

2018 Cultural Resource Inventory of the Hay Meadows Project Area, Meagher County, Montana

#114-710301A.500
August 2018

PRESENTED TO

Sandfire Resources America, Inc.
17 East Main Street
White Sulphur Springs, Montana 59645

PRESENTED BY

Tetra Tech P +1-406-443-5210
825 W. Custer Ave. F +1-406-449-3729
Helena, Montana 59602 tetratech.com

Prepared by:

Lynn M. Peterson, Cultural Resource Specialist,
August 2018

Name	Date
Title	

ABSTRACT

Sandfire Resources America, Inc. proposes to open a copper mine, known as Black Butte, 15 miles north of White Sulphur Springs in Meagher County, Montana. Since 2011, Sandfire has collected detailed environmental information to support mine permit applications. In July 2018, Sandfire contracted Tetra Tech to examine 133 acres for the presence of cultural resources in a location known as the Hay Meadows project area. Current mine operations are designed to discharge treated water into alluvial infiltration galleries under project area hay fields in the Sheep Creek bottom lands. Coon Creek also flows into these bottom lands after having been diverted long ago from its historic channel into an irrigation ditch, which now serves as its long-term channel. Hydrologic models show water from Coon Creek will mix with treated mine discharge water which could have nitrogen levels which exceed those of Coon Creek. Therefore, upon mixing, the Coon Creek waters may exceed non-degradation standards for nitrogen. The preferred method to remedy the situation is to re-route Coon Creek away from the discharge area at slightly higher elevation against the western edge of the bottom lands. With this re-route, discharged water would not intercept water in Coon Creek.

Lynn M. Peterson, Tetra Tech archaeologist, conducted the cultural resource inventory July 24-25, 2018, and documented two historic irrigation ditches known as the Coon Creek Irrigation Ditch (24ME1135) and the Little Sheep Creek Irrigation Ditch (24ME1136). Both of these ditches are recommended not eligible to the National Register of Historic Places. The 2018 inventory also identified an historic barn and a recent railroad flat car bridge installed around 2013. The property owner declined Tetra Tech permission to record the barn and the bridge has not achieved 50 years of age, necessary to qualify as an historic site.

The pedestrian inventory also observed chert material in the northeastern portion of the project area. Although this location occurs across the road from Site 24ME786, the Big Boulder Lithics site, no culturally modified lithic material was observed in the current project area, and the boundary for the Big Boulder site was not extended into the Hays Meadows project area.

Proposed mine activities will not impact the historical significance of the Coon Creek and Little Sheep Creek irrigation ditches as both of these sites are recommended not eligible to the National Register of Historic Places. Additionally, the historic barn occurs within a 40-acre mine exclusion boundary so it does not seem likely that this building would be disturbed by mining activities. In the northeast portion of the project area, where naturally occurring chert material was identified, the potential exists for prehistoric lithic artifacts. If mine work does uncover artifacts, work should cease and Tetra Tech and/or James Strait, Montana DEQ archaeologist, should be notified.

1.0 INTRODUCTION

Sandfire Resources America, Inc. (formerly Tintina Resources, Inc.) proposes to open a copper mine, known as Black Butte, 15 miles north of White Sulphur Springs in Meagher County, Montana (**Figure 1.1**). Since 2011, Sandfire has collected detailed environmental information to support mine permit applications.

Environmental work includes cultural resource inventory and testing projects conducted at the request of the Montana Department of Environmental Quality (DEQ), who encouraged Sandfire to examine proposed disturbance areas for cultural resources. Acting on this request, Sandfire contracted Tetra Tech to perform cultural resource work in 2011, 2012, and 2015 (Tetra Tech 2013a, 2013b, and 2015).

In July 2018, Sandfire contracted Tetra Tech to examine an additional 133 acres for the presence of cultural resources in a location known as the Hay Meadows project area. The hay fields that characterize the project area are bisected by three creeks, including Coon Creek, Sheep Creek and Little Sheep Creek.

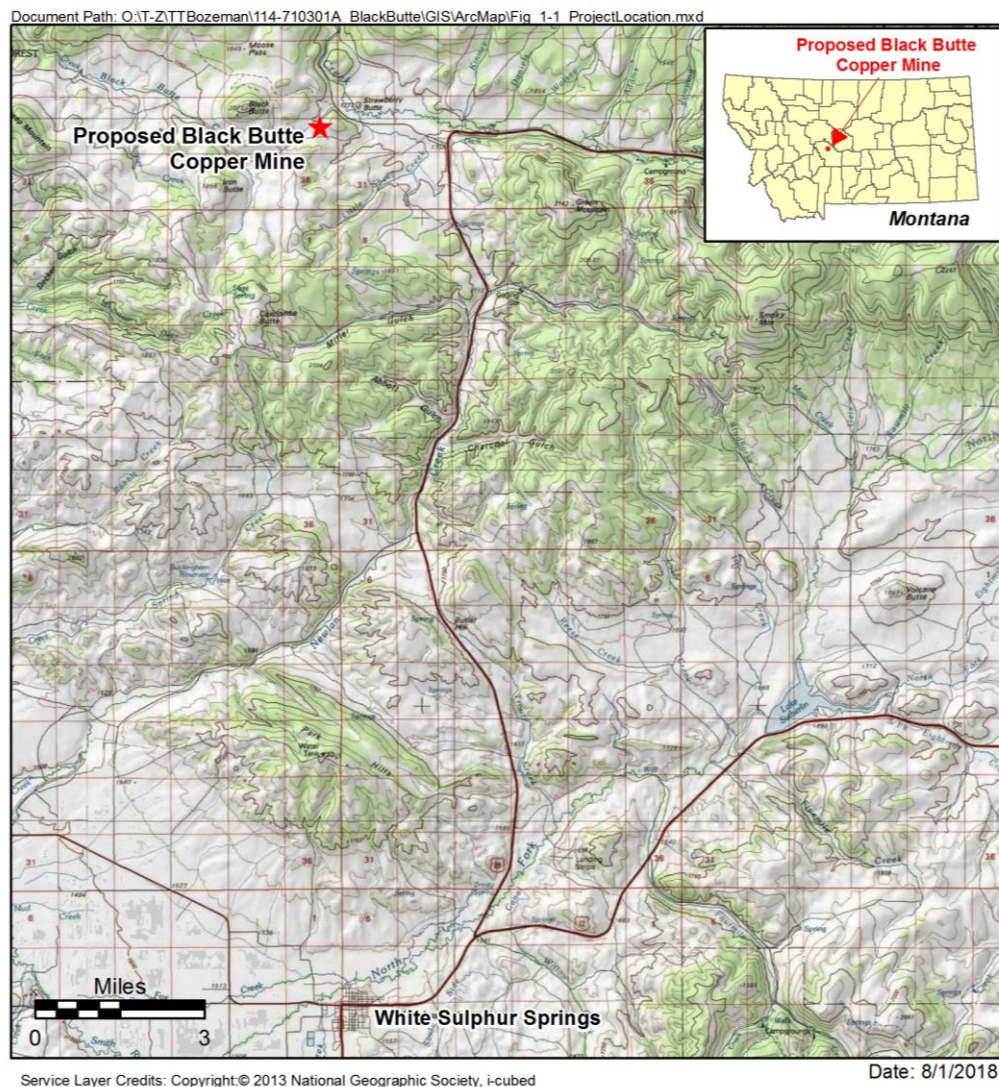


Figure 1.1
Project Location
Black Butte Copper Project
Sandfire Resources America Inc.

Current mine operations are designed to discharge treated water into alluvial infiltration galleries under the hay fields in the Sheep Creek bottom lands. Coon Creek also flows into these bottom lands after having been diverted long ago from its historic channel into an irrigation ditch, which now serves as its long-term channel. Hydrologic models show water from Coon Creek will mix with treated mine discharge water which could have nitrogen levels which exceed those of Coon Creek. Therefore, upon mixing, the Coon Creek waters may exceed non-degradation standards for nitrogen. The preferred method to remedy the situation is to re-route Coon Creek away from the discharge area at slightly higher elevation against the western edge of the bottom lands. With this re-route, discharged water would not intercept water in Coon Creek.

Re-routing Coon Creek would require an Individual Permit (IP) from the US Army Corps of Engineers. However, Sandfire already has an IP so only an amendment is required. This amendment may require completion of all the same steps as the original IP, including: 1) alternatives analysis, 2) tribal consultation, 3) determination of least environmentally damaging practicable alternative (LEDPA), and 4) mitigation.

Lynn M. Peterson, Tetra Tech archaeologist, conducted the cultural resource inventory July 24-25, 2018, and documented two historic irrigation ditches.

1.1 PROJECT LOCATION

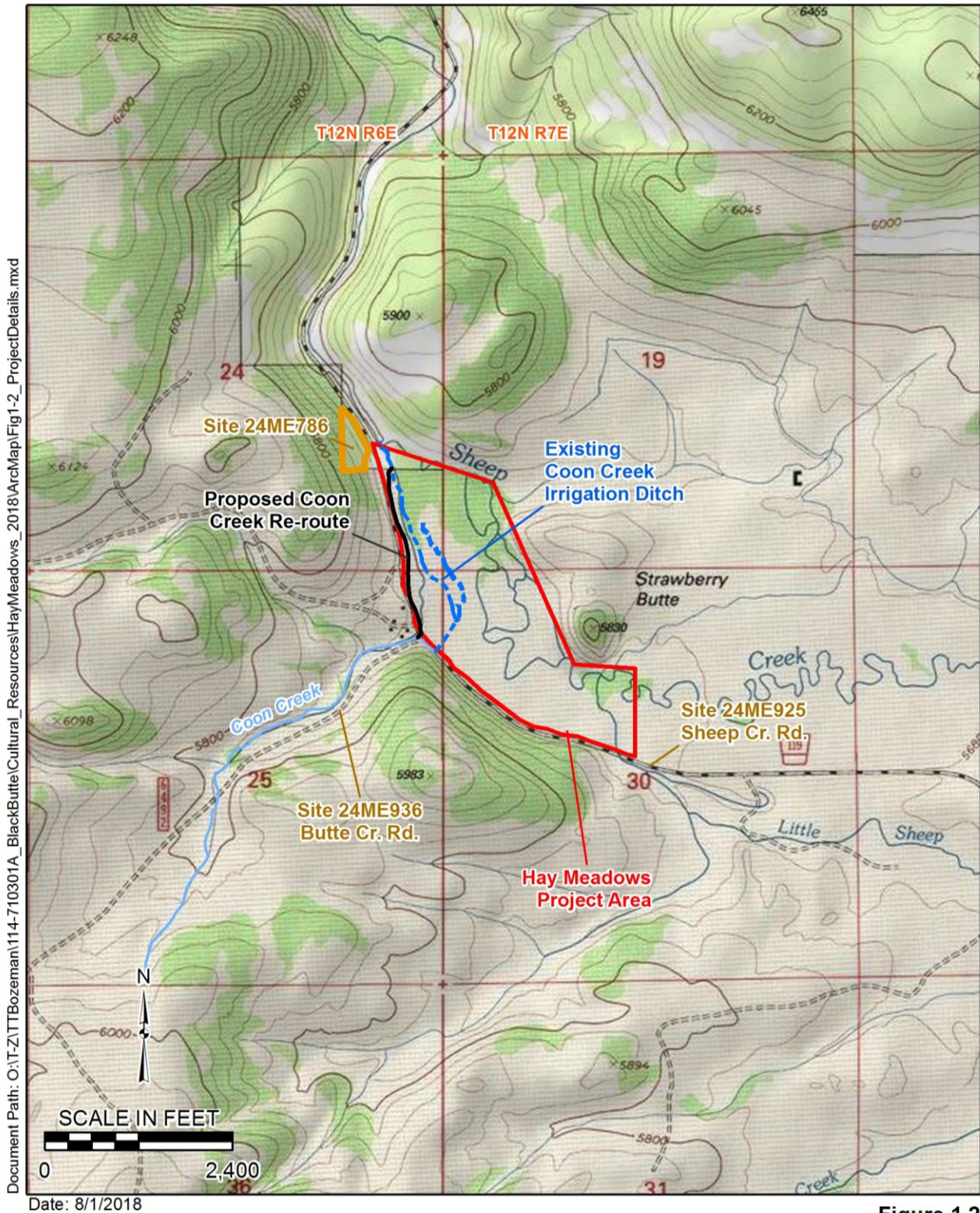
The proposed Black Butte Copper Mine is located in Meagher County, Montana. The 2018 cultural resource inventory of the Hay Meadows project area includes 133 acres in Sections 24-25, T12N, R6E; and in Sections 19 and 30, T12N, R7E (**Figure 1.2**). This area is a privately-owned hay meadow that is cut on an annual basis.

2.0 LITERATURE SEARCH

Prior to fieldwork, Tetra Tech requested a file and literature search for Sections 24-25, T12N, R6E; and Sections 19 and 30, T12N, R7E from the Montana State Historic Preservation Office (SHPO). Although no cultural resources have been recorded inside the current project area, the search indicated two previous cultural resource projects recorded three sites adjacent to the Hay Meadows project area.

In 2008, Ethos Consultants conducted a cultural resource inventory prior to the installation of the Central Montana Communications buried cable line (Brumley 2010 and 2011). Site 24ME936, Butte Creek Road, and site 24ME925, Sheep Creek Road, were recorded during this project (**see Figure 1.2**). Butte Creek Road trends northeast-southwest and begins/ends just outside the project area's east boundary. Sheep Creek Road runs along the project area's eastern and southern boundary and intersects with Butte Creek Road in Section 25, T12N R6E. Both roads are currently in use and have been designated Forest Service Road #6492 and #119, respectively. Ethos recommended both the Butte Creek Road and Sheep Creek Road are not eligible for listing in the National Register of Historic Places (NRHP).

The Sheep Creek EIS Reconnaissance project recorded site 24ME786 in 2002 (French, 2003). This light density lithic scatter occurs in the SE1/4 of Section 24, T12N R6E. Known as the Big Boulder Lithics Site, this resource is found just west of the northeastern project boundary (**see Figure 1.2**). French wrote that NRHP eligibility was doubtful for site 24ME786 as the site area showed enough disturbance to suggest an intact stratigraphic context was unlikely.



3.0 ENVIRONMENTAL AND CULTURAL SETTING

The Environmental and Cultural settings for the mine area has been previously described in a Tetra Tech cultural resource report for the Black Butter copper project (2013a). Please refer to this document for Environmental and Cultural setting discussions.

4.0 INVENTORY METHODS AND RESULTS

The 2018 pedestrian inventory examined 133 acres in portions of Sections 24-25, T12N, R6E; and Sections 19 and 30, T12N, R7E. The inventory was completed over two days, July 24-25, 2018 by Tetra Tech archaeologist Lynn M. Peterson.

The 133 acres were inventoried as east-west or northwest-southeast transects between the three creeks that run through the project area. Transects were spaced at 30-meter intervals and a Trimble GeoXT was used to ensure inventory boundaries were followed. The Trimble also recorded locations of cultural resources; this data was differentially corrected with Pathfinder Office software at the Tetra Tech office. All cultural properties were recorded on Montana Cultural Resources Information (CRIS) forms. No artifacts were collected in the field. The project area and cultural resources were photographed with a digital camera.

The inventory area consists of a nearly level hay meadow bisected by Coon Creek, Little Sheep Creek, and Sheep Creek. These creeks are bordered by dense riparian vegetation, and between this vegetation and the tall meadow grass, ground visibility was about 1 percent.

The 2018 inventory identified two new cultural resources that include the Coon Creek Irrigation Ditch (24ME1135) and the Little Sheep Creek Irrigation Ditch (24ME1136) [Figure 4.1, Appendix A]. An historic barn was also observed in the project area, along Sheep Creek Road in the NE1/4 of Section 25, T12N R6E (Figures 4.1 and 4.2a). Several other buildings that appear to be related to the barn were observed on the opposite side of the road. Tetra Tech contacted the landowner about recording these buildings as a site and permission was denied. However, based on irrigation ditch research, it appears these buildings are associated with Nancy Petit, a woman who received a homestead patent in 1903 for portions of Sections 24 and 25, T12N R6E.

A recent bridge was also observed across Sheep Creek in the NW1/4 of Section 30, T12N R7E (Figures 4.1 and 4.2b). This railroad flat car bridge measures about 10 x 60 feet. The bridge was installed around 2013, replacing an earlier flat car bridge from the 1980s (Zieg, personal communication, July 2018).

The 2018 pedestrian inventory also observed chert material in the northeast portion of the project area, across the road from Site 24ME786, the Big Boulder Lithics site. Big Boulder was recorded by Sandra French, of the US Forest Service, in 2002 as a light density lithic scatter with no formal tools. French observed that naturally occurring chert material was also present across the site, ranging from poor to good, toolmaking quality chert. Tetra Tech thoroughly examined the project area, across the road from the Big Boulder site, and observed several large chert boulders, cobbles, and some pieces of shatter (Figure 4c). However, none of the smaller pieces of debris contained striking platforms or bulbs of percussion which would suggest human influence. A peak occurs west of the Big Boulder site and a local informant reports that boulders and cobbles roll down the mountainside, across the Big Boulder site area, and into the current project area (Zieg, personal communication, July 2018). As no culturally modified lithic material was observed in the current project area, the site boundary for the Big Boulder site was not extended east, into the Hays Meadows project area.

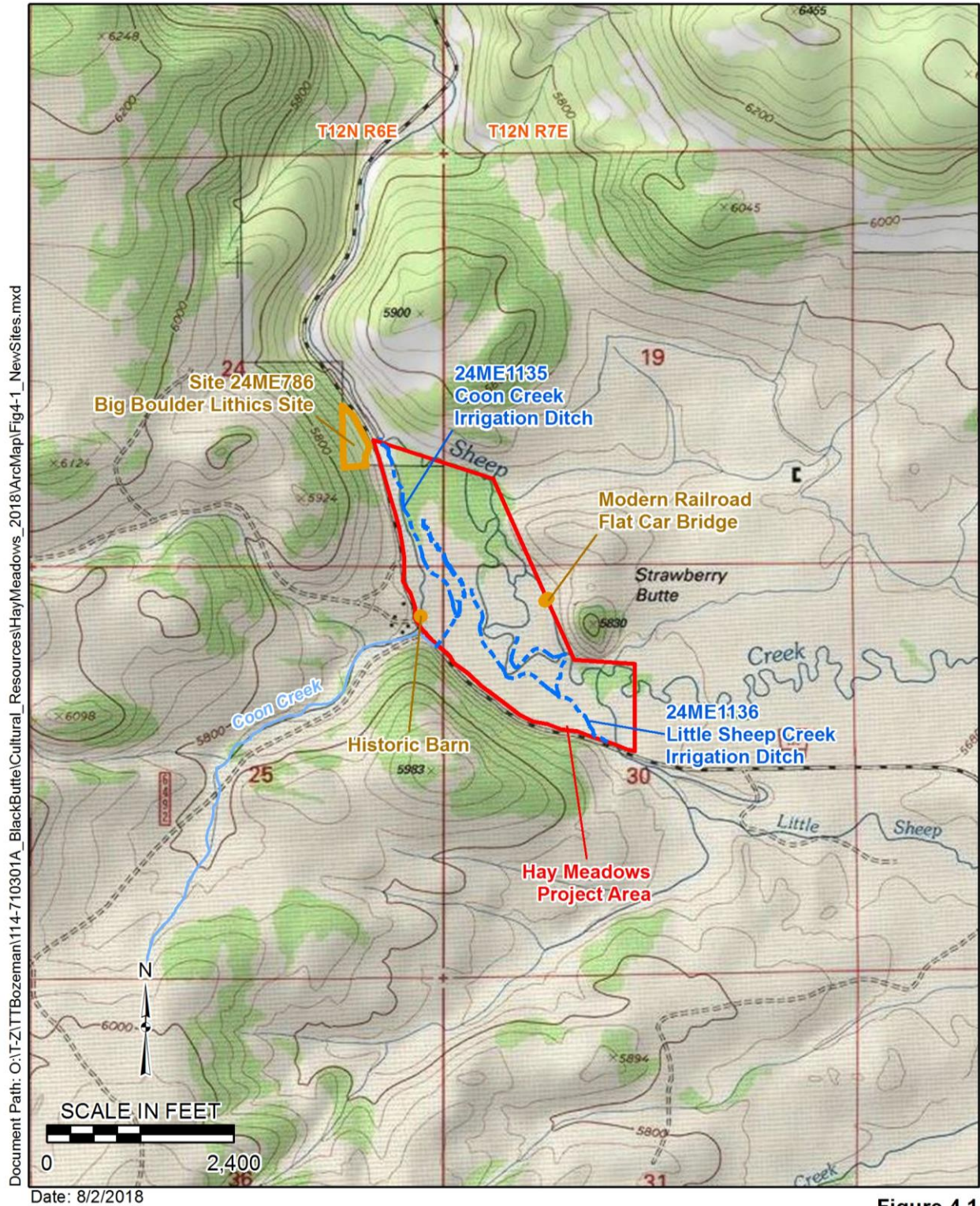




Figure 4.2a Historic Barn located in the NE1/4 of Section 25, T12N R6E, View to the Southeast.



Figure 4.2b Modern Railroad Flat Car Bridge in the NW1/4 of Section 30, T12N R7E, View to the West.



Figure 4c Chert Boulder and Cobble in Northeast Project Area, View to the Southwest.

Site 24ME1135

Site 24ME1135 represents the Coon Creek Irrigation Ditch (**Appendix A**) which occurs in Sections 24 and 25, T12N R6E, and Sections 19 and 30, T12N R7E. The earthen Coon Creek irrigation ditch consists of the main ditch, which extends about 3100 feet, and a lateral ditch which measures about 1500 feet in length. The original channel of Coon Creek was altered in the early 1900s when the creek was rerouted south and then east to enter a cultivated field as an irrigation ditch. The reroute continued north for another 1150 feet before the irrigation ditch flowed back into the original channel of Coon Creek. The main ditch segment (before it enters Coon Creek) is currently in use and measures 2-3 feet in width and extends 1-3 feet in depth. The lateral ditch segment is not currently in use and is 1-2 feet wide and 1-3 feet deep. The original channel of Coon Creek averages 5 feet in width and the depth is over 3 feet. The main ditch ends where it flows into Sheep Creek and it currently irrigates a hay meadow.

The irrigation ditch was likely constructed around 1903 when homesteader Nancy Petit received water rights (41J-198907-00) for Coon Creek on February 3, 1903. Locals report the ditch has been around for 100 years (Zieg, personal communication, July 2018).

A Waterman 21-inch canal gate occurs at the junction of the main and lateral irrigation ditches. The gate is not new and based on appearance, it may have been installed as early as the 1930s. Occasional wood planks were observed along the ditches that served as temporary ditch crossings.

Historical Context - Nancy Petit received water rights for Coon Creek on February 3, 1903. She also received a homestead patent for the NE1/4 NE1/4 of Sec. 25, T12N, R6E on June 1, 1903. The point of diversion for the Coon Creek Irrigation Ditch occurs in this same quarter-quarter section. As Nancy Petit also owned adjoining quarter-quarter sections that the irrigation ditch flowed through, it seems likely that the Coon Creek Ditch was constructed around 1903 by Nancy Petit. A local informant remembers that Nancy Petit homesteaded in partnership with her husband, Patrick (Zieg 2018, personal communication).

Significance and Integrity - The Coon Creek Irrigation Ditch does not qualify under Criteria A-D for inclusion in the NRHP. Nancy Petit, a homesteader in the Sheep Creek area, received water rights for the Coon Creek irrigation ditch on February 3, 1903. Although the ditch is associated with the homestead era, it irrigated a single pasture and as such, there are other irrigation systems in the state that better represent the homestead era (Criterion A). Additionally, Coon Creek Irrigation Ditch does not appear as a named ditch in the Water Resources Survey for Meagher County (State Engineer's Office, 1950). However, locals do refer to the site as the Coon Creek irrigation ditch (Zieg, personal communication, July 2018).

A review of Meagher County histories (Rostad, 1994; Meagher Co. Historical Society, 1968; and Kinnick, 2009) did not identify the Petits as a prominent family in the area so the site does not qualify under Criterion B. The earthen Coon Creek irrigation ditch is a simply constructed type commonly found across the state and does not qualify under Criterion C. Finally, the site is not likely to yield information important in history (Criterion D).

The site retains integrity of location, design, materials, and workmanship. The introduction of two 1970s era homes near the ditch has somewhat degraded integrity of setting, feeling, and association.

Site 24ME1136

Site 24ME1136 consists of the Little Sheep Creek Irrigation Ditch, located in the NW1/4 of Section 30, T12N R7E (**Appendix A**). The earthen ditch consists of the main ditch, which extends about 3050 feet, and a lateral ditch which measures about 1800 feet in length. Ditch segments are 2-3 feet wide and about 2-feet deep. The ditch system is not currently in use. The ditch intakes from Little Sheep Creek and irrigates a hay meadow. The irrigation ditch was likely constructed in 1903 by homesteader Nancy Petit. The water right (41J-198908-00) held by the current property owner has a priority date of September 1888.

Historic Context - J. W. Weir received the right to take water from Little Sheep Creek on September 16, 1888. The water right document states Weir's purpose is to irrigate his ranch on Sheep Creek, about a mile east of Black Butte. A review of the BLM's General Land Office Records (<https://gloreCORDS.blm.gov>) did not identify any land patents issued to J. W. Weir in the site vicinity. However, Nancy Petit received a homestead patent for most of the NW1/4 of Sec. 30, T12N, R7E on June 1, 1903. Little Sheep Creek irrigation ditch has its intake in this quarter-section. The 1900 plat map for T12N R7E does not show an irrigation ditch in the NW1/4 of Section 30 so it appears the ditch originated under the ownership of Nancy Petit, probably around 1903.

Significance and Integrity - The Little Sheep Creek Irrigation Ditch does not qualify under Criteria A-D for the NRHP. Nancy Petit, a homesteader in the Sheep Creek area, most likely constructed the ditch sometime around 1903. Although the ditch is associated with the homestead era, it irrigated a single pasture and as such, there are other irrigation systems in the state that better represent the homestead era (Criterion A). Additionally, Little Sheep Creek Irrigation Ditch does not appear as a named ditch in the Water Resources Survey for Meagher County (State Engineer's Office, 1950), and locals do not refer to the ditch specifically as the Little Sheep Creek irrigation ditch. When speaking of the ditch, locals talk about "turning the water on from Little Sheep Creek" and assume everyone knows that refers to the ditch (Zieg, personal communication, July 2018).

A review of Meagher County histories (Rostad, 1994; Meagher Co. Historical Society, 1968; and Kinnick, 2009) did not identify the Petits as a prominent family in the area so the site does not qualify under Criterion B. The earthen Little Sheep Creek irrigation ditch is a simply constructed type commonly found across the state and does not qualify under Criterion C. Finally, the site is not likely to yield information important in history (Criterion D).

The site retains integrity of location, design, materials, and workmanship. The introduction of two 1970s era homes near the ditch has somewhat degraded integrity of setting, feeling, and association.

5.0 SUMMARY AND RECOMMENDATIONS

The 2018 cultural resource inventory of 133 acres within the Hay Meadows project area identified site 24ME1135, the Coon Creek Irrigation Ditch, and 24ME1136, the Little Sheep Creek Irrigation Ditch. Future disturbance to these sites includes a proposed re-route of Coon Creek by Sandfire so mine discharge water will not enter Coon Creek and its associated ditch. Additionally, because the Little Sheep Creek irrigation ditch recently overflowed and flooded Sheep Creek Rd, Meagher County requested the ditch be re-routed by the property owner to avoid future road flooding (Hanson, personal communication, July 2018). Both sites 24ME1135 and 24ME1136 are recommended not eligible to the NRHP under Criteria A-D so these disturbances will not impact the historical significance of the Coon Creek and Little Sheep Creek irrigation ditches.

Cultural resource work also identified an historic barn in the project area near the intersection of Butte Creek and Sheep Creek roads. The barn appears to be associated with several other historic buildings found across the road and outside the current project area. These buildings were not recorded by Tetra Tech as the property owner declined such permission. However, these buildings occur within a 40-acre mine exclusion boundary so it does not seem likely that these buildings would be disturbed by mining activities.

Naturally occurring chert material was identified in the northeast portion of the project area, across the road from lithic scatter 24ME786. Although no culturally modified chert material was observed, it is possible mine work may uncover prehistoric lithic artifacts. If such an event occurs, mine work should cease and Tetra Tech and/or James Strait, Montana DEQ archaeologist, should be notified.

6.0 REFERENCES

Brumley, John H.

2011 Addendum to: A Cultural Resource Inventory of Central Montana Communications Inc.'s White Sulphur Springs Exchange. Document on file at Montana SHPO.

2010 A Cultural Resource Inventory of Central Montana Communications Inc.'s White Sulphur Springs Exchange. Document on file at Montana SHPO.

French, Sandra

2003 Site Form for 24ME786. On file at the Montana State Historic Preservation Office, Helena, MT.

Hanson, John

2018 Personal communication to Lynn M. Peterson on July 26, 2018.

Kinnick, Dee

2009 The Homestead Project: Original Patented Homestead and Mining Claims for Meagher County. Published by D. Kinnick.

Meagher County Historical Society

1968 Meagher County: An Early-Day Pictorial History, 1867-1967. Published by Meagher County News.

Rostad, Lee

1994 Mountains of Gold, Hills of Grass; A History of Meagher County. Bozeman Fork Publishing. Martinsdale, Montana.

State Engineer's Office

1950 Water Resources Survey, Meagher County Montana, Part II, Maps Showing Irrigated Areas in Colors Designating the Sources of Supply. Published by State Engineer's Office, Helena, MT.

Tetra Tech

2013a A Cultural Resource Inventory of 970 Acres in the Black Butte Copper Project Area, Meagher County, Montana. Prepared for Tintina Resources, Inc., Spokane, WA by Tetra Tech, Helena, MT.

2013b Pedestrian Inventory and Testing for National Register Eligibility at Site 24ME163 in the Black Butte Copper Project Area, Meagher County, Montana. Prepared for Tintina Resources, Inc., Spokane, WA by Tetra Tech, Helena, MT.

2015 2015 Cultural Resource Inventory of Proposed Mine Facilities and Access Roads within the Black Butte Copper Project Area, Meagher County, Montana. Prepared for Tintina Resources, Inc., Spokane, WA by Tetra Tech, Helena, MT.

Zieg, Jerry

2018 Personal communication to Lynn M. Peterson on July 24 and 28, 2018.

APPENDIX A

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

1. IDENTIFICATION

1.1 Smithsonian Number: 24ME1135

1.2 Field Designation: Coon Creek Irrigation Ditch

1.3 Project Name: Hay Meadows Cultural Resource Inventory

1.4 Agency Project Number: NA

1.5 Consultant Project Number: 114-710301A

2. LOCATION

2.1 Township/Range: T12 N, R6 E, Section 24; ¼ Section(s): SE

2.2 County: Meagher

2.3 UTM Coordinates: Zone 12 E 507092m; N 5180514m, Ditch Intake

Datum used: NAD 83 conus

2.4 Administrative/Surface Ownership: Private

2.5 7.5' USGS Map Name, Date: Strawberry Butte, 1967

2.6 Narrative of access: From the junction of Hwys 12 and 89, go 15 miles north on Hwy 89 to Sheep Creek Road (FR 119). Turn west and drive 2.2 miles. At this point, Coon Creek passes under the road to emerge as an irrigation ditch in a hay meadow owned by Bar Z Ranch, Inc.

2.7 Vicinity of (city/town): White Sulphur Springs

3. DESCRIPTION

3.1 Site Type: Irrigation Ditch

3.2 Site Time Period
(use dropdowns):

Prehistoric:

Paleontological:

Historic: Historic More Than One Decade

Combination: Unknown:

3.3 Narrative Description of Site: Coon Creek begins on the west side of the Little Belt Mountains in Section 25, T12N R6E. The creek flows northeast for 1.2 miles. At this point, the creek was rerouted southeast along the south side of Sheep Creek Road for about 250 feet. From this point, the creek passes under Sheep Creek Road to emerge as an irrigation ditch in a hay meadow owned by Bar Z Ranch, Inc. The site consists of the main ditch and one lateral ditch.

3.4 Site Dimensions: See No. 6

Surface visibility: Poor

3.5 Feature Descriptions: See No. 6

3.6 Artifacts: (✓ all that apply) Chipped Stone Wood Ground Stone Ceramics Bone Trade Other
Description:

3.7 Diagnostic Artifacts: NA

3.8 Subsurface Testing: NA

3.9 Site function/interpretation: Irrigation Ditch

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

4: ENVIRONMENTAL SETTING

4.1 Geographic Setting: Site is found on the west side of the Little Belt Mountains, along Coon Creek, a tributary of Sheep Creek which flows west about 11 miles to join the Smith River.

4.2 Contour: Known Approximate Unknown

4.3 Elevation: 5660 ft

4.4 View/Aspect: East and West, about 1.5 miles.

4.5 Sediments: Silt loam of Medicine Lodge-Adel-Mooseflat Complex, and loam of Mooseflat-Foxgulch-Redfish families.

Deposition: Surface Only Buried Only Surface and Buried Redeposited Other

4.6 Available Water Source: Stream/River/Creek

4.7 Major River Drainage: Sheep Creek, 5660 ft. in elevation

4.8 Minor Drainage: Coon Creek, 5660 ft. in elevation

4.9 Local Vegetation: Meadow / Pasture

Regional Vegetation: Coniferous Forest

5. ASSESSMENT, RECORDING & MANAGEMENT

5.1 Significance: The Coon Creek Irrigation Ditch does not qualify under Criteria A-D for the National Register of Historic Places. Nancy Petit, a homesteader in the Sheep Creek area, received water rights for the Coon Creek irrigation ditch on February 3, 1903. Although the ditch is associated with the homestead era, it irrigated a single pasture and as such, there are other irrigation systems in the state that better represent the homestead era (Criterion A). A review of Meagher County histories (Rostad, 1994; Meagher Co. Historical Society, 1968; and Kinnick, 2009) did not identify the Petits as a prominent family in the area so the site does not qualify under Criterion B. The earthen Coon Creek irrigation ditch is a type commonly found across the state and does not qualify under Criterion C. Finally, the site is not likely to yield information important in history (Criterion D).

5.2 Condition/Integrity: The site retains integrity of location, design, materials, and workmanship. The introduction of two 1970s era homes near the ditch has somewhat degraded integrity of setting, feeling, and association.

5.3 Possible impacts to site: The Sandfire copper project proposes the re-route Coon Creek Ditch so mine discharge water will not enter Coon Creek.

5.4 Evaluation: Does this property meet National Register criteria for eligibility? Yes No Unevaluated

Evaluation Procedures/Justification: Sites does not qualify under Criteria A-D.

5.5 Recording status: surface examination photo map subsurface tested

5.6 Recommendations (use dropdown): No Further Work

Comments:

5.7 Site Located by: Lynn M. Peterson

Date Located: July 24, 2018

5.8 Site Recorded by: Lynn M. Peterson

Date Recorded: July 25, 2018

5.9 Site form update and revisions by:

Date Updated:

5.10 Federal/State Permit No: NA

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

5.11 Publication(s)/Report(s) where site is described: 2018 Cultural Resource Inventory of the Hay Meadows Project Area, Meagher County, Montana

5.12 Artifact Repository: NA

5.13 Field notes/maps/photos repository: Tetra Tech, 825 W. Custer Ave., Helena, MT 59602

6. DESCRIPTION OF HISTORIC SITES

6.1 Property boundaries:

2800-ft (N-S) x 300-ft (E-W) : **estimated** **: measured**

Boundary justification: Boundary of main and lateral ditches

6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance: The earthen Coon Creek Irrigation Ditch consists of the main ditch, which extends about 3100 feet, and a lateral ditch which measures about 1500 feet in length. The original channel of Coon Creek was altered in the early 1900s when the creek was rerouted south and then east to enter a cultivated field as an irrigation ditch. The reroute continued north for another 1150 feet before the irrigation ditch flowed back into the original channel of Coon Creek. The main ditch segment (before it enters Coon Creek) is currently in use and measures 2-3 feet in width and extends 1-3 feet in depth. The lateral ditch segment is not currently in use and is 1-2 feet wide and 1-3 feet deep. The original channel of Coon Creek averages 5 feet in width and the depth is over 3 feet. The main ditch ends where it flows into Sheep Creek.

The irrigation ditch was likely constructed around 1903 when homesteader Nancy Petit received water rights (41J-198907-00) for Coon Creek on February 3, 1903. Locals report the ditch has been around for 100 years (Zieg, personal communication, July 2018).

A Waterman 21-inch canal gate occurs at the junction of the main and lateral irrigation ditches. The gate is not new and may have been installed as early as the 1930s. Occasional wood planks were observed along the ditches that served as temporary ditch crossings.

6.3 Artifacts observed, collected: NA

6.4 Subsurface Testing Methods and Results: NA

6.5 Historical Information and Context (footnote sources): Nancy Petit received water rights for Coon Creek on February 3, 1903. She also received a homestead patent for the NE1/4 NE1/4 of Sec. 25, T12N, R6E on June 1, 1903. The point of diversion for the Coon Creek Irrigation Ditch occurs in this same quarter-quarter section. As Nancy Petit also owned adjoining quarter-quarter sections that the irrigation ditch flowed through, it seems likely that the Coon Creek Ditch was constructed around 1903 by Nancy Petit. A local informant remembers that Nancy Petit homesteaded in partnership with her husband, Patrick (Zieg 2018, personal communication).

Coon Creek irrigation ditch does not appear as a named ditch in the Water Resources Survey for Meagher County (State Engineer's Office, 1950). However, locals do refer to the site as the Coon Creek irrigation ditch (Zieg, personal communication, July 2018).

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

6.6 Sources, files, people consulted:

Kinnick, Dee, 2009

The Homestead Project: Original Patented Homestead and Mining Claims for Meagher County. Published by D. Kinnick.

Meagher County Historical Society, 1968

Meagher County: An Early-Day Pictorial History, 1867-1967. Published by Meagher County News.

Rostad, Lee, 1994

Mountains of Gold, Hills of Grass: A History of Meagher County. Published by Bozeman Fork Publishing.

State Engineer's Office, 1950

Water Resources Survey, Meagher County Montana, Part II, Maps Showing Irrigated Areas in Colors Designating the Sources of Supply. Published by State Engineer's Office, Helena, MT.

Zieg, Jerry, July 24, 2018, personal communication to Lynn M. Peterson.

7. ADDITIONAL INFORMATION

Canal also located in the following sections: T12N R6E, SENENE of Section 25; T12N R7E, SWSWSW of Section 19; and T12N R7E, NWNW of Section 30.

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

PHOTOGRAPHS



Road Culvert where Coon Creek Irrigation Ditch Begins, View to Southwest

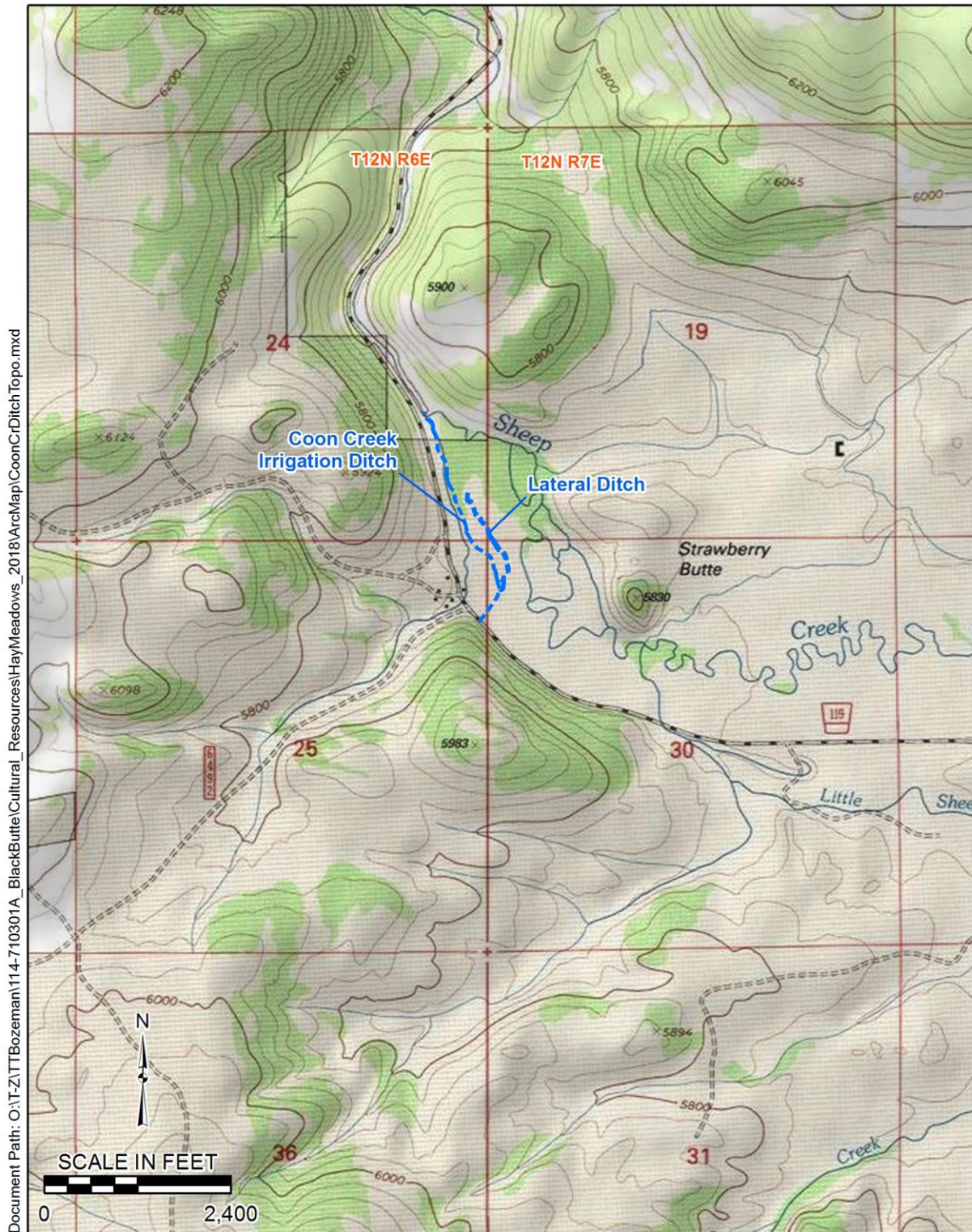


Ditch Gate, View to Northwest

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

MAPS

Attach a sketch map (if applicable) and 7.5' Quad showing site location.



**Coon Creek Irrigation Ditch
Meagher County, Montana**

MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

1. IDENTIFICATION

1.1 Smithsonian Number: 24ME1136

1.2 Field Designation: Little Sheep Creek Irrigation Ditch

1.3 Project Name: Hay Meadows Cultural Resource Inventory

1.4 Agency Project Number: NA

1.5 Consultant Project Number: 114-710301A

2. LOCATION

2.1 Township/Range: T12 N, R7 E, Section 30; ¼ Section(s): NW

2.2 County: Meagher

2.3 UTM Coordinates: Zone 12 E 507743m; N 5180135m, Ditch Intake

Datum used: NAD 83 conus

2.4 Administrative/Surface Ownership: Private

2.5 7.5' USGS Map Name, Date: Strawberry Butte, 1967

2.6 Narrative of access: From the junction of Hwys 12 and 89, go 15 miles north on Hwy 89 to Sheep Creek Road (FR 119). Turn west and drive about 1.5 mile to where Little Sheep Creek passes under the road. The Little Sheep Creek Irrigation Ditch begins on the north side of the road in a hay meadow owned by Bar Z Ranch, Inc.

2.7 Vicinity of (city/town): White Sulphur Springs

3. DESCRIPTION

3.1 Site Type: Irrigation Ditch

3.2 Site Time Period
(use dropdowns):

Prehistoric:

Historic: Historic More Than One Decade

Paleontological:

Combination: Unknown:

3.3 Narrative Description of Site: Little Sheep Creek begins on the west side of the Little Belt Mountains in Section 12, T11N R6E. The creek flows north and then west for about 4.5 miles. At this point, the creek passes under Sheep Creek Road and flows for about 1000 ft. north to join Sheep Creek. Little Sheep Creek Irrigation Ditch intakes from Little Sheep Creek, on the north side of Sheep Creek Road, and irrigates a hay meadow owned by Bar Z Ranch, Inc.

3.4 Site Dimensions: See No. 6

Surface visibility: Poor

3.5 Feature Descriptions: See No. 6

3.6 Artifacts: (✓ all that apply) Chipped Stone Wood Ground Stone Ceramics Bone Trade Other
Description:

3.7 Diagnostic Artifacts: NA

3.8 Subsurface Testing: NA

3.9 Site function/interpretation: Irrigation Ditch

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4: ENVIRONMENTAL SETTING

4.1 Geographic Setting: Site is found on the west side of the Little Belt Mountains, along Little Sheep Creek and Sheep Creek, a tributary of the Smith River, located about 11 miles to the west.

4.2 Contour: Known Approximate Unknown

4.3 Elevation: 5660 ft

4.4 View/Aspect: East and West, about 1.5 miles.

4.5 Sediments: Silt loam of Medicine Lodge-Adel-Mooseflat Complex, and loam of Mooseflat-Foxgulch-Redfish families.

Deposition: Surface Only Buried Only Surface and Buried Redeposited Other

4.6 Available Water Source: Stream/River/Creek

4.7 Major River Drainage: Sheep Creek, 5660 ft. in elevation

4.8 Minor Drainage: Little Sheep Creek, 5660 ft. in elevation

4.9 Local Vegetation: Meadow / Pasture

Regional Vegetation: Coniferous Forest

5. ASSESSMENT, RECORDING & MANAGEMENT

5.1 Significance: The Little Sheep Creek Irrigation Ditch does not qualify under Criteria A-D for the National Register of Historic Places. Nancy Petit, a homesteader in the Sheep Creek area, most likely constructed the ditch sometime around 1903. Although the ditch is associated with the homestead era, it irrigated a single pasture and as such, there are other irrigation systems in the state that better represent the homestead era (Criterion A). A review of Meagher County histories (Rostad, 1994; Meagher Co. Historical Society, 1968; and Kinnick, 2009) did not identify the Petits as a prominent family in the area so the site does not qualify under Criterion B. The earthen Little Sheep Creek irrigation ditch is a type commonly found across the state and does not qualify under Criterion C. Finally, the site is not likely to yield information important in history (Criterion D).

5.2 Condition/Integrity: The site retains integrity of location, design, materials, and workmanship. The introduction of two 1970s era homes near the ditch has somewhat degraded integrity of setting, feeling, and association.

5.3 Possible impacts to site: The Little Sheep Creek irrigation ditch recently overflowed and flooded Sheep Creek Rd. As a result, Meagher County requested the ditch be re-routed to avoid future road flooding (Hanson, personal communication, July 2018).

5.4 Evaluation: Does this property meet National Register criteria for eligibility? Yes No Unevaluated

Evaluation Procedures/Justification: Sites does not qualify under Criteria A-D.

5.5 Recording status: surface examination photo map subsurface tested

5.6 Recommendations (use dropdown): No Further Work

Comments:

5.7 Site Located by: Lynn M. Peterson

Date Located: July 24, 2018

5.8 Site Recorded by: Lynn M. Peterson

Date Recorded: July 25, 2018

5.9 Site form update and revisions by:

Date Updated:

5.10 Federal/State Permit No: NA

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5.11 Publication(s)/Report(s) where site is described: 2018 Cultural Resource Inventory of the Hay Meadows Project Area, Meagher County, Montana

5.12 Artifact Repository: NA

5.13 Field notes/maps/photos repository: Tetra Tech, 825 W. Custer Ave., Helena, MT 59602

6. DESCRIPTION OF HISTORIC SITES

6.1 Property boundaries:

2700-ft (NW-SE) x 860-ft (NE-SW) : **estimated**

: measured

Boundary justification: Boundary of main and lateral ditches

6.2 Physical description of buildings/ structures/ features; dates of construction and major alterations; contribution of building/ structure to property significance: The earthen Little Sheep Creek Irrigation Ditch consists of the main ditch, which extends about 3050 feet, and a lateral ditch which measures about 1800 feet in length. Ditch segments are 2-3 feet wide and about 2-feet deep. The ditch system is not currently in use. The ditch intakes from Little Sheep Creek in the NW1/4 of Section 30, T12N, R7E and irrigates a hay pasture. The irrigation ditch was likely constructed in 1903 by homesteader Nancy Petit. The water right (41J-198908-00) is currently owned by property owner John Hanson and has a priority date of September 1888.

6.3 Artifacts observed, collected: NA

6.4 Subsurface Testing Methods and Results: NA

6.5 Historical Information and Context (footnote sources): J. W. Weir received the right to take water from Little Sheep Creek on September 16, 1888. The water right document states Weir's purpose is to irrigate his ranch on Sheep Creek, about a mile east of Black Butte. A review of the BLM's General Land Office Records (<https://gloreCORDS.blm.gov>) did not identify any land patents issued to J. W. Weir in the site vicinity. However, Nancy Petit received a homestead patent for most of the NW1/4 of Sec. 30, T12N, R7E on June 1, 1903. Little Sheep Creek irrigation ditch has its intake in this quarter-section. The 1900 plat map for T12N R7E does not show an irrigation ditch in the NW1/4 of Section 30 so it appears the ditch originated under the ownership of Nancy Petit, probably around 1903.

Little Sheep Creek irrigation ditch does not appear as a named ditch in the Water Resources Survey for Meagher County (State Engineer's Office, 1950), and locals do not refer to the ditch specifically as the Little Sheep Creek irrigation ditch. When speaking of the ditch, locals talk about "turning the water on from Little Sheep Creek" and assume everyone knows that refers to the ditch (Zieg, personal communication, July 2018).

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6.6 Sources, files, people consulted:

Hanson, John, July 26, 2018, personal communication to Lynn M. Peterson

Kinnick, Dee, 2009

The Homestead Project: Original Patented Homestead and Mining Claims for Meagher County. Published by D. Kinnick.

Meagher County Historical Society, 1968

Meagher County: An Early-Day Pictorial History, 1867-1967. Published by Meagher County News.

Rostad, Lee, 1994

Mountains of Gold, Hills of Grass: A History of Meagher County. Published by Bozeman Fork Publishing.

State Engineer's Office, 1950

Water Resources Survey, Meagher County Montana, Part II, Maps Showing Irrigated Areas in Colors Designating the Sources of Supply. Published by State Engineer's Office, Helena, MT.

Zieg, Jerry, July 28, 2018, personal communication to Lynn M. Peterson

7. ADDITIONAL INFORMATION

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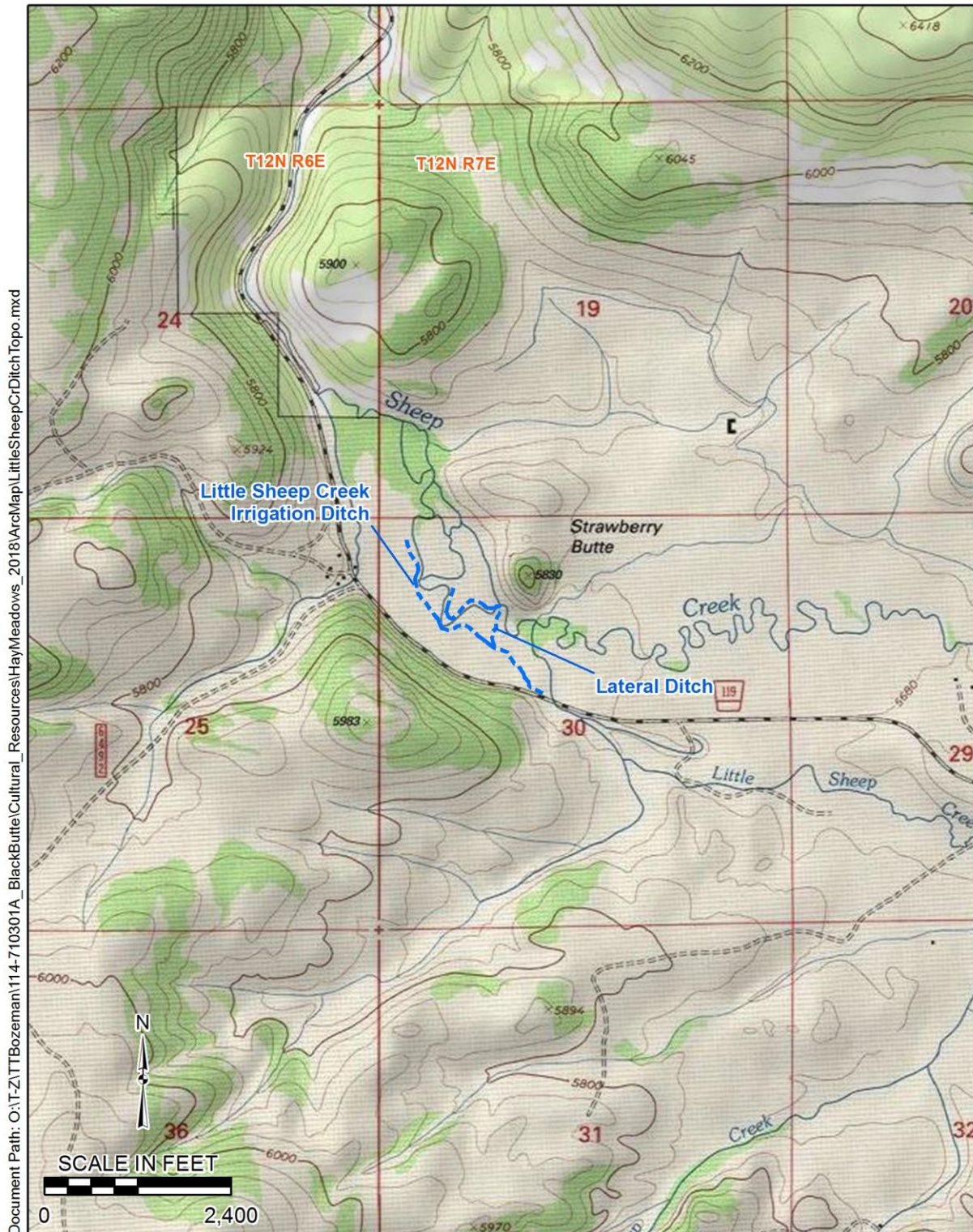


Little Sheep Creek Irrigation Ditch, View to the North-Northwest

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MAPS

Attach a sketch map (if applicable) and 7.5' Quad showing site location.



**Little Sheep Creek Irrigation Ditch
Meagher County, Montana**