 (A)
2.		**************************************			Total Number of Dominant
3.					Species Across All Strata: 6 (B)
4				·	Percent of Dominant Species
Carling (Charle Charles (Diet size) 0.04		0	= Total (Cover	That Are OBL, FACW, or, FAC:83 (A/B)
Sapling/Shrub Stratum (Plot size: 0.01 1. Dasiphora fruticosa		42	x	FAC	Prevalence Index Worksheet:
		200222022000000000000000000000000000000	22 122000-1000-00000-1-0	ARREST TO SECURE SERVICE	Total % Cover of: Multiply by:
2.					OBL Species 4 x 1 = 4
3 4					FACW Species 47 x 2 = 94
5.			·		FAC Species 124 x 3 = 372
			= Total (Cover	FACU Species 28 x 4 = 112
Herb Stratum (Plot size: 0.01 acre)				UPL Species 1 x 5 = 5
1. Poa pratensis	'	38	x	FAC	Column Totals: 204 (A) 587 (B)
2. Potentilla gracilis		22	х	FAC	Prevalence Index (B/A) = 2.88
3. Symphyotrichum foliaceum		20	X	FACU	Hydrophytic Vegetation Indicators:
4. Carex praegracilis		16	х	FACW	1 - Rapid Test for Hydrophytic Vegetation
5. Phleum pratense		16	X	FAC	✓ 2 - Dominance Test is >50%
6. Juncus balticus		15		FACW	✓ 3 - Prevalence Index is ≤3.01
7. Symphyotrichum subspicatum		15		FACW	4 - Morphological Adaptations¹ (Provide supporting
8. Fragaria virginiana	·			FACU	data in Remarks or on a separate sheet)
				FAC	5 - Wetland Non-Vascular Plants¹
				OBL	Problematic Hydrophytic Vegetation¹ (Explain)
11. Deschampsia cespitosa				FACW	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA	,	162	= Total (Cover	process, among arctaneous of process and
)				
1 2.					Hydrophytic Vegetation
2.		0	= Total (Cover	Present? Yes 🗹 No
% Bare Ground in Herb Stratum				-5401	
Remarks:			and the second second		L.



ル			Projec			
		be to the dept	h needed to document the	indicator or o	confirm the	absence of indicators.)
Depth	Matrix		Redox Features		T	Bereit
inches)	Color (moist)		Color (moist) % Typ	oe¹ Loc²	Texture	Remarks
0-16	10YR 2/1	100		THE PARTY OF THE P	SiCL	
				***************************************		The second secon
			Reduced Matrix, CS=Covere			² Location: PL=Pore Lining, M=Matri
		icable to all L	RRs, unless otherwise not	ea.):		ators for Problematic Hydric Soils
Histosol (/	•	H	Sandy Redox (S5)			cm Muck (A10)
	pedon (A2)	H	Stripped Matrix (S6)		and the same of	ed Parent Material (TF2)
Black Hist	` '		Loamy Mucky Mineral (F1) (exce	ept MLRA 1)		ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Ot	ther (Explain in Remarks)
•	Below Dark Surface	(A11)	Depleted Matrix (F3)		31	
	k Surface (A12)	닏	Redox Dark Surface (F6)			ators of hydrophytic vegetation and etland hydrology must be present,
-	cky Mineral (S1)		Depleted Dark Surface (F7)			less disturbed or problematic.
Sandy Gle	eyed Matrix (S4)		Redox Depressions (F8)			mode dictarbed of problematio.
strictive	Layer (if present):				
pe:		······································			1	
	ark soil profile wit		or gleyed matrix. Could mee as 'predominantly non-hydric		2 at greater o	oil Present? Yes No 🗹 lepth. NRCS soil mapping describes nap unit).
epth (inche emarks: D u	vark soil profile wit nit (1150C, Bischo	off-Monaberg)			2 at greater o	lepth. NRCS soil mapping describes
epth (inche emarks: D u	ark soil profile wit nit (1150C, Bischo GY drology Indicato	off-Monaberg)			2 at greater c are 15% of m	lepth. NRCS soil mapping describes
epth (inche emarks: D u	ark soil profile wit nit (1150C, Bischo GY drology Indicato cators (minimum o	off-Monaberg)	as ['] predominantly non-hydric	d' (hydric soils	2 at greater care 15% of m	depth. NRCS soil mapping describes nap unit).
emarks: Cu DROLOG etland Hy imary Indi	ark soil profile wit nit (1150C, Bischo GY drology Indicato cators (minimum o	off-Monaberg)	as predominantly non-hydric	b' (hydric soils	2 at greater care 15% of m	lepth. NRCS soil mapping describes nap unit).
emarks: Cu DROLOG etland Hy imary Indi	GY drology Indicato cators (minimum of	off-Monaberg)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (t	b' (hydric soils	2 at greater care 15% of m	depth. NRCS soil mapping describes nap unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2,
DROLOGETIAND IN THE PROPERTY I	GY drology Indicato cators (minimum of dater (A1) er Table (A2) in (A3)	off-Monaberg)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (F	B9) (except	2 at greater care 15% of m	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
DROLOGETIAND WATER TO THE PROPERTY OF THE PROP	GY drology Indicato cators (minimum of later (A1) er Table (A2) erks (B1)	off-Monaberg)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (F MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B	B9) (except 4B)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOGETIAND IN THE SURFACE WATER MANAGEMENT COMMENTS AND THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER MANAGEMENT COMMENTS TO THE SURFACE WATER WATER MANAGEMENT COMMENTS TO THE SURFACE WATER WAT	GY drology Indicato cators (minimum of art (A1) ar Table (A2) on (A3) rks (B1) Deposits (B2)	off-Monaberg)	d; check all that apply) Water-Stained Leaves (F MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B	B9) (except 4B)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
DROLOGETIAND WATER SATURATION WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER MASSED WATER	GY drology Indicato cators (minimum of later (A1) er Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3)	off-Monaberg)	d; check all that apply) Water-Stained Leaves (F MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a	B9) (except 4B) (C1) along Living Roc	Sectors (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
DROLOGETIAND WATER TO ALIGAL MATER TO ALIGAL M	GY drology Indicato cators (minimum of art Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4)	off-Monaberg)	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a	B9) (except 4B) (C1) along Living Rocon (C4)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
DROLOGETIAND PROLOGETIAND HIGH Water Man Sediment Drift Depo	ark soil profile with nit (1150C, Bischood) GY drology Indicato cators (minimum of later (A1) per Table (A2) per (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	off-Monaberg)	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc	B9) (except 4B) (C1) along Living Roc on (C4) n Tilled Soils (C6	Seconds (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
DROLOGETIAND AND SURFACE WATER MAIN SEDIMENT DEPO SURFACE SURF	GY drology Indicato cators (minimum of //ater (A1) ar Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6)	off-Monaberg) rs: of one required	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc Recent Iron Reduction ir Stunted or Stressed Plan	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOGE Saturation Water Mater	GY drology Indicato cators (minimum of //ater (A1) or Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) u Visible on Aerial Im	off-Monaberg) rs: of one required agery (B7)	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
DROLOG etland Hy mary Indi Surface W High Water Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V	GY drology Indicato cators (minimum of /ater (A1) er Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) I Visible on Aerial Im- /egetated Concave S	off-Monaberg) rs: of one required agery (B7)	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc Recent Iron Reduction ir Stunted or Stressed Plan	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hy imary Indi Surface W High Wate Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V	GY drology Indicato cators (minimum of /ater (A1) er Table (A2) on (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) oil Cracks (B6) i Visible on Aerial Im- /egetated Concave Sevations:	off-Monaberg) rs: of one required agery (B7)	d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Iron Recent Iron Reduction ir Stunted or Stressed Plar Other (Explain in Remar	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hy imary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely W eld Obser	drak soil profile with nit (1150C, Bischot nit	agery (B7) Surface (B8)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (f MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc Recent Iron Reduction ir Stunted or Stressed Plar Other (Explain in Remar	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sec	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOGETIAND IN THE PROPERTY OF THE PROPERTY O	drak soil profile with nit (1150C, Bischot nit	agery (B7) Surface (B8)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc Recent Iron Reduction ir Stunted or Stressed Plar Other (Explain in Remar	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	Sectors (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hy imary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely W eld Observator ater Table aturation F cludes ca	drak soil profile with nit (1150C, Bischold in	agery (B7) Surface (B8) Yes \(\text{No } \vec{\psi} \) Yes \(\text{No } \vec{\psi} \)	as 'predominantly non-hydric d; check all that apply) Water-Stained Leaves (I MLRA 1, 2, 4A, and 4 Salt Crust (B11) Aquatic Invertebrates (B Hydrogen Sulfide Odor (Oxidized Rhizospheres a Presence of Reduced Irc Recent Iron Reduction ir Stunted or Stressed Plar Other (Explain in Remar	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	sets (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOG etland Hy imary Indi Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely W eld Obser urface Wa ater Table aturation F cludes ca	drak soil profile with nit (1150C, Bischold in	agery (B7) Surface (B8) Yes \(\text{No } \vec{\psi} \) Yes \(\text{No } \vec{\psi} \)	d; check all that apply) Water-Stained Leaves (for MLRA 1, 2, 4A, and 4) Salt Crust (B11) Aquatic Invertebrates (B) Hydrogen Sulfide Odor (c) Oxidized Rhizospheres and Presence of Reduced Incomplete (Complete (C	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	sets (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOGETIANDER STATE OF THE PROPERTY OF THE PR	drark soil profile with nit (1150C, Bischold (1150C, Bischold (1150C), Bischold (115	agery (B7) Surface (B8) Yes \(\) No \(\vec{\psi} \) Yes \(\) No \(\vec{\psi} \) am gauge, mo	d; check all that apply) Water-Stained Leaves (for MLRA 1, 2, 4A, and 4) Salt Crust (B11) Aquatic Invertebrates (B) Hydrogen Sulfide Odor (c) Oxidized Rhizospheres and Presence of Reduced Incomplete (Complete (C	B9) (except 4B) (C1) along Living Rocon (C4) n Tilled Soils (C6 nts (D1) (LRR A)	sets (C3)	depth. NRCS soil mapping describes map unit). condary Indicators (2 or more required Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)



Project/Site: Black Butte Copper		Cit	ty/County	: White Su	ulphur Springs/Meagher Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U7
Investigator(s): D. Barton, K. Scow		S	ection, To	wnship, R	ange: S29, T12N, R7E
Landform: terrace				•	convex, none): none Slope (%): 1-2
Subregion (LRR): E	***************************************	Lat: 46.	7704795		Long: -110.8789263 Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-N	Monaberg				NWI classification: UPL
Are climatic/hydrologic conditions on the		for this time of	vear? V	es 🗸 Na	
Are Vegetation , Soil , or Hydrolo					"Normal Circumstances" present? Yes V No
Are Vegetation , Soil , or Hydrolo				,	eeded, explain any answers in Remarks.) ations, transects, important features, etc.
Hydrophytic Vegetation Present?		No 🗆			,
Hydric Soil Present?		No ✓	. Is t	he Sample	ed Area
Wetland Hydrology Present?		No ✓		hin a Wetl	
Remarks: Next to meandering creek	Little Sheep)	Photographs:	KS 1427	-1430	
Tellianie	,=	, , ,,etegrapile.			
VEGETATION - Use scientific na	ames of nla	nte			
VEGETATION — OSE SCIENTING THE	incs or pia	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA)	% Cover		Status	Number of Dominant Species
1			*************************	~~~~	That Are OBL, FACW, or, FAC: 3 (A)
2.			***************************************		Total Number of Dominant
3					Species Across All Strata: 3 (B)
4					Percent of Dominant Species
		0	= Total	Cover	That Are OBL, FACW, or, FAC:100 (A/B)
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)				Prevalence Index Worksheet:
				FAC	Total % Cover of: Multiply by:
2.					OBL Species x1=
3.					FACW Species 8 x 2 = 16
4.					FAC Species 156 x 3 = 468
5.		30	= Total	Cover	FACU Species 25 x 4 = 100
Herb Stratum (Plot size: 0.01 acre)		10(a)	00101	UPL Species 8.5 x 5 = 42.5
1 Pag protonois	······································	55	x	FAC	Column Totals: 197.5 (A) 626.5 (B)
2 Phloum protonos		25	X	FAC	Prevalence Index (B/A) = 3.17
3. Bromus inermis		20		FAC	Hydrophytic Vegetation Indicators:
4. Fragaria virginiana		14		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Potentilla gracilis		10		FAC	✓ 2 - Dominance Test is >50%
6. Juncus balticus		8		FACW	3 - Prevalence Index is ≤3.01
7. Solidago canadensis var. salebro	sa	6		FAC	4 - Morphological Adaptations¹ (Provide supporting
8. Symphyotrichum campestre		5		(UPL)	data in Remarks or on a separate sheet)
9. Artemisia ludoviciana		4		FACU	5 - Wetland Non-Vascular Plants ¹
10. Symphyotrichum ascendens				FACU	Problematic Hydrophytic Vegetation¹ (Explain)
11. Danthonia intermedia		3		FACU	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA	`	167.5	= Total	Cover	production of the second of th
)				
1 2.				***************************************	Hydrophytic Vegetation
2		0	= Total	Cover	Present? Yes V No
% Bare Ground in Herb Stratum		***************************************	rotar	00401	
Remarks: Vegetation meets the Dom	inance Test. i	indicating the s	ite as hyd	rophytic.	However, vegetation fails the Prevalence Index (PI).
The PI and professional jud	dgment indica	te that vegetat	ion is me	sic but not	wetland.
All these plots along Little s	эпеер Сгеек ч	would have hig	mer nydro	printic veg	etation composition if not for the historically sustained



SOIL				Proje	ct/Site: Blac	k Butte Co	opper Sampling Point: LS-U7
Profile Des	cription: (Descr	ibe to the de	pth needed to d	ocument the	indicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Re	dox Features		_	
(inches)	Color (moist)	%	Color (moist)	% Ty	/pe¹ Loc²	Text	ture Remarks
0-16	10YR 2/2	100					
				**************************************	·		
		and and an analysis of the second					
¹Tvpe: C=C	oncentration. D=	Depletion, RM	/I=Reduced Matri	x. CS=Cover	ed or Coated	d Sand Gra	ains ² Location: PL=Pore Lining, M=Matrix
			l LRRs, unless o				Indicators for Problematic Hydric Soils ³ :
Histosol (ſ	Sandy Redox (S		,		2 cm Muck (A10)
· —	pedon (A2)	Ì	Stripped Matrix	•	,	ĺ	Red Parent Material (TF2)
Black His			Loamy Mucky M	lineral (F1) (exc	ept MLRA 1)	ĺ	Very Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)	[Loamy Gleyed I	√latrix (F2)			Other (Explain in Remarks)
Depleted	Below Dark Surface	e (A11) [Depleted Matrix	(F3)			
Thick Dai	rk Surface (A12)		Redox Dark Sur	face (F6)			³ Indicators of hydrophytic vegetation and
Sandy Mı	ucky Mineral (S1)		Depleted Dark S	Surface (F7)			wetland hydrology must be present, unless disturbed or problematic.
Sandy Gl	eyed Matrix (S4)		Redox Depress	ons (F8)			unless disturbed of problematic.
Restrictive	Layer (if preser	nt):				***	
Type:			•			į	
Depth (inch	es):		and the same of th			Hyd	dric Soil Present? Yes 🗌 💮 No 🗹
Remarks: [Dark soil profile w	rithout deplete	ed or gleyed matr	ix. Could me	et indicator	A12 at gre	eater depth. NRCS soil mapping describes unit
(1150C, Bischoff-	Monaberg) as	'predominantly i	non-hydric' (h	ydric soils a	re 15% of	map unit).
HYDROLO	GY						
Wetland Hy	drology Indicat	ors:					
-			red; check all tha	t apply)			Secondary Indicators (2 or more required)
					(DO) (avecant		
	Vater (A1) er Table (A2)			Stained Leaves A 1, 2, 4A, and			Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation	, ,			ıst (B11)	40)		Drainage Patterns (B10)
Water Ma	` '			Invertebrates (I	R13)		Dry-Season Water Table (C2)
	: Deposits (B2)			en Sulfide Odor	•		Saturation Visible on Aerial Imagery (C9)
Drift Depo				d Rhizospheres	• •	Roots (C3)	✓ Geomorphic Position (D2)
Algal Mat	or Crust (B4)			ce of Reduced I		` ,	Shallow Aquitard (D3)
Iron Depo	sits (B5)		Recent	Iron Reduction	in Tilled Soils	(C6)	FAC-Neutral Test (D5)
Surface S	Soil Cracks (B6)		Stunted	or Stressed Pla	ants (D1) (LRF	R A)	Raised Ant Mounds (D6) (LRR A)
Inundation	n Visible on Aerial I	magery (B7)	Other (E	Explain in Rema	arks)		Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)					
Field Obse	rvations:						
Surface Wa	iter Present?	Yes No	Depth (inche	es):			
Water Table	e Present?	Yes 🗌 No	Depth (inche	es):			
Saturation F (includes ca	Present? apillary fringe)	Yes No	✓ Depth (inche	es):		Wetland	Hydrology Present? Yes ☐ No 🗹
Describe Re	ecorded Data (str	eam gauge, i	monitoring well, a	erial photos,	previous ins	pections),	if available:
Remarks:							

Project/Site: Black Butte Copper	Ci	ty/County	: White Su	ulphur Springs/Meagher Sampling Date: 09-02-2014
Applicant/Owner: Tintina Resources				State: MT Sampling Point: LS-U8
Investigator(s): K. Scow, D. Barton	S	ection. To	wnship. R	ange: S29, 12N, R7E
Landform: terrace (old meander)	NOT AND THE COLUMN TO AND THE OWNERS AND THE COLUMN TO SERVICE AND THE SERVICE A			convex, none): concave Slope (%): 1-2
Subregion (LRR): E		7694943	(*****************	Long: -110.8789673 Datum: WGS84
	Lat. 40.	7034343		
Soil Map Unit Name: 1150C Bischoff-Monaberg				NWI classification: UPL
Are climatic/hydrologic conditions on the site typical for				
Are Vegetation , Soil , or Hydrology significant	-			"Normal Circumstances" present? Yes 🗹 No
Are Vegetation , Soil , or Hydrology naturally p			,	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh		impling l	point loc	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No No No No No No No No No No No No No	~		he Sample hin a Wetl	parameter parame
Remarks: Old meander. Photographs: KS 1479-1482	(N to W)			
			er variansia kalendari akada sakadaka asababa	
VEGETATION - Use scientific names of plants	.			
	Absolute		Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA)		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or, FAC:4 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4	0	= Total (Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size: 0.01 acre				Prevalence Index Worksheet:
Dasiphora fruticosa		X	FAC	Total % Cover of: Multiply by:
2.		***************************************	er tret tre trendening design	OBL Species x 1 =
3				FACW Species 48 x 2 = 96
4		A ALTERNATION THAT I TRANSPORTED THE COLUMN		FAC Species 128 x 3 = 384
5.		~~		FACU Species 11 x 4 = 44
Herb Stratum (Plot size: 0.01 acre)	34	= Total (Jover	UPL Species 5 x 5 = 25
1 Phloum protonos	50	x	FAC	Column Totals: 192 (A) 549 (B)
2 Coray propagation	20	x	FACW	And the control of th
3. Poa pratensis	20	×	FAC	Prevalence Index (B/A) = 2.86
4. Potentilla gracilis	14		FAC	Hydrophytic Vegetation Indicators:
5. Symphyotrichum subspicatum	14		FACW	☐ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50%
6. Zizia aptera	8	ARTECON COLUMN DE PROPRESSOR	FAC	
7. Fragaria virginiana			FACU	4 - Morphological Adaptations¹ (Provide supporting
8. Antennaria microphylla			(UPL)	data in Remarks or on a separate sheet)
9. Juncus balticus	4		FACW	5 - Wetland Non-Vascular Plants ¹
10. Taraxacum officinale	3		FACU	Problematic Hydrophytic Vegetation¹ (Explain)
11. Deschampsia cespitosa	2		FACW	¹Indicators of hydric soil and wetland hydrology must be
	158	= Total (Cover	present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)				
1				Hydrophytic
2				Vegetation Present? Yes ✓ No
% Bare Ground in Herb Stratum	0	_ = Total (Jover	1 103 CH INV
% Bare Ground in Herb Stratum		Familia Talanda Tifadayi Fazi Nanda ada ananan		
iveniains.				



SOIL			Project/Site: Bla	ack Butte (Copper	Sampling Point: LS-U8
Profile Des	cription: (Descr	ibe to the dep	th needed to document the indicator	r or confir	m the a	absence of indicators.)
Depth	Matrix	•	Redox Features			·
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc	c² Te	kture	Remarks
0-7	10YR 2/1	100			С	
7-16	10YR 2/1	100			 CL	8-16" clay pockets 10YR 6/1
	TOTAL					
Hydric Soil	Indicators (App		=Reduced Matrix, CS=Covered or Coate	ted Sand G	Indica	² Location: PL=Pore Lining, M=Matrix ators for Problematic Hydric Soils ³ :
Histosol (•	<u></u>	Sandy Redox (S5)			cm Muck (A10)
	pedon (A2)	<u></u>	Stripped Matrix (S6)			ed Parent Material (TF2)
Black His		L	Loamy Mucky Mineral (F1) (except MLRA 1	1)		ry Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Oti	her (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix (F3)		3Indic	ators of hydrophytic vegetation and
	k Surface (A12)	<u> </u>	Redox Dark Surface (F6)			etland hydrology must be present,
	ucky Mineral (S1)	<u></u>	Depleted Dark Surface (F7)			less disturbed or problematic.
	eyed Matrix (S4)		Redox Depressions (F8)			
	Layer (if preser	ıı,		1		
Type:						- II Durana Mara - Na - Ala -
Depth (inch	es):			Ну	aric Sc	oil Present? Yes ☐ No ✓
IYDROLO	GV					
	drology Indicat	ors:	· · · · · · · · · · · · · · · · · · ·			
Primary Ind	icators (minimum	of one require	d; check all that apply)		Sec	ondary Indicators (2 or more required)
	Vater (A1) er Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	t	\	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturation	on (A3)		Salt Crust (B11)			Orainage Patterns (B10)
Water Ma	ırks (B1)		Aquatic Invertebrates (B13)		·	Ory-Season Water Table (C2)
Sediment	Deposits (B2)		Hydrogen Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo	, ,		Oxidized Rhizospheres along Living	g Roots (C3)	✓ ✓	Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)			Shallow Aquitard (D3)
Iron Depo			Recent Iron Reduction in Tilled Soil	, ,		FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or Stressed Plants (D1) (LF	RR A)		Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial I	• , , ,	Other (Explain in Remarks)		F	Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)				
Field Obse			Double (in the call)			
	iter Present?	Yes ☐ No ✓		-		
Water Table		Yes ☐ No 💆		Matlan	ما الدماء	olomy Dropont2 Voc 🗆 No 📶
Saturation F (includes ca	Present? apillary fringe)	Yes ☐ No 🛂	Depth (inches):	vvetian	u myara	ology Present? Yes No 🗸
		eam gauge, m	onitoring well, aerial photos, previous ir	nspections), if ava	ilable:
Remarks: S	Slight swale here.	looks like old r	meander or overflow channel. Good <i>Ca</i>	arex praten	<i>sis</i> , but	not frost-heaved.
				•	•	

Project/Site: Black Butte Copper		Ci	ity/Count	y: White Su	ılphur Springs/Meagher	Sampling Date: 09-02-2014
Applicant/Owner: Tintina Resources	A Paradonia deliminiari (- , , , , , , , , , , , , , , , , , ,			THE R. L. C. S. AND ADDRESS, AN	State: MT	Sampling Point: LS-U9
Investigator(s): J. Beaver, S. Cooper,	K. Scow, D. Ba	rton S	Section, 1	Γownship, R	ange: S29 T12N R7E	
Landform: terrace/floodplain					convex, none): concave	Slope (%): 2-3
Subregion (LRR): E		-	7688385	,	Long: -110.8757944	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-	Monahora	Lat. 40.	700000		NWI classifi	
			£	V [4] N.		
Are climatic/hydrologic conditions on t					(If no, explain in Re	•
Are Vegetation , Soil , or Hydrold						present? Yes ✓ No ☐
Are Vegetation , Soil , or Hydrold SUMMARY OF FINDINGS – Atta					eeded, explain any answ	•
				, pomitioo	ationo, transcotto, im-	you will red will so, out.
Hydrophytic Vegetation Present? Hydric Soil Present? Westernd Hydrology Present?	Yes No			the Sample		No 🗹
Wetland Hydrology Present?						
Remarks: Site is mesic; however, wa	s likely previous	sly wetter. Do	oesn't uit	imately mee	et wetland criteria. Photog	graphs: KS14/5-14/8 (N to
VEGETATION – Use scientific n	ames of plant					
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominar Species		Dominance Test Worl	
1.					Number of Dominant S That Are OBL, FACW,	
2.	AND A SHARE THE RESIDENCE OF A SHARE THE SHARE SHEW THAT I SHARE SHEW THAT AND AN ADDRESS OF THE SHARE SHEW THAT I SHARE SHEW THE SHEW THAT I SHARE SHEW THAT I SHARE SHEW THAT I SHARE SHEW THA		THE PERSON AND RESIDENCE AND ADDRESS.	THE CONTRACTOR OF THE PROPERTY AND THE THE		
3.		Market Miller Miller Market Market 11 to 11 feb	THE COST LABOUR PLANT AND ADDRESS OF THE	A Lake Melitaria (Meli Faseria)	Total Number of Domir Species Across All Stra	
4.			1100 00 00 100 00 100 00 100 00 100 00 0	A SATE AND THE SECOND COMMENT	•	
		0	= Tota	l Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)				Prevalence Index Wo	
				FAC	Total % Cover of:	
2.					1	4 x 1 = 4
3.						$0 \times 2 = 20$
4.					· I	9 x 3 = 267
5.		10	T.10	l Cover		9 x 4 = 36
Herb Stratum (Plot size: 0.01 acre)	10	_ = 10ta	Cover		0 x 5 = 50
1. Phleum pratense		46	x	FAC	Column Totals: 12	2 (A) 377 (B)
Poa pratensis		20	X	FAC	Prevalence Index	(R/Δ) = 3.00
3. Potentilla gracilis		13		FAC		
4. Carex praegracilis		6		FACW	Hydrophytic Vegetation 1 - Rapid Test for Hydrophytics 1 - Rapid	
5. Symphyotrichum campestre		6		(UPL)	2 - Dominance Test is	• •
6. Antennaria microphylla		4	ACCORDING TO A STATE OF THE STA	(UPL)	3 - Prevalence Index is	
7. Danthonia intermedia		4		FACU	Committee	otations¹ (Provide supporting
8. Juncus balticus		4		FACW		r on a separate sheet)
9. Potentilla anserina		4		OBL	5 - Wetland Non-Vasc	ular Plants¹
10. Fragaria virginiana		3		FACU	Problematic Hydrophy	tic Vegetation¹ (Explain)
11. Artemisia ludoviciana		2		FACU	¹Indicators of hydric soil an present, unless disturbed of	d wetland hydrology must be
NAV	`	112	= Tota	l Cover	present, unless disturbed t	problematic.
Woody Vine Stratum (Plot size: NA)					
1.					Hydrophytic Vegetation	
2.		0	= Total	I Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum 0.5			1014	. 00461		
Remarks: Vegetation meets the Dom	inance Test. inc	dicating the s	site as h	drophytic.	However, vegetation fails	the Prevalence Index (PI).
The PI and professional ju-	dgment indicate	that vegetat	tion is m	esic but not		
Typical high-mesic site tha	t meets nydroph	iytic vegetat	ion criter	id.		



SOIL			Project/Site: B	lack Butte C	Copper	Sampling Point: LS-U9
Profile Des	cription: (Descri	be to the de	oth needed to document the indicato	r or confir	m the a	bsence of indicators.)
Depth	Matrix		Redox Features			•
(inches)	Color (moist)	%	Color (moist) % Type¹ Lo	oc² Tex	kture	Remarks
0-8	10YR 2/1	100		C	CL	with coarse fragments
8-16	10YR 2/1	100			DL.	
						The second secon
~~~~						
			I=Reduced Matrix, CS=Covered or Coa	ted Sand G	rains	² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indicators (App	licable to all	LRRs, unless otherwise noted.):		Indica	tors for Problematic Hydric Soils ³ :
Histosol (	(A1)		Sandy Redox (S5)		2 cr	m Muck (A10)
Histic Epi	ipedon (A2)		Stripped Matrix (S6)		Red	d Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky Mineral (F1) (except MLRA	1)	Ver	y Shallow Dark Surface (TF12)
Hydroger	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Oth	er (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)			
Thick Da	rk Surface (A12)		Redox Dark Surface (F6)			tors of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark Surface (F7)			tland hydrology must be present, ess disturbed or problematic.
Sandy GI	eyed Matrix (S4)	L	Redox Depressions (F8)		uiii	ess disturbed of problematic.
Restrictive	Layer (if presen	t):				
Туре:			_			
Depth (inch	es):			Ну	dric So	il Present? Yes ☐ No 🗸
Remarks: 1	Typical of mesic s	tes in area				
HYDROLO	GY					
	/drology Indicate	ors:			***************************************	
-			ed; check all that apply)		Seco	ondary Indicators (2 or more required)
		or one requi				
	Vater (A1)		Water-Stained Leaves (B9) (excep	ot	□ v	Vater-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLRA 1, 2, 4A, and 4B)			4A, and 4B)
Saturation			Salt Crust (B11)			rainage Patterns (B10)
Water Ma	, ,		Aquatic Invertebrates (B13)			ry-Season Water Table (C2)
	Deposits (B2)		Hydrogen Sulfide Odor (C1)	D (00)		aturation Visible on Aerial Imagery (C9)
Drift Depo	• •		Oxidized Rhizospheres along Livin	ig Roots (C3)		Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)	"- (00)		hallow Aquitard (D3)
Iron Depo	` '		Recent Iron Reduction in Tilled So	` ,		AC-Neutral Test (D5)
	Soil Cracks (B6)	(27)	Stunted or Stressed Plants (D1) (L	.RR A)		aised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		Other (Explain in Remarks)		F	rost-Heave Hummocks (D7)
	Vegetated Concave	Suпасе (В8)				
Field Obse			<b>a b</b>			
		Yes   No				
Water Table		Yes 💹 No				
Saturation F	Present? apillary fringe)	Yes No	✓ Depth (inches):	Wetland	d Hydro	logy Present? Yes ☐ No ✓
		0m 001100 =	applicating well goriel photos province:	nonoction=\	المديم أأ	lablo:
Describe Re	ecorded Data (Stre	eam gauge, n	nonitoring well, aerial photos, previous i	nspections)	, ir avaii	lable:
		-				
Remarks: \	ery subtle humm	ocks, possibly	y a vestige of previous wetter conditions	S.		

Applicant/Owner: Tintina Resources  Investigator(s): D. Barton, K. Scow  Section, Township, Range: S9, T12N, R7E  Landform: toe slope  Local relief (concave, convex, none): none  Slope (%): 1  Subregion (LRR): E  Lat: 46.7688784  Long: -110.8743767  Datum: WGS84  Soil Map Unit Name: 1150C Bischoff-Monaberg  Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)  Are Vegetation , Soil , or Hydrology significantly disturbed?  Are "Normal Circumstances" present? Yes No Are Vegetation , Soil , or Hydrology naturally problematic?  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland? Yes No Wetland? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Wetland Hydrology Present
Landform: toe slope  Subregion (LRR): E  Lat: 46.7688784  Long: -110.8743767  Datum: WGS84  Soil Map Unit Name: 1150C Bischoff-Monaberg  NWI classification: UPL  Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ☐ (If no, explain in Remarks.)  Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?  Are "Normal Circumstances" present? Yes ✓ No ☐  Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?  (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?  Yes ☐ No ✓  Hydric Soil Present?  Yes ☐ No ✓  Wetland Hydrology Present?  Yes ☐ No ✓  Within a Wetland?  Yes ☐ No ✓
Landform: toe slope  Subregion (LRR): E  Lat: 46.7688784  Long: -110.8743767  Datum: WGS84  Soil Map Unit Name: 1150C Bischoff-Monaberg  NWI classification: UPL  Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ☐ (If no, explain in Remarks.)  Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?  Are "Normal Circumstances" present? Yes ✓ No ☐  Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?  (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?  Yes ☐ No ✓  Hydric Soil Present?  Yes ☐ No ✓  Wetland Hydrology Present?  Yes ☐ No ✓  Within a Wetland?  Yes ☐ No ✓
Soil Map Unit Name: 1150C Bischoff-Monaberg  Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)  Are Vegetation , Soil , or Hydrology significantly disturbed?  Are "Normal Circumstances" present? Yes  No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No  Hydric Soil Present? Yes No  Sis the Sampled Area  Wetland Hydrology Present? Yes No  Wetland Hydrology Present? Yes No  Wetland? Yes No  Wetland? Yes No  Wetland?
Soil Map Unit Name: 1150C Bischoff-Monaberg  Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No (If no, explain in Remarks.)  Are Vegetation , Soil , or Hydrology significantly disturbed?  Are "Normal Circumstances" present? Yes  No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No  Hydric Soil Present? Yes No  Sis the Sampled Area  Wetland Hydrology Present? Yes No  Wetland Hydrology Present? Yes No  Wetland? Yes No  Wetland? Yes No  Wetland?
Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes  No  (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No  Is the Sampled Area Wetland Hydrology Present? Yes No  within a Wetland? Yes No  No  No  No  No  No  No  No  No  No
Are Vegetation , Soil , or Hydrology significantly disturbed?  Are "Normal Circumstances" present? Yes No (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Wetland? Yes No Wetland? Yes No Wetland?
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No V  Hydric Soil Present? Yes No V  Wetland Hydrology Present? Yes No V  within a Wetland? Yes No V
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?  Yes No Is the Sampled Area Wetland Hydrology Present?  Yes No V
Hydric Soil Present? Yes ☐ No ✔ Is the Sampled Area Wetland Hydrology Present? Yes ☐ No ✔ within a Wetland? Yes ☐ No ✔
Hydric Soil Present? Yes ☐ No ✔ Is the Sampled Area Wetland Hydrology Present? Yes ☐ No ✔ within a Wetland? Yes ☐ No ✔
Remarks: Photographs: KS 1423-1426
VEGETATION – Use scientific names of plants.
Absolute Dominant Indicator  Tree Stratum (Plot size: NA ) % Cover Species? Status  Number of Dominant Species
1 Number of Dominant Species That Are OBL, FACW, or, FAC: 2 (A)
2
Total Number of Dominant Species Across All Strata: 4 (B)
4. Percent of Dominant Species
0 = Total Cover That Are OBL, FACW, or, FAC: 50 (A/B)
Sapling/Shrub Stratum (Plot size: 0.01 acre )
1. Dasiphora fruticosa 28 x FAC
2. Arternisia urdentata o x (OFL)
FACIN Charles 4 × 2 m 2
4. FACW Species 1 x 2 = 2  5. FAC Species 101 x 3 = 303
36 = Total Cover FACU Species 10 x 4 = 40
Herb Stratum (Plot size: 0.01 acre ) UPL Species 41 x 5 = 205
1. Poa pratensis         55         x         FAC         Column Totals:         153         (A)         550         (B)
2. <u>Lupinus sericeus</u> 16 x (UPL) Prevalence Index (B/A) = 3.59
3. Potentilla gracilis 10 FAC Hydrophytic Vegetation Indicators:
4. Artemisia ludoviciana 8 FACU 1 - Rapid Test for Hydrophytic Vegetation
5. Antennaria microphylla 6 (UPL) 2 - Dominance Test is >50%
6. <u>Stipa occidentalis</u> 5 (UPL) ☐ 3 - Prevalence Index is ≤3.0¹  7. Anemone multifida 4 (UPL) ☐ 4. Membelogical Adaptational (Bravida supporting
8. Phleum pratense  3 FAC data in Remarks or on a separate sheet)
O. Assenting trachised than Vegetiles
10. Fragaria virginiana  2 FAC S - Wetland Non-Vascular Flants  1 FACU Problematic Hydrophytic Vegetation¹ (Explain)
11. Schedonorus arundinaceus  2 FAC ¹Indicators of hydric soil and wetland hydrology must be
117 = Total Cover present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA
1 Hydrophytic
2. Vegetation
U - I Olai Covei
% Bare Ground in Herb Stratum
Remarks:



SOIL					F	roject/Site	e: Black	Butte Co	opper	Sar	npling Point	: LS-U10
Profile Des	cription: (Descr	ibe to th	e depth	needed to d	documen	t the indi	cator or	confirm	the a	bsence of inc	licators.)	
Depth	Matrix			Re	edox Featu	res						
(inches)	Color (moist)	%		Color (moist)	%	Type ¹	Loc²	Text		Remarks		elektrianische Tariff wilder (Elektrich Jahr) der der der der der der der der der der
0-16	10YR 2/2	_ 100						SiC				
											***************************************	
						_,						
								~~~	***************************************			
	WHITE CONTRACTOR OF THE CONTRA											
	·				-						· · · · · · · · · · · · · · · · · · ·	
								-				
	oncentration, D=I		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							² Location: PL		
_	Indicators (App	licable 1				e noted.):		,	Indica	itors for Prob	lematic Hyd	dric Soils³:
Histosol (•			Sandy Redox (S	•			Į		m Muck (A10)		
	pedon (A2)			Stripped Matrix	` '			[d Parent Materia	` ,	
Black His				Loamy Mucky N	` '	, ,	LRA 1)	l		ry Shallow Dark	`	2)
	Sulfide (A4) Below Dark Surface	(Δ11)		Loamy Gleyed I Depleted Matrix				l		ner (Explain in Re	emarks)	
	k Surface (A12)	(((1)		Redox Dark Su					3Indica	ators of hydrop	hvtic vegeta	ition and
	ıcky Mineral (S1)			Depleted Dark		7)			wet	tland hydrolog	y must be p	resent,
	eyed Matrix (S4)			Redox Depress		,			uni	ess disturbed	or problema	tic.
Restrictive	Layer (if presen	t):										
Type:												
Depth (inch	∋s):							Hyd	iric So	il Present? Y	'es 🗌 🗈 1	10 🗸
	ark soil profile w	ithout de	pleted o	or gleved mate	rix. Could	l meet ind	licator A1	12 at gre	ater de	enth. NRCS so	il mapping e	describes unit
	1150C, Bischoff-I											accombcc and
		~~~										
HYDROLO	c.v											
	drology Indicat	ore:										united Austria (aus. Calebration, Schoolstein, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandration, Sandrat
•	cators (minimum		equired	· check all tha	at anniv)				Seco	ondary Indicate	are (2 ar ma	re required)
		01 0110 1	cquircu	·								
Surface V				-		aves (B9) (e	except		V	Vater-Stained Le	aves (B9) (ML	.RA 1, 2,
Saturatio	er Table (A2)				RA 1, 2, 4A,	and 4B)				4A, and 4B)	(D40)	
Water Ma					ust (B11) :Invertebra	toe (R13)				)rainage Patterns )ry-Season Wate		
	Deposits (B2)				en Sulfide	. ,				Saturation Visible		nen/ (C9)
Drift Depo	. , ,					neres along	Livina Ro	ots (C3)		Seomorphic Posi		.go., (00)
	or Crust (B4)					ced Iron (C	•	( /		Shallow Aquitard	` '	
Iron Depo				Recent	Iron Reduc	ction in Tille	d Soils (C	6)	F	AC-Neutral Test	(D5)	
Surface S	oil Cracks (B6)			Stunted	or Stresse	ed Plants (D	)1) (LRR <i>A</i>	4)	R	Raised Ant Moun	ds (D6) (LRR	A)
Inundation	Visible on Aerial Ir	nagery (B	7)	Other (	Explain in F	Remarks)			F	rost-Heave Hum	mocks (D7)	
Sparsely \	/egetated Concave	Surface (	38)									***************************************
Field Obser												
	ter Present?	Yes 📋	No 🗹	Depth (inche								
Water Table		Yes 📙	No 🗸	Depth (inche				8/a4la	11	. I D 4	0 V 🗀	N - [7]
Saturation F (includes ca	resent? pillary fringe)	Yes 📋	No 🗸	Depth (inche	es):		V	vetiand	nyara	ology Present	r res 📋	No 🗸
	corded Data (str	eam gau	ge, mor	nitorina well. a	aerial pho	tos, previo	ous inspe	ections)	if avai	lable:	~~~	
		3	J=, <b>J</b> 1		<b>p.70</b>	, p	opc					
Remarks: P	lot at break betw	een toe	slope ar	nd high mesic	terrace	Saturation	or wate	r table n	ot ence	ountered in so	il nit Wetlar	nd is narrow
	ordering meande											
~~~												

Project/Site: Black Butte Copper		(City/Count	ty: White Su	ılphur Springs/Meagher	Sampling Date: 08	-26-2014
Applicant/Owner: Tintina Resources				-hideles/1007-100-100-100-100-100-100-100-100-100	State: MT	Sampling Point: LS	;-U11
Investigator(s): D. Barton, K. Scow			Section, 1	Γownship, R	ange: S29, T12N, R7E		
Landform: low terrace			Local relie	ef (concave,	convex, none): none	Slope	(%): 2
Subregion (LRR): E		Lat: 46	5.7686015	5	Long: -110.874731		WGS84
Soil Map Unit Name: 1175E Owenspr	ing-Cheadle		.,, 000010		NWI classific		
Are climatic/hydrologic conditions on		al for this time	of year?	Vac 📈 No			
Are Vegetation , Soil , or Hydrol			-		"Normal Circumstances"		No.
· · · · · · · · · · · · · · · · · · ·							NO _
Are Vegetation , Soil , or Hydrol SUMMARY OF FINDINGS – Atta				•	eeded, explain any answ	•	etc
			ap.ig	, pomitioo		Jordanie realarco,	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ✓ Yes ☐ Yes ☐	No ✓ No ✓ No ✓		the Sample		No 🗹	!
Remarks: Photographs: KS 1415-14	18		······································				
VEGETATION - Use scientific n	ames of pl	lants.					
		Absolute	Domina	nt Indicator	Dominance Test Work	«sheet:	1
Tree Stratum (Plot size: NA)	% Cove	<u>-</u>		Number of Dominant S	pecies	!
1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			That Are OBL, FACW,	or, FAC:3	(A)
2.					Total Number of Domin		;
3					Species Across All Stra	ata: 3	(B)
4		_		I Cover	Percent of Dominant S		
Sapling/Shrub Stratum (Plot size: 0.	01 acre	0	Tota	l Cover	That Are OBL, FACW,	or, FAC:100	(A/B)
4 Desighans fundiana	OT GOIC	. <i>)</i> 28	x	FAC	Prevalence Index Wor	ksheet:	!
2.					Total % Cover of:	Multiply b	<u>y:</u>
3.					OBL Species	x 1 =	
4.					FACW Species	x 2 =	
5					FAC Species 11		
		28	= Tota	l Cover	FACU Species 1	Andrew Administration of the Control	
Herb Stratum (Plot size: 0.01 acre)				UPL Species 3		
1. Phleum pratense		48		FAC	Column Totals: 16	4 (A) 57	7 (B)
2. Poa pratensis		30		FAC	Prevalence Index ((B/A) = 3.52	
3. Lupinus sericeus		18		(UPL)	Hydrophytic Vegetation	on Indicators:	
4. Antennaria microphylla				(UPL) FAC	1 - Rapid Test for Hydr	ophytic Vegetation	
Potentilla gracilis Danthonia intermedia		5		FACU	2 - Dominance Test is		
7. Symphyotrichum campestre				(UPL)	3 - Prevalence Index is		
9 Colium haraola				FACU	data in Remarks or	otations¹ (Provide supp r on a separate sheet)	orting
O A-1-1111-f-11		^		FACU	5 - Wetland Non-Vasci	•	
10 Oting agaidantalia		2		(UPL)	Problematic Hydrophyt	tic Vegetation¹ (Explair	1)
11. Taraxacum officinale		3		FACU	¹Indicators of hydric soil an		nust be
		136	= Tota	l Cover	present, unless disturbed o	r problematic.	
Woody Vine Stratum (Plot size: NA)						
1					Hydrophytic		1
2					Vegetation	N	
0/ Para Cround in Hart Street		0	= Tota	l Cover	Present? Yes	✓ No L	
% Bare Ground in Herb Stratum		indication ti	aite == 1	- المرجوليين	Hawayar	the Decision	lov (DI)
Remarks: Vegetation meets the Don The PI and professional ju						the Prevalence Ind	iex (PI).
	•						



SOIL				Proj	ect/Site	e: Black	Butte Coppe	sampling Point: LS-U11
Profile Des	scription: (Descri	be to the d	epth needed to d	ocument th	ne indi	cator or	confirm the	absence of indicators.)
Depth	Matrix		Re	dox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	Remarks
0-16	10YR 2/2	100					SiCL	***************************************
W								
							A	

¹Type: C=C	Concentration, D=0	Depletion, R	M=Reduced Matri	x, CS=Cove	ered or	Coated S	Sand Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indicators (App	licable to a	II LRRs, unless of	therwise n	oted.):		Indi	cators for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Redox (S	5)			2	cm Muck (A10)
L	pipedon (A2)		Stripped Matrix				vocation.	Red Parent Material (TF2)
Black His	, ,		Loamy Mucky M	, , ,	xcept ML	.RA 1)		/ery Shallow Dark Surface (TF12)
	n Sulfide (A4)	/A / 4°	Loamy Gleyed N					Other (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix	` ,			31	ingtons of hydrombytic vegetation and
=	ark Surface (A12)		Redox Dark Sur					cators of hydrophytic vegetation and vetland hydrology must be present,
	lucky Mineral (S1) leyed Matrix (S4)		Depleted Dark S Redox Depressi	, .				inless disturbed or problematic.
	Layer (if presen	+)·	itedox Depressi	0115 (1-0)				
Type:		•						
• • • • • • • • • • • • • • • • • • • •							Lludria (Soil Present? Yes No 🗸
Depth (inch								ater depth (A12), although soil (1175C,
HYDROLC)GY						enter en contrata de transita de la companidada.	
	ydrology Indicate	ore.						
	dicators (minimum		ired: check all tha	t annly)			Se	condary Indicators (2 or more required)
		or one requ						
	Water (A1)		_	tained Leaves	. , .	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
= .	ter Table (A2)			A 1, 2, 4A, and	a 4B)			4A, and 4B)
Saturati	arks (B1)		Salt Cru	st (B11) Invertebrates	(D43)			Drainage Patterns (B10)
	t Deposits (B2)			n Sulfide Odo	` '			Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
_	osits (B3)			d Rhizosphere		Livina Ro	ots (C3)	Geomorphic Position (D2)
	t or Crust (B4)			e of Reduced	_	_	(1.) <u>(</u>	Shallow Aquitard (D3)
Iron Depo	osits (B5)			ron Reduction	•	•	6)	FAC-Neutral Test (D5)
Surface S	Soil Cracks (B6)		Stunted	or Stressed P	Plants (D	1) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundatio	on Visible on Aerial Im	nagery (B7)	Other (E	xplain in Rem	narks)			Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)			**********			
Field Obse	ervations:	_				1		
Surface Wa	ater Present?	Yes 🗌 No	✓ Depth (inche)	s):				
Water Tabl			Depth (inche					
<u></u>	apillary fringe)		✓ Depth (inche				·····	rology Present? Yes ☐ No ✓
Describe R	ecorded Data (stre	eam gauge,	monitoring well, a	erial photos	, previo	us inspe	ections), if av	ailable:
D			***					
Remarks:								

Project/Site: Black Butte Copper			Cit	ty/County:	: White Su	lphur Springs/Meagher	Sampling Date	e: 09-02-	2014
Applicant/Owner: Tintina Resources						State: MT	Sampling Poin	nt: LS-U12	<u>)</u>
Investigator(s): K. Scow, D. Barton			S	ection, To	wnship, R	ange: S29, 12N, R7E			
Landform:					-	convex, none): none	S	lope (%):	
Subregion (LRR): E				7675724	,	Long: -110.874518		tum: WG	
Soil Map Unit Name: 1150C Bischoff-N	Monahera Monahera			, 0, 0, 12, 1			ication: UPL	· · · · · · · · · · · · · · · · · · ·	
Are climatic/hydrologic conditions on the		al for th	ie time o	fyear? V	ec 🚺 No				
Are Vegetation , Soil , or Hydrolo						"Normal Circumstances		■ No	_
<u> </u>									
Are Vegetation , Soil , or Hydrolo SUMMARY OF FINDINGS – Attac					•	eeded, explain any ansv ations, transects, im		•	.
Hydrophytic Vegetation Present?	Yes 🗸	No							
Hydric Soil Present?	Yes	No 🗸		ls t	he Sample	ed Area			
Wetland Hydrology Present?	Yes	No 🗸		with	hin a Wetl	and? Yes	No 🗸		
Remarks: Photographs: KS 1491-149	94 (N to W)			the contract of the contract o					
VEGETATION – Use scientific na	ames of p	lants.				90 (1900)			
Tree Stratum (Plot size: NA	١		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Wor			
1.		-				Number of Dominant S That Are OBL, FACW,		3	(A)
2.				Automotive and and an arrangement of the	V 11 241 241 241 241 241 241 241 241 241		***************************************		()
3.		after a farment as a second and the authorization	control a someone and and the	ARRONAL TIMESTAY TEARNOONS	ALL THE PERSON NAMED IN COLUMN	Total Number of Domi Species Across All Str		3	(B)
4.							Name of Association of State o		(-/
			Ō	= Total (Cover	Percent of Dominant S That Are OBL, FACW,		100	(A/B)
Sapling/Shrub Stratum (Plot size: 0.0	11 acre	_)				Prevalence Index Wo			
				X	FAC	Total % Cover of		iply by:	
2						OBL Species	x 1 =	piy by.	!
3.						FACW Species	x 2 =		
4.							63 x 3 =	489	
5.		-	26	_ T-1-1			41 x 4 =	164	
Herb Stratum (Plot size: 0.01 acre)		36	= Total (Jover		17 x 5 =	85	
1. Phleum pratense	/		66	x	FAC		21 (A)	738	(B)
2. Poa pratensis			48	X	FAC	Prevalence Index	(B/A) = 3.34		
3. Taraxacum officinale		all and another such as a solution when	25		FACU				
4. Antennaria microphylla			12		(UPL)	Hydrophytic Vegetat 1 - Rapid Test for Hyd			
5. Potentilla gracilis			5		FAC	✓ 2 - Dominance Test is			
6. Solidago canadensis var. salebro	sa		5	ARREST LANGUAGE ARRESTS	FAC	3 - Prevalence Index			
7. Danthonia intermedia		-	4	ARREST TO A STATE OF THE SAME	FACU	4 - Morphological Ada		supportin	ıg :
8. Galium boreale			4	1 No. Selected 1111 Section 600 1 Workshot 1 War	FACU	data in Remarks of			
Symphyotrichum ascendens				Alabahali di Pan International da P	FACU	5 - Wetland Non-Vas			
					FACU	Problematic Hydrophy			
11. Agrostis scabra			2		FAC	¹ Indicators of hydric soil a present, unless disturbed		ogy must t	be
Woody Vine Stratum (Plot size: NA	١		185	_ = Total (Jover			MALE NO 100 MAY - 1000-11	
1 2.						Hydrophytic Vegetation			
	***************************************		0	= Total (Cover		s ✓ No		
% Bare Ground in Herb Stratum		-	-						
Remarks: Vegetation meets the Dom	inance Test	, indica	iting the s	site as hyd	Irophytic.	However, vegetation fail	s the Prevalenc	e Index	(PI).
The PI and professional jud	ibni tnemgt	cate tha	at vegetat	ion is mes	sic but not	wetland.			
									1



SOIL					te: <u>Black But</u>		Sampling Point: LS-U12	
Profile Des	scription: (Describ	oe to the dept	h needed to	document the indi	cator or cor	nfirm the abs	sence of indicators.)	
Depth	Matrix			edox Features				
(inches)	Color (moist)	***************************************	Color (moist)	% Type¹	Loc²		emarks	
0-16	7.5YR 2.5/1	100		-		CL		
Anni dan								
					harden and a second			
				·				
1Type: C=C	oncentration D=D	enletion PM-	Paducad Matr	rix, CS=Covered or	Contad San	d Crains 21	costion: DI - Doro Lining M-Me	.401.7
				otherwise noted.)			ocation: PL=Pore Lining, M=Ma ors for Problematic Hydric Soi	
Histosol (ICable to all L	Sandy Redox (•	•		•	·S
Comment	ipedon (A2)	片	Stripped Matrix	•			Muck (A10) Parent Material (TF2)	
Black His				Mineral (F1) (except M	II RA 1)		Shallow Dark Surface (TF12)	
,	n Sulfide (A4)		Loamy Gleyed	. ,	LIO(I)	-	(Explain in Remarks)	
-	Below Dark Surface	(A11)	Depleted Matrix	, ,			(Explain in Normano)	
· = ·	rk Surface (A12)	` ′	Redox Dark Su	• •		³Indicato	rs of hydrophytic vegetation and	Ŀ
Sandy M	ucky Mineral (S1)		Depleted Dark	, ,		wetla	nd hydrology must be present,	
Sandy GI	leyed Matrix (S4)		Redox Depress	sions (F8)		unles	s disturbed or problematic.	
Restrictive	Layer (if present):						
Type:		•						
Depth (inch	ies).					Hydric Soil	Present? Yes No 🗸	
Remarks:								Na monte realiza
ixemaiks.								
				**************************************				******
HYDROLO	GY							
Wetland Hy	ydrology Indicato	rs:						
	licators (minimum		l check all the	at anniv)		Secon	dary Indicators (2 or more requi	رام م
→ Primary Ind	noators (minimatir t	or one required	i, oricon an tire	at apply)		OCCOIN	dary malcators (2 or more requi	
						L		eu)
Surface V	Water (A1)		Canada S	Stained Leaves (B9) (except	-	ter-Stained Leaves (B9) (MLRA 1, 2,	eu)
Surface V	er Table (A2)		MLF	RA 1, 2, 4A, and 4B)	except		1A, and 4B)	(ea)
Surface V High Wat Saturation	er Table (A2) on (A3)		MLF	RA 1, 2, 4A, and 4B) ust (B11)	except	Dra	4A, and 4B) inage Patterns (B10)	euj
Surface V High Wat Saturatio	er Table (A2) on (A3) arks (B1)		MLF Salt Cri Aquatio	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13)	except	Drai	AA, and 4B) inage Patterns (B10) -Season Water Table (C2)	
Surface V High Wat Saturatie Water Ma	er Table (A2) on (A3) arks (B1) t Deposits (B2)		MLF Salt Cro Aquatio	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) een Sulfide Odor (C1)		Dry-	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9)	
Surface V High Wat Saturati Water Ma Sediment Drift Depo	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)		MLF Salt Cri Aquatic Hydrog Oxidize	RA 1, 2, 4A, and 4B) ust (B11) Invertebrates (B13) en Sulfide Odor (C1) RA Rhizospheres along	g Living Roots (Drai Dry. Satu (C3)	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2)	
Surface V High Wat Saturati Water Ma Sediment Drift Depo	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4)		MLF Salt Cri Aquatic Hydrog Oxidize	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) en Sulfide Odor (C1) ed Rhizospheres along ce of Reduced Iron (C	g Living Roots (34)	☐ Drai ☐ Dry. ☐ Satu (C3) ✔ Geo	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) Illow Aquitard (D3)	
Surface V High Wat Saturati Water Ma Sediment Drift Depo	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) ien Sulfide Odor (C1) d Rhizospheres along ce of Reduced Iron (C	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5)	
Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4)	agery (B7)	MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) en Sulfide Odor (C1) ed Rhizospheres along ce of Reduced Iron (C	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha ☐ FAC	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) umorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)	
Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Goil Cracks (B6)		MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) ien Sulfide Odor (C1) d Rhizospheres along ce of Reduced Iron (C Iron Reduction in Tille d or Stressed Plants (I	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha ☐ FAC	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) omorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5)	
Surface V High Wat Saturati Water Ma Sediment Drift Depc Algal Mat Iron Depc Surface S Inundatio Sparsely	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Ima		MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) ien Sulfide Odor (C1) d Rhizospheres along ce of Reduced Iron (C Iron Reduction in Tille d or Stressed Plants (I	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha ☐ FAC	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) umorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)	
Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse	er Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) n Visible on Aerial Ima Vegetated Concave S rvations:	Surface (B8)	MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stunted Other (6	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) en Sulfide Odor (C1) de Rhizospheres along ce of Reduced Iron (C Iron Reduction in Tille d or Stressed Plants (I Explain in Remarks)	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha ☐ FAC	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) umorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)	
Surface V High Wat Saturati Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely Field Obse	er Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) n Visible on Aerial Ima Vegetated Concave S rvations: ater Present?		MLF Salt Cri Aquatic Hydrog Oxidize Presen Recent Stuntec Other (i	RA 1, 2, 4A, and 4B) ust (B11) c Invertebrates (B13) en Sulfide Odor (C1) de Rhizospheres along ce of Reduced Iron (C Iron Reduction in Tille d or Stressed Plants (I Explain in Remarks)	g Living Roots (34) ed Soils (C6)	☐ Drai ☐ Dry. ☐ Satu ☐ (C3) ☑ Gec ☐ Sha ☐ FAC	AA, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9) umorphic Position (D2) Illow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)	

Remarks: Micro-relief from shrubs/cattle activity, but no frost heaves.

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Section, Township, Range: S29, 12N, R7E andform terrace Local relief (concave, convex, none): concave Slope (%): 1-3 subtregion (LRR): E Lat: 46,787214 Long: 110.8373865 Datum: WGS84 Long: 110.8373865 Long: 110.	Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 09-02-2014			
Local relief (concave, convex, none): concave Slope (%): 1-3	Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U13				
Local relief (concave, convex, none): concave Slope (%): 1-3			S	ection, To	wnship, R	ange: S29, 12N, R7E	-			
Description Lat.							Slope (%): 1-3			
oil Map Unit Name: 1150C Bischoff-Monaberg ver climatichydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (if no, explain in Remarks.) ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? ver Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐, or Hydrology ☐ significantly disturbed? Ver Vegetation ☐ significantly ☐ significantly disturbed? Ver Develope ☐ significantly ☐ significantly disturbed? Ver Dominant ☐ disturbed ☐ significantly disturbed? Ver Dominant ☐ disturbed ☐ significantly disturbed? Ver Dominant ☐ disturbed ☐ significantly disturbed? Ver Dominant ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ disturbed ☐ dis	***************************************				(**************************************				
The climatic hydrologic conditions on the site typical for this time of year? Yes \(\subseteq \) No \(\) (If no, explain in Remarks.) Are Vegetation \(\), Soil \(\), or Hydrology \(\) indiring inflicantly disturbed? Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\) Are Vegetation \(\), Soil \(\), or Hydrology \(\) naturally problematic? Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances" present? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances", and panish any answers in Remarks.) Are "A the Sampled Area within a Wetland?" Yes \(\subseteq \) No \(\subseteq \) Is the Sampled Area within a Wetland? Yes \(\subseteq \) No \(\subseteq \) Are "Normal Circumstances", and panish any answers in Remarks.) Is the Sampled Area within a Wetland? Yes \(\subseteq \) No \(\subseteq \) Is the Sampled Area within a Wetland? Yes \(\subseteq \) No \(\subseteq \) Are "Total March and "Pole Norksheet: Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A) Total Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A) Total Number of Dominant Species That Are OBL, FACW, or, FAC: 100 (A)B) Prevalence index Worksheet: Total % Cover of \(\subseteq \) Multiply by: Obl. Species \(\subseteq \) X 2 2 4 4 FAC Species \(\subseteq \subseteq \) X 2 2 4 FAC Species \(\subseteq \subseteq \) X 2 2 4 FAC Species \(\subseteq \subseteq \) X 3 4 4 10 Prevalence index Worksheet: Total % Cover of \(\subseteq \subseteq \) Multiply by		longhora	Lat. 40.	7070214						
Are "Normal Circumstances" present? Yes No No reversition Soii or Hydrology naturally problematic? ((If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Wo Is the Sampled Area within a Wetland? Yes No Wo within a Wetland Norwall and Yes No Wo within a Wetland Norwall and Yes No No Wo within a Wetland Norwall and Yes No No Wo within a Wetland Norwall and Yes No No Wo within a Wetland Norwall and Yes Norwall and Yes Norwall and Yes Norwall and Yes Norwall and Yes Norwall and Yes Norwall and Yes					[a] N-					
SumMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	• •			-						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No No Is the Sampled Area within a Wetland Hydrology Present? Yes No No Wetland Hydrology New Present of Dominant Species That Are OBL, FACW, or, FAC: 3 (A) And Yes Percent of Dominant Species That Are OBL, FACW, or, FAC: 3 (A) And Yes Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B) Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species 1							,			
Hydriophytic Vegetation Present? Yes							•			
				mpinig	ponitious	auons, transects, mi	portant reatures, etc.			
Absolute Cover	Hydric Soil Present?	Yes N	o 🗸				No 🗸			
Absolute Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Cover Species Status Status Status Species Status Status Status Species Status Status Status Species Status										
Absolute % Cover Species Status Species S	Remarks. Photographs. No 1467-1456) (IN 10 VV)								
Absolute % Cover Species Status Species S										
Absolute % Cover Species Status Species S	VECETATION Line opientific no	maa of nlan								
Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A)	VEGETATION – Use scientific ha	mes or plar		D	11:1					
1.	Tree Stratum (Plot size: NA)								
2. 3. 4.		'								
Species Across All Strata: 3 (B)	2.					1	Annual and a state of the control of			
A	3									
Sapling/Shrub Stratum (Plot size: 0.01 acre 1. Dasiphora fruticosa 38						•				
1. Dasiphora fruticosa 2.				= Total	Cover					
1. Dasphora truticosa 38		acre)				Prevalence Index Wo	rksheet:			
2.					FAC					
4. 5. 38 = Total Cover	2.					***************************************				
FAC Species 147 x 3 = 441					Front Continue demanders					
Herb Stratum (Plot size: 0.01 acre										
Herb Stratum (Plot size: 0.01 acre	5.					1				
1. Poa pratensis 2. Phleum pratense 2. Danthonia intermedia 3. Danthonia intermedia 4. Zizia aptera 5. Symphyotrichum campestre 6. Fragaria virginiana 7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 15. TACU 17. Potentilla gracilis 16. An Enal Taraxacum (Plot size: NA 10. Morphological And wetland hydrology must be present, unless disturbed or problematic.	Herb Stratum (Plot size: 0.01 acre)	30	TOLATY	Cover	UPL Species 1	5 x 5 = 75			
2. Phleum pratense 20 x FAC 3. Danthonia intermedia 3. Danthonia intermedia 4. Zizia aptera 5. Symphyotrichum campestre 6. Fragaria virginiana 7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 20 x FAC 15 FAC 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 1 - Taraxacum officinale 2 FACU 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index (B/A) = 3.29 Hydrophytic Vegetation Indicators: 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 1 - Problematic Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetati		/	74	¥	FAC		5 (A) 630 (B)			
3. Danthonia intermedia 4. Zizia aptera 8. FAC 5. Symphyotrichum campestre 7. (UPL) 6. Fragaria virginiana 7. Potentiila gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 15 FACU 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 1 - Taraxacum officinale 2 FACU 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 1 - Problematic Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU 1 - FACU 2 - Dominance Test is >50% 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU 1 - FACU 2 - Dominance Test is >50% 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU 2 - FACU 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU 1 - FACU 2 - FACU 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU 1 - FACU 2 - Dominance Test is >50% 1 - FACU 1 - FACU 2 - Dominance Test is >50% 1 - FACU 2 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1 - FACU			20			Prevalence Index	(R/Δ) = 3.20			
4. Zizia aptera 8 FAC 1 - Rapid Test for Hydrophytic Vegetation 5. Symphyotrichum campestre 7 (UPL) 6. Fragaria virginiana 7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 12 FACU 13 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 10. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: NA 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			Marian resources and resources and re-	Tarries described de la companya de	Committee of the commit					
5. Symphyotrichum campestre 7 (UPL) 6. Fragaria virginiana 5 FACU 7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 15. Symphyotrichum campestre 7 (UPL) 9. Galium boreale 16. FACU 17. Potentilla gracilis 18. Anemone multifida 19. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 12. FACU 153.5 = Total Cover 153.5 = Total Cover			8		FAC					
6. Fragaria virginiana 7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 15. TACU 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ 10. Antennaria microphylla 11. Taraxacum officinale 12. FACU 153.5 = Total Cover Woody Vine Stratum (Plot size: NA 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹ □ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			7	NAME OF THE PROPERTY OF THE PR	(UPL)					
7. Potentilla gracilis 8. Anemone multifida 9. Galium boreale 10. Antennaria microphylla 11. Taraxacum officinale 2 FACU 153.5 = Total Cover 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹	6. Fragaria virginiana		5		FACU					
8. Anemone multifida 4 (UPL) 9. Galium boreale 4 FACU 10. Antennaria microphylla 11. Taraxacum officinale 2 FACU 15.5 = Total Cover Woody Vine Stratum (Plot size: NA 4 (UPL) 5 - Wetland Non-Vascular Plants¹ [7. Potentilla gracilis		5		FAC					
10. Antennaria microphylla 11. Taraxacum officinale 2 FACU 1153.5 = Total Cover Woody Vine Stratum (Plot size: NA 10. Antennaria microphylla 3 (UPL) 11. Problematic Hydrophytic Vegetation¹ (Explain) 11. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	8. Anemone multifida		4		(UPL)					
11. <u>Taraxacum officinale</u> 2 FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: NA)	9. Galium boreale		4		FACU	5 - Wetland Non-Vasc	ular Plants¹			
<u>153.5</u> = Total Cover <u>present, unless disturbed or problematic.</u> Woody Vine Stratum (Plot size: NA)	10. Antennaria microphylla				(UPL)	Problematic Hydrophy	tic Vegetation¹ (Explain)			
Woody Vine Stratum (Plot size: NA)	11. Taraxacum officinale									
			153.5	_ = Total (Cover	present, unless disturbed to	problematic.			
1 Hydrophytic)				i				
	_					Hydrophytic				
2 Vegetation 0 = Total Cover Present? Yes ✓ No □	۷٠			- Total /	Cover		✓ No □			
	% Bare Ground in Herb Stratum			10tal (Cover		· — — — — — — — — — — — — — — — — — — —			
Remarks: Vegetation meets the Dominance Test, indicating the site as hydrophytic. However, vegetation fails the Prevalence Index (PI).		nance Test. in	dicating the s	ite as hvo	drophytic.	However, vegetation fails	the Prevalence Index (PI).			
The PI and professional judgment indicate that vegetation is mesic but not wetland.	The PI and professional jud	gment indicate								
Cir lon probably crossed with Cir hoo	Cir ion probably crossed wit	n Cir hoo								



SOIL			Project/Site: E	Black Bu	tte Copper	Sampling Point: LS-U13
Profile Des	cription: (Descril	e to the dep	th needed to document the indicate	or or co	nfirm the a	bsence of indicators.)
Depth	Matrix		Redox Features			
(inches)	Color (moist)	%	Color (moist) % Type¹ L	OC2	Texture	Remarks
0-16	7.5YR 2.5/1	100			CL	

			=Reduced Matrix, CS=Covered or Coa	ated San	d Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to all l	LRRs, unless otherwise noted.):		Indica	tors for Problematic Hydric Soils ³ :
Histosol (A	\1)		Sandy Redox (S5)		2 cı	m Muck (A10)
	pedon (A2)	_	Stripped Matrix (S6)			d Parent Material (TF2)
Black Hist		<u>_</u>	Loamy Mucky Mineral (F1) (except MLRA	. 1)	·	y Shallow Dark Surface (TF12)
= -	Sulfide (A4)		Loamy Gleyed Matrix (F2)		U Oth	er (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix (F3)		3Indica	ators of hydrophytic vegetation and
	k Surface (A12) cky Mineral (S1)	<u></u>	Redox Dark Surface (F6) Depleted Dark Surface (F7)			tland hydrology must be present,
= .	eyed Matrix (S4)		Redox Depressions (F8)			ess disturbed or problematic.
	Layer (if present	١٠	, reduce Depressions (r sy			
Type:	Layor (ii proconc	,.				
Depth (inche	e).		-		Hydric So	il Present? Yes ☐ No 🗸
Remarks:	73). ************************************		THE THROUGH THE THROUGH THE ANGENT AND AND AND AND AND AND AND AND AND AND		- Try arro Oo	Tresent: res No y
Remains.						
HYDROLOG	GY					
Wetland Hy	drology Indicato	rs:				
Primary Indi	cators (minimum	of one require	d; check all that apply)		Seco	ondary Indicators (2 or more required)
Surface W	/ater (A1)		Water-Stained Leaves (B9) (exce	pt	Пи	Vater-Stained Leaves (B9) (MLRA 1, 2,
	r Table (A2)		MLRA 1, 2, 4A, and 4B)	r-		4A, and 4B)
Saturatio	n (A3)		Salt Crust (B11)			rainage Patterns (B10)
Water Mar	ks (B1)		Aquatic Invertebrates (B13)			ry-Season Water Table (C2)
Sediment	Deposits (B2)		Hydrogen Sulfide Odor (C1)		s	aturation Visible on Aerial Imagery (C9)
Drift Depo	sits (B3)		Oxidized Rhizospheres along Livi	ng Roots	(C3) 🗹 G	Geomorphic Position (D2)
Algai Mat	or Crust (B4)		Presence of Reduced Iron (C4)		s	hallow Aquitard (D3)
Iron Depos	sits (B5)		Recent Iron Reduction in Tilled So	oils (C6)	F.	AC-Neutral Test (D5)
	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LRR A)	☐ R	aised Ant Mounds (D6) (LRR A)
	Visible on Aerial Im		Other (Explain in Remarks)		∐ F	rost-Heave Hummocks (D7)
	egetated Concave S	Surface (B8)				
Field Obser			7			
Surface Wat		′es ∐ No 🛂		_		
Water Table		′es		NA7- 4	ناجيا المسما	Jamy Dusanto Vac Da Na 🗐
Saturation P (includes car		′es 📗 No 🛂	Depth (inches):	vvet	ianu nyaro	ology Present? Yes ☐ No ✓
		am gauge, mo	onitoring well, aerial photos, previous	inspection	ons). if avail	lable:
		J=J=,	,,	1- 3-4-11	.,,	
Remarks: S	ome micro-relief h	out no solid fro	ost heave indicators (high mesic <i>Dasij</i>	ohora fri	ıticosa)	
			(,.	

Project/Site: Black Butte Copper		Ci	ity/County	: White Su	lphur Springs/Meagher	Sampling Date: 08-25-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-U14
Investigator(s): K. Scow, D. Barton, J	. Beaver	S	Section, To	ownship, Ra	ange: S32, T12N, R7E	
Landform: broad swale		L	ocal relie	f (concave,	convex, none): none	Slope (%): 4
Subregion (LRR): E			7615031	•	Long: -110.8737664	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-				***************************************	NWI classifi	
Are climatic/hydrologic conditions on t		or this time o	f vear2 V	′es ✓ No		
Are Vegetation, Soil, or Hydrold						present? Yes V No
Are Vegetation , Soil , or Hydrold						
SUMMARY OF FINDINGS – Atta				, ,	eeded, explain any answ ations, transects, im	·
Hydrophytic Vegetation Present?		 o□				
Hydric Soil Present? Wetland Hydrology Present?	Yes No			the Sample thin a Wetla		No 🗹
Remarks: Plot in transition zone betw	veen wetland an	d upland. Pł	notograph	s: JB 2426-	-2429 (NESW)	
		·				
VEGETATION - Use scientific n	ames of plant	ts.				
T. O. I. I. I. I. I. I. I. I. I. I. I. I. I.		Absolute		t Indicator	Dominance Test World	ksheet:
Tree Stratum (Plot size: NA)	% Cover			Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC:3 (A)
2. 3.					Total Number of Domir	
4.					Species Across All Stra	ala. (D)
		0	= Total	Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)				ļ	
1. Dasiphora fruticosa		35	X	FAC	Prevalence Index Wo	
2					Total % Cover of:	
3					OBL Species 7.	x 1 = 5 x 2 =15
4					FAC Species 14	
5.					FACU Species 12.	
Herb Stratum (Plot size: 0.01 acre)	35	_ = Total	Cover		7 x 5 = 35
1. Poa pratensis	/	60	х	FAC	Column Totals: 16	
2. Phleum pratense		40	×	FAC	Prevalence Index	
3. Galium boreale		8		FACU	!	
4. Juncus balticus		5	***************************************	FACW	Hydrophytic Vegetation 1 - Rapid Test for Hyd	
5. Antennaria microphylla		4		(UPL)	✓ 2 - Dominance Test is	` -
6. Symphyotrichum ascendens		4		FACU	3 - Prevalence Index is	
7. Potentilla gracilis		3		FAC		otations¹ (Provide supporting
8. Carex praegracilis				FACW		r on a separate sheet)
				FAC	5 - Wetland Non-Vasc	ular Plants¹
			***************************************	(UPL)		tic Vegetation¹ (Explain)
11. Carex scirpoidea		1		FAC	¹Indicators of hydric soil an present, unless disturbed of	d wetland hydrology must be or problematic.
Woody Vine Stratum (Plot size: NA	1	134	_ = Total	Cover		
					11	
1. 2.					Hydrophytic Vegetation	
		0	= Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum				- · - ·	i 	
Remarks: Vegetation meets the Dom						the Prevalence Index (PI).
The PI and professional ju-	dgment indicate	that vegetat	tion is me	sic but not	wetland.	



SOIL				Project/Sit	te: Black B	Butte Cop	oper Sampling Point: LS-U14
Profile Des	cription: (Descri	be to the de	pth needed to d	ocument the ind	icator or c	onfirm t	the absence of indicators.)
Depth	Matrix		-	dox Features			·
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Textur	e Remarks
0-16	10YR 3/1	100				С	
				~~			
					-		
ver en en en en en en en en en en en en en							
1T C-C	tuation D-C	anlation DA	4-Dadward Matri				21 and in Disposal initial Na Nashahir
p	oncentration, D=D						
	Indicators (Appl	icable to al		-	•	111	ndicators for Problematic Hydric Soils³:
Histosol (•	Į I	Sandy Redox (S Stripped Matrix	•		<u></u>	」 2 cm Muck (A10) 〗Red Parent Material (TF2)
Black His	pedon (A2)	Į		(36) ineral (F1) (except M	II DA 1\	<u> </u>	Very Shallow Dark Surface (TF12)
	Sulfide (A4)	[Loamy Gleyed N		iLiva i)	<u></u>	Other (Explain in Remarks)
, ,	Below Dark Surface	(A11)	Depleted Matrix			L	J Other (Explain in Remarks)
	k Surface (A12)	()	Redox Dark Sur	` '		3 1	ndicators of hydrophytic vegetation and
	ucky Mineral (S1)	Ī	Depleted Dark S				wetland hydrology must be present,
Sandy GI	eyed Matrix (S4)	Ī	Redox Depressi	ons (F8)			unless disturbed or problematic.
Restrictive	Layer (if present	:):					
Type:		•					
Depth (inch	es):					Hydri	ic Soil Present? Yes ☐ No ✓
		hout deplete	— ad or aleved matr	v Could meet in	dicator A12		ter depth. NRCS soil mapping describes
	init (1150C, Bisch						
							•
HYDROLO	GY						
Wetland Hy	drology Indicate	rs:					
Primary Ind	icators (minimum	of one requi	red; check all tha	t apply)			Secondary Indicators (2 or more required)
Surface V	Vater (A1)		Water-S	tained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A, and 4B)	,0,,00,0	,	4A, and 4B)
Saturation	on (A3) `		Salt Cru	•			Drainage Patterns (B10)
Water Ma	rks (B1)			Invertebrates (B13)			Dry-Season Water Table (C2)
Sediment	Deposits (B2)		Hydroge	en Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo	osits (B3)		Oxidized	d Rhizospheres along	g Living Root	ts (C3)	✓ Geomorphic Position (D2)
Algal Mat	or Crust (B4)		Presenc	e of Reduced Iron (C	24)	(Shallow Aquitard (D3)
Iron Depo	• •		Recent	ron Reduction in Till	ed Soils (C6))	FAC-Neutral Test (D5)
Surface S	ioil Cracks (B6)		Stunted	or Stressed Plants (D1) (LRR A)	ļ	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		Other (E	explain in Remarks)			Frost-Heave Hummocks (D7)
	Vegetated Concave	Surface (B8)					
Field Obse					1		
		Yes No					
Water Table		Yes 🗌 No					
Saturation F	Present? pillary fringe)	Yes No	Depth (inche)	s):	VV	etiand H	lydrology Present? Yes 🗌 No 🗹
	ecorded Data (stre	am dalide ?	monitoring well a	erial photos, previ	ious inenea	rtione\ if	available:
Pesoine M	conded Data (Sile	anı yauye, i	nomoning well, a	chai photos, previ	ious ilispec	Alonoj, II	avallable.
Domorlini V	Votor toble as a = t-			nit Only	.no.oc	lanı indi-	notes of wotland budgels =:
rtemarks: V	vater table of Satt	nation flot el	icountered in SOF	pit. Only meets t	me second	ary maic	ator of wetland hydrology.

Project/Site: Black Butte Copper	City/Co	ounty: White Su	lphur Springs/Meagher	Sampling Date: 09-02-2014
Applicant/Owner: Tintina Resources		-	State: MT	Sampling Point: LS-U15
Investigator(s): D. Barton, K. Scow	Section	on, Township, Ra	ange: S30, T12N, R7E	***************************************
Landform: toe slope			convex, none): convex	Slope (%): 1-2
Subregion (LRR): E	Lat: 46.7616	·	Long: -110.8757961	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Monaberg		// LL	NWI classific	
		-2 V [8] N-		
Are climatic/hydrologic conditions on the site typical for the same of the sam	-		(If no, explain in Re	,
Are Vegetation , Soil , or Hydrology significantly				present? Yes V No
Are Vegetation , Soil , or Hydrology naturally pr SUMMARY OF FINDINGS – Attach site map she			eeded, explain any answ	
		ing point loca	adons, transects, imp	oortant leatures, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ☐ No ✓	=	Is the Sample	ud Area	
Wetland Hydrology Present? Yes No		within a Wetla		No 🗸
Remarks: Photograph: KS 1495-1498 (N to W); photo I	_	h shows D. Bart	on at flag for DB-013, an	intended unland plot but is in
obvious wetland - Dasiphora fruticosa/Juncu				
VEGETATION – Use scientific names of plants.			A Company of the Comp	WAY WARE WAY A CONTROL OF THE CONTRO
VLOCIATION — Ose scientific flames of plants.		ninant Indicator	Dominance Test World	
Tree Stratum (Plot size: NA)		cies? Status	Number of Dominant S	
1			That Are OBL, FACW,	
2			Total Number of Domin	ant
3			Species Across All Stra	
4			Percent of Dominant S	naciae
	0 = T	otal Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre			Prevalence Index Wor	ksheet:
1. Dasiphora fruticosa		x FAC	Total % Cover of:	
2.			OBL Species	x 1 =
3				5 x 2 = 1
4.			FAC Species 18	
5		otal Cover	FACU Species 5	
Herb Stratum (Plot size: 0.01 acre)		otal oovel	UPL Species	8 x 5 =40
1. Poa pratensis	65	x FAC	Column Totals: 240.	5 (A) <u>787</u> (B)
2. Phleum pratense		x FAC	Prevalence Index ((B/A) = 3.27
3. Taraxacum officinale	38 :	x FACU	Hydrophytic Vegetation	
4. Potentilla gracilis	15	FAC	1 - Rapid Test for Hydr	
5. Fragaria virginiana	10	FACU	✓ 2 - Dominance Test is	· · ·
6. Lupinus sericeus	8	(UPL)	3 - Prevalence Index is	
7. Festuca rubra	3	FAC	4 - Morphological Adar	otations¹ (Provide supporting
8. Bromus inermis	2	FAC	data in Remarks or	on a separate sheet)
9. Achillea millefolium	1	FACU	5 - Wetland Non-Vasci	ular Plants¹
10. Agoseris glauca		FAC		ic Vegetation¹ (Explain)
11. Agropyron trachycaulum	1	FAC	Indicators of hydric soil an present, unless disturbed o	d wetland hydrology must be
Woody Vine Stratum (Plot size: NA)	185.5 = T	otal Cover	p. 00011, 011000 010111	
1			Hydrophytic Vegetation	
2		otal Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum	=1	J.u. 50461		
Remarks: Vegetation meets the Dominance Test, indicate	ating the site a	s hydrophytic. H	lowever, vegetation fails	the Prevalence Index (PI).
The PI and professional judgment indicate th	at vegetation is	s mesic but not v	wetland.	, ,
GPS site DB-013 in obvious wetland (no form Sagebrush edge (see GPS point); upland onl			ou degrees to plot LS-U1	o iii upiand, aimost at Big



SOIL				F	Project/Sit	e: Black	Butte Co	pper	Sampling Point: LS-U15
Profile Des	cription: (Descri	be to the de	pth needed to	documen	nt the indi	cator or	confirm	the a	absence of indicators.)
Depth	Matrix		Re	edox Featu	ires				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ure	Remarks
0-16	7.5YR 2.5/1	100					CI	_	
	***************************************					***************************************			
		ne recent and a contract of the							

¹Type: C=C	oncentration, D=D	epletion, RN	/I=Reduced Matr	ix, CS=C	overed or	Coated S	Sand Gra	ains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (App	licable to al	l LRRs, unless	otherwis	e noted.):			Indica	ators for Problematic Hydric Soils³:
Histosol (A1)	[Sandy Redox (S5)			[2 c	cm Muck (A10)
Histic Epi	pedon (A2)	[Stripped Matrix	(S6)			[Re	ed Parent Material (TF2)
Black His	tic (A3)	[Loamy Mucky N	∕lineral (F1) (except M	LRA 1)		Ve	ery Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed	Matrix (F2)	•		[Oti	her (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3)					
	k Surface (A12)	Į	Redox Dark Su						ators of hydrophytic vegetation and
	ıcky Mineral (S1)	Į	Depleted Dark	•	7)				etland hydrology must be present, lless disturbed or problematic.
<u> </u>	eyed Matrix (S4)		Redox Depress	ions (F8)					Tool distance of problematic.
Restrictive	Layer (if present	:):							
Type:	,,,								
Depth (inch	es):						Hyd	ric So	oil Present? Yes ☐ No 🗸
									lepth. NRCS soil mapping describes
u	nit (1150C, Bisch	off-Monaber	g) as predominar	ntly non-h	nydric (hyd	Iric soils	are 15%	of ma	ap unit).
Average III cons									

HYDROLO	GY								
	drology Indicate	ors:			*******************************				
-	cators (minimum		red: check all tha	et annly)				Sec	condary Indicators (2 or more required)
Filliary Illu	cators (minimum	oi one requi						360	ordary fidicators (2 of filore required)
Surface V			-		aves (B9) (except		L \	Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			RA 1, 2, 4A	, and 4B)				4A, and 4B)
Saturation	, ,			ust (B11)					Drainage Patterns (B10)
Water Ma	` '			Invertebra	, ,				Dry-Season Water Table (C2)
	Deposits (B2)			en Sulfide		Thinn Da	-t- (C2)	\equiv	Saturation Visible on Aerial Imagery (C9)
Drift Depo	or Crust (B4)			•	heres along iced Iron (C	-	iots (C3)		Geomorphic Position (D2) Shallow Aquitard (D3)
Iron Depo	, ,				ction in Tille	,	:6)		FAC-Neutral Test (D5)
	oil Cracks (B6)				ed Plants (D		•		Raised Ant Mounds (D6) (LRR A)
	i Visible on Aerial Im	agery (B7)		Explain in	•) (L/((/	4		Frost-Heave Hummocks (D7)
	Vegetated Concave							ш.	
Field Obse						i			
		Yes 🗌 No	✓ Depth (inche)	es):					
Water Table		Yes No		***************************************					
7007V 000000000 00000000000000000000000							Vetland	Hydr	ology Present? Yes 🔲 No 🗸
(includes capillary fringe)									
Describe Re	corded Data (stre	am gauge, i	monitoring well, a	aerial pho	tos, previ	ous inspe	ections),	if ava	ilable:
Remarks: N	lo evidence of sat	uration or w	ater table in soil	pit. Plot a	t sagebru	sh edge a	and lack	s frost	t heave hummocks.



Project/Site: Black Butte Copper		Ci	ity/County	White Su	ılphur Springs/Meagher	Sampling Date: 08-25-2014			
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U16				
Investigator(s): D. Barton, K. Scow		S	Section, To	wnship, R	ange:	·			
Landform: toe slope				• •	convex, none): convex	Slope (%): 7			
Subregion (LRR): E			7614196		Long: -110.8757513	Datum: WGS84			
Soil Map Unit Name:		Lat. 40.	.7014130		NWI classifi				
		- 41-1 11	f	[a] N					
Are climatic/hydrologic conditions on t									
Are Vegetation , Soil , or Hydrok						present? Yes 🗸 No 🗌			
Are Vegetation , Soil , or Hydrold SUMMARY OF FINDINGS – Atta					eeded, explain any answ	·			
			impinig j		auons, transects, im	portant reatures, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	V		he Sample hin a Wetl		No 🗹			
Remarks: Photographs: KS1411-141	4 (N,E,S,W)		1						
VEGETATION - Use scientific n	ames of plant	s.							
	***************************************	Absolute	Dominant	Indicator	Dominance Test Wor	ksheet:			
Tree Stratum (Plot size: NA			Species?	Status	Number of Dominant S	pecies			
1.					That Are OBL, FACW,	or, FAC:1 (A)			
2.					Total Number of Domir	nant			
3.				***************************************	Species Across All Str	ata: 4 (B)			
4					Percent of Dominant S	pecies			
Conling/Chruh Stratum (Blot size: 0.0)1 ooro \	0	_ = Total (Cover	That Are OBL, FACW,	or, FAC:25 (A/B)			
Sapling/Shrub Stratum (Plot size: 0.0		35	×	(UPL)	Prevalence Index Wo	rksheet:			
0 D		_		FACU	Total % Cover of:	Multiply by:			
3.					OBL Species	x 1 =			
4.				***************************************	FACW Species	3 x 2 = 6			
5.					FAC Species 1	9 x 3 = 57			
		38	= Total 0	Cover	FACU Species 2	9 x 4 = 116			
Herb Stratum (Plot size: 0.01 acre)					7 x 5 = 385			
1. Carex obtusata		18	X	(UPL)	Column Totals: 12	8 (A) <u>564</u> (B)			
2. Antennaria microphylla		15	X	(UPL)	Prevalence Index	(B/A) = 4.41			
3. Poa pratensis		14	X	FAC	Hydrophytic Vegetati	on Indicators:			
4. Festuca idahoensis		12		FACU	1 - Rapid Test for Hyd				
5. Danthonia intermedia		12		FACU	2 - Dominance Test is	>50%			
6. Potentilla gracilis		5		FAC	3 - Prevalence Index is	s ≤3.0¹			
				(UPL)		ptations1 (Provide supporting			
			***************************************	FACW		r on a separate sheet)			
				(UPL)	5 - Wetland Non-Vaso				
10. Agropyron spicatum 11. Geum triflorum		2		(UPL)		tic Vegetation¹ (Explain)			
11. Geum umorum		90	= Total 0	FACU	present, unless disturbed of	nd wetland hydrology must be or problematic.			
Woody Vine Stratum (Plot size: NA)	90	101810	20VEI					
1.	·				Hydrophytic				
2.					Vegetation				
		0	= Total C	Cover	Present? Yes	□ No ✓			
% Bare Ground in Herb Stratum									
Remarks:						3000 ABRY 1 ABRY 1 ABRY 2			



SOIL				Р	roject/Site	e: Black i	Butte Co	opper Sampling Point: LS-U16
Profile Des	scription: (Describe	to the depth	needed to d	locument	the indi	cator or o	confirm	the absence of indicators.)
Depth	Matrix	•		dox Featur				· · · · · · •
(inches)	Color (moist)	% Co	lor (moist)	%	Type ¹	Loc²	Textu	ure Remarks
				- Annual Art. Mr. Annual Art.	***************************************			
***************************************							***************************************	
¹Type: C=C	Concentration, D=Der	oletion RM=Re	educed Matr	ix CS=Co	vered or	Coated S	and Gra	ains ² Location: PL=Pore Lining, M=Matrix
	il Indicators (Applic							Indicators for Problematic Hydric Soils3:
Histosol			andy Redox (,.		Γ	2 cm Muck (A10)
	pipedon (A2)	,	tripped Matrix	•			ŕ	Red Parent Material (TF2)
Black His	. , ,	=	oamy Mucky N	. ,	(except MI	LRA 1)	Ī	Very Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)	L	oamy Gleyed I	Matrix (F2)				Other (Explain in Remarks)
Depleted	d Below Dark Surface (A	11) 🗌 D	epleted Matrix	(F3)				
Thick Da	ark Surface (A12)	R	edox Dark Su	rface (F6)			3	³ Indicators of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)	D	epleted Dark	Surface (F7)			wetland hydrology must be present, unless disturbed or problematic.
Sandy G	leyed Matrix (S4)	∐ R	edox Depress	ions (F8)				unless disturbed of problematic.
Restrictive	E Layer (if present):							
Type:								
Depth (inch	nes):						Hydi	Iric Soil Present? Yes ☐ No 🗸
Remarks:	No soil pit since site	failed on hydro	phytic veget	atin and v	vetland h	ydrology.		
HYDROLC	OGY							
Wetland H	ydrology Indicators	:				***************************************		
	dicators (minimum of		check all tha	et apply)				Secondary Indicators (2 or more required)
		one required,	····					
	Water (A1)		_	Stained Lea		except		Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2) ion (A3)		promotory	RA 1, 2, 4A,	and 4B)			4A, and 4B)
	arks (B1)			ust (B11)	on (P12)			Drainage Patterns (B10) Dry-Season Water Table (C2)
	at NS (B1)			Invertebrat en Sulfide C	٠,,,			Saturation Visible on Aerial Imagery (C9)
routette.	osits (B3)			d Rhizosph	, ,	Living Roc	ots (C3)	Geomorphic Position (D2)
F	t or Crust (B4)			ce of Reduc	_	-	013 (00)	Shallow Aquitard (D3)
	osits (B5)		=	Iron Reduc	•	•	3)	FAC-Neutral Test (D5)
	Soil Cracks (B6)		==	or Stresse		,	,	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial Imag	ery (B7)		Explain in R	-	, ,	,	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave Sui	face (B8)						
Field Obse	ervations:		al des sel el l'aliment described secreté comme el selle planeer ese commenté e sel el					
Surface Wa	ater Present? Ye	s 🗌 No 🗸	Depth (inche	es):				
Water Tabl	le Present? Ye	s 🗌 No 🗸	Depth (inche	es):				
Saturation (includes can	Present? Ye apillary fringe)	s 🗌 No 🗸	Depth (inche	es):		W	/etland l	Hydrology Present? Yes ☐ No 🗹
Describe R	ecorded Data (strear	n gauge, moni	toring well, a	erial phot	os, previo	ous inspe	ctions), i	if available:
				·	-	•		
Remarks:								



Project/Site: Black Butte Copper		Ci	ity/Count	ty: White Su	ılphur Springs/Meagher Sa	ampling Date: 08-26-2014				
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U17					
Investigator(s): J. Beaver, D. Hagen		S	ange: S32, T12N, R7E							
Landform: lower slope		L	ocal relie	ef (concave,	convex, none): none	Slope (%): 2				
Subregion (LRR): E		Lat: 46.	7606399)	Long: -110.8793242	Datum: WGS84				
Soil Map Unit Name: 1175E Owensprin	g-Cheadle				NWI classificati	ion: UPL				
Are climatic/hydrologic conditions on the	e site typical fo	r this time o	f year?	Yes 🗸 No	(If no, explain in Rema	ırks.)				
Are Vegetation, Soil, or Hydrolog			-		"Normal Circumstances" pre	esent? Yes V No				
Are Vegetation, Soil, or Hydrolog					eeded, explain any answers					
SUMMARY OF FINDINGS – Attacl				point loc	ations, transects, impo	rtant features, etc.				
Hydrophytic Vegetation Present?	Yes ✓ No	<u> </u>								
Hydric Soil Present?	ATTENTION	✓		the Sample		🗔				
Wetland Hydrology Present?	Yes No		Wi	ithin a Wetl	and? Yes 🗌	No 🗹				
Remarks: Typical of lower slope/wetlar	nd margin. Pho	otographs: Ji	B 2434-2	2437						
VEGETATION – Use scientific na	mes of plant	ts.								
Tree Stratum (Plot size: NA	1	Absolute % Cover		nt Indicator ? Status	Dominance Test Worksh					
1.		***************************************	·		Number of Dominant Spec That Are OBL, FACW, or,					
2.			***************************************							
3.				h-h-	Total Number of Dominant Species Across All Strata:					
4.					•					
		0	= Total	l Cover	Percent of Dominant Spec That Are OBL, FACW, or,					
Sapling/Shrub Stratum (Plot size: 0.01	acre)				Prevalence Index Works					
!				FAC	Total % Cover of:	Multiply by:				
2.		delt editoriological material material con-			OBL Species	x 1 =				
3.					FACW Species 0.5	x 2 = 1				
4.					FAC Species 136	x 3 = 408				
5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	45	= Total	l Cover	FACU Species 7	x 4 = 28				
Herb Stratum (Plot size: 0.01 acre)		rotal	00001	UPL Species 15	x 5 = 75				
1. Phleum pratense	· •	45	x	FAC	Column Totals: 158.5	(A) 512 (B)				
2. Poa pratensis		35	X	FAC	Prevalence Index (B/A	A) = 3.23				
3. Festuca campestris		12		(UPL)	Hydrophytic Vegetation	***************************************				
4. Potentilla gracilis		88		FAC	1 - Rapid Test for Hydroph					
1				FACU	✓ 2 - Dominance Test is >50)%				
i de la companya de la companya de la companya de la companya de la companya de la companya de la companya de				FAC	3 - Prevalence Index is ≤3	i.01				
			***************************************	(UPL)	4 - Morphological Adaptati					
Taraxacum officinale Danthonia intermedia		2		FACU	data in Remarks or on 5 - Wetland Non-Vascular					
40 5				FACU FACW	Problematic Hydrophytic V					
11. <u>Descriampsia despitosa</u>				IAOW	¹Indicators of hydric soil and w	• , , ,				
		113.5	= Total	Cover	present, unless disturbed or pr					
Woody Vine Stratum (Plot size: NA)									
1					Hydrophytic					
2					Vegetation					
0/ Pore Cround in Hort Obstance 2.7		0	_ = Total	l Cover	Present? Yes ✓	No 📙				
% Bare Ground in Herb Stratum 0.5		 				- D				
Remarks: Vegetation meets the Domin The PI and professional judg						a Prevalence Index (PI).				
FAC veg w/ upland veg beco										



SOIL				Р	roject/Site	e: Black	Butte Co	opper Sampling Point: LS-U17
Profile Des	cription: (Descri	be to the depti	needed to do	cumen	the indi	cator or	confirm	n the absence of indicators.)
Depth	Matrix		Red	lox Featur	es		_	
(inches)	Color (moist)	%(Color (moist)	%	Type ¹	Loc²	Text	ture Remarks
0-8	10YR 2/1	100			*****		CL	<u> </u>
8-16	2.5Y 2.5/1	100					CL	L
	Accounted to the state of the s							
***************************************		and an address of the second s						
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							
	~~~~	**	····					
¹Type: C=C	oncentration, D=D	epletion, RM=F	Reduced Matrix	, CS=Co	vered or	Coated	Sand Gra	ains ² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (App	icable to all Li	RRs, unless of	therwise	noted.):			Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (St	5)			[2 cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix (S6)			[Red Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky Mi	neral (F1)	(except Mi	LRA 1)	[Very Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed M				Į	Other (Explain in Remarks)
	Below Dark Surface	` ' =	Depleted Matrix (20 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	k Surface (A12)		Redox Dark Surf	, ,			•	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
	icky Mineral (S1)		Depleted Dark S	•)			unless disturbed or problematic.
	eyed Matrix (S4)	\	Redox Depression	ons (F8)				
	Layer (if present							
Type:							11	luia Cail Burranto Van 🗔 - Na 🖪
Depth (inch					~~~			dric Soil Present? Yes ☐ No 🗸
C	headle) is an upla							t greater depth. Soil (1175C, Owenspring- s as "non-hydric". Very similar soil as plot as
L	S-U18.							
LIVEROL O	ov.							
HYDROLO					~ ~~~			
-	drology Indicate							
Primary Ind	cators (minimum	of one required	; check all that	apply)				Secondary Indicators (2 or more required)
Surface V	Vater (A1)			ained Lea	ves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wate	er Table (A2)		MLRA	1, 2, 4A,	and 4B)			4A, and 4B)
Saturation	on (A3)		Salt Crus	t (B11)				Drainage Patterns (B10)
Water Ma	rks (B1)		Aquatic I	nvertebra	tes (B13)			Dry-Season Water Table (C2)
	Deposits (B2)			n Sulfide (Saturation Visible on Aerial Imagery (C9)
Drift Depo	, ,			•	eres along	-	oots (C3)	✓ Geomorphic Position (D2)
	or Crust (B4)				ced Iron (C	,		Shallow Aquitard (D3)
Iron Depo					tion in Tille	•	,	FAC-Neutral Test (D5)
r	oil Cracks (B6) n Visible on Aerial Im	agon (P7)	,	or Stresse kplain in F	d Plants (D	71) (LKK /	4)	Raised Ant Mounds (D6) (LRR A)
ļ	Vegetated Concave		Other (E)	kpiaiii iii r	errarks)			Frost-Heave Hummocks (D7)
Field Obser		ounace (Do)						
		Yes ☐ No 🗸	Depth (inches	:)·				
Water Table		Yes No V	Depth (inches					
								Hydrology Present? Yes ☐ No 🗸
	pillary fringe)	. 55	Doput (mones	·/·				ري در اسا در اسا
Describe Re	corded Data (stre	am gauge, moi	nitoring well, as	erial phot	os, previo	ous inspe	ections),	if available:
Remarks: J	ust above wetland	d boundary. No	primary wetlan	d hydrol	ogy indica	ators.		



Project/Site: Black Butte Copper	Cit	ty/County:	White Su	lphur Springs/Meagher Sampling Date: 08-26-2014					
Applicant/Owner: Tintina Resources				State: MT Sampling Point: LS-U18					
Investigator(s): J. Beaver	S	ection, To	wnship, Ra	ange: S32, T12N, R7E					
Landform: lower slope	Le	ocal relief	(concave,	convex, none): none Slope (%): 4					
Subregion (LRR): E	Lat: 46.	7624605		Long: -110.8797875 Datum: WGS84					
Soil Map Unit Name: 1175E Owenspring-Cheadle				NWI classification: UPL					
Are climatic/hydrologic conditions on the site typical for	this time of	f year? Ye	es 🗸 No	(If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantl	y disturbed	1?	Are '	"Normal Circumstances" present? Yes 🗸 No					
Are Vegetation, Soil, or Hydrology naturally p	roblematic'	?	(If ne	eeded, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map sh			oint loca	ations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No No No No No No No No No No No No No	/		ne Sample nin a Wetla						
Remarks: Wetland below this plot has inclusions (<10%) of upland - complex. Photographs: JB 2430-2433 (N,E,S,W)									
VEGETATION – Use scientific names of plants	i.								
<u>Tree Stratum</u> (Plot size: NA		Dominant Species?	Indicator Status	Dominance Test Worksheet:					
1.				Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A)					
2.									
3.				Total Number of Dominant Species Across All Strata: 3 (B)					
4				Percent of Dominant Species					
	0	= Total C	Cover	That Are OBL, FACW, or, FAC: 100 (A/B)					
Sapling/Shrub Stratum (Plot size: 0.01 acre)	45	v	FAC	Prevalence Index Worksheet:					
1. Dasiphora fruticosa	***************************************	NAME AND ADDRESS OF THE OWNER, THE PARTY OF THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER,	FAC	Total % Cover of: Multiply by:					
3.				OBL Species x 1 =					
4.				FACW Species x 2 =					
5.				FAC Species 130 x 3 = 390					
	45	= Total C	Cover	FACU Species 6 x 4 = 24					
Herb Stratum (Plot size: 0.01 acre)				UPL Species 5 x 5 = 25					
1. Phleum pratense	50	X	FAC	Column Totals: 141 (A) 439 (B)					
2. Poa pratensis		X	FAC	Prevalence Index (B/A) = 3.11					
3. Potentilla gracilis	12		FAC	Hydrophytic Vegetation Indicators:					
4. Fragaria virginiana	3		FACU	1 - Rapid Test for Hydrophytic Vegetation					
Agropyron trachycaulum Astragalus canadensis	3		FAC FACW	✓ 2 - Dominance Test is >50%					
7 Calium hava ala	2		FACU	3 - Prevalence Index is ≤3.0¹					
8. Festuca campestris			(UPL)	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)					
9. Lupinus sericeus		***************************************	(UPL)	5 - Wetland Non-Vascular Plants¹					
10.				Problematic Hydrophytic Vegetation¹ (Explain)					
11				¹Indicators of hydric soil and wetland hydrology must be					
	96	= Total C	Cover	present, unless disturbed or problematic.					
Woody Vine Stratum (Plot size: NA)									
1				Hydrophytic					
2				Vegetation Present? Yes ✓ No □					
% Bare Ground in Herb Stratum 0.5	0	_ = Total C	over						
Remarks: Vegetation meets the Dominance Test, indic	cating the s	ite as hvd	rophytic. F	However, vegetation fails the Prevalence Index (PI)					
The PI and professional judgment indicate the									



SOIL				Project/Sit	e: Black Bı	utte Copper	r Sampling Point: LS-U18
Profile Des	cription: (Describ	e to the dept	h needed to de	ocument the indi	cator or co	onfirm the	absence of indicators.)
Depth	Matrix		Red	lox Features			·
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks
0-7.5	10YR 2/1	100			***************************************	CL	
7.5-16	2.5Y 2.5/1	100				CL	
		· — —			***************************************		WA 49-30-40-40-40-40-40-40-40-40-40-40-40-40-40
A							
¹Type: C=C	oncentration, D=D	epletion, RM=	Reduced Matrix	c, CS=Covered or	Coated Sa	nd Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to all L	RRs, unless o	therwise noted.):		Indic	cators for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Redox (S	5)		2	cm Muck (A10)
	pedon (A2)		Stripped Matrix (S6)			ed Parent Material (TF2)
Black His	` '			neral (F1) (except M	LRA 1)	=	ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed M	, ,		□ 0	ther (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix			31 n die	nators of hydrophytic vegetation and
	k Surface (A12)		Redox Dark Surf	• ,			cators of hydrophytic vegetation and etland hydrology must be present,
	ucky Mineral (S1) eyed Matrix (S4)	L	Depleted Dark S Redox Depression				nless disturbed or problematic.
	Layer (if present	\.	Nedox Depression	ліз (I о)		1	
Type:						***************************************	
						Hudric S	soil Present? Yes ☐ No 🗸
Depth (inch			······································				
							ater depth; however, soil (1175C, y NRCS as "non-hydric".
	owenspring-onead	iic) is all uplai	1110111301 0000	ining on 4-40 70 31	opes and d	escribed b	y Nikoo as hon-nyano .
HYDROLO	GY						
Wetland Hy	drology Indicato	rs:					
Primary Ind	icators (minimum	of one require	d; check all that	apply)		Sec	condary Indicators (2 or more required)
Surface V	Vater (A1)		☐ Water-S	tained Leaves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
(mm)	er Table (A2)			1, 2, 4A, and 4B)			4A, and 4B)
Saturati	on (A3)		Salt Crus				Drainage Patterns (B10)
Water Ma	ırks (B1)		Aquatic	nvertebrates (B13)			Dry-Season Water Table (C2)
Sediment	Deposits (B2)		Hydroge	n Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo	osits (B3)		Oxidized	Rhizospheres along	Living Roots	s (C3)	Geomorphic Position (D2)
Algal Mat	or Crust (B4)		Presence	e of Reduced Iron (C	4)		Shallow Aquitard (D3)
Iron Depo	sits (B5)		Recent I	ron Reduction in Tille	ed Soils (C6)	Ц	FAC-Neutral Test (D5)
	Soil Cracks (B6)		·····	or Stressed Plants (D	01) (LRR A)		Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		Other (E	xplain in Remarks)			Frost-Heave Hummocks (D7)
	Vegetated Concave S	Surface (B8)				~	
Field Obse		. — –					
		∕es ☐ No 🗸					
Water Table		∕es No ✓				والمرا المستملك	
Saturation I	Present? apillary fringe)	′es 📙 No 🗹	Depth (inche	s):	vve	etiano Hydi	rology Present? Yes 🗌 No 🗸
<u></u>	ecorded Data (stre	am gauge, mo	nitoring well. a	erial photos, previ	ous inspect	tions), if ava	ailable:
							- · · - · · · - ·
Remarks: N	Mesic boundary ab	ove wetland					
	acanaa, ab						
E COMMISSION DE							



Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LS-U19
Investigator(s): J. Beaver, D. Hagen		s	ection, To	ownship, R	ange: S31, T12N, R7E	
Landform: toe slope		L	ocal reliet	f (concave,	convex, none): none	Slope (%): 12
Subregion (LRR): E		Lat: 46.	7597174		Long: -110.8868521	Datum: WGS84
Soil Map Unit Name: 1175E Owenspring-C	headle				NWI classifie	
Are climatic/hydrologic conditions on the si		this time of	f vear? Y	es 🗸 No		
Are Vegetation, Soil, or Hydrology			-			present? Yes 🗸 No
Are Vegetation , Soil , or Hydrology					eeded, explain any answ	-
SUMMARY OF FINDINGS – Attach s						
Hydrophytic Vegetation Present? Ye	s No	/				
	s No	7		he Sample		
Wetland Hydrology Present? Ye	es 🗌 No 🛭		wit	hin a Wetl	and? Yes	No 🗸
Remarks: Immediately upslope of wetland	l boundary. P	hotograph	s: JB 247	1-2474		
The second secon						
VEGETATION - Use scientific name	s of plants					
T 0: (D) (: 114		Absolute		Indicator	Dominance Test Worl	ksheet:
Tree Stratum (Plot size: NA)			Species?		Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC: (A)
2.					Total Number of Domir	
3. 4.					Species Across All Stra	ata: 4 (B)
			= Total	Cover	Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.01 ac	re)				That Are OBL, FACW,	
1. Artemisia tridentata		25	X	(UPL)	Prevalence Index Wo	
2. Dasiphora fruticosa		15	X	FAC	Total % Cover of:	
3.						x1=
4.						$2 \times 2 = 4$ $60 \times 3 = 180$
5.				_		24 x 4 = 96
Herb Stratum (Plot size: 0.01 acre)		40	= Total	Cover		9 x 5 = 145
1 Pop protonois		40	x	FAC	Column Totals: 11	
Symphyotrichum ascendens		15	x	FACU	Prevalence Index	
3. Potentilla gracilis		5		FAC		
4. Achillea millefolium		3		FACU	Hydrophytic Vegetation 1 - Rapid Test for Hydro	
5. Lupinus sericeus		3		(UPL)	2 - Dominance Test is	
6. Taraxacum officinale		3		FACU	3 - Prevalence Index is	
7. Danthonia intermedia				FACU		ptations¹ (Provide supporting
8. Juncus balticus				FACW		r on a separate sheet)
9. Galium boreale				FACU	5 - Wetland Non-Vasc	
10. Stipa occidentalis		1		(UPL)		tic Vegetation¹ (Explain)
11		75	- Total		present, unless disturbed of	nd wetland hydrology must be or problematic.
Woody Vine Stratum (Plot size: NA)	75	_ = Total	COVE		With the control of t
1					Hydrophytic	
2					Vegetation	
		0	_ = Total	Cover	Present? Yes	□ No ✓
% Bare Ground in Herb Stratum						
Remarks: Mesic edge of Big Sagebrush.						
						!



SOIL				Proj	ect/Site	: Black E	Butte Co	opper Sampling Point: LS-U19
Profile Des	cription: (Describe	e to the depth i	needed to do	cument th	ne indic	ator or o	confirm	the absence of indicators.)
Depth	Matrix		Red	ox Features				
(inches)	Color (moist)	% Co	or (moist)	% -	Гуре¹	Loc²	Textu	ure Remarks

		A-A44AA						
								WARRANCE WAR
¹Type: C=Co	oncentration, D=De	nletion DM-De	duced Matrix	CS=Covo	rod or C	`ootod S	and Gra	nine 21 contion: DI -Doro Lining M-Metrix
	Indicators (Applic			·		oaleu S		ains ² Location: PL=Pore Lining, M=Matrix Indicators for Problematic Hydric Soils ³ :
Histosol (A		********	andy Redox (St		oteu.,.			2 cm Muck (A10)
Histic Epip	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ripped Matrix (S	•				Red Parent Material (TF2)
Black Hist			amy Mucky Mi	•	cept MLI	RA 1)	ř	Very Shallow Dark Surface (TF12)
	Sulfide (A4)		amy Gleyed M			,	Ì	Other (Explain in Remarks)
p	Selow Dark Surface (A		epleted Matrix (` '			_	
Thick Darl	Surface (A12)	Re	edox Dark Surf	ace (F6)			3	Indicators of hydrophytic vegetation and
Sandy Mu	cky Mineral (S1)	De	epleted Dark Si	urface (F7)				wetland hydrology must be present,
Sandy Gle	yed Matrix (S4)	☐ Re	edox Depressio	ns (F8)				unless disturbed or problematic.
Restrictive	Layer (if present):							
Туре:								
Depth (inche	es):						Hydı	ric Soil Present? Yes 🗌 No 🗹
Remarks: N	o soil pit as no hyd	rophytic vegeta	tion or wetlar	d hydrolog	y. Presu	ımed noı	n-hydric	
	•			, ,			•	

HYDROLOG	~v							
		~						
	drology Indicator			t- A				
Primary Indi	cators (minimum o	r one requirea; c	check all that	apply)				Secondary Indicators (2 or more required)
Surface W			Water-St	ained Leaves	s (B9) (ex	cept		Water-Stained Leaves (B9) (MLRA 1, 2,
	r Table (A2)		MLRA	. 1, 2, 4A, an	d 4B)			4A, and 4B)
Saturatio	• •		Salt Crus					Drainage Patterns (B10)
Water Mar	` '		-	nvertebrates				Dry-Season Water Table (C2)
C3	Deposits (B2)			Sulfide Odd	` '			Saturation Visible on Aerial Imagery (C9)
Drift Depo				Rhizosphere			ots (C3)	Geomorphic Position (D2)
Iron Depos	or Crust (B4)			of Reduced on Reduction	, ,		21	Shallow Aquitard (D3)
	oil Cracks (B6)			or Stressed F		•	•	FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
	Visible on Aerial Imag	nery (B7)		on otressed in oplain in Rem	,) (LIXIX A)	,	Frost-Heave Hummocks (D7)
	egetated Concave Su			(pidiii iii i toit	iaritoj			Troot reave rammooks (B1)
Field Obser	·							
Surface Wat		es 🗌 No 🗸 [Depth (inches	s):				
Water Table		(Depth (inches		***************************************			
Saturation P			Depth (inches			w	etland l	Hydrology Present? Yes ☐ No ✔
	oillary fringe)		Jopan (monoc					
Describe Re	corded Data (strea	m gauge, monit	oring well, ac	rial photos	, previoi	us insped	ctions), i	if available:
Remarks:								

Project/Site: Black Butte Copper		Ci	ty/County	r: White Su	lphur Springs/Meagher Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: LS-U20
Investigator(s): J. Beaver, D. Hagen		S	ection, T	ownship, R	ange: S31, T12N, R7E
Landform: toe slope		L	ocal relie	f (concave,	convex, none): concave Slope (%): 11
Subregion (LRR): E		Lat: 46.	7587788		Long: -110.8875142 Datum: WGS84
Soil Map Unit Name: 1175E Owenspri	ng-Cheadle				NWI classification: UPL
Are climatic/hydrologic conditions on the		or this time o	f vear? Y	′es ✓ No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrolo			-		"Normal Circumstances" present? Yes ✔ No
Are Vegetation , Soil , or Hydrolo		-			eeded, explain any answers in Remarks.)
					ations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes N	o 🗸			
Hydric Soil Present?	errerro.	o 🔽		the Sample	
Wetland Hydrology Present?	Yes N	o 🗸	wit	thin a Wetl	and? Yes ∐ No ✔
Remarks: Boundary between wetland	and upland be	comes sharp	er as slo	pe increase	es. Photographs: JB 2438-2441
VEGETATION - Use scientific na	ames of plan	ts.			
Toro Charles (District No.	`	Absolute		t Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA			Species?		Number of Dominant Species
1.					That Are OBL, FACW, or, FAC:2 (A)
3.			***************************************		Total Number of Dominant Species Across All Strata: 4 (B)
4.				- 10	
		0	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 50 (A/B)
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)				
			X	FAC	Prevalence Index Worksheet: Total % Cover of: Multiply by:
			X	(UPL)	
3.					OBL Species x 1 = FACW Species x 2 =
4.					FAC Species 78 x 3 = 234
5.		38	= Total	Covor	FACU Species 23 x 4 = 92
Herb Stratum (Plot size: 0.01 acre)		10tai	Covei	UPL Species 32 x 5 = 160
1. Poa pratensis	··············	45	×	FAC	Column Totals: 133 (A) 486 (B)
2. Danthonia intermedia		20	Х	FACU	Prevalence Index (B/A) = 3.65
3. Antennaria microphylla		15		(UPL)	Hydrophytic Vegetation Indicators:
4. Festuca campestris		44		(UPL)	1 - Rapid Test for Hydrophytic Vegetation
5. Potentilla gracilis		3_		FAC	2 - Dominance Test is >50%
I STATE OF THE STA				(UPL)	3 - Prevalence Index is ≤3.0¹
				FACU	4 - Morphological Adaptations¹ (Provide supporting
0.5 /				(UPL) FACU	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants¹
10.				FACO	Problematic Hydrophytic Vegetation¹ (Explain)
11.					¹Indicators of hydric soil and wetland hydrology must be
		95	= Total	Cover	present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)				
1					Hydrophytic
2					Vegetation
0/ Page Crayed in Heat Continue		0	_ = Total	Cover	Present? Yes ☐ No ✓
% Bare Ground in Herb Stratum 4					
Remarks:					
e de la constante de la consta					



SOIL				Pr	oject/Site	: Black	Butte Co	opper	Sampling Point: LS-U20
Profile Des	scription: (Descri	be to the depth	needed to d						bsence of indicators.)
Depth	Matrix			dox Feature					•
(inches)	Color (moist)	% C	olor (moist)	%	Type¹	Loc²	Text	ure	Remarks
				****				***************************************	
					 -				
							***************************************	er encourse reservoire -	
¹Type: C=C	Concentration, D=[Depletion, RM=R	educed Matri	x, CS=Co	vered or 0	Coated S	Sand Gra	ains	² Location: PL=Pore Lining, M=Matrix
	I Indicators (App								tors for Problematic Hydric Soils ³ :
Histosol		r	Sandy Redox (S				[2 cı	m Muck (A10)
Histic Ep	ipedon (A2)		Stripped Matrix	(S6)			[Red	d Parent Material (TF2)
Black His	stic (A3)	I	.oamy Mucky M	lineral (F1)	(except ML	.RA 1)	[Ver	y Shallow Dark Surface (TF12)
Hydroger	n Sulfide (A4)	l	oamy Gleyed N	/latrix (F2)			[Oth	ner (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3)					
	rk Surface (A12)		Redox Dark Sur	face (F6)			:		ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark S)				tland hydrology must be present, ess disturbed or problematic.
	leyed Matrix (S4)		Redox Depressi	ons (F8)			:		
	Layer (if presen	t):					and the second		
Depth (inch	nes):						нуа	ric So	oil Present? Yes ☐ No 🗸
HVDBOI O	nGV								
HYDROLO									
	ydrology Indicate		ahaak all tha	t annlu\				Coo	andani Indiastora (2 ar mara raquirad)
Primary inc	dicators (minimum	or one required;	check all tha	t apply)					ondary Indicators (2 or more required)
	Water (A1)			stained Lea	. , .	xcept		∨	Vater-Stained Leaves (B9) (MLRA 1, 2,
= -	ter Table (A2)			A 1, 2, 4A,	and 4B)				4A, and 4B)
Saturati				ist (B11)	oo (D13)				Orainage Patterns (B10) Ory-Season Water Table (C2)
Water Ma	arks (B1) t Deposits (B2)			Invertebrat en Sulfide C				\equiv	Saturation Visible on Aerial Imagery (C9)
	osits (B3)			d Rhizosph		Livina Ro	nots (C3)		Seomorphic Position (D2)
	t or Crust (B4)			e of Reduc	•	•	000 (00)		Shallow Aquitard (D3)
	osits (B5)		==	Iron Reduc	•		26)		AC-Neutral Test (D5)
	Soil Cracks (B6)			or Stressed		-			Raised Ant Mounds (D6) (LRR A)
Inundatio	on Visible on Aerial In	nagery (B7)	Other (E	Explain in R	emarks)			F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	Surface (B8)							
Field Obse	ervations:								
Surface Wa	ater Present?	Yes 🗌 No 🗹	Depth (inche	es):					
Water Tabl	e Present?	Yes 🔲 No 🗹	Depth (inche						
	apillary fringe)		Depth (inche						ology Present? Yes ☐ No ✔
Describe R	ecorded Data (str	eam gauge, mor	itoring well, a	erial phot	os, previo	us insp	ections),	if avai	lable:
Remarks:									
i tomanta.									



Project/Site: Black Butte Copper			City/C	County	: White Su	Ilphur Springs/Meagher	Sampling D	ate: 09-03	-2014
Applicant/Owner: Tintina Resources						State: MT	Sampling P	oint: LS-U2	1
Investigator(s): S. Cooper, L. Larsen			Secti	ion, To	ownship, R	ange: S01, T11N, R6E			
Landform: bench			Loca	l relief	(concave,	convex, none): concave		Slope (%)	: 3-4
Subregion (LRR): E		Lat:	- 46.740	3061		Long: -110.9098701		Datum: WC	
Soil Map Unit Name: 1176D Franconi	Kimpton					NWI classifi			
Are climatic/hydrologic conditions on t		al for this tim	e of ve	ar? Y	es 🗸 No				
Are Vegetation, Soil, or Hydrok			-	αι: ·		"Normal Circumstances"	•	es Mo	
Are Vegetation , Soil , or Hydrok						eeded, explain any answ	•		
SUMMARY OF FINDINGS – Atta				oling (c.
Hydrophytic Vegetation Present?	Yes 🗸	No							
Hydric Soil Present? Wetland Hydrology Present?	Yes _	No 🗹 No 🗸			he Sample hin a Wetl		No 🗹		
Remarks: Photographs: SC937-940									raudeor virilli 17 activitationes i 17 dela
VEGETATION - Use scientific n	ames of p	lants.							
		Absol		minant		Dominance Test World	ksheet:		
Tree Stratum (Plot size: NA			ver Sp			Number of Dominant S		•	/A\
1.						That Are OBL, FACW,	or, FAC:	2	(A)
2.						Total Number of Domir		2	(B)
3 4						Species Across All Stra			(D)
	and a distributed of a distribute valuable last to the cost of a distribute of a distribute value with which will be altered			Total (Percent of Dominant S That Are OBL, FACW,		100	(A/B)
Sapling/Shrub Stratum (Plot size: 0.0	1 acre)				Prevalence Index Wo			
Artemisia tridentata			1		(UPL)	Total % Cover of:		ultiply by:	
2									
3.						OBL Species FACW Species	x 1 =		
4						1	9 x 3 =		
5.				Total (Caa.		6 x 4 =		
Herb Stratum (Plot size: 0.01 acre)	1		rotart	Cover	-	4 x 5 =	20	
4 December 1		ţ	50	x	FAC	Column Totals: 10	9 (A)	341	(B)
2. Phleum pratense			25	X	FAC	Prevalence Index	(B/A) = 3.13		
3. Potentilla gracilis			8		FAC				
4. Antennaria microphylla			3		(UPL)	Hydrophytic Vegetation 1 - Rapid Test for Hyd			
5. Danthonia intermedia			3		FACU	2 - Dominance Test is	. , .		
6. Juncus confusus			3		FAC	3 - Prevalence Index is	s ≤3.0¹		
7. Achillea millefolium			2		FACU	4 - Morphological Ada		ide supportir	ng
			1		FAC	data in Remarks o	•	e sheet)	
·			1		FAC	5 - Wetland Non-Vasc			
10. Schedonorus arundinaceus			1		FAC	Problematic Hydrophy	Ü	` ' '	. .
11. Taraxacum officinale	um k man and an admitted about the securities and securities have been been and also admitted assembly	10	1 _	Total (FACU	¹Indicators of hydric soil an present, unless disturbed of		rology must	be
Woody Vine Stratum (Plot size: NA)	10	<u> </u>	ı otai (Covei				
1	/					∣ ⊟Hydrophytic			
2.						Vegetation			
		0		Total (Cover	Present? Yes	✓ N	o 🗌	
% Bare Ground in Herb Stratum						-			
Remarks: Vegetation meets the Dom							the Prevale	nce Index	(PI).
The PI and professional jude Disturbed/grazed by liveston									
		Oyin	. ₉ . 550 u	0,,,,					



SOIL			Project/Site: Bla	ck Butte Co	opper Sampling Point: LS-U21
Profile Des	cription: (Descril	e to the dept	th needed to document the indicator	or confirm	the absence of indicators.)
Depth	Matrix		Redox Features		·
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc³	² Text	ure Remarks
0-11	10YR 2/2	100		Sil	
11-16	10YR 3/4	100		CL	
11-16	101R 3/4	100		CL	with small gravels
		·			
			APPOINTED TO THE PROPERTY AND APPOIN		
1Typo: C=C	oncontration D=D	onlotion DM-	Reduced Matrix, CS=Covered or Coate	d Cond Cre	sing 21 contions DI = Doro Lining M=Metric
			RRs, unless otherwise noted.):		
			•		Indicators for Problematic Hydric Soils³:
Histosol (•		Sandy Redox (S5)	Ĺ	2 cm Muck (A10)
enuntuma.	pedon (A2)	닏	Stripped Matrix (S6)	Ĺ	Red Parent Material (TF2)
Black His			Loamy Mucky Mineral (F1) (except MLRA 1)		Very Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)	L	Other (Explain in Remarks)
=	Below Dark Surface	(A11) 📙	Depleted Matrix (F3)		Simplications of hydrochysters and Company
	k Surface (A12)		Redox Dark Surface (F6)	`	Indicators of hydrophytic vegetation and wetland hydrology must be present,
	ucky Mineral (S1)		Depleted Dark Surface (F7)		unless disturbed or problematic.
	eyed Matrix (S4)		Redox Depressions (F8)		amoud dictarboa of problematic.
Restrictive	Layer (if present):			
Туре:					
Depth (inch	es):			Hyd	ric Soil Present? Yes 🗌 No 🗸
Remarks: H	lorizon changes d	ue to color and	d texture. Could meet indicator A12.		
HYDROLO	GY				
Wetland Hy	drology Indicato	rs:			
Primary Indi	icators (minimum	of one require	d; check all that apply)		Secondary Indicators (2 or more required)
Surface V	Vater (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation					Drainage Patterns (B10)
	, ,		Salt Crust (B11)		
Water Ma	, ,		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Deposits (B2)		Hydrogen Sulfide Odor (C1)	Doots (C2)	Saturation Visible on Aerial Imagery (C9)
Drift Depo	, ,		Oxidized Rhizospheres along Living	R00ts (C3)	Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)	(00)	Shallow Aquitard (D3)
Iron Depo			Recent Iron Reduction in Tilled Soils	. ,	FAC-Neutral Test (D5)
	oil Cracks (B6)	(D7)	Stunted or Stressed Plants (D1) (LR	KA)	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Vegetated Concave S	випасе (вв)		,	
Field Obse		<u></u>			
Surface Wa	ter Present?	′es 📙 No 🗹		-	
Water Table	e Present?	′es 🔲 No 🗹	Depth (inches):	Or a state and a	paraman, paraman
Saturation F (includes ca	Present? pillary fringe)	′es 🗌 No 🗸	Depth (inches):	Wetland	Hydrology Present? Yes ☐ No ✓
Describe Re	ecorded Data (stre	am gauge, mo	onitoring well, aerial photos, previous ins	spections),	if available:
				**	
Remarks: T	his is a bench abo	ve the draina	ge (immediately adjacent).		
, tomanto. I	o to a periori abt	the draina	go (infinitionation) adjacently.		

Project/Site: Black Butte Copper		Ci	ity/Count	y: White Su	Ilphur Springs/Meagher Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources				All of shows a second on black with a life and the shows	State: MT Sampling Point: LST1-U1
Investigator(s): J. Beaver, D. Hagen		S	Section, T	ownship, R	ange: S31, T12N, R7E
Landform: terrace					convex, none): none Slope (%): 2
Subregion (LRR): E		Lat: 46.	7650714	,	Long: -110.9060836 Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Mo	naberg				NWI classification: UPL
Are climatic/hydrologic conditions on the		this time o	f year? \	Yes 🗸 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology					"Normal Circumstances" present? Yes V No
Are Vegetation , Soil , or Hydrology					eeded, explain any answers in Remarks.)
				•	ations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes ✓ No				
, , , , , , , , , , , , , , , , , , , ,	Yes No			the Sample	
, , , , , , , , , , , , , , , , , , , ,	Yes No		i	ithin a Wetl	
		but no hydr	ology. Pr	obably was	wetter historically before creek was channelized by
cattle. Photographs: JB 2534-	-2000				
VEGETATION – Use scientific nam	nes of plants				
Tree Stratum (Plot size: NA	١	Absolute % Cover	Dominan Species?	nt Indicator ? Status	Dominance Test Worksheet:
1.	,				Number of Dominant Species That Are OBL, FACW, or, FAC: 3 (A)
2.					, , , , , , , , , , , , , , , , , , ,
3.					Total Number of Dominant Species Across All Strata: 4 (B)
4					Percent of Dominant Species
		0	_ = Total	Cover	That Are OBL, FACW, or, FAC:75 (A/B)
Sapling/Shrub Stratum (Plot size: 0.01 a		40		E40	Prevalence Index Worksheet:
			Mariano . 00000000000000000000000000000000000		Total % Cover of: Multiply by:
2		***************************************		me average our analysis	OBL Species x 1 =
3. 4.					FACW Species 5 x 2 = 10
5.					FAC Species 65 x 3 = 195
		10	= Total	Cover	FACU Species 37 x 4 = 148
Herb Stratum (Plot size: 0.01 acre)				UPL Species x 5 =
1. Taraxacum officinale		35	x	FACU	Column Totals: 107 (A) 353 (B)
			X	FAC	Prevalence Index (B/A) = 3.30
3. Agrostis stolonifera		20	X	FAC	Hydrophytic Vegetation Indicators:
4. Trifolium repens		8		FAC	1 - Rapid Test for Hydrophytic Vegetation
Juncus balticus Poa palustris		2		FACW FAC	2 - Dominance Test is >50%
				FACU	☐ 3 - Prevalence Index is ≤3.01
8					4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
9.			·		5 - Wetland Non-Vascular Plants¹
10.					Problematic Hydrophytic Vegetation¹ (Explain)
11					¹Indicators of hydric soil and wetland hydrology must be
AND THE PROPERTY OF THE PROPER		97	_ = Total	Cover	present, unless disturbed or problematic.
)				
1.					Hydrophytic
2				Cover	Vegetation Present? Yes ✓ No □
% Bare Ground in Herb Stratum		<u> </u>	_ = Total	Cover	d desired and the second desired desir
	nce Test. indi	cating the s	site as hv	drophytic.	However, vegetation fails the Prevalence Index (PI).
The PI and professional judgr					
Grazed 90%+					



SOIL			Project/Site: Blac	k Butte Copper	Sampling Point: LST1-U1
Profile Des	cription: (Descri	be to the d	epth needed to document the indicator o	r confirm the	absence of indicators.)
Depth	Matrix		Redox Features		,
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc²	Texture	Remarks
0-10	10YR 3/2	100		SiCL	
					la accession and the second for a second for
10-25	10YR 3/2	100		SCL	Increase in coarse fragments
1T		anlation D	Manager of Matrix CC-Covered on Control	C4 C:	21 and an Dispose Linion Bankship
			M=Reduced Matrix, CS=Covered or Coated		² Location: PL=Pore Lining, M=Matrix
$\overline{}$		icable to a	III LRRs, unless otherwise noted.):		ators for Problematic Hydric Soils³:
Histosol (/	•		Sandy Redox (S5)		cm Muck (A10)
	pedon (A2)		Stripped Matrix (S6)		ed Parent Material (TF2)
Black Hist			Loamy Mucky Mineral (F1) (except MLRA 1)		ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)	O	ther (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix (F3)		
Thick Dar	k Surface (A12)		Redox Dark Surface (F6)		ators of hydrophytic vegetation and
Sandy Mu	ıcky Mineral (S1)		Depleted Dark Surface (F7)		etland hydrology must be present, lless disturbed or problematic.
Sandy Gle	eyed Matrix (S4)		Redox Depressions (F8)	uı	ness disturbed of problematic.
Restrictive	Layer (if present):		4 04 0 0000	
Туре:					
Depth (inche	es):			Hydric S	oil Present? Yes ☐ No 🗸
		hout donlo	ted or gleyed matrix. Could meet indicator A		
			describes unit (1150C, Bischoff-Monaberg)		
	nap unit).	on mapping	, deconoce and (11000, blocken monapoly)	ao prodomina	mily from fryario (fryario dono are 1070 of
	. ,				
HYDROLO	GV				
-	drology Indicate				
Primary Indi	cators (minimum	of one requ	uired; check all that apply)	Sec	condary Indicators (2 or more required)
Surface W	Vater (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wate	er Table (A2)		MLRA 1, 2, 4A, and 4B)	_	4A, and 4B)
Saturation	, ,		Salt Crust (B11)		Drainage Patterns (B10)
Water Ma	` '		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Depo			Oxidized Rhizospheres along Living R		Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)	. ,	Shallow Aquitard (D3)
Iron Depo	, ,		Recent Iron Reduction in Tilled Soils (FAC-Neutral Test (D5)
	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LRR		Raised Ant Mounds (D6) (LRR A)
	i Visible on Aerial Im	ageny (R7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Vegetated Concave		Explain in remaine)		root reave rananoons (57)
		Danace (Do)			
Field Obser		[Donth (inches)		
		Yes ∐ No			
Water Table		Yes 🗌 No			
Saturation F	resent? pillary fringe)	res 🗸 No	Depth (inches): 25	Wetland Hydr	ology Present? Yes ☐ No ✓
					· II-bla
Describe Re	corded Data (Stre	am gauge,	monitoring well, aerial photos, previous insp	bections), it ava	mable.
Remarks: N	lo hummocks and	no saturat	ion within 12 inches. Saturation at 25".		



Project/Site: Black Butte Copper	c	ity/County: White	Sulphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: LST1-U2/A/B
Investigator(s): J. Beaver, D. Hagen	S	Section, Township	, Range: S36, T12N, R6E	
Landform: terrace		ocal relief (conca	ve, convex, none): none	Slope (%): 1
Subregion (LRR): E		7645533	Long: -110.9077216	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-Monaberg				ication: UPL
Are climatic/hydrologic conditions on the site type		f vear? Yes		
Are Vegetation, Soil, or Hydrology sig			Are "Normal Circumstances"	
Are Vegetation , Soil , or Hydrology na			If needed, explain any ansv	-
SUMMARY OF FINDINGS – Attach site n				,
Hydrophytic Vegetation Present? . Yes	No 🗸			
Hydric Soil Present? Yes	No 🗸	Is the Sam	npled Area	
Wetland Hydrology Present? Yes	No 🗸	within a W	/etland? Yes	No 🗹
Remarks: Mesic, but not wetland, lacks hydrole Probably has dried out due to cattle				. No indicators at 24".
Flobably has uned out due to cattle	and creek channe	nzation. Photogra	piis. 3D 2311-2314	
VEGETATION – Use scientific names of	plants.			
Trop Stratum (Diet aize: NA	Absolute % Cover	Dominant Indica Species? Statu		ksheet:
Tree Stratum (Plot size: NA)		-	Number of Dominant S That Are OBL, FACW,	
1				
3.			Total Number of Domi Species Across All Str	
4				AND AND AND AND AND AND AND AND AND AND
	0	= Total Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre			Prevalence Index Wo	
Dasiphora fruticosa		FAC	Total % Cover of	
2.			OBL Species	x 1 =
3.			-	4 x 2 = 8
4				50 x 3 = 150
5	2	= Total Cover		19 x 4 = 196
Herb Stratum (Plot size: 0.01 acre)		Total Cover	UPL Species	x 5 =
1. Taraxacum officinale	35	x FACU	Column Totals: 10	03 (A) 354 (B)
2. Phleum pratense	25	x FAC	Prevalence Index	(B/A) = 3.44
3. Poa pratensis	15	FAC	Hydrophytic Vegetati	
4. Achillea millefolium	8	FACU	1 - Rapid Test for Hyd	
5. Carex microptera	6	FACU		,
6. Potentilla gracilis		FAC	3 - Prevalence Index i	is ≤3.0¹
7. Juncus balticus		FACV	4 - Morphological Ada	aptations¹ (Provide supporting
8. Agrostis stolonifera		FAC		or on a separate sheet)
9. Carex pachystachya		FAC	5 - Wetland Non-Vaso	
10.				ytic Vegetation¹ (Explain) nd wetland hydrology must be
11	101	= Total Cover	present, unless disturbed	
Woody Vine Stratum (Plot size: NA	_)	– Total Gover		
1			Hydrophytic	:
2			Vegetation	
9/ Rara Ground in Harb Stratum 0.5	0	_ = Total Cover	Present? Yes	No ✓
% Bare Ground in Herb Stratum 0.5	ones and same C	'aray anasiss st.	12A 9 112D but atill as but	ology Vocatation also has the
Remarks: Mesic at LST1-U2. More FACW pres grazed, but not significantly disturbe		arex species at C	DZM α UZD, DUL SIIII NO NYON	Jiogy, vegetation also neavily



SOIL				Project/9	Site: Black	Butte Coppe	sr Sampling Point: LST1-U2/A/B
Profile Desc	ription: (Descr	ibe to the d	epth needed to d	locument the in	dicator or	confirm the	absence of indicators.)
Depth	Matrix			dox Features			
(inches)	Color (moist)	%	Color (moist)	% Type	1 Loc²	Texture	Remarks
0-20	10YR 3/1	100				SCL	

				. VAAAMAAAAAAA			
·			M=Reduced Matri				² Location: PL=Pore Lining, M=Matrix
		ilicable to a	II LRRs, unless o		1.):		cators for Problematic Hydric Soils ³ :
Histosol (A	•		Sandy Redox (8 Stripped Matrix	•			com Muck (A10)
Black Histi	` '			(੨੦) fineral (F1) (except	MI DA 1)		Red Parent Material (TF2) /ery Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed !		. WILION I)	=	Other (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix	• •			CAPAIN IN NOMAINO,
	Surface (A12)	, ,	Redox Dark Sui	• •		³Indi	cators of hydrophytic vegetation and
Sandy Mu	cky Mineral (S1)		Depleted Dark S	Surface (F7)			vetland hydrology must be present,
Sandy Gle	yed Matrix (S4)		Redox Depress	ions (F8)		u:	nless disturbed or problematic.
Restrictive I	_ayer (if presen	t):					
Туре:							
Depth (inche	s):					Hydric S	Soil Present? Yes ☐ No 🗸
HYDROLOG		in-mydric (ny	dric soils are 15%		зер, very с	JIISISLEITE SOIL	•
	drology Indicat	ore:					
-			ired; check all tha	et annie)		Co.	condant Indicators (2 or more required)
		or one requ			***************************************		condary Indicators (2 or more required)
Surface W	, ,			Stained Leaves (B9		Ц	Water-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wate	r Table (A2)			A 1, 2, 4A, and 4B))		4A, and 4B)
Water Mar	` '			ıst (B11) Invertebrates (B13	۸.	님	Drainage Patterns (B10)
	Deposits (B2)			en Sulfide Odor (C1	•	님	Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Drift Depos				d Rhizospheres alo	•	ots (C3)	Geomorphic Position (D2)
_ :	or Crust (B4)			ce of Reduced Iron			Shallow Aquitard (D3)
☐ Iron Depos	its (B5)			Iron Reduction in T		6)	FAC-Neutral Test (D5)
Surface Sc	oil Cracks (B6)		Stunted	or Stressed Plants	(D1) (LRR A	N)	Raised Ant Mounds (D6) (LRR A)
Inundation	Visible on Aerial Ir	nagery (B7)	Other (E	Explain in Remarks)		Frost-Heave Hummocks (D7)
	egetated Concave	Surface (B8)					
Field Obser							
Surface Wat			Depth (inche				
Water Table			Depth (inche			Matland Hed	voleni Drazanto Va-
Saturation Projection (includes cap		Yes ∐ No	✓ Depth (inche	:s):	V	veuana mya	rology Present? Yes No 🗸
		eam gauge,	monitoring well, a	erial photos, pre	vious inspe	ections), if av	ailable:
	n edge of humm 2B also without a			/e. Hummocks a	re more pro	onounced slig	ghly downslope. Soil pits at U2A and



Project/Site: Black Butte Copper		Cit	ty/Coun	ty: White Su	lphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST1-U3
Investigator(s): J. Beaver, D. Hagen		S	ection.	Township, R	ange: S36, T12N, R6E	
Landform: lower slope				·	convex, none): undulatin	g Slope (%): 18
Subregion (LRR): E		Lat: 46.			Long: -110.9152485	Datum: WGS84
Soil Map Unit Name: Surdal-Poin			7077310	·	NWI classific	
	aita tuminal for	Albin Ainna ad	f	Van 🗖 Na		
Are climatic/hydrologic conditions on the	= -		-		(If no, explain in Rer	•
Are Vegetation , Soil , or Hydrolog					"Normal Circumstances"	· · · · · · · · · · · · · · · · · · ·
Are Vegetation , Soil , or Hydrolog SUMMARY OF FINDINGS – Attacl					eeded, explain any answe	
			mpinie	, point ioca	adons, dansects, mit	Ortant reatures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No No Yes No	/		the Sample		No 🗹
Remarks: Upland, sagebrush. Photogr	aphs: JB 2534-2	2535				
, contains opinion of the contains the contains of the contain	~p					
VEGETATION – Use scientific na	mes of plants					
	noo or plante	Absolute	Domina	nt Indicator	Dominance Test Work	sheet.
Tree Stratum (Plot size: NA	_)	% Cover			Number of Dominant Sp	
1					That Are OBL, FACW,	
2					Total Number of Domin	ant
3					Species Across All Stra	
4			***************************************		Percent of Dominant Sp	pecies
Carling (Obs. d. Otratus, (Diet size, 0.04		0	_ = Tota	l Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 1. Artemisia tridentata		40	х	(UPL)	Prevalence Index Wor	ksheet:
2 Desinhers frutisses		4		FAC	Total % Cover of:	Multiply by:
3.				17.0	OBL Species	x 1 =
4					FACW Species	
5.						2 x 3 = 126
		44	= Tota	l Cover		3 x 4 = 12
Herb Stratum (Plot size: 0.01 acre	_)				UPL Species 47	
1. Poa pratensis			X	FAC	Column Totals: 92	2 (A) 373 (B)
2. Stipa occidentalis		5		(UPL)	Prevalence Index (B/A) = 4.05
3. Cirsium arvense		2		FAC	Hydrophytic Vegetatio	on Indicators:
4. Lupinus sericeus		2		(UPL)	1 - Rapid Test for Hydro	ophytic Vegetation
				FACU	2 - Dominance Test is	>50%
				FACU	3 - Prevalence Index is	≤3.01
9 Componula retundifolia		0.5	and entertal 1 will be 10 teleproperate	FAC FACU		otations1 (Provide supporting on a separate sheet)
O Francois discissions		0 F		FACU	5 - Wetland Non-Vascu	, ,
10.			****	1700		ic Vegetation¹ (Explain)
11.					-	d wetland hydrology must be
		48	= Tota	I Cover	present, unless disturbed o	
Woody Vine Stratum (Plot size: NA)					
1					Hydrophytic	
2					Vegetation	harrowd harrowd
		0	_ = Tota	l Cover	Present? Yes	No ✓
% Bare Ground in Herb Stratum 15						
Remarks: heavily grazed						
Pergentage						



Profile Description: (Des		Project/Site:	Black Butte Co	pper Sampling Point: LST1-U3
	cribe to the depth	needed to document the indica	tor or confirm	the absence of indicators.)
Depth Mat	rix	Redox Features		
(inches) Color (moist)) % C	olor (moist) % Type¹	Loc² Textu	re Remarks
		AND STREET, ST		
		educed Matrix, CS=Covered or Co		
		Rs, unless otherwise noted.):	I.	ndicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)		Sandy Redox (S5) Stripped Matrix (S6)	L	2 cm Muck (A10) Red Parent Material (TF2)
Black Histic (A3)		.oamy Mucky Mineral (F1) (except MLR.	A 1)	Very Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		oamy Gleyed Matrix (F2)	,,, [Other (Explain in Remarks)
Depleted Below Dark Surfa	pt	Depleted Matrix (F3)	_	
Thick Dark Surface (A12)	F	Redox Dark Surface (F6)	3	Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	(Depleted Dark Surface (F7)		wetland hydrology must be present,
Sandy Gleyed Matrix (S4)		Redox Depressions (F8)		unless disturbed or problematic.
Restrictive Layer (if pres	ent):			
Type:				
Depth (inches):			Hydr	ric Soil Present? Yes No 🗸
	ators:			
Wetland Hydrology Indic		check all that apply)		Secondary Indicators (2 or more required)
Wetland Hydrology Indic Primary Indicators (minimu			······································	
Wetland Hydrology Indic Primary Indicators (minimu Surface Water (A1)		Water-Stained Leaves (B9) (exc	ept	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indic Primary Indicators (minimu			pept	
Wetland Hydrology Indic Primary Indicators (minimu Surface Water (A1) High Water Table (A2)		Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B)	ept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indic Primary Indicators (minimu Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	ept	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)		Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indic Primary Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)		Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Linder Presence of Reduced Iron (C4)	ving Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)		Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6)	um of one required;	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria	um of one required;	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca	um of one required;	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1)	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca	um of one required; Il Imagery (B7) Ive Surface (B8)	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Other (Explain in Remarks)	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present?	um of one required; Il Imagery (B7) Ive Surface (B8) Yes	Water-Stained Leaves (B9) (excomplements) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Literation (C4) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Other (Explain in Remarks) Depth (inches):	ving Roots (C3) Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A)
Wetland Hydrology Indic Primary Indicators (minimumous Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	um of one required; Il Imagery (B7) Ive Surface (B8) Yes	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) Other (Explain in Remarks) Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) (LRR A) Wetland I	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	um of one required; Il Imagery (B7) Ive Surface (B8) Yes	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) Other (Explain in Remarks) Depth (inches):	ving Roots (C3) Soils (C6) (LRR A) Wetland I	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
Wetland Hydrology Indic Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (19)	um of one required; al Imagery (B7) ave Surface (B8) Yes	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) Other (Explain in Remarks) Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) (LRR A) Wetland I	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aeria Sparsely Vegetated Conca Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	um of one required; al Imagery (B7) ave Surface (B8) Yes	Water-Stained Leaves (B9) (exc MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S Stunted or Stressed Plants (D1) Other (Explain in Remarks) Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) (LRR A) Wetland I	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)



Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST2-U1
Investigator(s): J. Beaver, D. Hagen		s	ection, To	wnship, R	ange: S32, T12N, R7E	
Landform: swale		L	ocal relief	(concave,	convex, none): none	Slope (%): 3
Subregion (LRR): E		Lat: 46.	766079		Long: -110.8792266	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-I	Monaberg	water water			NWI classifi	cation: UPL
Are climatic/hydrologic conditions on t	he site typical fo	or this time of	f year? Y	es 🗸 No	(If no, explain in Re	marks.)
Are Vegetation , Soil , or Hydrold						present? Yes V No
Are Vegetation , Soil , or Hydrold					eeded, explain any answ	•
SUMMARY OF FINDINGS – Attac						
Hydrophytic Vegetation Present?	Yes ✓ No					
Hydric Soil Present?		✓		he Sample		
Wetland Hydrology Present?	Yes No		wit	hin a Wetl	and? Yes 🗌	No 🗹
Remarks: Wetland phases out appro- 2497-2500	x. 20 feet uphill.	This plot loc	cation still	mesic, the	n goes to POPR/AGSM	type. Photographs: JB
VEGETATION – Use scientific n	ames of plan	ts.				
Tree Stratum (Plot size: NA	,	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Wor	
1.					Number of Dominant S That Are OBL, FACW,	
2.						
3.					Total Number of Domir Species Across All Stra	
4.					Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)	0	_ = Total	Cover	That Are OBL, FACW,	or, FAC: 100 (A/B)
4.5		8	х	FAC	Prevalence Index Wo	
2.					Total % Cover of	
3						x 1 =
4					FACW Species	x 2 =
5					'	68 x 3 = 204 60 x 4 = 120
		8	= Total	Cover	'	$5 \times 5 = 25$
Herb Stratum (Plot size: 0.01 acre)			E40	Column Totals: 10	A. W. C. C. C. C. C. C. C. C. C. C. C. C. C.
Phleum pratense Taraxacum officinale		4.0	X	FAC FACU		
3. Agropyron smithii		12		FACU	Prevalence Index	
4. Symphyotrichum campestre		5		(UPL)	Hydrophytic Vegetati	
F D-4		2		FAC	1 - Rapid Test for Hyd ✓ 2 - Dominance Test is	· · ·
6. Poa pratensis				FAC	3 - Prevalence Index i	
7.					: =	ptations¹ (Provide supporting
8						r on a separate sheet)
9.					5 - Wetland Non-Vaso	cular Plants1
10.						tic Vegetation¹ (Explain)
11.					¹Indicators of hydric soil ar present, unless disturbed	nd wetland hydrology must be or problematic.
Woody Vine Stratum (Plot size: NA	,	95	_ = Total	Cover		
					11 -1	
1 2					Hydrophytic Vegetation	
		0	= Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum 0.5						
Remarks: Vegetation meets the Dom						s the Prevalence Index (PI).
The PI and professional ju	dgment indicate	that vegetat	tion is me	sic but not	wetland.	



SOIL			Project/Site: Bla	ack Butte Co	opper	Sampling Point: LST2-U1
Profile Des	cription: (Descri	oe to the dep	oth needed to document the indicator	or confirm	the a	bsence of indicators.)
Depth	Matrix		Redox Features			
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc	² Text	ure	Remarks
0-4	10YR 3/1	100		CI	<u> </u>	
4-11.5	10YR 3/2	100		CI	L	
11.5-18	2.5Y 3/2	100		SC	CL.	
	210.0/2					
						The state of the s
					~~~~~~	
¹Type: C=C	oncentration, D=D	epletion, RM	=Reduced Matrix, CS=Covered or Coate			² Location: PL=Pore Lining, M=Matrix
Hydric Soil	Indicators (Appl	icable to all	LRRs, unless otherwise noted.):		Indica	tors for Problematic Hydric Soils ³ :
Histosol (	A1)		Sandy Redox (S5)		2 c	m Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix (S6)		Re	d Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1)	)	Ver	y Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Oth	er (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)			
	k Surface (A12)		Redox Dark Surface (F6)			ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark Surface (F7)			tland hydrology must be present, ess disturbed or problematic.
	eyed Matrix (S4)	<u> </u>	Redox Depressions (F8)			
	Layer (if present	):				
Туре:			_			
Depth (inch	es):		_	Hyd	iric So	il Present? Yes ☐ No 🗸
HYDROLO						
-	drology Indicato				_	
Primary Ind	icators (minimum	of one require	ed; check all that apply)		Seco	ondary Indicators (2 or more required)
Surface V	• •		Water-Stained Leaves (B9) (except		□ V	Vater-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLRA 1, 2, 4A, and 4B)		_	4A, and 4B)
Saturatio	` '		Salt Crust (B11)			rainage Patterns (B10)
Water Ma	` '		Aquatic Invertebrates (B13)		-	ry-Season Water Table (C2)
	Deposits (B2)		Hydrogen Sulfide Odor (C1)		·	aturation Visible on Aerial Imagery (C9)
Drift Depo	, ,		Oxidized Rhizospheres along Living	Roots (C3)		Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)			hallow Aquitard (D3)
Iron Depo	, ,		Recent Iron Reduction in Tilled Soils	• •		AC-Neutral Test (D5)
	ioil Cracks (B6)	(07)	Stunted or Stressed Plants (D1) (LF	RRA)		taised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im	,	Other (Explain in Remarks)		F	rost-Heave Hummocks (D7)
	Vegetated Concave :	Surrace (B8)				
Field Obse		/ [] N- [	Ponth (inches)			
		res ∐ No No No				
Water Table		∕es ∐ No No		Watland	Lludua	Jamis Brasanta Van 🗆 Na 🗹
Saturation F (includes ca	Present? pillary fringe)	res 🗌 No 🛚	Depth (inches):	vvetiand	nyara	ology Present? Yes No 🗸
		am gauge, m	onitoring well, aerial photos, previous in	spections).	if avai	lable:
		J J , · · ·	5			
Remarks: V	Vetland goes subs	surface about	20' upslope of pit. Unclear why the char	nge occurs.	possil	oly because swale broadens out
			and the second s	.5- 2230101	L 2001	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s

Project/Site: Black Butte Copper		Cit	ty/County	y: White Su	llphur Springs/Meagher	Sampling Date: 08-26-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST2-U2
Investigator(s): J. Beaver, D. Hagen		s	ection, T	ownship, R	ange: S31, T12N, R7E	
Landform: floodplain					convex, none): none	Slope (%): 1
Subregion (LRR): E		 Lat: 46.	7618518		Long: -110.8944948	Datum: WGS84
Soil Map Unit Name: 1175E Owenspring	ı-Cheadle				NWI classific	ation: UPL
Are climatic/hydrologic conditions on the		I for this time of	f year?	res ✔ No		
Are Vegetation, Soil, or Hydrology			•		"Normal Circumstances"	·
Are Vegetation . Soil , or Hydrology					eeded, explain any answe	
SUMMARY OF FINDINGS – Attach	_			·	•	ŕ
Hydric Soil Present?	Yes 🗌	No ☐ No ☑		the Sample		No 🗸
		No 🗸	i			
Remarks: Just above wetland boundary	/; was proba	ably wetland in	the past	, but no lon	ger. Photographs: JB 248	9-2492
VEGETATION – Use scientific nar	nos of pla	ınte				
VEGETATION – OSE SCIENTING Hai	iles oi pia	Absolute	Dominan	t Indicator	Dominance Test Work	
Tree Stratum (Plot size: NA	_)	% Cover			Number of Dominant Sp	
1					That Are OBL, FACW, of	
2					Total Number of Domina	ant
3.					Species Across All Stra	ta: 3 (B)
4					Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 0.01	acre )	0	= Total	Cover	That Are OBL, FACW, o	or, FAC:67 (A/B)
1. Dasiphora fruticosa		0.5	х	FAC	Prevalence Index Wor	ksheet:
2.					Total % Cover of:	Multiply by:
3.					OBL Species	x 1 =
4.					FACW Species 15	
5.			\		FAC Species 105	
		35	= Total	Cover	FACU Species 20 UPL Species	
Herb Stratum (Plot size: 0.01 acre	_)			E40	Column Totals: 140	x 5 = ) (A) 425 (B)
Poa pratensis     Taraxacum officinale	***************************************	50 20	X	FAC FACU		
3. Agrostis stolonifera		10	X	FAC	Prevalence Index (I	
4. Phleum pratense		10		FAC	Hydrophytic Vegetatio	
5. Symphyotrichum subspicatum		8		FACW	<ul><li>1 - Rapid Test for Hydro</li><li>✓ 2 - Dominance Test is &gt;</li></ul>	, ,
6. Carex praegracilis		5		FACW	✓ 3 - Prevalence Index is	
7. Juncus balticus		_		FACW		tations¹ (Provide supporting
8.						on a separate sheet)
9					5 - Wetland Non-Vascu	ılar Plants¹
10.					Problematic Hydrophyti	
11				O	rindicators of hydric soil and present, unless disturbed or	d wetland hydrology must be problematic.
Woody Vine Stratum (Plot size: NA	)	105	= Total	Cover		
1					Hydronbytic	
2.					Hydrophytic Vegetation	
		0	= Total	Cover	Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum 0.5						
Remarks: grazing 70-90%; hydrophytic	veg really n	more mesic/FA	С			



SOIL			Project/Site: Bla	ack Butte Co	pper Sampling Point: LST2-U2
Profile Des	cription: (Desci	ribe to the de	pth needed to document the indicator	or confirm	the absence of indicators.)
Depth	Matrix		Redox Features		,
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc	z² Textu	re Remarks
0-7	10YR 2/1	100		CL	
7-16	10YR 3/1	100	***************************************	С	
	***************************************				
AND STREET, ST				***************************************	
¹Tvpe: C=C	oncentration, D=	Depletion, RM	======================================	ed Sand Grai	ins ² Location: PL=Pore Lining, M=Matrix
			LRRs, unless otherwise noted.):		ndicators for Problematic Hydric Soils ³ :
Histosol (			Sandy Redox (S5)		2 cm Muck (A10)
Histic Epi	pedon (A2)		Stripped Matrix (S6)		Red Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky Mineral (F1) (except MLRA 1)	) [	Very Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)	transcon.	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
Depleted	Below Dark Surfac	e (A11)	Depleted Matrix (F3)		
Thick Dar	k Surface (A12)		Redox Dark Surface (F6)	3	Indicators of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)	To the state of th	Depleted Dark Surface (F7)		wetland hydrology must be present, unless disturbed or problematic.
Sandy Gle	eyed Matrix (S4)		Redox Depressions (F8)		unless disturbed of problematic.
Restrictive	Layer (if preser	nt):			
Туре:					
Depth (inch	es):		_	Hydr	ic Soil Present? Yes 🗌 No 🗹
HYDROLO	nydric soil, but no	water input n	ow.		
	drology Indica	tors:			
-			red; check all that apply)		Secondary Indicators (2 or more required)
		Tor one requi			
	Vater (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation	` '		Salt Crust (B11)		Drainage Patterns (B10)
Water Ma			Aquatic Invertebrates (B13)		Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Drift Depo	Deposits (B2)		Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Poote (C3)	Geomorphic Position (D2)
	or Crust (B4)		Presence of Reduced Iron (C4)	j Roois (Ca)	Shallow Aquitard (D3)
Iron Depo			Recent Iron Reduction in Tilled Soils	s (C6)	FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or Stressed Plants (D1) (LF	• •	Raised Ant Mounds (D6) (LRR A)
$\equiv$	n Visible on Aerial I	magery (B7)	Other (Explain in Remarks)	,	Frost-Heave Hummocks (D7)
	Vegetated Concave				
Field Obse					
	ter Present?	Yes No	✓ Depth (inches):		
Water Table		Yes No			
Saturation F		Yes No		Wetland I	Hydrology Present? Yes 🗌 No 🗹
		ream gauge, r	nonitoring well, aerial photos, previous in	nspections), it	f available:
	•			•	
Remarks: F	listorically was n	robably a wet	land, but grazing appears to have channe	elized the sor	ring, which has dried this out.
			The second of product to the contained		<u> </u>



Project/Site: Black Butte Copper		Ci	ity/County:	: White Su	lphur Springs/Meagher	Sampling Date: 09-04-2014		
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST2-U3		
Investigator(s): J. Beaver, D. Culwell		S	Section, To	wnship, R	Range: S31, T12N, R7E			
Landform: toe slope					convex, none): concave	Slope (%): 7		
Subregion (LRR): E			7612628	,	Long: -110.9003452	Datum: WGS84		
Soil Map Unit Name: 1175E Owenspr	ing Cheadle		7012020		NWI classific	***************************************		
		thia tima a	f.v.o.ar2 V	00 FB N4				
Are climatic/hydrologic conditions on t								
Are Vegetation , Soil , or Hydrold						present? Yes ✓ No		
Are Vegetation , Soil , or Hydrold SUMMARY OF FINDINGS – Atta					eeded, explain any answ			
			pg	301116 1000	ations, transcoto, imp	Joi turn routuros, cto.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No No No No No No No No No No No No No	<b>Z</b>		he Sample hin a Wetla		No 🗹		
Remarks: Photographs: JB 2577-258	30							
VEGETATION - Use scientific n	ames of plants							
		Absolute		Indicator	Dominance Test Work	(sheet:		
Tree Stratum (Plot size: NA			Species?	Status	Number of Dominant S			
1.					That Are OBL, FACW,	or, FAC: (A)		
2.					Total Number of Domin			
3					Species Across All Stra	ata: 4 (B)		
4		0	= Total (	Cover	Percent of Dominant Sp			
Sapling/Shrub Stratum (Plot size: 0.1	l acre )	,	··· rotar c	J0 V C I	That Are OBL, FACW,	or, FAC:50 (A/B)		
		20	x	FAC	Prevalence Index Wor			
0 44		7	X	(UPL)	Total % Cover of:			
				(UPL)	- 370 00007000000	x 1 =		
4						2 x 2 = 24		
5						4 x 3 = 192		
		28	_ = Total (	Cover		2 x 4 = 168		
Herb Stratum (Plot size: 0.01 acre					UPL Species 14 Column Totals: 13			
1. Fragaria virginiana		30	x	FACU				
2. Poa pratensis			X	FAC	Prevalence Index (	B/A) = <u>3.44</u>		
Agrostis stolonifera      A lungua haltiqua		15	MARCO PROGRAMMENTO PROPERTO	FACW	Hydrophytic Vegetation			
Juncus balticus     Taraxacum officinale		<u>12</u> 8		FACW FACU	1 - Rapid Test for Hydr			
6. Antennaria microphylla		5		(UPL)	2 - Dominance Test is			
7 Double sein interneredie				FACU	3 - Prevalence Index is			
0. D-44//				FAC		otations ¹ (Provide supporting on a separate sheet)		
0 = 1				(UPL)	5 - Wetland Non-Vasco			
10.					Problematic Hydrophyt	tic Vegetation¹ (Explain)		
11.						d wetland hydrology must be		
		104	= Total (	Cover	present, unless disturbed o	r problematic.		
Woody Vine Stratum (Plot size: NA	)							
1			***************************************	***************************************	Hydrophytic			
2					Vegetation Present? Yes	□ No 🗹		
% Bare Ground in Herb Stratum 3		0	_ = Total (	Cover	Present? Yes			
Remarks: vegetation mesic, not wetla	XIIU							



SOIL				Pi	oject/Site	: Black E	Butte Copp	er Sampling Point: LST2-U3
Profile Descri	ption: (Describe t	o the depth	needed to d	locument	the indic	ator or c	confirm the	e absence of indicators.)
Depth	Matrix		Re	dox Feature	es			
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc²	Texture	Remarks
							***************************************	
			***************************************					
							***************************************	
				******		w=====================================	***************************************	
¹Type: C=Cond	entration, D=Depl	etion, RM=R	educed Matri	x, CS=Co	vered or (	Coated Sa	and Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil Inc	dicators (Applica	ble to all LR	Rs, unless o	therwise	noted.):		Ind	icators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Redox (S	S5)				2 cm Muck (A10)
Histic Epiped	on (A2)		Stripped Matrix					Red Parent Material (TF2)
Black Histic (	•		.oamy Mucky M		(except ML	.RA 1)		Very Shallow Dark Surface (TF12)
Hydrogen Su	, ,		oamy Gleyed I					Other (Explain in Remarks)
	ow Dark Surface (A1		Depleted Matrix				31	
Thick Dark S			Redox Dark Sui					licators of hydrophytic vegetation and wetland hydrology must be present.
Sandy Mucky			Depleted Dark S		)			unless disturbed or problematic.
Sandy Gleyer			Redox Depress	ions (Fo)				•
	yer (if present):							
Type:		***************************************					ماسام الله	Soil Present? Yes No 🗸
Depth (inches)				~_~~~			пушно	Soil Present? Yes No 🗸
Remarks: No s	soil pit as no hydro	logy of flyard	phylic veget	ation.				
HYDROLOGY		.,	.,					
Wetland Hydro	ology Indicators:							
Primary Indicat	ors (minimum of o	ne required;	check all tha	t apply)			S	econdary Indicators (2 or more required)
Surface Water	er (A1)		Water-S	Stained Leav	ves (B9) (e:	xcept		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water T	• •			A 1, 2, 4A,		•	44444	4A, and 4B)
Saturation (	A3)		Salt Cru	ıst (B11)				Drainage Patterns (B10)
Water Marks	(B1)		Aquatic	Invertebrate	es (B13)			Dry-Season Water Table (C2)
Sediment De	posits (B2)		Hydroge	en Sulfide C	dor (C1)			] Saturation Visible on Aerial Imagery (C9)
Drift Deposits	• •		Oxidize	d Rhizosphe	eres along	Living Roo	ts (C3)	Geomorphic Position (D2)
Algal Mat or 0	, ,		Presend	ce of Reduc	ed Iron (C4	<b>!</b> )		Shallow Aquitard (D3)
Iron Deposits			Recent	Iron Reduct	ion in Tilled	Soils (C6	i)	FAC-Neutral Test (D5)
Surface Soil (	• •			or Stressed	•	1) (LRR A)	·	Raised Ant Mounds (D6) (LRR A)
	sible on Aerial Image	,	Other (E	Explain in R	emarks)		L	Frost-Heave Hummocks (D7)
	etated Concave Surfa	ace (B8)						
Field Observa			5 " " "					
Surface Water			Depth (inche	***************************************				
Water Table Pr			Depth (inche				lational III	dualant Duananto V
Saturation Pres (includes capill		∐ No 🗸	Depth (inche	es):		W	епапа нус	drology Present? Yes No 🗸
	rded Data (stream	gauge, mon	itoring well. a	erial photo	os, previo	us inspec	ctions) if a	vailable:
	(0.104111	55-,			- 5, 6.0110		,, u	
Remarke: No h	nydrology indicator	·····						Y-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-10-00-
itelliains. NOI	iyarology mulcator	٥.						



Project/Site: Black Butte Copper		Cit	ty/County:	: White Su	lphur Springs/Meagher	Sampling Date: 08-26-2014	
Applicant/Owner: Tintina Resources		State: MT Sampling Point: LST3-U1					
Investigator(s): J. Beaver, D. Hagen		S	ection, To	wnship, R	ange: S31, T12N, R7E		
Landform: swale		Lo	ocal relief	(concave,	convex, none): concave	Slope (%): 4	
Subregion (LRR): E		Lat: 46.	7541101		Long: -110.9014439	Datum: WGS84	
Soil Map Unit Name: 171E Surdal-Poir	ı-Libeg				NWI classific	ation: UPL	
Are climatic/hydrologic conditions on the		or this time of	fyear? Y	es 🗸 No	(If no, explain in Re	marks.)	
Are Vegetation . Soil , or Hydrolog					"Normal Circumstances"		
Are Vegetation, Soil, or Hydrolo		•			eeded, explain any answ		
SUMMARY OF FINDINGS – Attac							
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No			he Sample hin a Wetl		No 🗹	
Remarks: Upland end of WL swale. P	hotographs: JB	2449-2452					
•	•						
VEGETATION - Use scientific na	mes of plant	ts.					
		Absolute		Indicator	Dominance Test Work	sheet:	
Tree Stratum (Plot size: NA			Species?		Number of Dominant S		
1. 2.					That Are OBL, FACW,		
3.					Total Number of Domin Species Across All Stra	<b>a</b> ( <b>b</b> )	
4.					•		
		0	= Total (	Cover	Percent of Dominant State Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 0.0	1 acre )				Prevalence Index Wor		
	,,,,,			(UPL)	Total % Cover of:		
			***************************************	FAC	OBL Species	x 1 =	
3.					FACW Species 0.		
4.					FAC Species 6		
5.		16	= Total (	Cover	FACU Species 3	2 x 4 = 128	
Herb Stratum (Plot size: 0.01 acre	)		rotar v	00701	UPL Species 2	3 x 5 = 115	
1. Poa pratensis		65	x	FAC	Column Totals: 122.	5 (A) <u>445</u> (B)	
2. Artemisia ludoviciana		30	X	FACU	Prevalence Index (	B/A) = 3.63	
3. Carduus nutans		3		UPL	Hydrophytic Vegetation	on Indicators:	
4. Stipa occidentalis		3		(UPL)	1 - Rapid Test for Hydr		
5. Danthonia intermedia		2		FACU	2 - Dominance Test is	>50%	
				(UPL)	3 - Prevalence Index is	; ≤3.0¹	
				FAC		otations¹ (Provide supporting	
				(UPL) FACW	5 - Wetland Non-Vasc	on a separate sheet)	
10.						ic Vegetation¹ (Explain)	
11.					1	d wetland hydrology must be	
			= Total (	Cover	present, unless disturbed of	r problematic.	
Woody Vine Stratum (Plot size: NA	)						
1					Hydrophytic		
2					Vegetation	□ No M	
0/ Page Craumd in Harb Charling		0	_ = Total (	Cover	Present? Yes	□ No ✓	
Remarks:							



SOIL				Pr	oject/Site	e: Black E	Butte Co	pper	Sampling	Point: LST3-U1
Profile Des	cription: (Describ	e to the depth	needed to d	ocument	the indi	cator or c	onfirm	the absen	ce of indicator	s.)
Depth	Matrix	-	Re	dox Feature	es					
(inches)	Color (moist)	% (	Color (moist)	%	Type¹	Loc²	Textu	ire Rema	arks	
¹Tyne: C=C	oncentration, D=De	nletion PM=F	Paducad Matri	v CS=Co	vered or	Coated S	and Gra	ine 21 000	ation: DIDoro	Lining, M=Matrix
	Indicators (Appli					Coaled Si				C Hydric Soils ³ :
Histosol (			Sandy Redox (S		noteu.,.		·	2 cm Muc		o flyuric solls .
	pedon (A2)		Stripped Matrix	•			F	=	nt Material (TF2)	
Black His			Loamy Mucky M		(except MI	RA 1)			low Dark Surface	(TF12)
=	Sulfide (A4)		Loamy Gleyed N		(	,	F		plain in Remarks)	(,
(menon)	Below Dark Surface (/		Depleted Matrix				_		,	
Thick Dar	k Surface (A12)		Redox Dark Sur	face (F6)			3	Indicators of	of hydrophytic v	egetation and
Sandy Μι	icky Mineral (S1)		Depleted Dark S	Surface (F7)	)				hydrology must	
Sandy Gle	eyed Matrix (S4)		Redox Depressi	ons (F8)				uniess a	sturbed or prob	iematic.
Restrictive	Layer (if present)	:								
Туре:										
Depth (inche	es):						Hydr	ric Soil Pre	sent? Yes 🗌	No 🗹
Remarks: N	lo soil pit as no hyd	Irophytic vege	tation or wetla	nd hydrol	ogy. Pres	umed nor	n-hydric.			er vor gewonelster-van de leve- lande haar gelag vand daar de voors gevoor
	,			•	•		-			
						~~~~				
HYDROLO	GY									
	drology Indicator	s:								
-	cators (minimum o		· check all tha	t annly)				Secondan	/ Indicators (2 d	or more required)
		i one required	·							
Surface V	• •			Stained Leav		xcept			Stained Leaves (B	9) (MLRA 1, 2,
	er Table (A2)		parameter	A 1, 2, 4A,	and 4B)				and 4B)	
Saturation	, ,			st (B11)	(D40)				e Patterns (B10)	(00)
Water Ma	rks (B1) Deposits (B2)		-	Invertebrate en Sulfide C	. ,				ason Water Table	•
Drift Depo				d Rhizosphe		Livina Poo	te (C3)		on Visible on Aeri phic Position (D2	
_	or Crust (B4)		_	e of Reduc	-	-	is (C3)		Aquitard (D3))
Iron Depo				Iron Reduct	,	•)		eutral Test (D5)	
	oil Cracks (B6)			or Stressed		•	•		Ant Mounds (D6)	(LRR A)
_	Nisible on Aerial Ima	gery (B7)	()	xplain in R		, ,			eave Hummocks (, -
Sparsely \	egetated Concave S	urface (B8)								•
Field Obser	vations:							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Surface Wa	ter Present? Y	es 🗌 No 🗹	Depth (inche	es):						
Water Table	Present? Y	es 🗌 No 🗸	Depth (inche	es):						
Saturation F (includes ca	resent? Y pillary fringe)	es 🗌 No 🗹	Depth (inche	es):		W	etland l	Hydrology	Present? Yes	□ No ✓
	corded Data (strea	ım gauge, moı	nitoring well. a	erial photo	os, previo	us insped	ctions), i	f available:		
	,		•	•		•	,,,			
Remarks: N	lo hydrology other	han swale		-						
	,									

Project/Site: Black Butte Copper			Ci	ty/Coun	ty: White Su	lphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources						State: MT	Sampling Point: LST4-U1
Investigator(s): S. Cooper, L. Larsen			s	ection, ⁻	Township, Ra	ange: S1, T11N, R6E	
Landform: terrace			L	ocal reli	ef (concave,	convex, none): none	Slope (%): 0-1
Subregion (LRR): E			Lat: 46.	7471229	9	Long: -110.9089304	Datum: WGS84
Soil Map Unit Name: 1150C Bischoff-N	/lonaberg						cation: UPL
Are climatic/hydrologic conditions on the	ne site typic	al for t	this time of	f year?	Yes ✔ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrolo				-			" present? Yes ✔ No
Are Vegetation, Soil, or Hydrolo						eeded, explain any answ	
SUMMARY OF FINDINGS – Attac					•	•	,
Hydrophytic Vegetation Present?	Yes 🗸	No	1				
Hydric Soil Present?	Yes 🗌	No 🕟	7		the Sample		[
Wetland Hydrology Present?	Yes 🗌	No 🛚		W	ithin a Wetla	and? Yes 🗌	No 🗹
Remarks: Plot located on a terrace al	oove flowing	g drain	age/wetlai	nd and a	idjacent to A	RTR community type. M	lesic, but not wet. Photograph:
SC 955-958							
VEGETATION – Use scientific na	ames of p	lants				-	
Tree Stratum (Plot size: NA)		Absolute % Cover		nt Indicator ? Status	Dominance Test Wor	
1						Number of Dominant S That Are OBL, FACW,	
2.						Total Number of Domir	
3.						Species Across All Str	
4		54000000-00000				Percent of Dominant S	
			0	= Tota	l Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.0		_~)	_		(LIDL)	Prevalence Index Wo	rksheet:
					(UPL)	Total % Cover of	: Multiply by:
2.						OBL Species	x 1 =
34				A		FACW Species	2 x 2 = 4
5.				Transference of the community of	AMERICA TORNA DE AMERICA DO AMERICA.	FAC Species 9	97 x 3 = 291
			5	= Tota	l Cover		5 x 4 = 20
Herb Stratum (Plot size: 0.01 acre)						10 x 5 = 50
1. Poa pratensis			60	X	FAC	Column Totals: 11	14 (A) 365 (B)
2. Phleum pratense			23	X	FAC	Prevalence Index	(B/A) = <u>3.20</u>
3. Potentilla gracilis			14		FAC	Hydrophytic Vegetati	on Indicators:
Stipa occidentalis Achillea millefolium		and the second of the second o	3		(UPL) FACU	1 - Rapid Test for Hyd	
					FACW	2 - Dominance Test is	
7. Cerastium arvense				***************************************	FACU	3 - Prevalence Index i	s ≤3.0° ptations¹ (Provide supporting
8. Fragaria virginiana				***************************************	FACU		or on a separate sheet)
9						5 - Wetland Non-Vaso	cular Plants¹
10		~~~~~				Problematic Hydrophy	rtic Vegetation¹ (Explain)
11.		~~~~			_,	¹ Indicators of hydric soil ar present, unless disturbed of	nd wetland hydrology must be
Woody Vine Stratum (Plot size: NA	,		109	_ = Tota	l Cover	present, unless distarbed	of problematic.
· —)						
1 2					***************************************	Hydrophytic Vegetation	
			0		l Cover	Present? Yes	No 🗌
% Bare Ground in Herb Stratum 0.5						· manage control contr	
Remarks: Vegetation meets the Dom							s the Prevalence Index (PI).
The PI and professional jud	agment indi	cate th	at vegetat	ion is m	esic but not	wetland.	
TITOTOGRAP							



SOIL				Proje	ect/Site:	Black	Butte Co	opper	Sampling Point: LST4-U1	
Profile Des	cription: (Desc	ribe to the de	epth needed to d						bsence of indicators.)	
Depth	Matrix			dox Features					,	
(inches)	Color (moist)	%	Color (moist)	% T	ype¹	Loc²	Text	ure	Remarks	
0-16	10YR 2/2	100					Sil	L	Coarse fragments (5-10%)	

							Name to the second contract of the second con			
Manager Printer 11 Indicates 11 (1971) Plant and all controls Asses										
¹Type: C=C	oncentration, D=	Depletion, RI	M=Reduced Matri	x, CS=Cover	ed or C	oated S	Sand Gra	ains	² Location: PL=Pore Lining, M=Matri	x
			II LRRs, unless o						tors for Problematic Hydric Soils ³	
Histosol ((A1)		Sandy Redox (S	S5)			[2 c	m Muck (A10)	
Histic Epi	ipedon (A2)		Stripped Matrix	(S6)			[Red	d Parent Material (TF2)	
Black His	stic (A3)		Loamy Mucky M	lineral (F1) (ex	cept MLF	RA 1)	[Ver	ry Shallow Dark Surface (TF12)	
Hydroger	Sulfide (A4)		Loamy Gleyed N	Matrix (F2)			[Oth	ner (Explain in Remarks)	
= .	Below Dark Surfac	e (A11)	Depleted Matrix	(F3)						
==	rk Surface (A12)		Redox Dark Sur	, ,			,		ators of hydrophytic vegetation and tland hydrology must be present,	
	ucky Mineral (S1)		Depleted Dark S						ess disturbed or problematic.	
	eyed Matrix (S4)		Redox Depressi	ions (F8)		*************				
_	Layer (if prese	nt):								
Type:										
Depth (inch	es):						Hyd	ric So	oil Present? Yes ☐ No 🗸	
Remarks: I	lomogeneous da	ark soil.								
HYDROLO	GY									
Wetland Hy	drology Indica	tors:								, ,,
-			ired; check all tha	t apply)				Seco	ondary Indicators (2 or more required	1)
					(DO) /					
	Vater (A1) er Table (A2)			Stained Leaves A 1, 2, 4A, and		серт		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
Saturation	, ,			ıst (B11)	140)				Orainage Patterns (B10)	
Water Ma	` ,			Invertebrates ('B13\				Ory-Season Water Table (C2)	
[Deposits (B2)			en Sulfide Odoi	` '				Saturation Visible on Aerial Imagery (C9)	
Drift Depo	. , ,			d Rhizospheres		iving Ro	ots (C3)		Geomorphic Position (D2)	
Algal Mat	or Crust (B4)			e of Reduced	_	_	. ,		shallow Aquitard (D3)	
Iron Depo	osits (B5)		Recent	Iron Reduction	in Tilled	Soils (C	6)	F	AC-Neutral Test (D5)	
Surface S	Soil Cracks (B6)		Stunted	or Stressed PI	ants (D1)) (LRR A	٨)	R	Raised Ant Mounds (D6) (LRR A)	
Inundation	n Visible on Aerial I	magery (B7)	Other (E	Explain in Rema	arks)			F	rost-Heave Hummocks (D7)	
Sparsely	Vegetated Concave	Surface (B8)								
Field Obse										
	iter Present?	Yes No								
Water Table			Depth (inche							
Saturation F	Present? apillary fringe)	Yes No	✓ Depth (inche	es):		V	vetland	Hydro	ology Present? Yes No 🗸	
	·	ream gauge	monitoring well, a	erial photos	previou	ıs inspe	ections)	if avai	lahle:	
				pilotoo,	p. 0 110 u	pc	3			
Remarke: C	Only meets one s	econdary by	drology indicator.							e committees
, tomains, C	,coo one s									



Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 09-04-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: LST4-U2
Investigator(s): S. Cooper, L. Larsen, D.	Culwell	s	ection, To	ownship, Ra	ange: S1, T11N, R6E	
Landform: broad swale		L	ocal reliet	f (concave,	convex, none): concave	Slope (%): 4-5
Subregion (LRR): E		Lat: 46.	7494023		Long: -110.9146027	Datum: WGS84
Soil Map Unit Name: 1176E Kimpton-Zao	de				NWI classific	cation: UPL
Are climatic/hydrologic conditions on the		this time o	fyear? Y	′es ✔ No	(If no, explain in Re	marks.)
Are Vegetation . Soil , or Hydrology						present? Yes V No
Are Vegetation , Soil , or Hydrology					eeded, explain any answ	-
SUMMARY OF FINDINGS – Attach						
Hydrophytic Vegetation Present?	Yes ✓ No					
	Yes 🔲 No 🔽			the Sample		🗖
	Yes No №			thin a Wetla		No 🗸
Remarks: Broad swale located above of	ld seep (wetland	d) below. A	Adjacent t	to Douglas	fir forest and sagebrush	slope to N. Photographs: SC
980-983						
VEGETATION – Use scientific nam	nes of plants.					
Tree Stratum (Plot size: NA)	Absolute % Cover		t Indicator Status	Dominance Test Worl	
1.	,				Number of Dominant S That Are OBL, FACW,	
2.					Total Number of Domir	· · · ·
3.					Species Across All Stra	
4					Percent of Dominant S	necies
	_	0	= Total	Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Wo	rksheet:
1.					Total % Cover of:	Multiply by:
3.					OBL Species	x 1 =
4.					FACW Species 1	1 x 2 = 22
5.						7 x 3 = 291
		0	_ = Total	Cover		3 x 4 = 12
Herb Stratum (Plot size: 0.01 acre	.)				UPL Species	x 5 =(P)
			X	FAC	Column Totals: 11	
			X	FAC	Prevalence Index	(B/A) = <u>2.93</u>
3. Juncus balticus		11		FACW FAC	Hydrophytic Vegetation	
Agrostis stolonifera Achillea millefolium		3		FACU	1 - Rapid Test for Hyd	· · · -
0 4 4 4		4		FAC	2 - Dominance Test is	
7. Rumex crispus		4	***************************************	FAC	✓ 3 - Prevalence Index is	s ≤3.0° ptations¹ (Provide supporting
8.						r on a separate sheet)
9					5 - Wetland Non-Vasc	ular Plants¹
10					Problematic Hydrophy	tic Vegetation¹ (Explain)
11.					¹ Indicators of hydric soil an present, unless disturbed of	nd wetland hydrology must be
Manda Mina Chrotisms (Dist sizes \$10	\	111	= Total	Cover	present, unless disturbed t	n proportiato.
Woody Vine Stratum (Plot size: NA)					
1					Hydrophytic Vegetation	
2		0	= Total	Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum 0.5				20101		
Remarks: Mesic					4	
No. of the contract of the con						
randonous						



SOIL				Project/Sit	e: Black E	Butte Copper	Sampling Point: LST4-U2
Profile Des	cription: (Descr	ibe to the de	oth needed to d	ocument the indi	cator or c	onfirm the	absence of indicators.)
Depth	Matrix			dox Features			,
(inches)	Color (moist)	%	Color (moist)	% Type¹	Loc²	Texture	Remarks
0-10	10YR 2/2	100				SL	Coarse sand
10-16	10YR 2/2	100				SL	High coarse fragments (shale like)
Hydric Soil Histosol (/ Histic Epi Black Hist Hydrogen Depleted Thick Dar Sandy Mu Sandy Gle	Indicators (App A1) Dedon (A2) Dic (A3) Sulfide (A4) Below Dark Surface k Surface (A12) Dicky Mineral (S1) Eyed Matrix (S4)	licable to all	LRRs, unless o Sandy Redox (S Stripped Matrix (S6) ineral (F1) (except M fatrix (F2) (F3) face (F6) urface (F7)		Indic 2 2 Rec Ve 0 01	² Location: PL=Pore Lining, M=Matrix sators for Problematic Hydric Soils³: cm Muck (A10) ed Parent Material (TF2) ery Shallow Dark Surface (TF12) ther (Explain in Remarks) cators of hydrophytic vegetation and etland hydrology must be present, nless disturbed or problematic.
	Layer (if presen	•					
Type:						Usadaio C	oil Dropout 2 Von 🗔 No 📝
Depth (inche	oil has coarse sa					nyuric 3	oil Present? Yes No 🗸
HYDROLO	GY drology Indicat	ore:					
-	cators (minimum		ad: abaak all that	· annlu\		Soc	condent Indicators (2 or more required)
		or one requir			***************************************	360	condary Indicators (2 or more required)
Saturatio Water Mai Sediment Drift Depo Algal Mat Iron Depo: Surface S Inundatior Sparsely \	er Table (A2) In (A3) Irks (B1) Deposits (B2) Isits (B3) Ior Crust (B4) Ioil Cracks (B6) I Visible on Aerial In Vegetated Concave		MLR/ Salt Cru: Aquatic Hydroge Oxidizec Presenc Recent I Stunted	tained Leaves (B9) (6 A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres along e of Reduced Iron (C ron Reduction in Tille or Stressed Plants (E xplain in Remarks)	Living Roo 4) d Soils (C6	ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Field Obser		v. —	Dankle /local :	-).			
Surface Wat		Yes No	= .	***************************************			
Water Table Saturation P		Yes No No No No No No No No No N	_ ' '	CONTRACTOR CONTRACTOR	w	etland Hydr	ology Present? Yes 🗌 No 🗹
		eam gauge, m	nonitoring well, a	erial photos, previo	ous inspec	tions), if ava	nilable:
Remarks: D	oesn't really mee	et geomorphic	nosition				
Nemains, D	ocan creany mee	e geomorpilio	position.				



Project/Site: Black Butte Copper	Cit	ty/County:	White Sul	lphur Springs/Meagher Sampling Date: 08-14-2014
Applicant/Owner: Tintina Resources				State: MT Sampling Point: SC-U1
Investigator(s): J. Beaver, K. Scow	S	ection, To	wnship, Ra	ange: S24, T12N, R6E
Landform: floodhlain				convex, none): none Slope (%): 1
Subregion (LRR): E		7822718	(,	Long: -110.9075097 Datum: WGS84
		7022710		NWI classification: UPL
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfis			[a] N-	
Are climatic/hydrologic conditions on the site typical for				
Are Vegetation , Soil , or Hydrology significant				"Normal Circumstances" present? Yes 🗹 No 🗌
Are Vegetation , Soil , or Hydrology naturally p			•	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh		mpling t	JOINT IOCE	ations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ☐ No		ls ti	ne Sample	ed Area
Wetland Hydrology Present? Yes No		with	nin a Wetla	and? Yes ☐ No ✔
Remarks: Site is highest point at this end of meadow. Photographs: JB 2308-2311 (N to W) VEGETATION – Use scientific names of plants	yan a saas ya ga a saas a saas ga a saas a saas ga a saas a saas ga a saas a saas ga a saas a saas ga a saas a	nd JUNBA	AL more co	mmon to north and east as get closer to creek.
VEGETATION — Ose scientific finances of plants	Absolute	Dominant	Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA		Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or, FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4		= Total (Percent of Dominant Species That Are OBL, FACW, or, FAC: 67 (A/B)
Sapling/Shrub Stratum (Plot size: NA)				
1.				Prevalence Index Worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL Species x 1 =
4				FACW Species x 2 =
5				FAC Species 104 x 3 = 312
	0	= Total (Cover	FACU Species 124 x 4 = 496
Herb Stratum (Plot size: 0.01 acre				UPL Species x 5 =(A)(P)
1. Phleum pratense	56	X	FAC	Column Totals: 228 (A) 808 (B)
2. Rhinanthus crista-galli	36	X	FACU	Prevalence Index (B/A) = 3.54
3. Poa pratensis	34	X	FAC	Hydrophytic Vegetation Indicators:
4. Trifolium pratense	28		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Taraxacum officinale	26		FACU	✓ 2 - Dominance Test is >50%
6. Schedonorus pratensis	18		FACU FACU	3 - Prevalence Index is ≤3.0¹
7. Cerastium fontanum	^		FAC	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8. Potentilla gracilis 9. Carum carvi			FACU	5 - Wetland Non-Vascular Plants¹
40 Tit-Um habitan	4		FAC	Problematic Hydrophytic Vegetation¹ (Explain)
11. Alopecurus arundinaceus	2		FAC	¹Indicators of hydric soil and wetland hydrology must be
· · · · · · · · · · · · · · · · · · ·	228	= Total (present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: NA)				
1				Hydrophytic
2.				Vegetation
	0	= Total (Cover	Present? Yes ✓ No ☐
% Bare Ground in Herb Stratum				
Remarks: Vegetation meets the Dominance Test, indicate the PI and professional judgment indicate the management distributions of the professional pr	hat vegetat			
Hay meadow, ditch immediately west of plot				



SOIL				F	Project/Site	e: Black	Butte Copp	per Sampling Point: SC-U1
Profile Des	cription: (Descri	be to the dep	oth needed to d	documen	t the indi	cator or	confirm th	ne absence of indicators.)
Depth	Matrix		Re	edox Featu	res			
(inches)	Color (moist)		Color (moist)	%	Type¹	Loc²	Texture	Remarks
0-5.5	2.5Y 3/2	100					CL	increased fine roots
5.5-16	2.5Y 2.5/1	100					С	W. W. W. W. W. W. W. W. W. W. W. W. W. W
¹Type: C=C	oncentration, D=D	Depletion, RM	=Reduced Matr	ix, CS=C	overed or	Coated S	Sand Grain	s ² Location: PL=Pore Lining, M=Matrix
\neg	Indicators (Appl	icable to all	¬		e noted.):		Inc	dicators for Problematic Hydric Soils ³ :
Histosol (•		Sandy Redox (•				2 cm Muck (A10)
	pedon (A2)		Stripped Matrix	• •				Red Parent Material (TF2)
Black His	` '		Loamy Mucky N			LRA 1)	닏	Very Shallow Dark Surface (TF12)
	Sulfide (A4)	(044)	Loamy Gleyed I					Other (Explain in Remarks)
	Below Dark Surface k Surface (A12)	(411)	Depleted Matrix Redox Dark Su				3ln	dicators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark		7)		***	wetland hydrology must be present,
	eyed Matrix (S4)		Redox Depress	•	' '			unless disturbed or problematic.
	Layer (if present	:):						
Туре:		,						
Depth (inch			-				Hydric	Soil Present? Yes No 🗸
•	ydrophytic and la	cking hydrolog	ју.					
IYDROLO Wetland Hy	GY drology Indicato	ors:						
-	icators (minimum		ed; check all tha	it apply)			5	Secondary Indicators (2 or more required)
	Vater (A1)				aves (B9) (e	vcent		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A		xcept	L	4A, and 4B)
Saturation				ust (B11)	,		Γ	Drainage Patterns (B10)
☐ Water Ma	, ,		=	Invertebra	tes (B13)		Ė	Dry-Season Water Table (C2)
Sediment	Deposits (B2)		Hydrog	en Sulfide	Odor (C1)			Saturation Visible on Aerial Imagery (C9)
Drift Depo	osits (B3)		Oxidize	d Rhizospl	neres along	Living Ro	ots (C3)	Geomorphic Position (D2)
Algal Mat	or Crust (B4)		Present	ce of Redu	ced Iron (C	4)		Shallow Aquitard (D3)
Iron Depo	. ,				ction in Tille	•	-	FAC-Neutral Test (D5)
_	oil Cracks (B6)				ed Plants (D	01) (LRR A	N) _	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im		Other (Explain in F	Remarks)		L	Frost-Heave Hummocks (D7)
	Vegetated Concave S	Surface (Bo)						
Field Obse		√oo □ No □	Denth (inche	.e.).		İ		
Vater Table		Yes 🔲 No 🕨 Yes 🔲 No 🔽		***************************************				
Saturation F		res ☐ No w	_ ' '			v	Vetland Hy	vdrology Present? Yes ☐ No 🗸
Describe Re	ecorded Data (stre	am gauge, m	onitoring well, a	erial pho	tos, previo	ous inspe	ections), if a	available:
Remarks:								

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 09-03-	2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC-U2	
Investigator(s): J. Beaver		S	ection, To	wnship, R	ange: S19, T12N, R7E		
Landform: terrace/floodplain		 L	ocal relief	(concave,	convex, none): none	Slope (%):	<1
Subregion (LRR): E		Lat: 46.	7820802		Long: -110.9054365	Datum: WG	S84
Soil Map Unit Name: 1110D Mooseflat-F	oxgulch-Redfis	h			NWI classifi	cation: UPL	
Are climatic/hydrologic conditions on the			f vear? Y	es 🗸 No			
Are Vegetation , Soil , or Hydrology					"Normal Circumstances"		٦
Are Vegetation , Soil , or Hydrology					eeded, explain any answ	-	
SUMMARY OF FINDINGS – Attach				,	•	,	: .
Hydric Soil Present?	Yes ✓ No Yes ✓ No Yes No •	J		he Sample hin a Wetl		No 🗹	
Remarks: Mesic terrace above Sheep C	Creek. Photogra	aphs: JB 17	73724-173	3715		<u> </u>	
,	J						į
VEGETATION - Use scientific nam	nes of plants						
		Absolute		Indicator	Dominance Test World	ksheet:	
Tree Stratum (Plot size: NA		% Cover		Status	Number of Dominant S		(8)
1.					That Are OBL, FACW,	or, FAC:1	(A)
2.					Total Number of Domir		(B)
3 4				ATTEMPT OF THE PROPERTY OF THE PARTY OF THE	Species Across All Stra		(0)
			= Total (Cover	Percent of Dominant S That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: NA)						(,,,,,
1.					Prevalence Index Wo		
2.					Total % Cover of:		-
3					OBL Species FACW Species 0.	x 1 =	~~~
4.						$38 \times 3 = 204$	*****
5.		0	T-4-1 (~	FACU Species 30.		
Herb Stratum (Plot size: 0.01 acre)	<u> </u>	_ = Total (Jover	UPL Species	x 5 =	
1 Boo protonois	.′	60	x	FAC	Column Totals: 9	9 (A) 327	(B)
2. Taraxacum officinale		10	,	FACU	Prevalence Index	(B/A) = 3.30	
3. Trifolium pratense		12		FACU	Hydrophytic Vegetation		
4. Phleum pratense		8		FAC	1 - Rapid Test for Hyd		
5. Galium boreale		0.5		FACU	✓ 2 - Dominance Test is	>50%	
6. Juncus balticus		0.5		FACW	3 - Prevalence Index is	s ≤3.0¹	
7.						ptations1 (Provide supporting	g
8					5 - Wetland Non-Vasc	r on a separate sheet)	
9. 10.						tic Vegetation¹ (Explain)	
11.						nd wetland hydrology must b	e
		99	= Total (Cover	present, unless disturbed of		
Woody Vine Stratum (Plot size: NA)						
1					Hydrophytic		
2					Vegetation	[2] N. [7]	
0/ Para Cround in Nach Strature		0	_ = Total (Cover	Present? Yes	✓ No □	
% Bare Ground in Herb Stratum		، عال معالم	ila ac la ci		 	the Deceler - Lade /	DIV
Remarks: Vegetation meets the Domina The PI and professional judgr							
Really doesn't have hydrophy							



SOIL				Р	roject/Site	e: <u>Black E</u>	Butte Copper	Sampling Point: SC-U2
Profile Des	cription: (Descri	be to the dept	h needed to d	locument	the indi	cator or o	onfirm the a	absence of indicators.)
Depth	Matrix		Re	dox Featur	es			
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-12.5	10YR 3/2	100					CL	More towards clay
12.5-20	2.5Y 4/2	95	5YR 4/6	5	С	M	SC	
					~~~~~			
***************************************								***************************************
	oncentration, D=I							² Location: PL=Pore Lining, M=Matrix
	Indicators (App	licable to all L	-		noted.):			ators for Problematic Hydric Soils ³ :
Histosol (	•		Sandy Redox (S	-				cm Muck (A10)
	pedon (A2)		Stripped Matrix					ed Parent Material (TF2)
Black His			Loamy Mucky M		(except M	LRA 1)		ery Shallow Dark Surface (TF12)
Hydroger	Sulfide (A4)		Loamy Gleyed !	Matrix (F2)			∐ Ot	her (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix	(F3)				
	k Surface (A12)		Redox Dark Sur	rface (F6)				ators of hydrophytic vegetation and etland hydrology must be present,
r	ucky Mineral (S1)	Ų	Depleted Dark		·)			less disturbed or problematic.
Sandy Gl	eyed Matrix (S4)		Redox Depress	ions (F8)				
Restrictive	Layer (if presen	t):						
Туре:		·						
Depth (inch	es):						Hydric S	oil Present? Yes ✔ No 🗌
Nemans. C	Soil in between in	dicators Arr air	u A12. 0011 uii	ιι ιο πιαρρ	eu as pai	tially liyul	ic by Micos.	
HYDROLO	GY							
-	drology Indicate							
Primary Ind	icators (minimum	of one required	l; check all tha	t apply)			Sec	condary Indicators (2 or more required)
Surface V	Vater (A1)		☐ Water-S	Stained Lea	ves (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)		<del></del>	RA 1, 2, 4A,				4A, and 4B)
Saturation				ust (B11)				Drainage Patterns (B10)
Water Ma	` .			Invertebra	tes (B13)			Dry-Season Water Table (C2)
	Deposits (B2)			en Sulfide (				Saturation Visible on Aerial Imagery (C9)
Drift Depo						Living Roc		Geomorphic Position (D2)
	or Crust (B4)			ce of Reduc	•	•		Shallow Aquitard (D3)
Iron Depo	` '				•	ed Soils (C6		FAC-Neutral Test (D5)
	Soil Cracks (B6)					01) (LRR A)		Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial In	nagery (B7)		Explain in F	•	, , (CI (I ( ) (		Frost-Heave Hummocks (D7)
	Vegetated Concave	,		-xpiaiii iii i	(critarito)			riost ricate riaminosis (br)
Field Obse		Van 🗌 Na 🕡	Donth (inch	oc).				
		Yes No V						
Water Table		Yes No 🗸					(-41	ology Present? Yes ☐ No 🗹
Saturation I	Present? apillary fringe)	Yes 📗 No 🗸	Depth (inche	es):		Y	eliano nyor	ology Present? Tes No w
	ecorded Data (str	eam dalide mo	nitoring well	erial nhot	ne previ	nus inene	ctions) if ava	uilahle:
Describe Kr	Journan Dala (SIII	cam gauge, mo	moning well, a	zenai pilol	os, pievi	ous mape	ocionis), il ava	madio.
	Mr		16	1			A1-	
Remarks: A	All redox below 12	Site is in terra	ace/floodplain	but no oth	ner indica	tors of hy	arology.	



Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources	,-,				State: MT	Sampling Point: SC-U3
Investigator(s): D. Barton, K. Scow		S	ection. To	wnship. R	ange: S19, T12N, R7E	Violet communication and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advantage and advan
Landform: low terrace				•	convex, none): concave	Slope (%): 2
Subregion (LRR): E	······································		7811914	(000010,	Long: -110.9050213	Datum: WGS84
***************************************	waylah Dadfia		7011314		****	
Soil Map Unit Name: 1110D Mooseflat-Fo					NWI classifi	
Are climatic/hydrologic conditions on the						
Are Vegetation, Soil, or Hydrology				Are	"Normal Circumstances"	present? Yes 🗸 No 🗌
Are Vegetation , Soil , or Hydrology					eeded, explain any answ	
SUMMARY OF FINDINGS – Attach	site map sn	owing sa	mpling	point loc	ations, transects, im	portant features, etc.
Hydric Soil Present?	∕es ✓ No ∕es  No ∕es  No	7		he Sample hin a Wetl		No 🗹
Remarks: Mowed and baled hay meadow	w. Photograph	s: KS 1451	-1454 (N	to W)		
VEGETATION - Use scientific nam	es of plants					
		Absolute		Indicator	Dominance Test World	ksheet:
Tree Stratum (Plot size: NA		% Cover		Status	Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC: (A)
2.					Total Number of Domir	
3.				~~~	Species Across All Stra	ata: 2 (B)
4.			= Total (	Cover	Percent of Dominant S That Are OBL, FACW,	
	)				Prevalence Index Wo	
1.					Total % Cover of:	
2.						
3.					OBL Species FACW Species	
4.					FAC Species 12	
5.	,			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		7 x 4 = 68
Herb Stratum (Plot size: 0.01 acre	`	0	_ = Total (	Jover	UPL Species	x 5 =
1 Dhlaum protonos	)	55	v	FAC	Column Totals: 15	
Phleum pratense     Poa pratensis		45	X	FAC		
3. Alopecurus pratensis		14		FAC	Prevalence Index	
Taraxacum officinale		10		FACU	Hydrophytic Vegetation	
5. Carex nebrascensis		8		OBL	<ul><li>1 - Rapid Test for Hyd</li><li>✓ 2 - Dominance Test is</li></ul>	. , ,
0 0		4		FACU	✓ 3 - Prevalence Index is	
7 Tais time to be desired				FAC		ptations¹ (Provide supporting
8. Geum macrophyllum		3		FAC		r on a separate sheet)
9. Carum carvi		2		FACU	5 - Wetland Non-Vasc	ular Plants¹
10. Plantago major		2		FAC	Problematic Hydrophy	tic Vegetation¹ (Explain)
11. Polygonum aviculare		2		FAC		nd wetland hydrology must be
		150	= Total (	Cover	present, unless disturbed of	or problematic.
Woody Vine Stratum (Plot size: NA	)				1	
1.					Hydrophytic	
2					Vegetation Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum		0	_ = Total (	Jover	. 1030111: 165	
Remarks: very central part of this round	area terrace in	high perce	ant of Cor	neh 30 v f	55' (elight depression)	
remains, very central part of this found	uica (611 <b>4</b> 06 15	ingii perce	on on oal	HED JU X C	oo (angin depression)	
						A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA



SUIL			Project/Site: Blac	ck Butte Co	opper	Sampling Point: SC-U3
Profile Des	cription: (Descri	be to the d	epth needed to document the indicator o	or confirm	the absence	e of indicators.)
Depth	Matrix		Redox Features	_		
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc²			rks
0-9.5	10YR 3/2	100		SiC	; <u>L</u>	
9.5-16	10YR 3/2	100		LS	Grave	els up to 3" (stream laid)
		<del></del> -				
¹Type: C=Cd	oncentration D=F	Denletion R	M=Reduced Matrix, CS=Covered or Coated	Sand Gra	ains ² loca	ition: PL=Pore Lining, M=Matrix
			II LRRs, unless otherwise noted.):			or Problematic Hydric Soils ³ :
Histosol (A			Sandy Redox (S5)	Ī	2 cm Mucl	•
	pedon (A2)		Stripped Matrix (S6)	ĺ		nt Material (TF2)
Black Hist			Loamy Mucky Mineral (F1) (except MLRA 1)	ĺ		ow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed Matrix (F2)		Other (Exp	olain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix (F3)			
Thick Dari	k Surface (A12)		Redox Dark Surface (F6)	;		f hydrophytic vegetation and
	ıcky Mineral (S1)		Depleted Dark Surface (F7)			nydrology must be present, sturbed or problematic.
	eyed Matrix (S4)		Redox Depressions (F8)			
	Layer (if presen	t):				
Туре:			<u> </u>			
Depth (inche	es):			Hyd	ric Soil Pre	sent? Yes ☐ No ✔
	Redfish) as "partia eatures in top 16"		vith 50% of the soil unit containing hydric so	oil compon	ents. Plot is	on low terrace and lacks redox
HYDROLO	GY					
Wetland Hy	drology Indicate	ors:				
Primary Indi	cators (minimum	of one requ	ired; check all that apply)		Secondary	Indicators (2 or more required)
Surface W	Jater (A1)		Water-Stained Leaves (B9) (except		□ Water-S	tained Leaves (B9) (MLRA 1, 2,
=	er Table (A2)		MLRA 1, 2, 4A, and 4B)			and 4B)
Saturation	• •		Salt Crust (B11)			e Patterns (B10)
Water Mar	rks (B1)		Aquatic Invertebrates (B13)		Dry-Sea	son Water Table (C2)
Sediment	Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation	on Visible on Aerial Imagery (C9)
Drift Depo	` '		Oxidized Rhizospheres along Living F	Roots (C3)	<b>✓</b> Geomor	phic Position (D2)
Algal Mat	or Crust (B4)		Presence of Reduced Iron (C4)		Shallow	Aquitard (D3)
Iron Depo			Recent Iron Reduction in Tilled Soils	` '		utral Test (D5)
	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LRR	R A)		Ant Mounds (D6) (LRR A)
	Notice on Aerial In		Other (Explain in Remarks)		Frost-He	eave Hummocks (D7)
	Vegetated Concave	Surface (B8)				
Field Obser			Double (inches)			
			Depth (inches):			
Water Table			Depth (inches):	Wetland	Hydrology	Present? Yes No 🗸
Saturation P (includes ca	pillary fringe)	Yes 💹 No	Depth (inches):	vvettanu	riyurology	riesent: les 📗 No 💗
Describe Re	ecorded Data (stre	eam gauge,	monitoring well, aerial photos, previous insp	pections),	if available:	
	N-1					
Remarks: P	iot on low terrace	ın drainage	<ul> <li>Saturation or water table not encountered</li> </ul>	ın soil pit.	No primary	indicators of wetland hydrology.



Project/Site: Black Butte Copper	Ci	ty/County:	White Su	phur Springs/Meagher Sampling Da	ate: 08-27-2014
Applicant/Owner: Tintina Resources				State: MT Sampling Po	oint: SC-U4
Investigator(s): D. Barton, K. Scow	S	ection, To	wnship, R	ange: S30, T12N, R7E	
Landform: terrace					Slope (%): 0-2
		779176		ValV 201	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfish				NWI classification: UPL	11000
Are climatic/hydrologic conditions on the site typical for this	time o	fveer2 Ve	se 🕡 No		
Are Vegetation . Soil , or Hydrology significantly dis				'Normal Circumstances" present? Ye	os Mo
Are Vegetation , Soil , or Hydrology naturally proble				•	
SUMMARY OF FINDINGS – Attach site map showi				eeded, explain any answers in Remar	•
Hydrophytic Vegetation Present? Yes ✔ No				, , , , , , , , , , , , , , , , , , , ,	
Hydric Soil Present? Yes No		ls th	ne Sample	d Area	
Wetland Hydrology Present? Yes ☐ No ✓			in a Wetl	process of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sam	
Remarks: Mowed hay meadow. Photographs: KS1455-145	8 (N to	o W)			
, , ,	`	,			
VEGETATION – Use scientific names of plants.					
Ab	solute	Dominant	Indicator	Dominance Test Worksheet:	
,	Cover		Status	Number of Dominant Species	
1.				That Are OBL, FACW, or, FAC:	2 (A)
2.				Total Number of Dominant	
3.				Species Across All Strata:	2 (B)
4		= Total C		Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: NA )		= rotar C	over	That Are OBL, FACW, or, FAC:	100 (A/B)
1				Prevalence Index Worksheet:	
2.				Total % Cover of: Mu	Itiply by:
3.				OBL Species x 1 =	
4.				FACW Species x 2 =	
5				FAC Species 141 x 3 =	
Management	0	= Total C	over	FACU Species 30 x 4 =	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
Herb Stratum (Plot size: 0.01 acre				UPL Species x 5 =	
1. Bromus inermis	65	X	FAC	Column Totals: 171 (A)	543 (B)
2. Poa pratensis	40	X	FAC	Prevalence Index (B/A) = 3.18	***************************************
3. Trifolium hybridum	28		FAC	Hydrophytic Vegetation Indicators	s:
4. Trifolium pratense	16		FACU	1 - Rapid Test for Hydrophytic Vegeta	ation
5. Taraxacum officinale	8		FACU	✓ 2 - Dominance Test is >50%	
6. Cirsium arvense	3		FAC	3 - Prevalence Index is ≤3.0¹	
7. Symphyotrichum foliaceum  8. Carum carvi	2		FACU FACU	4 - Morphological Adaptations¹ (Provide data in Remarks or on a separate	
O Overtennia antone	2		FAC	5 - Wetland Non-Vascular Plants¹	sneet/
Oxytropis spiendens     Vicia americana	2		FAC	Problematic Hydrophytic Vegetation¹	(Explain)
11. Astragalus alpinus	1		FACU	¹Indicators of hydric soil and wetland hydro	
	171	= Total C		present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: NA )					
1				Hydrophytic	
2				Vegetation	<del></del>
	0	_ = Total C	over	Present? Yes 🗹 No	<b>)</b> []
% Bare Ground in Herb Stratum					
Remarks: Vegetation meets the Dominance Test, indicating The PI and professional judgment indicate that v					nce Index (PI).
the fit and professional judgment indicate that v	-y <del>c</del> iai	ion is iiles	io pat 110t 1	vouanu.	



SOIL				ı	Project/Sit	e: Black	Butte Co	opper	Sampling Point: SC-U	J4		
Profile Des	scription: (Descri	be to the d	epth needed to d	ocumer	nt the indi	cator or	confirm	the a	absence of indicators.)			
Depth	Matrix		Redox Features									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text	ure	Remarks			
0-16	7.5YR 3/1	100					SiC	CL				
										THE RESERVE OF STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,		
							***************************************					
~~~~~												
			***************************************		-							
		and the second of the second o										
	Concentration, D=D								² Location: PL=Pore Lining, M=			
	I Indicators (App	licable to a			e noted.):	:			ators for Problematic Hydric S	Soils³:		
Histosol	` '		Sandy Redox (S				Į		cm Muck (A10)			
= .	ipedon (A2)		Stripped Matrix	` '		. =	Į		ed Parent Material (TF2)			
Black His	, :		Loamy Mucky M			LRA 1)	Į		ery Shallow Dark Surface (TF12)			
	n Sulfide (A4)	(4.4.4)	Loamy Gleyed M)		Į	Oti	her (Explain in Remarks)			
	l Below Dark Surface irk Surface (A12)	(A11)	Depleted Matrix Redox Dark Sur					3Indic:	ators of hydrophytic vegetation	and		
===	lucky Mineral (S1)		Depleted Dark S		:7)				etland hydrology must be preser			
= -	leyed Matrix (S4)		Redox Depressi		',				less disturbed or problematic.	-		
	Layer (if present	·):		0110 (1 0)								
Type:												
Depth (inch							Hvd	Iric Sc	oil Present? Yes 🗌 No 🗸	•		
		-44:-11			A 10\	NDCC	<u>_</u>		soil unit (1110D Mooseflat-Foxg			
HYDROLC)GY									chadronic resident success at 11 Million 12		
Wetland H	ydrology Indicate	ors:										
	dicators (minimum		ired; check all tha	t apply)				Sec	condary Indicators (2 or more rec	quired)		
	Water (A1)				eaves (B9) (evcent			Water-Stained Leaves (B9) (MLRA 1	·		
	ter Table (A2)				aves (B5) (, and 4B)	елоері		' لـــا	4A, and 4B)	, 2,		
	ion (A3)		Salt Cru		,			П	Drainage Patterns (B10)			
Water Ma	arks (B1)				ates (B13)				Dry-Season Water Table (C2)			
Sedimen	t Deposits (B2)		Hydroge	n Sulfide	Odor (C1)				Saturation Visible on Aerial Imagery ((C9)		
Drift Dep	osits (B3)		Oxidize	l Rhizosp	heres along	Living Ro	oots (C3)	V	Geomorphic Position (D2)			
Algal Ma	t or Crust (B4)		Presenc	e of Redu	uced Iron (C	(4)			Shallow Aquitard (D3)			
	osits (B5)		Recent	iron Redu	iction in Tille	ed Soils (C	26)	F	FAC-Neutral Test (D5)			
Surface	Soil Cracks (B6)				ed Plants (I	01) (LRR /	A)		Raised Ant Mounds (D6) (LRR A)			
	on Visible on Aerial Im		Other (E	xplain in	Remarks)			F	Frost-Heave Hummocks (D7)			
	Vegetated Concave	Surface (B8)										
Field Obse				- > -								
			Depth (inche									
			Depth (inche	<i>'</i>		I ,	Motland	Liver	ology Present? Yes N	o 🗸		
Saturation (includes c	Present? apillary fringe)	Yes ∐ No	Depth (inche	s):			rrenand	riyur	orogy riesent: 165 📋 19			
··	lecorded Data (stre	eam gauge,	monitoring well, a	erial pho	otos, previ	ous insp	ections),	if ava	ilable:			
		5 5.,	Ţ,	•	• •	•	,,					
Remarks:		·										

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ulphur Springs/Meagher Sampling Date: 08-27-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: SC-U5
Investigator(s): D. Barton, K. Scow		S	ection, To	ownship, R	ange: S30, T12N, R7E
Landform: terrace					convex, none): none Slope (%): 0-1
Subregion (LRR): E			7762042	•	Long: -110.9012878 Datum: WGS84
Soil Map Unit Name: 23D Medicinelodge			7702012		NWI classification: UPL
			fvoor2 V	You de Nie	
Are climatic/hydrologic conditions on the	* *		-		
Are Vegetation , Soil , or Hydrolog					"Normal Circumstances" present? Yes V No
Are Vegetation , Soil , or Hydrolog				•	eeded, explain any answers in Remarks.) ations, transects, important features, etc.
			pg	pomit ioo	
Hydric Soil Present?	Yes No			the Sample	
Wetland Hydrology Present?	Yes No		Wit	hin a Wetl	land? Yes No ✓
Remarks: Photographs: KS 1463-1466	(N to W)				
			,		
VEGETATION – Use scientific nar	nes of plan	ts.			
- O	,	Absolute	Dominant		Dominance Test Worksheet:
Tree Stratum (Plot size: NA	_)		Species?		Number of Dominant Species
1.					That Are OBL, FACW, or, FAC:3 (A)
2.					Total Number of Dominant
3. ₄					Species Across All Strata: 3 (B)
4		0	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or, FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot size: NA)				Prevalence Index Worksheet:
1					Total % Cover of: Multiply by:
2.					OBL Species 2 x 1 = 2
3					FACW Species 15 x 2 = 30
4.					FAC Species 103 x 3 = 309
5.		0	= Total	Cover	FACU Species 44 x 4 = 176
Herb Stratum (Plot size: 0.01 acre)		_ = 10(a)	Covei	UPL Species x 5 =
1. Bromus inermis	/	55	×	FAC	Column Totals: 164 (A) 517 (B)
2. Phleum pratense		25	x	FAC	Prevalence Index (B/A) = 3.15
3. Poa pratensis		20	x	FAC	Hydrophytic Vegetation Indicators:
4. Dactylis glomerata		18		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Carex praegracilis		12		FACW	✓ 2 - Dominance Test is >50%
6. Rhinanthus crista-galli		10		FACU	3 - Prevalence Index is ≤3.0¹
7. Carum carvi		6		FACU	4 - Morphological Adaptations¹ (Provide supporting
8. Symphyotrichum foliaceum		5_		FACU	data in Remarks or on a separate sheet)
9. Juncus balticus		3		FACW	5 - Wetland Non-Vascular Plants¹
10. Trifolium hybridum	····	3		FAC	Problematic Hydrophytic Vegetation¹ (Explain)
11. Trifolium pratense		3		FACU	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Manda Vina Otastana (Districta NA	,	164	_ = Total	Cover	process, amoso distarbed or properties.
Woody Vine Stratum (Plot size: NA)				
1					Hydrophytic Vegetation
2		0	= Total	Cover	Present? Yes V No
% Bare Ground in Herb Stratum			10141	COVEI	
	ance Test. inc	dicating the	site as hvo	drophytic	However, vegetation fails the Prevalence Index (PI).
The PI and professional judg					



SOIL			Project/Site: Bla	ck Butte Cop	pper Sampling Point: SC-U5
Profile Des	cription: (Descri	ibe to the de	pth needed to document the indicator	or confirm	the absence of indicators.)
Depth	Matrix		Redox Features		······································
(inches)	Color (moist)	%	Color (moist) % Type¹ Loc³	Z Textur	re Remarks
0-12	10YR 2/2	100		С	
12-16	10YR 4/1	100		С	
per constant					

Type: C=C	oncontration D-I	Conletion PM	I=Reduced Matrix, CS=Covered or Coate	d Sand Crai	ing 21 coation: DI =Doro Lining M=Matrix
			LRRs, unless otherwise noted.):		<u></u>
		nicable to all	¬ '	<u>,,</u>	ndicators for Problematic Hydric Soils ³ :
Histosol (•	L	Sandy Redox (S5)	L	2 cm Muck (A10)
	pedon (A2)	Ļ	Stripped Matrix (S6)	L	Red Parent Material (TF2)
Black His	` '	F	Loamy Mucky Mineral (F1) (except MLRA 1)	L	Very Shallow Dark Surface (TF12)
	Sulfide (A4)	L	Loamy Gleyed Matrix (F2)	L	Other (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix (F3)	31	
=	k Surface (A12)	Ĺ	Redox Dark Surface (F6)	-1	Indicators of hydrophytic vegetation and wetland hydrology must be present,
	ıcky Mineral (S1)	Ĺ	Depleted Dark Surface (F7)		unless disturbed or problematic.
<u> </u>	eyed Matrix (S4)		Redox Depressions (F8)		
Restrictive	Layer (if presen	it):			
Type:					
Depth (inch	es):			Hydr	ic Soil Present? Yes ☐ No 🗸
Remarks: F	ark soil profile la	ckina deplete	d/gleved matrix or redox features. Possib	ility for hydri	ic soil at greater depth (indicator A12). Soil
			Mooseflat) is caegorized as predominantly		
HYDROLO	GY				
Wetland Hy	drology Indicate	ors:			
-			end: abook all that apply)		Secondary Indicators (2 or more required)
Primary ind	icators (minimum	or one requir	red; check all that apply)		Secondary Indicators (2 or more required)
Surface V	Vater (A1)		Water-Stained Leaves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Wate	er Table (A2)		MLRA 1, 2, 4A, and 4B)		4A, and 4B)
Saturation	on (A3)		Salt Crust (B11)		Drainage Patterns (B10)
Water Ma	rks (B1)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
Sediment	Deposits (B2)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
Drift Depo	sits (B3)		Oxidized Rhizospheres along Living	Roots (C3)	Geomorphic Position (D2)
Algal Mat	or Crust (B4)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
Iron Depo	sits (B5)		Recent Iron Reduction in Tilled Soils	(C6)	FAC-Neutral Test (D5)
Surface S	oil Cracks (B6)		Stunted or Stressed Plants (D1) (LR	R A)	Raised Ant Mounds (D6) (LRR A)
Inundation	n Visible on Aerial Ir	magery (B7)	Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
Sparsely '	Vegetated Concave	Surface (B8)			
Field Obse	rvations:	anning to the state of the stat			
		Yes No	✓ Depth (inches):		
Water Table		Yes No			
Saturation F				Wetland F	lydrology Present? Yes ☐ No 🗹
	pillary fringe)	Yes No	✓ Depth (inches):	, vectiona i	lydrology i resent: res No 💽
		eam gauge n	nonitoring well, aerial photos, previous ins	spections) if	f available:
		g ~ ~ g ~ , 1·	g, acres proces, provides in	,, 11	
Darsadii	lo optionation	Lab 4 a da 4	nountared in acil =:4		
rtemarks: N	o saturation of W	rater table end	countered in soil pit.		

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 09-03-2	2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC-U6	
Investigator(s): D. Barton, K. Scow		S	ection, To	wnship, R	ange: S29, T12N, R7E	And the first and the second of the second o	
Landform: toe slope					convex, none): concave	Slope (%):	5-10
Subregion (LRR): E		***************************************	7733058	,	Long: -110.8721294	Datum: WG	
Soil Map Unit Name: 1110D Mooseflat	t Foygulch Pedfi		1100000		NWI classific		
· · · · · · · · · · · · · · · · · · ·			f.v.o.o.r2 V	oo 🕡 Na			
Are climatic/hydrologic conditions on the							_
Are Vegetation , Soil , or Hydrolo					"Normal Circumstances"	-	
Are Vegetation , Soil , or Hydrolo SUMMARY OF FINDINGS – Attac					eeded, explain any answ		£_
	Yes ✔ No						-
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No	✓		he Sample	_	No 🗹	
Wetland Hydrology Present?	Yes No				- · · · · · · · · · · · · · · · · · · ·		
Remarks: Dasiphora fruticosa toeslop	e - no frost heav	es. Photog	raphs: KS	1519-152	2 (N to W)		
VEGETATION – Use scientific na	ames of plants				·		
Tree Stratum (Plot size: NA)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Work		
1.	/	***************************************			Number of Dominant S That Are OBL, FACW,		(A)
2.					1		
3.					Total Number of Domin Species Across All Stra		(B)
4.							` ,
		0	= Total (Cover	Percent of Dominant Sp That Are OBL, FACW,		(A/B)
Sapling/Shrub Stratum (Plot size: 0.0)1 acre)				Prevalence Index Wor		
Dasiphora fruticosa		50	X	FAC	Total % Cover of:		1
2							- :
3						8 x 1 = 8 3 x 2 = 46	
4					FAC Species 14		
5.						4 x 4 = 56	
Horb Stratum (Diet size: 0.01 core	`	50	_ = Total (Cover		4 x 5 = 20	
Herb Stratum (Plot size: 0.01 acre 1. Phleum pratense)	45	v	FAC	Column Totals: 19		(B)
2 Decembraio conitose		10	X	FACW	-		• ' '
3. Potentilla gracilis		18	x	FAC	Prevalence Index (-
4. Poa pratensis		16		FAC	Hydrophytic Vegetation		
5. Carex pellita		8		OBL	1 - Rapid Test for Hydr	, , ,	1
6. Poa palustris		8		FAC	✓ 2 - Dominance Test is ✓ 3 - Prevalence Index is		1
7. Symphyotrichum foliaceum		7		FACU		s ≤3.0° otations¹ (Provide supporting	~
8. Agropyron trachycaulum		4		FAC		r on a separate sheet)	ا
9. Danthonia intermedia		4		FACU	5 - Wetland Non-Vasci	ular Plants¹	
10. Stipa occidentalis		4		(UPL)	Problematic Hydrophyt	tic Vegetation¹ (Explain)	
11. Fragaria virginiana		3		FACU		d wetland hydrology must be	е
		144	= Total (Cover	present, unless disturbed of	r problematic.	
Woody Vine Stratum (Plot size: NA)				1990		
1					Hydrophytic		
2					Vegetation Present? Yes	✓ No □	1
% Bare Ground in Herb Stratum		0	_ = Total (Cover	i icaciiti 162	Y NO L	
Remarks: this plot is paired with wetla	and plot SC 14/9	about 45' c	Man.			100 alaannyon - ahan pani, salaha Senah sooraan sooraan kalaan ahaa ahaa ahaa ahaa sooraa sooraa sooraa sooraa	
Tremains, tills plot is palled with wells	and plot 30-440 a	about 45 at	vvay				
Y TO THE TOTAL THE TAX							



SOIL				Р	roject/Sit	e: Black	Butte Co	pper	Sampling Point: SC-U6
Profile Des	cription: (Descri	be to the d	epth needed to d	locumen	t the indi	cator or	confirm	the a	absence of indicators.)
Depth	Matrix		Re	dox Featur	res				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Text		Remarks
0-16	7.5YR 2.5/2	100				***************************************	SC	L	

		-							
¹Tvpe: C=C	oncentration, D=E	epletion. R	M=Reduced Matr	x. CS=Co	overed or	Coated S	Sand Gra	ains	² Location: PL=Pore Lining, M=Matrix
	Indicators (App								ators for Problematic Hydric Soils ³ :
Histosol (Sandy Redox (S		,		ſ		cm Muck (A10)
!= '	pedon (A2)		Stripped Matrix	•			Ĭ		ed Parent Material (TF2)
Black His	tic (A3)		Loamy Mucky N	lineral (F1)	(except M	LRA 1)	[Ve	ery Shallow Dark Surface (TF12)
Hydrogen	Sulfide (A4)		Loamy Gleyed I	Matrix (F2)				Otl	her (Explain in Remarks)
Depleted	Below Dark Surface	(A11)	Depleted Matrix	(F3)					
Thick Dar	k Surface (A12)		Redox Dark Su	face (F6)			;		ators of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark	Surface (F7	7)				etland hydrology must be present, less disturbed or problematic.
Sandy GI	eyed Matrix (S4)	***************************************	Redox Depress	ions (F8)				uiii	ess disturbed of problematic.
Restrictive	Layer (if present	:):							
Type:			manufacture.				-		
Depth (inch	es):		annarianna				Hyd	ric Sc	oil Present? Yes 🗌 No 🗹
	1110D, Mooseflat-								NRCS soil mapping describes unit).
HYDROLO	GV				BORRESTON AND AND AND AND AND AND AND AND AND AN		Marine de altrinoù i arrive harrige d	THE RESIDENCE OF THE PARTY OF T	
	drology Indicate	re.							
	icators (minimum		irad: abaak all the	· Lannlu				C	condary Indicators (2 or more required)
Filliary IIIu	icators (minimum	or one requ	meu, check an ma	п арріу)				Sec	ondary indicators (2 or more required)
processor	Vater (A1)				aves (B9) (6	except		∐ <i>\</i>	Water-Stained Leaves (B9) (MLRA 1, 2,
	er Table (A2)			A 1, 2, 4A,	and 4B)				4A, and 4B)
Saturation	` '		=	ıst (B11)	. (5.40)			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Drainage Patterns (B10)
Water Ma	` '			Invertebra en Sulfide (. ,				Dry-Season Water Table (C2)
	Deposits (B2)				neres along	Livina Po	ote (C3)		Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Drift Depo	or Crust (B4)			,	ced Iron (C	•	ois (C3)		Shallow Aquitard (D3)
Iron Depo					ction in Tille	•	6)		FAC-Neutral Test (D5)
	Soil Cracks (B6)				ed Plants (E	•	•	=	Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im	agery (B7)		Explain in F		, (=	•		Frost-Heave Hummocks (D7)
	Vegetated Concave		(,				,
Field Obse	rvations:								
		Yes 🗌 No	Depth (inche	es):		Ì			
Water Table			Depth (inche						
Saturation F	Present?	Comments.	✓ Depth (inche	·		v	Vetland	Hydro	ology Present? Yes 🗌 No 🗹
<u> </u>	pillary fringe)								
Describe Re	ecorded Data (stre	am gauge,	monitoring well, a	erial pho	tos, previ	ous inspe	ections),	if ava	ilable:
Remarks: N	/larginal geomorpl	nic position.							
1	•								
						.,	~		



Project/Site: Black Butte Copper		Cit	ty/County:	White Sul	lphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SC-U7
Investigator(s): D. Barton, K. Scow		S	ection. To	wnship, Ra	ange: S29, T12N, R7E	
Landform: terrace				•	convex, none): convex	Slope (%): 1-2
Subregion (LRR): E			7736039	(Long: -110.8692715	Datum: WGS84
Soil Map Unit Name: 1110D Mooseflat-Foxg	ulch Pedfiel		7730033		NWI classific	
				[a] N-		
Are climatic/hydrologic conditions on the site			-			
Are Vegetation, Soil, or Hydrology	-					present? Yes 🗸 No
Are Vegetation , Soil , or Hydrology				•	eeded, explain any answ	·
SUMMARY OF FINDINGS – Attach sit			inpling p	Joint loca	ilions, transects, imp	portant reatures, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	□ No v	_		he Sample		N. [7]
Wetland Hydrology Present? Yes				nin a Wetla		No 🗹
Remarks: Upland plot paired with upland pl	ot SC-U8. L	ens-shape	d non-we	tland island	I. Photographs: KS 1539	-1542 (N to W)
VEGETATION – Use scientific names	of plants	•				
		Absolute	Dominant		Dominance Test Worl	ksheet:
Tree Stratum (Plot size: 0.1 acre				Status	Number of Dominant S	•
1. Picea engelmannii		38	X	FAC	That Are OBL, FACW,	or, FAC:4 (A)
2					Total Number of Domin	
3					Species Across All Stra	ata: 4 (B)
4.		38	= Total (Cover	Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.01 acre)				Prevalence Index Wo	
Dasiphora fruticosa				FAC	Total % Cover of:	•
2.					OBL Species	x 1 =
3					FACW Species 2.	
4.					FAC Species 13	
5.					-	9 x 4 = 116
Harb Stratum (Plot size: 0.01 gara		14	_ = Total (Jover	UPL Species 1	
Herb Stratum (Plot size: 0.01 acre		52	v	FAC	Column Totals: 185.	
Phleum pratense Poa pratensis		20	X	FAC		
3. Taraxacum officinale		12	^	FACU	Prevalence Index	
Achillea millefolium		8		FACU	Hydrophytic Vegetation	
5. Cirsium arvense		8		FAC	1 - Rapid Test for Hydi	
6. Lupinus sericeus				(UPL)	2 - Dominance Test is	
7		7		(UPL)	3 - Prevalence Index is	
0 0		^		FACU	data in Remarks o	ptations¹ (Provide supporting r on a separate sheet)
0 D-4-4111		^		FAC	5 - Wetland Non-Vasc	
40 4		_		FAC	Problematic Hydrophy	tic Vegetation¹ (Explain)
11. Fragaria virginiana		2		FACU		d wetland hydrology must be
		133.5	= Total C	Cover	present, unless disturbed of	r problematic.
Woody Vine Stratum (Plot size: NA)					
1.					Hydrophytic	
2					Vegetation Present? Yes	No 🗆
0/ Para Cround in Hosh Charters		0	_ = Total (Cover	Present? Yes	✓ No L
% Bare Ground in Herb Stratum		_4:			L	the December 1 to 100
Remarks: Vegetation meets the Dominance The PI and professional judgmen						the Prevalence Index (PI).
, and proceeding judgition						



SOIL				Projec	ct/Site: Black	k Butte Co	pper	Sampling Point: SC-U7	
Profile Desc	ription: (Descr	be to the de	oth needed to d	ocument the	indicator o	r confirm	the absence o	of indicators.)	
Depth _	Matrix		Re	dox Features					
(inches)	Color (moist)	%	Color (moist)	% Туј	pe¹ Loc²	Textu	ire Remarks		
0-16	7.5YR 2.5/1	100				CL			
many action of									
					***************************************			AND THE PROPERTY OF THE PROPER	

					***************************************	****			********
¹Type: C=Co	ncentration D=I	Depletion RM	=Reduced Matri	x CS=Covere	ed or Coated	Sand Gra	ins ² l ocation	n: PL=Pore Lining, M=Matrix	
			LRRs, unless of					Problematic Hydric Soils ³ :	
Histosol (A		Г	Sandy Redox (S		,.	·	2 cm Muck (A	•	
Histic Epip	•	F	Stripped Matrix	•		Ē	Red Parent Ma	•	
Black Histi		Ī	Loamy Mucky M		ept MLRA 1)	Ī	=	Dark Surface (TF12)	
Hydrogen S	• •	Ē	Loamy Gleyed N		,		Other (Explain	· · ·	
Depleted B	elow Dark Surface	(A11)	Depleted Matrix	(F3)				·	
Thick Dark	Surface (A12)		Redox Dark Sur	face (F6)		3		drophytic vegetation and	
Sandy Muc	ky Mineral (S1)		Depleted Dark S					rology must be present,	
Sandy Gle	yed Matrix (S4)		Redox Depressi	ons (F8)			uniess distur	bed or problematic.	
Restrictive L	ayer (if presen	t):							
Туре:			_						
Depth (inche	s):					Hydı	ric Soil Presen	it? Yes 🗌 No 🗸	
Remarks: Da	ark soil without o	lepleted or gle	yed matrix. Cou	uld meet indic	ator A12 at g	greater de	oth. NRCS soil	mapping describes unit	
			dfish) as partially					•	
					·				
LIVEROLOG									
HYDROLOG								THE CONTRACTOR OF THE CONTRACT	
-	drology Indicate		!!!!! 4!	l \			0	#:	
Primary Indic	ators (minimum	of one requir	ed; check all tha	t apply)			Secondary Inc	dicators (2 or more required)	ł
Surface Wa	ater (A1)		_	stained Leaves (Water-Stain	ed Leaves (B9) (MLRA 1, 2,	
	Table (A2)		MLR	A 1, 2, 4A, and 4	4B)		4A, and 4	4B)	
Saturation			Salt Cru				Drainage Pa	, ,	
Water Marl	` .		,	Invertebrates (B	•		photography	Water Table (C2)	
	Deposits (B2)			en Sulfide Odor				isible on Aerial Imagery (C9)	
Drift Depos	, ,			d Rhizospheres		Roots (C3)		Position (D2)	
	or Crust (B4)			e of Reduced In		(00)	Shallow Aqu	` '	
Iron Depos	its (B5) il Cracks (B6)			Iron Reduction in or Stressed Pla		. ,	FAC-Neutra		
	Visible on Aerial In	nageny (R7)	=	Explain in Remai	` , ,	(A)		Mounds (D6) (LRR A) Hummocks (D7)	
	egetated Concave		Other (L	.xpiaiii iii iteiliai	inoj		1103t-11eave	: Hullimocks (D7)	
Field Observ		Canace (Bo)							
Surface Water		Yes No	✓ Depth (inche)	·e).					
Water Table		Yes No							
Saturation Pr		Yes No				Wetland I	Hydrology Pre	sent? Yes No 🗸	
(includes cap	oillary fringe)	. 03 [] 140 [- Debut (mone	· · · · · · · · · · · · · · · · · · ·			.,		
Describe Red	corded Data (str	eam gauge, n	nonitoring well, a	erial photos, p	orevious insp	pections), i	f available:		
			-						
Remarks: M	icro-relief (bump	y) due to exte	nsive pocket go	oher disturban	nce, not frost	t heaving o	on either this pla	ot or SC-U8.	
	, r		. 5-1			5 -			
ENVIRONMENT OF A COLUMN TO THE									

Project/Site: Black Butte Copper			Ci	ty/County	: White Su	lphur Springs/Meagher	Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources						State: MT	Sampling Point: SC-U8
Investigator(s): D. Barton, K. Scow			S	ection, To	ownship, Ra	ange: S29, T12N, R7E	
Landform: terrace			L	ocal relief	(concave,	convex, none): convex	Slope (%): 0-2
Subregion (LRR): E			 Lat: 46.	7734532		Long: -110.8685221	Datum: WGS84
Soil Map Unit Name: 1110D Moosefla	at-Foxaulch-Re		***************************************			NWI classific	
Are climatic/hydrologic conditions on			s time o	f vear? Y	es 🗸 No		
Are Vegetation . Soil , or Hydrole				-			present? Yes ✓ No □
Are Vegetation, Soil, or Hydrol		-				eeded, explain any answ	
SUMMARY OF FINDINGS – Atta					•		·
Hydrophytic Vegetation Present?		No					
Hydric Soil Present?		No ✓		ls t	he Sample	ed Area	
Wetland Hydrology Present?	Yes	No 🗸		wit	hin a Wetla	and? Yes	No 🗸
Remarks: Slight rise between main of	hannel and o	verflow	to north	, non-wet	land island	. Photographs: KS 1535-	1538 (N to W)
VEGETATION - Use scientific n	ames of pla	ınts.					
T 0/ / /D/ : NA	`		bsolute		Indicator	Dominance Test Work	sheet:
Tree Stratum (Plot size: NA				Species?		Number of Dominant S	
1.						That Are OBL, FACW,	or, FAC: (A)
2.			***************************************			Total Number of Domin	
3. 4.					***************************************	Species Across All Stra	ita: Z (b)
				= Total	Cover	Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 0.	01 acre)					That Are OBL, FACW,	
1. Dasiphora fruticosa			1		FAC	Prevalence Index Wor	
2						Total % Cover of:	
3							x 1 =
4						FACW Species 13 FAC Species 163	
5					***************************************	FACU Species 10	
Herb Stratum (Plot size: 0.01 acre)		1	= Total	Cover	· ———	5 x 5 = 25
1. Poa pratensis	/		78	x	FAC	Column Totals: 19	
2. Phleum pratense			40	x	FAC	Prevalence Index (
3. Cirsium arvense			22		FAC		,
4. Trifolium hybridum			10		FAC	Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Test for Hydrophy	
5. Iris missouriensis			9		FACW	✓ 2 - Dominance Test is	, , <u> </u>
6. Achillea millefolium			6		FACU	✓ 3 - Prevalence Index is	
7. Juncus balticus			4		FACW		otations¹ (Provide supporting
8. Lupinus sericeus					(UPL)		on a separate sheet)
Solidago canadensis var. salebro	sa				FAC	5 - Wetland Non-Vascu	
				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FACU		ic Vegetation¹ (Explain)
11. Taraxacum officinale			2	_ T-4-1	FACU	indicators of hydric soil and present, unless disturbed o	d wetland hydrology must be r problematic.
Woody Vine Stratum (Plot size: NA	١		190	= Total (	Jover		
1						Lludrophutio	
2.						Hydrophytic Vegetation	
			0	= Total (	Cover	Present? Yes	✓ No 🗆
% Bare Ground in Herb Stratum						1	
Remarks:							



SOIL				Pro	ject/Site:	Black Bu	ıtte Cop	per Sampling Point: SC-U8
Profile Des	scription: (Describ	e to the dep	th needed to d	locument tl	he indica	tor or co	nfirm tl	he absence of indicators.)
Depth	Matrix		Re	dox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc²	Texture	e Remarks
0-16	10YR 2/1	100					SiL	
	***************************************							
			· · · · · · · · · · · · · · · · · · ·					
1Type: C=C	Concentration, D=D	enletion PM:	-Peduced Matr	iv CS=Cov	ared or Co	oatod Sai	nd Grain	ns ² Location: PL=Pore Lining, M=Matrix
<u> </u>	I Indicators (Appl			<del></del>		oateu oai		dicators for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (		otou.,.			2 cm Muck (A10)
	ipedon (A2)	<u> </u>	Stripped Matrix	•				Red Parent Material (TF2)
Black His	. , ,		Loamy Mucky N		xcent MLR	PA 1)	F	Very Shallow Dark Surface (TF12)
	n Sulfide (A4)	Γ	Loamy Gleyed I		xoopt me.	,		Other (Explain in Remarks)
	Below Dark Surface	(A11)	Depleted Matrix				_	,
	rk Surface (A12)	`	Redox Dark Su	rface (F6)			³lr	ndicators of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface (F7)				wetland hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F8)				unless disturbed or problematic.
Restrictive	Layer (if present	):						
Type:			_					
Depth (inch	nes):						Hydrid	c Soil Present? Yes ☐ No 🗹
<u> </u>		epleted or ale	ved matrix Co	uld meet inc	licator A1	12 at grea	iter dept	th. NRCS soil mapping describes unit
								unit). Very dry, weak structure.
		•						
HYDROLO	ACV							
	ydrology Indicato	re ·						
	licators (minimum		ad: check all the	it annly)				Secondary Indicators (2 or more required)
		one require	prompt.					Secondary indicators (2 or more required)
	Nater (A1)			Stained Leave	. , .	cept	L	Water-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			A 1, 2, 4A, ar	nd 4B)			4A, and 4B)
Saturati	` '		······	ıst (B11)			Ĺ	Drainage Patterns (B10)
Water Ma				Invertebrates	` '		Ĺ	Dry-Season Water Table (C2)
P*************************************	t Deposits (B2)			en Sulfide Od		inina Daata	(00)	Saturation Visible on Aerial Imagery (C9)
	osits (B3)			d Rhizospher ce of Reduced	•	iving Roots	s (C3) [	✓ Geomorphic Position (D2)
	t or Crust (B4) osits (B5)			Iron Reductio	` '	Soile (CR)	L [	Shallow Aquitard (D3) FAC-Neutral Test (D5)
, ,	Soil Cracks (B6)			or Stressed F			L [	Raised Ant Mounds (D6) (LRR A)
	on Visible on Aerial Im	agery (B7)		Explain in Rer	, ,	(LIXIX A)	Ĺ	Frost-Heave Hummocks (D7)
	Vegetated Concave S			_xpiaii iii iioi	namo,		L	
Field Obse								
		∕es ☐ No N	Depth (inche	es).		:		
Water Tabl		res ☐ No N				!		
Saturation		res ☐ No No	_ ' '	,		We	tland H	ydrology Present? Yes ☐ No 🗹
(includes ca	apillary fringe)	C2   140	Deptil (iliche					, a. c. c. g, c. c
Describe R	ecorded Data (stre	am gauge, m	onitoring well, a	erial photos	s, previou	s inspect	ions), if	available:
		-	-					
Remarks:								



Project/Site: Black Butte Copper		City/County:	White Su	ılphur Springs/Meagher	Sampling Date: 09-03-2014	
Applicant/Owner: Tintina Resources				State: MT	Sampling Point: SCT1-U1	
Investigator(s): J. Beaver		Section, To	wnship, R	ange: S19, T12N, R7E	<del></del>	
Landform: lower slope		Local relief	(concave,	convex, none): convex	Slope (%): 1-4	
Subregion (LRR): E	Lat: 4	6.7839724		Long: -110.9033231	Datum: WGS84	
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-F				NWI classifie	***************************************	
Are climatic/hydrologic conditions on the site typic		of vear? Ye	es 🗸 No			
Are Vegetation, Soil, or Hydrology signi					present? Yes ✓ No	
Are Vegetation, Soil, or Hydrology natur				eeded, explain any answ	· — —	
SUMMARY OF FINDINGS – Attach site ma			•	•	·	
Hydrophytic Vegetation Present? Yes ✓	No					
Hydric Soil Present? Yes ✓	No 🗌	is ti	he Sample	ed Area		
Wetland Hydrology Present? Yes	No 🗹	with	nin a Wetl	and? Yes	No 🗸	
Remarks: Disturbed timothy/Canada thistle, mes	ic, not wetland	l. Photograp	hs: JB 161	1134-161124		
VEGETATION – Use scientific names of p	lants.					
Tron Stratum (Plot circ: NA	Absolut	e Dominant er Species?	Indicator Status	Dominance Test Worl	ksheet:	
Tree Stratum (Plot size: NA )				Number of Dominant S That Are OBL, FACW,		
1. 2.					Province of the second	
3.				Total Number of Domir Species Across All Stra		
4.					AN ADMINISTRATION OF THE PARTY	
		= Total C	Cover	Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: NA				Prevalence Index Wor		
1.	manifest afficiated below of all final final control of the contro	Model of all I decided and the violation and decided a		Total % Cover of:		
2.					x 1 =	
3.			***************************************		6 x 2 = 12	
4.					5 x 3 = 211.5	
5	0	= Total C	over	FACU Species		
Herb Stratum (Plot size: 0.01 acre )		Total C	J04C1	UPL Species	x 5 =	
1. Phleum pratense	45	x	FAC	Column Totals: 77.	5 (A) 227.5 (B)	
2 Circium anyoneo	20	X	FAC	Prevalence Index	(B/A) = 2.94	
3. Juncus balticus	6		FACW	Hydrophytic Vegetation	on Indicators:	
4. Poa pratensis	3		FAC	1 - Rapid Test for Hydi		
Solidago canadensis var. salebrosa	2		FAC	✓ 2 - Dominance Test is	>50%	
6. Fragaria virginiana			FACU	✓ 3 - Prevalence Index is	S ≤3.0¹	
7. Geum macrophyllum			FAC		otations¹ (Provide supporting	
8.		THE THERMAL PRIVATE AND ADDRESS OF A STATE O	-	5 - Wetland Non-Vasc	r on a separate sheet)	
9. 10.					tic Vegetation¹ (Explain)	
11		Marie Inches III I and A Company of the Company of			d wetland hydrology must be	
	77.5	= Total C	Cover	present, unless disturbed of		
Woody Vine Stratum (Plot size: NA )	San parameter and a second and the					
1				Hydrophytic		
2				Vegetation		
9/ Raro Ground in Harb Stratus 0.5	0	= Total C	Cover	Present? Yes	✓ No L	
% Bare Ground in Herb Stratum 0.5	abutio					
Remarks: Vegetation is mesic, rather than hydrop	onyuo.					



SOIL				Р	roject/Site	e: Black E	Butte Copp	er Samp	ling Point: SCT1-U1	
Profile Des	cription: (Describ	e to the de	pth needed to					e absence of indic		
Depth	Matrix			edox Featur						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks		
0-12	2.5Y 3/2	100					CL	Shovel rejected at	12" due to rocks	
										_
***************************************		v	710000000000000000000000000000000000000							
		T VIIII TO THE TOTAL THE TOTAL TO THE TOTAL TOTA								
						*****************				
¹Type: C=C	oncentration, D=D	epletion, RN	/I=Reduced Matr	ix, CS=Co	overed or	Coated Sa	and Grains	² Location: PL=P	ore Lining, M=Matri	X
Hydric Soil	Indicators (Appl	icable to al	l LRRs, unless	otherwise	noted.):		Ind	icators for Probler	matic Hydric Soils³	:
Histosol (	A1)	[	Sandy Redox (	S5)				2 cm Muck (A10)		
Histic Epi	pedon (A2)	[	Stripped Matrix	(S6)				Red Parent Material (T	`F2)	
Black His	•		Loamy Mucky N	/lineral (F1)	(except M	LRA 1)		Very Shallow Dark Sui	face (TF12)	
	Sulfide (A4)		Loamy Gleyed					Other (Explain in Rem	arks)	
	Below Dark Surface	(A11) [	Depleted Matrix				••			
	k Surface (A12)	L	Redox Dark Su	` ,				licators of hydrophy wetland hydrology r		
_	ucky Mineral (S1)	Į	Depleted Dark	•	<b>'</b> )			unless disturbed or		
	eyed Matrix (S4)		Redox Depress	ions (F8)					p. 00101110110.	
	Layer (if present	):								
Type: cobb			and an analysis of the same of						,	
Depth (inch	es): <u>12"</u>	***************************************					Hydric	Soil Present? Yes	s ✓ No 🗌	
Remarks: S	Soils are dark but o	io not really th. NRCS m	appear to be de aps soil unit (111	pleted. Ma 0D Moos	ay be rem eflat-Foxo	nant of wh juich-Redi	nen spring fish) as par	was more active. P tially hydric (50% h	ossibly meets indica ydric soil componen	ato it).
									ARRONAL SHIP BEAT DESIGNED TO ETT SATISATION FOR SALES STOCKET STANKET SALES S	
<b>HYDROLO</b>	GY									
Wetland Hy	drology Indicato	rs:								
1	icators (minimum		red: check all tha	at apply)			S	econdary Indicators	s (2 or more required	4)
					/5.a. /					-/
Surface V	, ,		_	Stained Lea	` , `	except		Water-Stained Leave	es (B9) (MLRA 1, 2,	
Saturation	er Table (A2)			RA 1, 2, 4A, ust (B11)	anu 4b)			4A, and 4B)	240)	
Water Ma				: Invertebra	tos (B13)			Drainage Patterns (E  Dry-Season Water T	•	
	Deposits (B2)			en Sulfide (				-	Aerial Imagery (C9)	
Drift Depo						Living Roo	ts (C3)	Geomorphic Position	5 , , ,	
	or Crust (B4)			ce of Reduc	_	•	(00)	Shallow Aquitard (D	, ,	
☐ Iron Depo					•	d Soils (C6	) [	FAC-Neutral Test (D	•	
	Soil Cracks (B6)					01) (LRR A)	· ==	Raised Ant Mounds	•	
	n Visible on Aerial Im	agery (B7)		Explain in F	,	, , ,		Frost-Heave Hummo		
	Vegetated Concave S	. , ,	**************************************	•	,		tenoven			
Field Obse		<u>-</u>								
1		∕es  No	Depth (inche	es):						
Water Table		es No								
Saturation F		es No			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	w	etland Hy	drology Present?	Yes 🗌 No 🗸	
	pillary fringe)			/ -		THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PERSON NAMED OF THE PE	•		******	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No indicator of any sort of hydrology.

Project/Site: Black Butte Copper		Ci	ty/County	: White Su	ulphur Springs/Meagher Sampling Date: 09-03-2014
Applicant/Owner: Tintina Resources					State: MT Sampling Point: SCT2-U1
Investigator(s): J. Beaver		S	ection, To	ownship, R	ange: S30, T12N, R7E
Landform: lower slope					convex, none): none Slope (%): 8
Subregion (LRR): E		Lat: 46.	7787782		Long: -110.896835 Datum: WGS84
Soil Map Unit Name: 170E Cheadle-Co	penhaver-Marce				NWI classification: UPL
Are climatic/hydrologic conditions on th			f vear? Y	es 🗸 No	(If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrolog					"Normal Circumstances" present? Yes ✓ No
Are Vegetation , Soil , or Hydrolog					eeded, explain any answers in Remarks.)
•					ations, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No			-	
Hydric Soil Present?	Yes No		lst	he Sample	
Wetland Hydrology Present?	Yes No	✓	wit	hin a Wetl	and? Yes ☐ No ✔
Remarks: ARTR/STRI c.t Photograp	hs: JB 140141-1	40150			
VEGETATION - Use scientific na	mes of plants	<b>.</b>			
		Absolute		Indicator	Dominance Test Worksheet:
Tree Stratum (Plot size: NA	_)		Species?	~	Number of Dominant Species
1,		***************************************			That Are OBL, FACW, or, FAC:1 (A)
2.					Total Number of Dominant
3.					Species Across All Strata: 3 (B)
4.		0	= Total	Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 0.0	1 acre )		10(a)	Cover	That Are OBL, FACW, or, FAC: 33 (A/B)
4		15	x	(UPL)	Prevalence Index Worksheet:
O Desirbers fruitieses		4		FAC	Total % Cover of: Multiply by:
3					OBL Species x 1 =
4					FACW Species x 2 =
5					FAC Species 28 x 3 = 84
		16	_ = Total	Cover	FACU Species 2.5 x 4 = 10 UPL Species 63 x 5 = 315
Herb Stratum (Plot size: 0.01 acre	_)	45		LIDI	Column Totals: 93.5 (A) 409 (B)
Stipa richardsonii     Poa pratensis		<u>45</u> 20	X	UPL FAC	
3. Phleum pratense		5		FAC	Prevalence Index (B/A) = 4.37
4. Fragaria virginiana		2		FACU	Hydrophytic Vegetation Indicators:
5. Stipa occidentalis		2		(UPL)	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
6. Agropyron trachycaulum		1		FAC	3 - Prevalence Index is ≤3.0¹
7. Potentilla gracilis		1		FAC	4 - Morphological Adaptations¹ (Provide supporting
8. Cirsium longistylum		0.5		(UPL)	data in Remarks or on a separate sheet)
9. Geum triflorum		0.5		FACU	5 - Wetland Non-Vascular Plants¹
I .		0.5		(UPL)	Problematic Hydrophytic Vegetation¹ (Explain)
11					Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Mandy Vine Stratum (Plot size: NA	,	77.5	_ = Total	Cover	precent, unless distances of problemate.
Woody Vine Stratum (Plot size: NA					
1					Hydrophytic Vegetation
2		0	= Total	Cover	Present? Yes □ No ✓
% Bare Ground in Herb Stratum 10				• •	
Remarks: ungrazed					
Total Control of the					



SOIL			Project/Sit	e: Black E	Butte Copper	Sampling Point: SCT2-U1
Profile Description: (	Describe to the d	lepth needed to d	ocument the indi	cator or c	onfirm the a	absence of indicators.)
Depth	Matrix	•	dox Features			•
(inches) Color (m	noist) %	Color (moist)	% Type¹	Loc²	Texture	Remarks
						West 1991-1990 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) - 1807-00 (Miles Afficiation) -
						ARRIVATION OF THE PROPERTY OF
¹Type: C=Concentratio	n D=Depletion F	M=Reduced Matri	x CS=Covered or	Coated Sa	and Grains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil Indicators	<del></del>					ators for Problematic Hydric Soils ³ :
Histosol (A1)	. (	Sandy Redox (S				cm Muck (A10)
Histic Epipedon (A2)		Stripped Matrix (	•		***************************************	ed Parent Material (TF2)
Black Histic (A3)			ineral (F1) (except M	LRA 1)	description .	ery Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)		Loamy Gleyed N		·	Ot	her (Explain in Remarks)
Depleted Below Dark	Surface (A11)	Depleted Matrix	(F3)			
Thick Dark Surface (A	12)	Redox Dark Sur	face (F6)			ators of hydrophytic vegetation and
Sandy Mucky Mineral	(S1)	Depleted Dark S	Surface (F7)			etland hydrology must be present, less disturbed or problematic.
Sandy Gleyed Matrix (	S4)	Redox Depressi	ons (F8)		un	mess disturbed of problematic.
Restrictive Layer (if p	resent):					
Type:		acception and the second secon				
Depth (inches):					Hydric Se	oil Present? Yes 🗌 No 🗹
HYDROLOGY						
Wetland Hydrology In		والمعال والمعال والمعال			0	on described in the second construction of
Primary Indicators (min	ilmum of one requ	uired; check all tha	( арріу)		Sec	condary Indicators (2 or more required)
Surface Water (A1)			tained Leaves (B9) (	except		Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)	)		A 1, 2, 4A, and 4B)			4A, and 4B)
Saturation (A3)		Salt Cru	, ,			Drainage Patterns (B10)
Water Marks (B1)	٥١.		Invertebrates (B13)			Dry-Season Water Table (C2)
Sediment Deposits (B: Drift Deposits (B3)	2)		en Sulfide Odor (C1) d Rhizospheres along	Living Poo		Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Algai Mat or Crust (B4	١	_	e of Reduced Iron (C	•	` ,	Shallow Aquitard (D3)
Iron Deposits (B5)	,	r	ron Reduction in Tille			FAC-Neutral Test (D5)
Surface Soil Cracks (E	36)	(manage)	or Stressed Plants (I	•		Raised Ant Mounds (D6) (LRR A)
Inundation Visible on A	•	·	xplain in Remarks)	, ,		Frost-Heave Hummocks (D7)
Sparsely Vegetated C	oncave Surface (B8)					
Field Observations:				É		
Surface Water Present	t? Yes 🗌 No	Depth (inche	s):			
Water Table Present?	Yes 🗌 No	Depth (inche	s):			
Saturation Present? (includes capillary fring	je)	Depth (inche	·		•	ology Present? Yes No 🗹
Describe Recorded Da	ta (stream gauge,	monitoring well, a	erial photos, previ	ous inspec	ctions), if ava	ilable:
Remarks: Dry toe slop	e.					



Project/Site: Black Butte Copper		Ci	ty/Count	y: White Su	lphur Springs/Meagher	Sampling Date: 09-03-2014		
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT3-U1		
Investigator(s): D. Barton, K. Scow		s	ection, 7	Township, R	Range: S29, T12N, R7E			
Landform: bench		L	ocal relie	ef (concave,	convex, none): undulating	ng Slope (%): 4		
Subregion (LRR): E		Lat: 46.	7712384	ļ	Long: -110.8692419	Datum: WGS84		
Soil Map Unit Name: 664E Farlin-stony-l	Hardhart-Check	erboard			NWI classific	cation: UPL		
Are climatic/hydrologic conditions on the			f vear?	Yes 🗸 No	(If no. explain in Re	marks.)		
Are Vegetation, Soil, or Hydrology			-			present? Yes ✔ No		
Are Vegetation . Soil , or Hydrology					eeded, explain any answ			
SUMMARY OF FINDINGS – Attach				,		•		
	Yes No							
	Yes No	_	ls	the Sample	ed Area			
Wetland Hydrology Present?	Yes No	/	W	ithin a Wetl	and? Yes	No 🗹		
Remarks: Paired plot with SCT3-W1. P	hotographs: KS	1527-153	0 (N to V	<b>V</b> )		***************************************		
VEGETATION - Use scientific nan	nes of plants							
		Absolute		nt Indicator	Dominance Test Work	(sheet:		
Tree Stratum (Plot size: NA	_)	% Cover	<del>`</del>		Number of Dominant S			
1.					That Are OBL, FACW,	or, FAC:1 (A)		
2.					Total Number of Domin			
3. 4.					Species Across All Stra			
			= Tota	l Cover	Percent of Dominant St	pecies or. FAC: 50 (A/B)		
Sapling/Shrub Stratum (Plot size: NA	)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			That Are OBL, FACW,			
1.	•				Prevalence Index Wor			
2.					Total % Cover of:			
3						x 1 =		
4.				merry macroscopic processors a resease.	FACW Species 10	AND AND AND AND AND AND AND AND AND AND		
5.					FACU Species 10			
Harb Stratum (Diat size: 0.01 gara	,	0	_ = Tota	l Cover	UPL Species	x5=		
Herb Stratum (Plot size: 0.01 acre  1. Symphyotrichum ascendens	_)	60	x	FACU	Column Totals: 22			
2. Poa pratensis		55	X	FAC	Prevalence Index (			
3. Phleum pratense		40		FAC				
1 Orthogorpus lutous		16		FACU	Hydrophytic Vegetation  1 - Rapid Test for Hydro			
E Coray proparacilia		14		FACW	2 - Dominance Test is			
6. Poa secunda		14	-,-,	FACU	3 - Prevalence Index is			
7. Agropyron trachycaulum				FAC	4 - Morphological Adap	otations¹ (Provide supporting		
8. Artemisia ludoviciana				FACU		r on a separate sheet)		
				FACU	5 - Wetland Non-Vasci			
10.						tic Vegetation¹ (Explain)		
11.			- T-4-		present, unless disturbed o	d wetland hydrology must be or problematic.		
Woody Vine Stratum (Plot size: NA	)	221	_ = 10ta	l Cover				
1					Hydrophytic			
2.					Vegetation			
		0		l Cover	Present? Yes	□ No 🗹		
% Bare Ground in Herb Stratum								
Remarks: tremendous stratification (gra	zed hard earlie	r in seasor	1)					
						***************************************		



SUIL				Pro _.	ject/Site: ˌ	Black B	utte Cop	oper Sampling Point: <u>SCT3-U1</u>	
Profile Des	scription: (Descr	ibe to the d	epth needed to	document tl	he indica	tor or c	onfirm t	the absence of indicators.)	
Depth	Matrix		F	edox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type¹	Loc ²	Texture	re Remarks	
0-5	10YR 2/1	100					CL	Gravels present	
5-16	10YR 4/1	100					Clay	Coarse gravels present, not loamy	
	***************************************		-,,	***************************************					
Anno cultura de More Antono monto monto matema					Talahahas allalahas da arkasad				
¹Type: C=C	oncentration, D=	Depletion, R	M=Reduced Mat	rix, CS=Cove	ered or Co	oated Sa	and Grain	ns ² Location: PL=Pore Lining, M=Mat	rix
	l Indicators (App	olicable to a	_		oted.):		<u>In</u>	ndicators for Problematic Hydric Soils	;³:
Histosol (			Sandy Redox	(S5)				2 cm Muck (A10)	
	ipedon (A2)		Stripped Matri	, ,			<u>_</u>	Red Parent Material (TF2)	
Black His	, ,			Mineral (F1) (e	xcept MLR/	A 1)	Ļ	Very Shallow Dark Surface (TF12)	
	Sulfide (A4)		Loamy Gleyed	` '			L	Other (Explain in Remarks)	
	Below Dark Surface	e (A11)	Depleted Matr	, ,			31.		
	rk Surface (A12)		Redox Dark S	` '			٦١	ndicators of hydrophytic vegetation and wetland hydrology must be present,	
= :	ucky Mineral (S1)		Depleted Dark	. ,				unless disturbed or problematic.	
	leyed Matrix (S4)		Redox Depres	sions (F8)					
	Layer (if preser	it):					1		
Type:									
Depth (inch	les):						Hyarı	ic Soil Present? Yes 📗 No 🗹	
	units converge in					eckerboa	ard) as n	non-hydric (0% hydric soils). Several soil	map
HYDROLO									
-	ydrology Indicat			-4				0	15
Primary Ind	licators (minimum	of one requ	ilred; check all th	at apply)				Secondary Indicators (2 or more require	(b:d
Surface V	Vater (A1)		Water	-Stained Leave	s (B9) (exc	ept	[	Water-Stained Leaves (B9) (MLRA 1, 2,	
= -	er Table (A2)		ML	RA 1, 2, 4A, ar	nd 4B)			4A, and 4B)	
Saturati	on (A3)		Salt C	rust (B11)			Į	Drainage Patterns (B10)	
Water Ma	• •			c Invertebrates			l	Dry-Season Water Table (C2)	
=	t Deposits (B2)			gen Sulfide Od	` '		and to	Saturation Visible on Aerial Imagery (C9)	
Drift Dep	, ,			ed Rhizospher	•	ving Root	s (C3)	Geomorphic Position (D2)	
= -	t or Crust (B4)			nce of Reduced	` '		Į	Shallow Aquitard (D3)	
Iron Depo	, ,			t Iron Reductio		٠,	· [	FAC-Neutral Test (D5)	
==	Soil Cracks (B6)	(D7)		d or Stressed F		(LRR A)	l	Raised Ant Mounds (D6) (LRR A)	
	n Visible on Aerial In		Uther	(Explain in Rer	narks)		l	Frost-Heave Hummocks (D7)	
	Vegetated Concave	Surface (Bo)							
Field Obse		Van 🗆 Na	Donth (inch						
	ater Present?		Depth (incl	***************************************					
Water Table			Depth (incl			\\	otland L	lydrology Present? Yes 🔲 No 🗸	i
Saturation I (includes ca	Present? apillary fringe)	Yes   No	Depth (inch	ies):			euanu n	ydrology Fresent: Tes No v	1
Describe R	ecorded Data (str	eam gauge,	monitoring well,	aerial photos	s, previous	s inspec	tions), if	available:	
Remarks: I	Marginal geomorp	hic position,	, paired with plot	SCT3-W1.					
			•						



Project/Site: Black Butte Copper		Cit	y/County:	White Su	lphur Springs/Meagher S	Sampling Date: 09-05-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT4-U1
Investigator(s): J. Beaver		Se	ection, To	wnship, R	ange: S24, T12N, R6E	
Landform: upper slope		Lo	cal relief	(concave,	convex, none): none	Slope (%): 15
Subregion (LRR): E	1	 Lat: 46.7	7880127		Long: -110.9195451	Datum: WGS84
Soil Map Unit Name: 1142E Redchief-Ducko	reek-Cheadle	<del></del>			NWI classifica	ation: UPL
Are climatic/hydrologic conditions on the site			year? Ye	es 🗸 No	(If no, explain in Rem	narks.)
Are Vegetation , Soil , or Hydrology			-		"Normal Circumstances" p	
Are Vegetation . Soil ., or Hydrology .					eeded, explain any answe	
SUMMARY OF FINDINGS – Attach sit						
Hydrophytic Vegetation Present? Yes	□ No ✓					
Hydric Soil Present? Yes				he Sample		
Wetland Hydrology Present? Yes				nin a Wetla	and? Yes 🗌	No 🗹
Remarks: Very typical of upland on this slop	oe. Photograpi	hs: JB 2	618-2621			
VEGETATION – Use scientific names						
<u>Tree Stratum</u> (Plot size: NA		bsolute Cover	Dominant Species?	Indicator Status	Dominance Test Works	
1.	***************************************				Number of Dominant Sp That Are OBL, FACW, o	
2					Total Number of Domina	And the second s
3					Species Across All Strat	
4.					Percent of Dominant Spe	ecies
Cauling/Charle Chartons /Dist since NA	,	0	= Total (	Cover	That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: NA	)				Prevalence Index Work	sheet:
2.					Total % Cover of:	Multiply by:
3.			***************************************		OBL Species	x 1 =
4.					FACW Species 0.5	
5.		****			FAC Species 75	
		0	= Total (	Cover	FACU Species 44 UPL Species 8	
Herb Stratum (Plot size: 0.01 acre				E40	Column Totals: 127.5	
Phleum pratense     Geranium viscosissimum		55 30	X X	FAC FACU		
Solidago canadensis var. salebrosa		10		FAC	Prevalence Index (E	
Achillea millefolium		8		FACU	Hydrophytic Vegetation	
5. Bromus carinatus		8		(UPL)	1 - Rapid Test for Hydro 2 - Dominance Test is >	
6. Poa pratensis		8		FAC	3 - Prevalence Index is	
7. Artemisia ludoviciana	alter de la circinación de constituir de color d	6		FACU		ations¹ (Provide supporting
		22		FAC	data in Remarks or o	on a separate sheet)
				FACW	5 - Wetland Non-Vascul	
10.					Problematic Hydrophytic	• , , ,
11.		127.5	= Total (	Cover	Indicators of hydric soil and present, unless disturbed or	
Woody Vine Stratum (Plot size: NA	)	141.0	- I Ulai l	20 <b>v</b> ©1		
1	,				Hydrophytic	
2.					Vegetation	
			= Total (	Cover	Present? Yes	No <b>⊻</b>
% Bare Ground in Herb Stratum 0.5						
Remarks: Facultative but not wetland.						



SOIL		Project/Site: Blac	ck Butte Cop	pper Sampling Point: SCT4-U1
Profile Desc	cription: (Describe to the	depth needed to document the indicator	or confirm t	he absence of indicators.)
Depth	Matrix	Redox Features		•
(inches)	Color (moist) %	Color (moist) % Type¹ Loc²	Textur	e Remarks
	~			- CANADA CONTRACTOR CO
-				
			***************************************	
¹Type: C=Co	oncentration, D=Depletion, F	RM=Reduced Matrix, CS=Covered or Coated	d Sand Grai	ns ² Location: PL=Pore Lining, M=Matrix
		all LRRs, unless otherwise noted.):		ndicators for Problematic Hydric Soils ³ :
Histosol (A		Sandy Redox (S5)		2 cm Muck (A10)
	pedon (A2)	Stripped Matrix (S6)		Red Parent Material (TF2)
Black Hist		Loamy Mucky Mineral (F1) (except MLRA 1)		Very Shallow Dark Surface (TF12)
	Sulfide (A4)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
	Below Dark Surface (A11)	Depleted Matrix (F3)		· · · · (,p. · · · · · · · · · · · · · · · · · · ·
	k Surface (A12)	Redox Dark Surface (F6)	3	ndicators of hydrophytic vegetation and
	cky Mineral (S1)	Depleted Dark Surface (F7)		wetland hydrology must be present,
	eyed Matrix (S4)	Redox Depressions (F8)		unless disturbed or problematic.
Restrictive	Layer (if present):			
Туре:	, , , ,			
Depth (inche	7c).		Hydr	ic Soil Present? Yes ☐ No ✔
ixemaiks. IN	o pit as no hydrology and n	o flydropflytic vegetation.		
HYDROLOG	ЭΥ			
Wetland Hy	drology Indicators:			
Primary Indi	cators (minimum of one req	uired; check all that apply)		Secondary Indicators (2 or more required)
Surface W	• •	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		Water-Stained Leaves (B9) (MLRA 1, 2,
Saturatio	er Table (A2)			4A, and 4B)
Water Mar	` '	Salt Crust (B11) Aquatic Invertebrates (B13)		Drainage Patterns (B10)  Dry-Season Water Table (C2)
	Deposits (B2)	Hydrogen Sulfide Odor (C1)		
Drift Depo			Poots (C2)	Saturation Visible on Aerial Imagery (C9)
	or Crust (B4)	Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Roots (C3)	Geomorphic Position (D2)
Iron Depos	• •	Recent Iron Reduction in Tilled Soils	(C6)	Shallow Aquitard (D3) FAC-Neutral Test (D5)
	oil Cracks (B6)	Stunted or Stressed Plants (D1) (LRI	• •	
	Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	K A)	Raised Ant Mounds (D6) (LRR A)
	/egetated Concave Surface (B8)			Frost-Heave Hummocks (D7)
Field Obser	_	Depth (inches):		
Surface Wat				
Water Table		o Depth (inches):	Motland L	lydrology Present? Yes 🗌 No 🗸
Saturation P	'resent?         Yes ∐  N pillary fringe)	o 🗹 Depth (inches):	vveuanu r	nydrology Present? Tes No 💌
		, monitoring well, aerial photos, previous ins	spections) if	available:
	Jana (ollowill gauge	,		and an extended balance
Domarka: N	o hydrology indicaters			
remarks: N	o hydrology indicators.			

Project/Site: Black Butte Copper	Ci	ty/County	: White Su	ılphur Springs/Meagher	Sampling Date: 08-17-2014		
Applicant/Owner: Tintina Resources				State: MT Sampling Point: SCT5-U			
Investigator(s): K. Scow, E. Darfler	S	ection, To					
Landform: bottom/swale	L	ocal relief	(concave,	convex, none): concave	Slope (%): 4-8		
Subregion (LRR): E		7793934		Long: -110.913501	Datum: WGS84		
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redf				NWI classific			
Are climatic/hydrologic conditions on the site typical for		f vear? Y	es V N				
Are Vegetation, Soil, or Hydrology significan				"Normal Circumstances"			
Are Vegetation , Soil , or Hydrology naturally				eeded, explain any answ			
SUMMARY OF FINDINGS – Attach site map s							
	o <b>✓</b>						
, , , ,		ls t	he Sample	ed Area			
	<b>V</b>		hin a Wetl		No 🗹		
Remarks: No grazing at this location. Photographs: h	(S1399-1402	2 (N to W)					
		,					
VEGETATION – Use scientific names of plant	ts.						
	Absolute	Dominant	Indicator	Dominance Test Work	(sheet:		
Tree Stratum (Plot size: 0.1 acre )	% Cover	Species?	~ ~~~~~	Number of Dominant S	pecies		
1. Populus tremuloides	48	X	FACU	That Are OBL, FACW,	or, FAC:1 (A)		
2				Total Number of Domin	ant		
3				Species Across All Stra	ata: 4 (B)		
4				Percent of Dominant Sp	pecies		
	48	= Total (	Cover	That Are OBL, FACW,	or, FAC: 25 (A/B)		
	44	x	FACU	Prevalence Index Wor	ksheet:		
1. Rosa woodsii 2.				Total % Cover of:	Multiply by:		
3.				OBL Species	x 1 =		
4.				FACW Species	6 x 2 = 12		
5.		and some and a contract of the		FAC Species 110	0 x 3 = 330		
		= Total (	Cover	FACU Species 16			
Herb Stratum (Plot size: 0.01 acre )				UPL Species	x 5 =		
1. Poa pratensis	82	X	FAC	Column Totals: 28	4 (A) 1014 (B)		
2. Taraxacum officinale	56	X	FACU	Prevalence Index (	B/A) = 3.57		
3. Phleum pratense	22		FAC	Hydrophytic Vegetation	on Indicators:		
4. Achillea millefolium	8		FACU	1 - Rapid Test for Hydr	ophytic Vegetation		
5. Geranium viscosissimum	6		FACU	2 - Dominance Test is	>50%		
6. Symphyotrichum subspicatum			FACU	3 - Prevalence Index is	≤3.01		
7. Galium boreale 8. Potentilla gracilis	4	***************************************	FACU FAC		otations¹ (Provide supporting on a separate sheet)		
0.0			FAC	5 - Wetland Non-Vasci	•		
Bromus inermis     Fragaria virginiana	_		FACU		ic Vegetation¹ (Explain)		
11.			17.00		d wetland hydrology must be		
	192	= Total (	Cover	present, unless disturbed o			
Woody Vine Stratum (Plot size: NA )		•					
1				Hydrophytic			
2			***************************************	Vegetation			
	0	_ = Total (	Cover	Present? Yes	□ No ✓		
% Bare Ground in Herb Stratum							
Remarks: unnamed tributary to Sheep Creek							



				Pi	roject/Site	e: Black B	utte Copper	Sampling Point: SCT5-U
Profile Des	cription: (Descril	be to the	depth needed to	document	the indi	cator or c	onfirm the a	bsence of indicators.)
Depth	Matrix		R	edox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
0-6	2.5Y 3/1	100					SiL	Roots of all sizes fine to coarse sand
6-13	2.5Y 2.5/1	100	****				SL	Fine roots, coarse sands and gravels
13-16	10YR 3/3	100					SL	Hard packed soil, no roots
			RM=Reduced Mat	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Coated Sa		² Location: PL=Pore Lining, M=Ma
	`	icable to	all LRRs, unless		noted.):			ators for Problematic Hydric Soil
Histosol (A	•		Sandy Redox (	-				m Muck (A10)
	pedon (A2)		Stripped Matrix		/ <b>14</b> 1	DA 4)		d Parent Material (TF2)
Black Hist	• •		Loamy Mucky I		(except ivit	.RA 1)		ry Shallow Dark Surface (TF12)
	Sulfide (A4) Below Dark Surface	/ <b>//11</b> \	Loamy Gleyed				Oti	ner (Explain in Remarks)
	k Surface (A12)	(A11)	Depleted Matri				3Indic:	ators of hydrophytic vegetation and
	icky Mineral (S1)		Depleted Dark					tland hydrology must be present,
	eyed Matrix (S4)		Redox Depress		,			less disturbed or problematic.
			Nedox Depress	sions (Fo)				
_	Layer (if present	.).						
Type:								
Depth (inche	es):						Hydric Sc	oil Present? Yes ☐ No ✔
Remarks:								
Wetland Hv	drology Indicato	ors:						
-	••		juired; check all th	at apply)			Sec	ondary Indicators (2 or more requir
Surface W	/ater (A1)		☐ Water-	Stained Leav	ves (B9) (e	xcept		Vater-Stained Leaves (B9) (MLRA 1, 2,
==	er Table (A2)		<del></del>	RA 1, 2, 4A,				4A, and 4B)
☐ Saturation				ust (B11)	•			Orainage Patterns (B10)
Water Mai				Invertebrate	es (B13)			Dry-Season Water Table (C2)
$\equiv$	Deposits (B2)			en Sulfide C				Saturation Visible on Aerial Imagery (C9)
Drift Depo			= ' '	ed Rhizosphe	, ,	Living Roof		Geomorphic Position (D2)
	or Crust (B4)			ce of Reduc	-	-		Shallow Aquitard (D3)
Iron Depos	` '			Iron Reduct	•	•		FAC-Neutral Test (D5)
	oil Cracks (B6)			d or Stressed				Raised Ant Mounds (D6) (LRR A)
	n Visible on Aerial Im	agery (B7)		Explain in R	-	,		Frost-Heave Hummocks (D7)
Sparsely \	egetated Concave	Surface (B8	)					
	vations:							
Field Obser								
		Yes 🗌 N	lo 🗹 Depth (inch	es):				
	ter Present?	=	lo 🗹 Depth (inch lo 🗹 Depth (inch					

Remarks: Soils are dry. No water in pit.

Project/Site: Black Butte Copper	C	ity/County: White	Sulphur Springs/Meagher	Sampling Date: 09-04-2014
Applicant/Owner: Tintina Resources			State: MT	Sampling Point: SCT5-U2
Investigator(s): S. Cooper, L. Larsen, D. Culwell	5	Section, Township	, Range: S24, T12N, R6E	
Landform: toeslope, drainage		ocal relief (conca	ve, convex, none): concave	Slope (%): 4-6
Subregion (LRR): E	 Lat: 46.	.7810051	Long: -110.9274322	Datum: WGS84
Soil Map Unit Name: 1175E Owenspring-Cheadle			NWI classifi	
Are climatic/hydrologic conditions on the site typica	al for this time o	f year? Yes ✔	···	
Are Vegetation , Soil , or Hydrology signifi			are "Normal Circumstances"	·
Are Vegetation , Soil , or Hydrology natura			If needed, explain any answ	
SUMMARY OF FINDINGS – Attach site ma			•	,
Hydrophytic Vegetation Present? Yes ✔	No			
Hydric Soil Present? Yes	No 🗸	Is the Sam		
Wetland Hydrology Present? Yes	No 🗸	within a W	etland? Yes 🗌	No 🗸
Remarks: Plot occurs on mesic montane slope. S	eep located up	slope in meadow.	Photographs: SC 991-994	
VEGETATION – Use scientific names of pl	ants.			~~~~
<u>Tree Stratum</u> (Plot size: NA )	Absolute % Cover	Dominant Indicat Species? Statu	•	
1			Number of Dominant S That Are OBL, FACW,	
2.				
3.			Total Number of Domir Species Across All Str	
4			Percent of Dominant S	necies
	0	= Total Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: NA	)		Prevalence Index Wo	rksheet:
1			Total % Cover of	Multiply by:
3.			OBL Species	2 x 1 = 2
4.			FACW Species 3	6 x 2 = 72
5.				1 x 3 = 243
	0	_ = Total Cover		5 x 4 = 20
Herb Stratum (Plot size: 0.01 acre			UPL Species	x 5 =
1. Phleum pratense	35	x FAC	Column Totals: 12	(A) 337 (B)
2. Carex praegracilis	24	x FACW	Prevalence Index	(B/A) = <u>2.72</u>
Poa pratensis     Potentilla gracilis	<u>22</u> 15	x FAC FAC	Hydrophytic Vegetati	
5. Juncus balticus	12	FACW		, , <u>, , , , , , , , , , , , , , , , , </u>
6. Artemisia ludoviciana	5	FACU	- 2 Dominance results	
7	4	FAC	3 - Prevalence index is	s ≤3.0¹ ptations¹ (Provide supporting
	3	FAC		r on a separate sheet)
9. Carex pellita	_	OBL	5 - Wetland Non-Vaso	ular Plants¹
10. Perideridia montana	2	FAC		tic Vegetation¹ (Explain)
11			Indicators of hydric soil ar present, unless disturbed of	nd wetland hydrology must be
Moody Vino Stratum (Plot size: NA	124	_ = Total Cover	present, unicos distarbes t	or problematic.
Woody Vine Stratum (Plot size: NA )				
1.       2.			Hydrophytic Vegetation	
	0	= Total Cover	Present? Yes	✓ No □
% Bare Ground in Herb Stratum 0.5				
Remarks: Hummocky				



				Project/Si	ite: <u>Black B</u> ı	utte Cop	per Sampling Point: SCT5-U2					
Donth	scription: (Describ	e to the depti	depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix		•		dox Features			·					
(inches)	Color (moist)	% (	Color (moist)	% Type¹	Loc²	Texture	e Remarks					
0-16	10YR 2/1	100				SiC						
	-											
¹Tvpe: C=0	Concentration, D=D	enletion RM=F	Reduced Matrix	CS=Covered o	r Coated Sa	ind Grain	ns ² Location: PL=Pore Lining, M=Matrix					
	il Indicators (Appli	<del></del>					dicators for Problematic Hydric Soils3:					
Histosol			Sandy Redox (S		,-		2 cm Muck (A10)					
	pipedon (A2)	H	Stripped Matrix (	•		F	Red Parent Material (TF2)					
Black His				ineral (F1) (except N	/ILRA 1)	<u> </u>	Very Shallow Dark Surface (TF12)					
	n Sulfide (A4)	=	Loamy Gleyed M	, , , ,	,		Other (Explain in Remarks)					
	d Below Dark Surface (		Depleted Matrix	` '		-	,					
	ark Surface (A12)		Redox Dark Sur	face (F6)		118	ndicators of hydrophytic vegetation and					
Sandy M	lucky Mineral (S1)		Depleted Dark S	urface (F7)			wetland hydrology must be present,					
Sandy G	leyed Matrix (S4)		Redox Depression	ons (F8)			unless disturbed or problematic.					
Restrictive	Layer (if present)	):										
Туре:												
Depth (inch						Hvdri	c Soil Present? Yes ☐ No ✔					
IVDDO! O	NOV.		·									
	OGY lydrology Indicato	rs:										
Wetland H			; check all that	apply)			Secondary Indicators (2 or more required)					
<b>Wetland H</b> Primary Inc	ydrology Indicato dicators (minimum d		·		(except							
Wetland H	lydrology Indicato dicators (minimum o Water (A1)		Water-S	tained Leaves (B9)	(except		Water-Stained Leaves (B9) (MLRA 1, 2,					
Wetland H Primary Inc Surface \ High Wa	lydrology Indicato dicators (minimum o Water (A1) ter Table (A2)		Water-S	tained Leaves (B9) A 1, 2, 4A, and 4B)	(except	[	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)					
Wetland H Primary Ind Surface N High Wat Saturati	lydrology Indicato dicators (minimum o Water (A1) ter Table (A2) ion (A3)		Water-S MLR/	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11)	(except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)					
Wetland H Primary Inc Surface N High War Saturati Water Ma	lydrology Indicato dicators (minimum o Water (A1) ter Table (A2)		Water-S MLR/ Salt Cru	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13)	(except		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)					
Wetland H Primary Inc Surface \ High Wat Saturati Water Ma	lydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1)		Water-S MLR/ Salt Crus Aquatic Hydroge	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11)			Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)					
Wetland H Primary Inc Surface \ High Wat Saturati Water Ma Sedimen Drift Dep	lydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2)		Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidized	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1)	g Living Roots		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)					
Wetland H Primary Inc Surface \ High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2) posits (B3)		Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidized Presence	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon	g Living Roots C4)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10)  □ Dry-Season Water Table (C2)  □ Saturation Visible on Aerial Imagery (C9)  ☑ Geomorphic Position (D2)					
Wetland H Primary Inc Surface \ High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4)		Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidizec Presenc Recent I	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (6	g Living Roots C4) led Soils (C6)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3)					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Mat Iron Depo	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5)	of one required	Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (iron Reduction in Til	g Living Roots C4) led Soils (C6)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  ✓ Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatio	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2) sosits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6)	of one required	Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (control Reduction in Till or Stressed Plants (control Research)	g Living Roots C4) led Soils (C6)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatic Sparsely	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image Vegetated Concave S	of one required agery (B7) Surface (B8)	Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (control Reduction in Till or Stressed Plants (control Research)	g Living Roots C4) led Soils (C6)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)					
Wetland H Primary Inc Surface N High War Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depd Surface S Inundatic Sparsely	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image Vegetated Concave Servations:	of one required  agery (B7)  Surface (B8)  ✓es □ No ✔	Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidizec Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron ( ron Reduction in Til or Stressed Plants ( xplain in Remarks)	g Living Roots C4) led Soils (C6)	[ [ s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depd Surface S Inundatic Sparsely Field Obse	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) tt Deposits (B2) sosits (B3) tt or Crust (B4) sosits (B5) Soil Cracks (B6) on Visible on Aerial Image vegetated Concave Servations: ater Present?	of one required agery (B7) Surface (B8)	Water-S MLR/ Salt Cru: Aquatic Hydroge Oxidizec Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alone e of Reduced Iron (iron Reduction in Till or Stressed Plants (ixplain in Remarks) s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[     s (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)					
Wetland H Primary Inc Surface N High War Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatic Sparsely Field Obse Surface Water Tabl Saturation I	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) to Deposits (B2) posits (B3) to or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image vegetated Concave Servations: ater Present? Present? Apillary fringe)	agery (B7) Surface (B8)  Yes No  Y Yes No  No  No  No  No  No  No  No  No  No	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidizec Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alone of Reduced Iron (con Reduction in Tillor Stressed Plants (con Remarks)  s): s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[   [   [   [   [   [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)  ydrology Present? Yes □ No ✓					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatic Sparsely Field Obse Surface Water Tabl Saturation (includes care	lydrology Indicator dicators (minimum of dicators (minimum of dicators (minimum of dicators (minimum of dicators (minimum of dicators (minimum of dicators (minimum of dicators (B1) arks (B1) arks (B1) arks (B2) arks (B3) arks (B3) arks (B3) arks (B3) arks (B3) arks (B4) ossits (B3) arks (B4) ossits (B5) Soil Cracks (B6) ark Visible on Aerial Image of Vegetated Concave Servations: ater Present?	agery (B7) Surface (B8)  Yes No  Y Yes No  No  No  No  No  No  No  No  No  No	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidizec Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alone of Reduced Iron (con Reduction in Tillor Stressed Plants (con Remarks)  s): s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[   [   [   [   [   [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)  ydrology Present? Yes □ No ✓					
Primary Inc  Surface N  High Wat  Saturati  Water Ma  Sedimen  Drift Dep  Algal Ma  Iron Depc  Surface S  Inundatic  Sparsely  Field Obse  Surface Water Tabl  Saturation (includes co	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) to Deposits (B2) posits (B3) to or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image vegetated Concave Servations: ater Present? Present? Apillary fringe)	agery (B7) Surface (B8)  Yes No  Y Yes No  No  No  No  No  No  No  No  No  No	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidizec Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alone of Reduced Iron (con Reduction in Tillor Stressed Plants (con Remarks)  s): s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[   [   [   [   [   [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)  ydrology Present? Yes □ No ✓					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatic Sparsely Field Obse Surface Water Tabl Saturation (includes ca	ydrology Indicato dicators (minimum of Water (A1) ter Table (A2) ion (A3) arks (B1) to Deposits (B2) posits (B3) to or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Aerial Image vegetated Concave Servations: ater Present? Present? Apillary fringe)	of one required agery (B7) Surface (B8)  ✓es	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (fron Reduction in Til or Stressed Plants (fron Remarks) s): s): s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[   [   [   [   [   [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)  ydrology Present? Yes □ No ✓					
Wetland H Primary Inc Surface N High Wat Saturati Water Ma Sedimen Drift Dep Algal Ma Iron Depo Surface S Inundatic Sparsely Field Obse Surface Water Tabl Saturation (includes ca	lydrology Indicator dicators (minimum of dicators (	of one required agery (B7) Surface (B8)  ✓es	Water-S MLR/ Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted Other (E	tained Leaves (B9) A 1, 2, 4A, and 4B) st (B11) Invertebrates (B13) n Sulfide Odor (C1) I Rhizospheres alon e of Reduced Iron (fron Reduction in Til or Stressed Plants (fron Remarks) s): s): s):	g Living Roots C4) led Soils (C6) (D1) (LRR A)	[   [   [   [   [   [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C9) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)  ydrology Present? Yes □ No ✓					



Project/Site: Black Butte Copper	Ci	ty/County	: White Su	ulphur Springs/Meagher Sampling Date: 08-17-2014				
Applicant/Owner: Tintina Resources				State: MT Sampling Point: SCT5-U3				
Investigator(s): K. Scow, E. Darfler	S	ection. To	wnship. R	Range: S25, T12N, R6E				
Landform: terrace				convex, none): convex Slope (%): 1-2				
Subregion (LRR): E	 Lat: 46.		(000010,	Long: -110.9149068 Datum: WGS84				
Soil Map Unit Name: 1110D Mooseflat-Foxgulch-Redfis	***************************************	NWI classification: UPL						
			[a] N	######################################				
Are climatic/hydrologic conditions on the site typical for								
Are Vegetation , Soil , or Hydrology significantl	-			"Normal Circumstances" present? Yes 🗹 No 🗌				
Are Vegetation , Soil , or Hydrology naturally p SUMMARY OF FINDINGS – Attach site map sh				eeded, explain any answers in Remarks.)				
		mpinig	point loc	auons, transects, important leatures, etc.				
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No No No No No No No No No No No No No	7		he Sample hin a Wetl					
Remarks: Upland plot above small creek. Photographs	: KS1397 (	(E), 1398	(W)					
VEGETATION – Use scientific names of plants	•	TTT (PROTECTION OF THE AMERICAN TRANSPORT TO AMERICAN	·····					
	Absolute		Indicator	Dominance Test Worksheet:				
<u>Tree Stratum</u> (Plot size: <u>NA</u> )  1.	% Cover		Status	Number of Dominant Species That Are OBL, FACW, or, FAC:3(A)				
3				Total Number of Dominant Species Across All Strata: 4 (B)				
4.		= Total (		Percent of Dominant Species That Are OBL, FACW, or, FAC: 75 (A/B)				
Sapling/Shrub Stratum (Plot size: 0.01 acre )								
1. Artemisia tridentata		x	(UPL)	Prevalence Index Worksheet:				
2. Dasiphora fruticosa			FAC	Total % Cover of: Multiply by:				
3		***************************************		OBL Species x 1 =				
4		/*************************************		FACW Species x 2 =				
5			***	FAC Species 107 x 3 = 321 FACU Species 27 x 4 = 108				
Healt Chartery (Diet sines 0.04 and	48	_ = Total (	Cover	UPL Species 52.5 x 5 = 262.5				
Herb Stratum (Plot size: 0.01 acre	40		<b>540</b>	Column Totals: 186.5 (A) 691.5 (B)				
1. Poa pratensis	46	X	FAC					
Phleum pratense     Antennaria microphylla	<u>42</u> 14	<u>X</u>	FAC (UPL)	Prevalence Index (B/A) = 3.71				
Artemisia ludoviciana	9		FACU	Hydrophytic Vegetation Indicators:				
5. Symphyotrichum ascendens	8		FACU	1 - Rapid Test for Hydrophytic Vegetation				
6. Festuca idahoensis			FACU	2 - Dominance Test is >50%				
7. Geranium viscosissimum			FACU	3 - Prevalence Index is ≤3.0¹				
8. Stipa richardsonii			UPL	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)				
9. Potentilla gracilis	_		FAC	5 - Wetland Non-Vascular Plants¹				
10. Anemone multifida			(UPL)	Problematic Hydrophytic Vegetation¹ (Explain)				
11. Erigeron subtrinervis	4		(UPL)	¹Indicators of hydric soil and wetland hydrology must be				
		= Total (	Cover	present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: NA )								
1.			444	Hydrophytic				
2.				Vegetation				
% Bare Ground in Herb Stratum	0	_ = Total (	Cover	Present? Yes 🗹 No 🗌				
Remarks: Vegetation meets the Dominance Test, indic The PI and professional judgment indicate the	ating the s at vegetat	ite as hyd ion is mes	rophytic. I	However, vegetation fails the Prevalence Index (PI). wetland.				



SOIL				Pr	oject/Site	: Black I	Butte Co	pper	Sampling Point: SCT5-U3	r
Profile Des	scription: (Describ	e to the depth	needed to d	ocument	the indic	ator or	confirm	the a	bsence of indicators.)	
Depth	Matrix	•	Re	dox Feature	es				•	
(inches)	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc²	Textu	ıre	Remarks	
				-						
										***************************************
									WARRANCE AND AND AND AND AND AND AND AND AND AND	
	oncentration, D=De	<del></del>				Coated S			² Location: PL=Pore Lining, M=Mat	
	I Indicators (Appli	_			noted.):		ı		tors for Problematic Hydric Soils	<b>3</b> 3:
Histosol (	` '		Sandy Redox (S	•			L		m Muck (A10)	
	ipedon (A2)		Stripped Matrix			<b></b>	Ĺ		d Parent Material (TF2)	
Black His	, ,		oamy Mucky M		(except ML	.RA 1)	L	_	y Shallow Dark Surface (TF12)	
	n Sulfide (A4)		oamy Gleyed N				L	Oth	er (Explain in Remarks)	
	Below Dark Surface (/		epleted Matrix				3	Indica	ators of hydrophytic vegetation and	
=	rk Surface (A12) ucky Mineral (S1)		Redox Dark Sur Depleted Dark S	, ,					tland hydrology must be present,	
	leyed Matrix (S4)		Redox Depressi						ess disturbed or problematic.	
	Layer (if present)		coox Depiessi	0113 (1 0)						ar thansanar the toron to
							i			
Type:							المددانا	-:- C-	il Dragant2 Van 🗆 Na 🖪	
Depth (inch							нуа	ric So	il Present? Yes No ✔	
Remarks: 1	No soil pit as margir	nal hydrophytic	vegetation a	nd no weti	and hydr	ology.				
<u> </u>										
HYDROLO	GY									
Wetland H	ydrology Indicator	e.								
-	licators (minimum o		check all tha	t annly)				Sacr	ondary Indicators (2 or more require	nd)
Filliary Illu	iicators (minimum o	r one required,						3600	ondary indicators (2 or more require	;u)
	Vater (A1)			Stained Leav		xcept		∐ V	Vater-Stained Leaves (B9) (MLRA 1, 2,	
	er Table (A2)		_	A 1, 2, 4A,	and 4B)				4A, and 4B)	
Saturati	• •			ıst (B11)					Prainage Patterns (B10)	
Water Ma	, ,			Invertebrate	` '				Ory-Season Water Table (C2)	
	t Deposits (B2)		= , ,	en Sulfide O	, ,		. (. (00)		Saturation Visible on Aerial Imagery (C9)	
Drift Depo	` '			d Rhizosphe	_	_	ots (C3)		Geomorphic Position (D2)	
= '	t or Crust (B4)			e of Reduc	•	•	21		Shallow Aquitard (D3)	
Iron Depo	Soil Cracks (B6)			Iron Reduct or Stressed		,	•		AC-Neutral Test (D5)	
	n Visible on Aerial Ima	geny (B7)	==	Explain in Re	,	i) (LKK A	,		taised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)	
	Vegetated Concave S		Other (E	_xpiaiii iii ix	siliains)			L '	Tost-freave fruitiffocks (D7)	
	<del></del>	unace (Bo)								
Field Obse		es 🗌 No 🗸	Depth (inche	ve).		1				
Water Table										
			Depth (inche	***************************************			/etland	Hydro	ology Present? Yes 🗌 No 🔽	7
Saturation I (includes ca	Present? Y apillary fringe)	es 🔝 No 🗹	Depth (inche	:5):		! *\	-cuariu I	. iyui C	NO W	ال.
	ecorded Data (strea	ım gauge. moni	itoring well. a	erial photo	os, previo	us inspe	ctions). i	if avai	lable:	
	(	3 3-,	Ç, <del>-</del> -	1	, ,		/ /			
Remarks:										
rtomants.										



Project/Site: Black Butte Copper		Ci	ty/Count	y: White Su	Ilphur Springs/Meagher	Sampling Date: 08-17-2014
Applicant/Owner: Tintina Resources					State: MT	Sampling Point: SCT5-U4
Investigator(s): K. Scow, E. Darfler		S	ection, T	ownship, R	ange: S25, T12N, R6E	
Landform: hillside		L	ocal relie	ef (concave,	convex, none): convex	Slope (%): 4-5
Subregion (LRR): E		Lat: 46.	7743809	)	Long: -110.9171606	Datum: WGS84
Soil Map Unit Name: 1110D Moosefla	it-Foxgulch-Redf	ish			NWI classifi	cation: UPL
Are climatic/hydrologic conditions on	the site typical fo	r this time o	f year? `	Yes 🗸 No	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrol-			-			present? Yes V No
Are Vegetation, Soil, or Hydrol					eeded, explain any answ	
SUMMARY OF FINDINGS – Atta						
Hydrophytic Vegetation Present?						
Hydric Soil Present?	Yes 🗌 No	<b>V</b>		the Sample		
Wetland Hydrology Present?	Yes No		wi	thin a Wetl	and? Yes 🔝	No 🗸
Remarks: Upland plot. Photograph: KS1390-1392	2 (S, N, E)					
VEGETATION - Use scientific n	ames of plan	s.				
C. C. C. C. C. C. C. C. C. C. C. C. C. C		Absolute		nt Indicator	Dominance Test World	ksheet:
Tree Stratum (Plot size: NA	)	% Cover	<del>-</del>		Number of Dominant S	
1.					That Are OBL, FACW,	or, FAC:3 (A)
2.					Total Number of Domir	
3 4		Transaction of the Thirth and all thomas as account to the T			Species Across All Stra	ata: 3 (B)
		0	= Total		Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.	01 acre)		name			
1. Dasiphora fruticosa		10_	x	FAC	Prevalence Index Wo	
2					Total % Cover of:	
3				and a feet and analysis of the feet and the feet and and the feet and	OBL Species FACW Species	x 1 =
4					FAC Species 13	x 2 = 5 x 3 = 405
5.						9 x 4 = 116
Herb Stratum (Plot size: 0.01 acre	)	10	_ = Total	Cover	-	4 x 5 = 70
1. Poa pratensis	,	65	х	FAC	Column Totals: 17	8 (A) 591 (B)
2. Phleum pratense		40	×	FAC	Prevalence Index	(B/A) = 3.32
3. Symphyotrichum foliaceum		16		FACU		
4. Potentilla gracilis		14		FAC	Hydrophytic Vegetation  1 - Rapid Test for Hydrophytics  1 - Rapid	
5. Achillea millefolium		8		FACU	2 - Dominance Test is	· · ·
6. Lupinus sericeus		8		(UPL)	3 - Prevalence Index is	s ≤3.0¹
7. Erigeron subtrinervis				(UPL)	4 - Morphological Ada	ptations1 (Provide supporting
				FACU	,	r on a separate sheet)
40.4		_		FAC	5 - Wetland Non-Vasc	
		2		FAC		tic Vegetation¹ (Explain) Id wetland hydrology must be
11		168	= Total	Cover	present, unless disturbed of	
Woody Vine Stratum (Plot size: NA	)		10tal	J0401		
1.	PP/PP/PP/PP/PP/PP/PP/PP/PP/PP/PP/PP/PP/				Hydrophytic	
2					Vegetation	
		0	= Total	Cover	Present? Yes	✓ No 🗌
% Bare Ground in Herb Stratum						
Remarks: Vegetation meets the Dom The PI and professional ju						the Prevalence Index (PI).
The FF and professional ju	agment maleate	mai vegetat	און פו זוטו.	JOIO DUL HOL	wouding.	



SOIL			Project/S	ite: Black B	utte Copper	Sampling Point: SCT5-U4
Profile Des	cription: (Describe to t	he depth needed to	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			bsence of indicators.)
Depth	Matrix		Redox Features			
(inches)	Color (moist) %	Color (moist)	% Type¹	Loc²	Texture	Remarks
				· ·		
¹Type: C=C	oncentration, D=Depletio	n PM=Peduced M	atrix CS=Covered o	r Coated Sa	and Grains	21 contion: PI =Poro Lining M=Matrix
	Indicators (Applicable					² Location: PL=Pore Lining, M=Matrix itors for Problematic Hydric Soils ³ :
Histosol (		Sandy Redox		).		•
1 = '	pedon (A2)	Stripped Mat	· ·			m Muck (A10) d Parent Material (TF2)
Black His	• •		y Mineral (F1) (except l	MI RA 1)		y Shallow Dark Surface (TF12)
1 ===	Sulfide (A4)	,	ed Matrix (F2)		promote	ner (Explain in Remarks)
1	Below Dark Surface (A11)	Depleted Ma				(Explain in Fernance)
-	k Surface (A12)	Redox Dark	` '		3Indica	ators of hydrophytic vegetation and
Sandy Mu	cky Mineral (S1)	Depleted Da	rk Surface (F7)			tland hydrology must be present,
Sandy Gle	eyed Matrix (S4)	Redox Depre	essions (F8)		unl	ess disturbed or problematic.
Restrictive	Layer (if present):					
Туре:						
Depth (inche	es):				Hydric So	il Present? Yes ☐ No 🗹
ļ	o soil pit as marginal hy	drophytic vegetation	and no wetland hy	drology		V
	e con preside marginal my	aropny no regenance		a		
n have						
IIVADAL O	21/					
HYDROLO						
1	drology Indicators:					
Primary Indi	cators (minimum of one	required; check all t	that apply)		Seco	ondary Indicators (2 or more required)
Surface W	/ater (A1)	☐ Wate	er-Stained Leaves (B9)	(except	□ v	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wate	er Table (A2)	M	ILRA 1, 2, 4A, and 4B)			4A, and 4B)
Saturation	n (A3)	Salt	Crust (B11)		D	Prainage Patterns (B10)
Water Ma	rks (B1)	Aqua	atic Invertebrates (B13)			ry-Season Water Table (C2)
Sediment	Deposits (B2)	Hydr	ogen Sulfide Odor (C1)	)	s	aturation Visible on Aerial Imagery (C9)
Drift Depo	sits (B3)	Oxid	ized Rhizospheres alor	ng Living Root	s (C3) 🔲 G	Seomorphic Position (D2)
	or Crust (B4)		ence of Reduced Iron (	•		hallow Aquitard (D3)
☐ Iron Depo	, ,		ent Iron Reduction in Ti	` '	=	AC-Neutral Test (D5)
	oil Cracks (B6)		ted or Stressed Plants	(D1) (LRR A)		taised Ant Mounds (D6) (LRR A)
	Visible on Aerial Imagery (E	,	r (Explain in Remarks)		F	rost-Heave Hummocks (D7)
<u> </u>	/egetated Concave Surface	(B8)				
Field Obser	· · · · · · · · · · · · · · · · · · ·					
Surface Wa						
Water Table	, manufacture and a second			18/-	معال لمحملة	Janu Brasanta Van 🗔 Na 📈
Saturation F (includes ca	resent?       Yes pillary fringe)	No 🗹 Depth (inc	ches):	VVE	auana myaro	ology Present? Yes ☐ No ✓
	corded Data (stream ga	uae. monitorina wel	l. aerial photos, prev	ious inspec	tions), if avail	lable:
	TIMES THE COLORING	wor	.,, pilotoo, pilot		,	
Remarks:						
remains.						

Project/Site: Black Butte Copper		Ci	ity/County	։ White Տւ	ılphur Springs/Meagher	Sampling Date: 08-16-2014
Applicant/Owner: Tintina Resources				A di Art via l'intera di A publiche accordina foliazioni di se	State: MT	Sampling Point: SCT5-U5
Investigator(s): K. Scow, E. Darfler		9	Section, To	ownship, R	ange: S25, T12N, R6E	
Landform: head of swale					convex, none): convex	Slope (%): 7-8
Subregion (LRR): E	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		77060031	•	Long: -110.920392805	
	t Foygulah Badfi		7700003	103		
Soil Map Unit Name: 1110D Moosefla	<del></del>		f . 0 .	( [] N	NWI classific	
Are climatic/hydrologic conditions on t			=			·
Are Vegetation , Soil , or Hydrole		-				present? Yes 🗸 No 🗌
Are Vegetation , Soil , or Hydrole SUMMARY OF FINDINGS – Atta				,	eeded, explain any answ	,
			mpinig	point ioc	auons, transects, imp	portant leatures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No Yes No Yes No	✓		the Sample thin a Wetl		No 🗹
Remarks: Upland plot. Photographs: KS1384 (N)	and 1385 (S)					
VEGETATION – Use scientific n	ames of plant					
Tree Stratum (Plot size: NA	)	Absolute % Cover	Dominant Species?		Dominance Test Worl	
1.			·		Number of Dominant S That Are OBL, FACW,	
2.			***************************************	THE STREET STREET, STR	,	· · · · · · · · · · · · · · · · · · ·
3.				THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE S	Total Number of Domir Species Across All Stra	
4.					•	
		0	= Total		Percent of Dominant S That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size: 0.0	)1 acre)				Prevalence Index Wo	
				FAC	Total % Cover of:	
2.					OBL Species	x 1 =
3						5 x 2 = 30
4			**************		FAC Species 11	The second secon
5						2 x 4 = 328
Herb Stratum (Plot size: 0.01 acre	,	. 2	_ = Total	Cover		5 x 5 = 25
1. Taraxacum officinale	)	80	х	FACU	Column Totals: 21	
2. Phleum pratense		45	X	FAC	Prevalence Index	4,000
3. Poa pratensis		40		FAC		
4. Juncus balticus		15	-	FACW	Hydrophytic Vegetation	
5. Potentilla gracilis		12	wholes is 1000, but in a del and self-one abult if all the a self-of all	FAC	1 - Rapid Test for Hyd	
6. Agrostis stolonifera		10		FAC	3 - Prevalence Index is	
7. Symphyotrichum campestre		5		(UPL)		ptations¹ (Provide supporting
8. Muhlenbergia richardsonis		2		FAC		r on a separate sheet)
9. Fragaria virginiana	10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May 10 May	1		FACU	5 - Wetland Non-Vasc	ular Plants¹
10. Galium boreale		1		FACU	Problematic Hydrophy	tic Vegetation¹ (Explain)
11. Juncus confusus		1_		FAC		d wetland hydrology must be
		212	= Total	Cover	present, unless disturbed of	or problematic.
Woody Vine Stratum (Plot size: NA	)					
1				• •••••	Hydrophytic	
2					Vegetation Present? Yes	□ No ✓
% Bare Ground in Herb Stratum		0	_ = Total	Cover	1656111: 165	
Remarks:						
i verifativo.						



SOIL				Р	roject/Site	e: Black I	Butte Co	opper	Sampling Point: SCT5-U5
Profile Descrip	tion: (Describe to	the depth	needed to de	ocument	the indi	cator or	confirm	the a	bsence of indicators.)
Depth	Matrix	•		dox Featur					,
(inches)	Color (moist)	% C	olor (moist)	%	Type¹	Loc²	Textu	ure	Remarks
		· · · · · · · · · · · · · · · · · · ·			***************************************		***************************************		
***************************************									
		moreover, and an experience of the			/				
				***************************************	***************************************	·			
***************************************				-					
¹Type: C=Conc	entration, D=Deplet	ion, RM=R	educed Matrix	k, CS=Cc	vered or	Coated S	and Gra	ains	² Location: PL=Pore Lining, M=Matrix
Hydric Soil Ind	licators (Applicabl	e to all LR	Rs, unless o	therwise	noted.):			Indica	ators for Problematic Hydric Soils ³ :
Histosol (A1)			Sandy Redox (S	5)			Г	2 0	m Muck (A10)
Histic Epipedo	on (A2)	$\sqcap$ :	Stripped Matrix (	S6)			Ī		d Parent Material (TF2)
Black Histic (A			_oamy Mucky M	-	(except MI	.RA 1)	Ī		ry Shallow Dark Surface (TF12)
Hydrogen Sulf	•	·	oamy Gleyed M		` '	,	Ĩ		ner (Explain in Remarks)
	w Dark Surface (A11)		Depleted Matrix						,
Thick Dark Su			Redox Dark Surl				1	³Indica	ators of hydrophytic vegetation and
Sandy Mucky	• •	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Depleted Dark S		)			we	tland hydrology must be present,
Sandy Gleyed	, ,		, Redox Depression	•	•			un	less disturbed or problematic.
Restrictive Lay	<del></del>	- Languary	······································						
T									
							Llud	ria Ca	oil Present? Yes ☐ No ✔
Depth (inches):							пуа	ric Sc	oil Present? Yes
HYDROLOGY									
	logy Indicators:							eren an e communication	
-	ors (minimum of on	e required:	chack all that	· annlu)				Sac	ondary Indicators (2 or more required)
		e requireu,							
Surface Water	, ,				ves (B9) (e	xcept		<u>ا</u> \	Nater-Stained Leaves (B9) (MLRA 1, 2,
High Water Ta				A 1, 2, 4A,	and 4B)			·	4A, and 4B)
Saturation (	•		Salt Cru					,	Orainage Patterns (B10)
Water Marks (	B1)		Aquatic	Invertebra	tes (B13)				Ory-Season Water Table (C2)
Sediment Dep				n Sulfide (	, ,				Saturation Visible on Aerial Imagery (C9)
Drift Deposits					eres along	•	ots (C3)		Geomorphic Position (D2)
Algal Mat or C	` '				ced Iron (C				Shallow Aquitard (D3)
Iron Deposits					tion in Tille	•	•		FAC-Neutral Test (D5)
Surface Soil C	, ,				d Plants (D	1) (LRR A	.)		Raised Ant Mounds (D6) (LRR A)
	ible on Aerial Imagery	` '	Other (E	xplain in R	lemarks)			F	Frost-Heave Hummocks (D7)
Sparsely Vege	etated Concave Surfac	e (B8)							
Field Observat	ions:								
Surface Water	Present? Yes	_ No ✓	Depth (inche	s):					
Water Table Pre	esent? Yes [	No 🗸	Depth (inche	s):					
Saturation Pres (includes capilla	ary fringe)	□ No ✓	Depth (inche	version va.					ology Present? Yes No 🗸
Describe Recor	ded Data (stream g	auge, mon	itoring well, a	erial phot	os, previo	us inspe	ctions),	if avai	ilable:
					-				
Remarks: Upsl	ope of wetland plot.								



# **Appendix D**

# Photos of Wetland and Upland Survey Plots August/September 2014

**Photos of Wetland Survey Plots** 

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: BB-W1 Plot: BB-W2



Plot: BBT3-W1 Plot: LS-W1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: LS-W2 Plot: LS-W3





Plot: LS-W4 Plot: LS-W5

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: LS-W6 Plot: LS-W7



Plot: LS-W8 Plot: LS-W9

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: LS-W10 Plot: LS-W11



Plot: LS-W12 Plot: LS-W13

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-W14 Plot: LST1-W1





Plot: LST1-W2 Plot: LST1-W3

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LST1-W4 Plot: LST2-W1





Plot: LST2-W2 Plot: LST2-W3

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LST3-W1







Plot: LST4-W1 Plot: SC-W1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: SC-W3 Plot: SC-W3

No photo available



Plot: SC-W4 Plot: SC-W5

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: SC-W7





Plot: SC-W8 Plot: SC-W9

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: SCT1-W1 Plot: SCT2-W1







Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: SCT5-W1



Plot: SCT5-W2



Plot: SCT5-W4

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: SCT5-W5

# **Photos of Upland Survey Plots**

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: BB-U1 Plot: BB-U2





Plot: BBT3-U1 Plot: LS-U1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-U2 Plot: LS-U3





Plot: LS-U4 Plot: LS-U5

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-U6 Plot: LS-U7



Plot: LS-U8 Plot: LS-U9

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-U10 Plot: LS-U11





Plot: LS-U12 Plot: LS-U13

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-U14 Plot: LS-U15





Plot: LS-U16 Plot: LS-U17

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LS-U18 Plot: LS-U19





Plot: LS-U20 Plot: LS-U21

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



Plot: LST1-U1 Plot: LST1-U2



Plot: LST1-U2A Plot: LST1-U2B

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LST1-U3 Plot: LST2-U1





Plot: LST2-U2 Plot: LST2-U3

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: LST3-U1 Plot: LST4-U1





Plot: LST4-U2 Plot: SC-U1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





Plot: SC-U2 Plot: SC-U3





Plot: SC-U4 Plot: SC-U5

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





SC-U6 Plot: SC-U7





Plot: SC-U8 Plot: SCT1-U1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.





SCT2-U1 SCT3-U1





SCT4-U1 SCT5-U1

Appendix D. Photos of Wetland and Upland Survey Plots, August/September 2014.



