Glenda Wiles

From: Darren Ginn <mtdginn@hotmail.com>
Sent: Tuesday, March 12, 2019 9:49 PM
To: Ravalli County Commissioners Office
Subject: Yoder Gravel Pit expansion
Attachments: Yoder Gravel Pit Addendum.pdf

Commissioners,

I respectfully ask that you, as the county commissioners, request a public meeting through the Department of Environmental Quality (DEQ) regarding the Yoder Gravel Pit located nearest to 4376 Eastside Highway, Stevensville, MT. The gravel pit, as it currently exists, has been in operation for approximately two years. I, along with other landowners within one half mile of the gravel pit, recently received notice that the Yoder Gravel Pit has filed for an expansion from 13.1 acres to 49.7 acres. In addition to the expansion, it would appear from the application that the Yoder Gravel Pit also plans to add an asphalt plant, change operating hours to 24/7, and store asphalt and other waste on site.

The Yoder Gravel Pit at its current operating level already negatively affects landowners nearby due to a significant increase in noise and air pollution (dust). The addition of an asphalt plant can only further decrease the air quality and increase the noise level. The Yoder Gravel Pit has in its two years of operation, in my opinion, has significantly reduced property values and quality of life. The addition of onsite storage of asphalt and waste products could potentially impact nearby ephemeral streams, groundwater, and wildlife to include Sandhill Cranes which frequent the area. While I believe a landowner has the right to do what they want on their property, I feel as though a line is crossed when you begin negatively affect neighbors' finances, quality of life, and health.

The county is a landowner for the affected area and is one of the parties that can request a public meeting. I have attached the Yoder Gravel Pit application to this email. The application is currently mislabeled on the DEQ's website showing the site location as Gallatin County. The address of the Yoder Gravel Pit also appears to be incorrectly entered as 964 Stevensville Airport Road on the 2nd page of the application.

Thank you for your time and consideration of this request,

Darren Ginn

DEQ OPENCUT MINING SECTION • PO BOX 200901 • HELENA MT 59620-0901 • PHONE: 406-444-4970 • FAX: 406-444-4988 • Email: DEQOpencut@mt.gov

OPENCUT MINING PLAN OF OPERATION AND APPLICATION

Operator Name: Jake Yoder

Site Name: Yoder Gravel Pit

INSTRUCTIONS - How to submit a complete and accurate Plan & Application:

1. Before completing this form, verify you are using the most recent version and read the help information available on the Opencut Mining Section's website at http://deq.mt.gov/Land/opencut/opencutpermitforms.
2. Fill in all blanks and provide a detailed answer for each question. Write "None" if that is the correct answer.
3. This form includes automated calculations that require Microsoft Word 2010 or newer. As you enter data into this form, autocalculate fields bounded by a red box [ ] will autopopulate. If an autocalculate field is blank, either: a) the required information was not entered, or b) the blank field does not pertain to your application.
4. Opencut Mining Permits are "living" documents, meaning that whenever a permit is amended, the updated information replaces the outdated information. As a result, this form must be filled in completely for a **Permit** or an **Amendment**.
5. The Department of Environmental Quality (DEQ) strongly recommends completing this application form in electronic format. Doing so will make applying for a future amendment much easier. Operators should keep the original electronic files and backup copies. (Note: The DEQ does not retain Operator files in original electronic format, so it is essential that the Operator do so.)
6. In the table below, indicate which **Support Documents** are included with this application, and which were included with a previously approved application and do not need to be revised or updated at this time. If you believe you do not need to submit a required support document for **a, b, c, j, k, l, m, n or o** because an exception applies, mark only the *Exception* box for that document.

ID	Included with: *This Application*	Included with: *Previously Approved Application*	SUPPORT DOCUMENTS	Plan Section
			REQUIRED DOCUMENTS	
a	☐	☐	**Consultation with DNRC on Sage Grouse** *Exception*: ☒Opencut site not located in Core, General Habitat or Interconnectivity Sage Grouse Areas: https://sagegrouse.mt.gov	B7-2
b	☐	☐	**Addendum for Opencut Operations in Sage Grouse Habitat** *Exception*: ☒Opencut site not located in Core, General Habitat or Interconnectivity Sage Grouse Areas: https://sagegrouse.mt.gov	B7-2 C-5 E6-4
c	☒	☐	**Well Logs** *Exception*: ☐No Wells within 1,000 feet of permit area	B8
d	☒	☐	**Soil Photos** *Exception*: ☐Amendment not adding additional acreage	C2-1 & 2
e	☒	☐	**Site Map**	C6-3
f	☒	☐	**Area Map**	C6-4
g	☒	☐	**Reclamation Map**	C6-5
h	☒	☐	**Location Map**	C6-6
i	☒	☐	**Boundary Coordinate Table**	C6-7
j	☐	☒	**Weed Board Notification of Opencut Operation**	E6-1g
k	☒	☐	**Reclamation Bond Spreadsheet** *Exception*: ☐Government Operator	F-1
l	☒	☐	**Landowner Consultation (ARM 17.24.206)** *Exception*: ☐Operation is not adding acreage, an asphalt or concrete plant, not changing the postmining land use, and not extending the reclamation date.	
m	☒	☐	**Zoning Compliance (ARM 17.24.223)** *Exception*: ☐Not required for applications mining bentonite, clay, scoria, peat, or soil only. *Exception*: ☐Not adding acreage, not changing the postmining land use, and not adding an asphalt or concrete plant.	
n	☒	☐	**Surface Landowners List (MCA 82-4-432(2)(e) & (6)(b))** *Exception*: ☐Not required for amendment adding less than 50% of the permitted acreage.	
o	☒	☐	**Bond (MCA 82-4-433)** *Exception*: ☐Government Operator *Exception*: ☐Not required for amendment changing only final reclamation date, hours of operation, or similar procedural aspect that does not alter physical characteristics of the site and if DEQ determines existing bond is adequate.	

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SUPPLEMENTAL DOCUMENTS				
	Included with:			
	This Application	*Previously Approved Application*		
p	☐	☐	**Additional Well Data**	B8-1
q	☐	☒	**NRCS Soil Data**	C2
r	☐	☐	**Dewatering Data and Analysis**	D2-2
s	☐	☐	**Easement/Setback Documentation**	D3
t	☐	☐	**Stream/Waterway Guideline**	D3-1
u	☐	☐	**Wash Plant Settling Pond Guideline**	D6-1c
v	☐	☐	**Monitoring Well Installation Plan**	D7-1b
w	☐	☐	**Ground Water Monitoring Plan**	D7-1b
x	☐	☐	**Pond Plan View**	E3-8
y	☐	☐	**Pond/Wetland Cross-Sections and/or Bottom Contour Map**	E3-9
z	☐	☐	**Pond Guideline**	E3-10
aa	☐	☐	**Slope Stability Analysis**	E4-2
bb	☐	☒	**Seed Mix Guideline**	E6-4
cc	☐	☒	**Other: Stevensville Airport Letter**	**B4-2**
dd	☐	☐	Other:	
ee	☐	☐	Other:	
ff	☐	☐	Other:	
gg	☐	☐	Other:	
hh	☐	☐	Other:	

7. Sign and date the certification in Section G.
8. Submit all required application materials to the Opencut Mining Section in Helena as one package.

SECTION A – APPLICATION INFORMATION

A1. General Information *[MCA 82-4-432 & 82-4-403(6)] & [ARM 17.24.218]*

1. Indicate which of the following is being requested (check one):
   ☐**Permit** ☒**Amendment** ☐**Convert Limited Opencut Operation to a Permit**
   ☐**Reclamation Only (Used only with prior Department approval):** Complete Instructions pages - items 1 through 8, Sections A1-1 through A1-6, A1-10, A1-11, A2, Section E, and provide a Reclamation Map and BCT of the existing permitted boundary. The Department may also require the Operator to provide detailed site-specific conditions and reclamation plans, including but not limited to information for sections C2, C3 and D5.

   If for a **Permit or to Convert a Limited Opencut Operation to a Permit,** skip to A1-2 and complete the remainder of this document. If for **Reclamation Only,** follow the directions above in A1-1. If for an **Amendment,** proceed to the below:

   If for an **Amendment:**
   a. Update all the information in this document.
   b. The existing permit number is: **2863**
   c. Identify all the purposes of the amendment:
      ☒**Change Reclamation Date**
      ☐**Change Postmining Land Use**
      ☐**Change Site Name** – Former Site Name was:
      ☐**Change Seed Mix**
      ☐**Change Mining Depth**
      ☒**Add Acreage**
      ☒**Add the following processing equipment:**
      ☒Asphalt Plant ☐Concrete Plant ☐Crusher ☐Grizzly ☐Pug Mill ☐Screen ☐Wash Plant
      ☐Other:
      ☒ **Change the Hours of Operation**
      ☐ **Change Landowner(s)** – Previous Landowner's Name:
      ☐**Other:**

2. Operator Name: **Jake Yoder**

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Site Name: **Yoder Gravel Pit**

Address: **964 Stevensville Airport Road**
City: **Stevensville** State: **MT** Zip Code: **59870**
Office Phone # **None** Cell # **406-274-8348** Fax # **None** Email: **None**

3. Name of the person who will be familiar with this *Plan of Operation & Application* (must be an owner and/or employee of the company and not a consultant): **Jake Yoder** Office Phone # **None** Cell #: **406-274-8348** Email: **None**

4. Landowner 1 Name: **Jake Yoder**
Address: **964 Stevensville Airport Road**
City: **Stevensville** State: **MT** Zip Code: **59870**
Phone #: **406-274-8348** Optional Additional Contact Information (e.g. email, other phone #): **None**
If there is an additional landowner, provide contact information below; otherwise leave blank.
Landowner 2 Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ Optional Additional Contact Information (e.g. email, other phone #): _____
Additional Landowners (if applicable use same format as above):

5. County where the proposed site is located: **Ravalli**

6. Legal Description (Includes Permit Area, Access Roads, and Non-Bonded Areas):
Section(s) 24 & __ Township 9 ☒North or ☐South Range 20 ☐East or ☒West
Section(s) __ & __ Township __ ☐North or ☐South Range __ ☐East or ☐West
Additional Sections, Township & Range (if applicable use same format as above): _____

7. What type of materials will be mined from the permit area?
☐Bentonite ☐Clay ☒Gravel ☐Peat ☐Sand ☐Scoria ☐Soil
☐Mixtures including any of the above substances (i.e. borrow material)
☐Additional Information:

8. What processing equipment could be used in the permit area?
☐None ☒Asphalt Plant (answer D6-1a) ☐Concrete Plant (answer D6-1b) ☒Crusher ☒Pug Mill
☒Screen ☒Grizzly ☐Wash Plant (answer D6-1c) ☐Other:

9. Estimated Quantity of Mine Material to be Excavated and removed from the Entire Permit Area : **550,000 cubic yards**

10. **Total Permit Acreage Breakdown** ***(acreages must be entered to the nearest TENTH of an acre)***

	Existing or New Permit Acres	Amendment Acres (if any)	Total Permitted Acres
a. **Bonded Acres***	13.1	14.2	27.3
b. **Non-Bonded Acres****	0	22.4	22.4
c. **Access Road Acres*****	0	0	0.0
Totals	13.1	36.6	49.7

Note: To ensure that the "Totals" display, use the Tab key after entering each acreage amount.

a. *Although Government Operators do not "bond," they would fill in this row only to display entire permitted acreage.
b. **Government Operators cannot have non-bonded acres and would not fill in this row.
c. ***Completed only if Landowner Consultation form states an access road would be permitted.

11. **Private Operators Proposing to Permit Non-Bonded Area:**
If Non-Bonded acreage is proposed, the Operator agrees not to disturb any Non-Bonded acreage for any Opencut operation until: a) the Operator submits a *Request to Commence Operations in Non-Bonded Area* form with appropriate attachments and a reclamation bond, and b) the DEQ provides written approval of the request.

A2. ADDITIONAL INFORMATION *[MCA 82-4-432(1) & 82-4-434(3)] & [ARM 17.24.222]*

1. If applicable, provide additional application information not addressed above.
Answer: None

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SECTION B – PRE-MINE INFORMATION

Note: If a Pre-Application Meeting was conducted by the DEQ, information from the inspection report can typically be used to complete portions of section B.

B1. DIRECTIONS TO SITE *[ARM 17.24.221(6)]*

1. Describe in detail how to get from the nearest town or major intersection to the permit area. Provide directions that can be interpreted and followed by anyone viewing the location map for the site, both now and in the future (e.g. identify roads, mileposts, landmarks, and distances; include information on how to obtain keys or combinations for locks).
   Answer: From the town of Stevensville, go east on Eastside Hwy for approx. 1.2 miles. Follow Eastside Hwy as it curves left (to the north) for another mile. The site is to the east. The address is 4376 Eastside Hwy.

B2. TOPOGRAPHY *[MCA 82-4-403(11)(b)]*

1. Describe in detail the terrain in and within 1,000 feet of the permit area (for example: hills, valleys, ridges, drainages, cliffs, and benches).
   Answer: Low, linear ridge paralleling the toeslope of a higher terrace on the edge of broad outwash plains extending westward.

B3. LAND USES *[MCA 82-4-403(11)(b)]*

1. Indicate current land uses within the permit area.
   ☐Cropland/Hayland ☐Forest/Timberland ☐Industrial/Commercial ☐Oil/Gas ☒Opencut Operation
   ☒Pasture/Rangeland ☐Residential ☐Other:

2. Indicate current land uses within 1,000 feet of the permit area.
   ☒Cropland/Hayland ☐Forest/Timberland ☒Industrial/Commercial ☐Oil/Gas ☐Opencut Operation
   ☒Pasture/Rangeland ☒Residential ☐Other:

B4. STRUCTURES, FACILITIES, & SURFACE DISTURBANCES *[MCA 82-4-434(3)(n)] & [ARM 17.24.218(1)]*

1. Identify the manmade structures, facilities, or surface disturbances within the permit area.
   ☐None ☐Construction Project ☐Farming ☐Industrial/Commercial ☐Oil/Gas Structures or Pipelines
   ☒Opencut Operation ☐Overhead Power Lines or Facilities ☐Residential ☐Roads
   ☐Underground Utilities (e.g. electrical, fiber optic, water, sewer, phone, etc.) ☐Other:

2. Identify the manmade structures, facilities, or surface disturbances within 1,000 feet of the permit area.
   ☐None ☐Construction Project ☒Farming ☒Industrial/Commercial ☒Oil/Gas Structures or Pipelines
   ☐Opencut Operation ☐Overhead Power Lines or Facilities ☒Residential ☒Roads
   ☒Underground Utilities (e.g. electrical, fiber optic, water, sewer, phone, etc.) ☒Other: Stevensville Airport is located within 1,000 feet east/northeast, but approximately 100 vertical feet higher up on a terrace and out of sight.

B5. SURFACE WATER FEATURES *[ARM 17.24.218(1) & 17.24.221]*

1. Identify any surface water features within the permit area.
   Note: This includes features that may contain water at any time, including seasonal ponds, ephemeral drainages, runoff channels, ditches, floodways, etc.

   ☒None ☐Ephemeral Drainage ☐Irrigation Ditch/Canal ☐Lake/Pond ☐River– Name: ☐Spring
   ☐Stream/Creek – name: ☐Wetlands ☐Other:

2. Identify any surface water features within 1,000 feet of the permit area.
   Note: This includes features that may contain water at any time, including seasonal ponds, ephemeral drainages, runoff channels, ditches, floodways, etc.

   ☒None ☐Ephemeral Drainage ☐Irrigation Ditch/Canal ☐Lake/Pond ☐River– Name: ☐Spring
   ☐Stream/Creek – name: ☐Wetlands ☐Other:

B6. VEGETATION *[ARM 17.24.219(h) & 17.24.222]*

1. Provide a list of the dominant grasses, forbs, shrubs and trees located within the permit area. If the species are not indicated in the check boxes below, check the "Other" box and list them.
   ☐Bluebunch Wheatgrass ☐Blue Grama ☐Canada Wildrye ☒Cheatgrass ☐Conifer ☐Cottonwood
   ☐Creeping Juniper ☐Crested Wheatgrass ☐Crop ☐Curly Cup Gumweed ☐Green Needlegrass
   ☐Intermediate Wheatgrass ☐Juniper ☐Kentucky Bluegrass ☐Prairie Junegrass ☐Rubber Rabbit Brush

☒Sagebrush ☐Slender Wheatgrass ☐Smooth Brome ☐Sweetclover ☐Willow ☐Western Wheatgrass
☒Other: various grasses and forbs cheat grass was dominant.

2. Identify the Noxious Weeds present within the permit area.
If the species are not indicated in the check boxes below, check the "Other" box and list them.
☐None ☒Canada Thistle ☐Dalmatian Toadflax ☐Field Bindweed ☐Houndstongue ☐Leafy Spurge
☒ Knapweed ☐Tansy Ragwort ☐Whitetop ☐Sulfur Cinquefoil ☐Tamarisk ☐Other:

B7. WILDLIFE *[MCA 82-4-402(2) & 82-4-403(13) & 82-4-434(3)] & [ARM 17.24.219 & 17.24.222]*

1. Indicate the fish and wildlife species in and within 1,000 feet of the permit area.
☐Antelope ☐Black Bear ☒Coyotes ☒Deer ☐Elk ☐Fish ☐Fox ☐Grizzly Bear ☐Moose ☒Raptors
☒Rodents ☐Sage Grouse ☒Song Birds ☐Upland Birds ☐Waterfowl ☐Wolves ☐Other:

2. **Sage Grouse Consultation** - If sage grouse was checked above, and the permit area is regulated by the Montana Sage Grouse Habitat Conservation Program, then refer to page 1, section 6a of this form and ensure the consultation letter from the Montana Sage Grouse Habitat Conservation Program is attached.
In addition, ensure all requirements of the DNRC letter are addressed in the *Addendum for Opencut Operations In Sage Grouse Habitat* document found here: http://deq.mt.gov/Land/opencut/opencutpermitforms
Additional Information:

B8. WELLS (water, oil, gas, etc.) *[ARM 17.24.218(1)(g) & 17.24.221]*

1. In the table below, list the required information for wells in and within 1,000 feet of the permit area.
   - Information and well logs can be obtained from the Ground Water Information Center (GWIC) at http://mbmggwic.mtech.edu or by using the "Mapping DEQ's Data" found at http://svc.mt.gov/deq/wmadst.
   - The DEQ recommends obtaining well information from the Montana Department of Natural Resources and Conservation (DNRC), and Board of Oil and Gas websites to determine the location of any oil and gas wells in the vicinity of the permit area.
   - Additional information may be available from landowners or by conducting field measurements.
   - Provide depths and static water levels in feet below the ground surface.
   - Well locations must be reasonably accurate. In cases where well locations are unavailable or appear inaccurate, field confirmation may be required.
   - Locations of existing and proposed wells in and within 1,000 feet of the permit area must be shown and labeled on the Area Map or if more appropriate a separate well location map.
   - Well logs in excess of 1,000 feet from the proposed permit boundary can be submitted and shown below if they provide relevant information. If provided, their location must be shown on the appropriate map.
   - If there are no wells in and within 1,000 feet of the permit area, write "None" in the table below and skip to B8-4.

   * Use these codes to fill in the "Use" Column below: D = Domestic, Ind = Industrial, I = Irrigation, L = Lawn & Garden, P = Public, S = Stock, O = Other

Well I.D. on Map	Well Owner	Distance & Direction from Permit Area Boundary	Total Well Depth (feet)	Static Water Level (feet)	Use	Log Attached	Comments
60100	Donald Sawhill	325' SW	22	10	D, S	☒Yes ☐No	
60097	Jay Meyer	350' S	254	190	D	☒Yes ☐No	
292210	Orlie Troyer	350' NW	120	37	D	☒Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	
						☐Yes ☐No	

Note: If there are additional wells check the appropriate box on page 2 and attach the Opencut Mining Section's

Additional Well Data form available at:
(http://deq.mt.gov/Portals/112/Land/Opencut/Documents/Forms/AdditionalWellData.xlsx).

2. Attach the above identified Well Logs to this application submittal and check the appropriate box on page 1.
3. Are there wells located within 1,000 feet of the permit area that are used for public water supply? ☐Yes ☒No
   If Yes, contact the DEQ Water Protection Bureau to determine setbacks and restrictions and incorporate those into this application. **Further Information (if applicable):**
4. Are there any Oil or Gas wells located in or within 1,000 feet of the permit area? ☐Yes ☒No
   If Yes, the Operator may be required to provide information about additional wells, buried pipelines, and petroleum release sites that may be present in the vicinity. **Further Information (if applicable):**

B9. ADDITIONAL INFORMATION *[MCA 82-4-432(1) & 82-4-434(3)] & [ARM 17.24.222]*

1. If applicable, provide additional pre-mine site characteristics or circumstances not addressed above.
   Answer: The three water wells within 1,000-ft are shown on the site map according to data from GWIC. These locations have been field verified to be incorrect. Well ID 292210 is for the Post & Pole Mill located further to the west. Well ID 60100 can not be located in the field. It is assumed that since the well is 100 years old it has been abandoned or the data is incorrect. Well ID 60097 is assumed to be further to the southwest based on the well depth and static water level recorded.

SECTION C – SITE PREPARATION AND PLANNING

C1. WATER TABLE LEVELS *[ARM 17.24.218(1)(g)]*

Provide information below for the permit area.

- The seasonal high water table is the highest level that water typically rises to each year.
- The seasonal low water table is the lowest level that water typically falls to each year.

1. The estimated maximum depth of mining is: **20 feet below ground surface**
2. The estimated seasonal high water table level is: **20 feet below ground surface**
3. The estimated seasonal low water table level is: **25 feet below ground surface**
4. How did you determine the seasonal high & low water table levels?

   ☒**Well Logs** ☐**GWIC Well Data** ☐**Landowner Observation-Describe:**

   ☐**Field Observation-Describe:** ☒**Other: The max depth of mining along the ridge line on the eastern portion of the permit area will be 20 feet. The max depth of mining on the lower elevations to the west will be 15 feet. The most recent well (Well ID 292210) shows a static water level of 37 feet. Water was encountered in Soil Test Hole T6 on the lower elevation at approximately 25 feet.**

Seasonal high water table:	20 feet
Maximum depth of mining;	20 feet
Difference =	0 feet

   a. If the difference is ≥3 proceed to Section C2.
   b. If the difference is ≤0, a pond and/or wetland will be left for final reclamation,. Operator must include "pond" or "wetland" as a postmining land use in Section E2-2, as well as complete Section E3.
   c. If the difference is >0 and <3, soil could become saturated or ground water could occur in some portions of the pit. Therefore, explain how the Operator will maintain a minimum of 3 feet of separation between the seasonal high water table and the reclaimed ground surface (e.g. The Operator will: backfill the site to maintain a minimum 3 feet of earthen material between water and the reclaimed ground surface; construct a permanent drainage mechanism; etc.):

      ☐ **Operator will use on-site materials to ensure that a minimum of 3 feet of material is maintained above the seasonal high water table. No water feature would remain for final reclamation.**

      ☒ **Other: Explain: The max depth of mining of 20 feet will take place along ridges and raised elevations. The information obtained for the water table levels is based on depths taken on the lower permit area elevations. Mining at the these lower elevations will be a max of 15 feet which will allow for a difference of 5 feet between the depth of mining and the seasonal high water table.**

C2. SOIL AND OVERBURDEN *[MCA 82-4-403(14) & 82-4-434(3)(c)] & [ARM 17.24.218(c-d) & 17.24.220(2)(b)]*

1. In the table below, provide soil and overburden thickness data obtained from test holes excavated within the proposed permit area (bonded and non-bonded areas). The Operator is required to provide no less than three test holes spaced

representatively to describe proposed permit areas of less than nine acres, and one test hole per each three-acre area for proposed permit areas of nine acres or more, with a maximum of 20 representatively spaced test holes for proposed permit areas that exceed 60 acres, or as otherwise approved by the DEQ.

- **Clear, labeled photos showing the top three feet of the soil profile with a visible scale must be provided to the DEQ for each test hole. Soil photos must be labeled with the *Soil Test Hole ID* (see below table) and their locations must be shown on the site map.**
- Test holes must be of sufficient depth to measure the thicknesses of soil and overburden (minimum of 3 feet deep).
- Exposures of the soil and overburden profile, such as a roadcut, may be used in lieu of a test hole, as long as 3 feet of the profile is exposed and clear photos are taken.
- The soil is usually darker than overburden, may contain roots, and typically extends deeper than just the top few inches of rich organic matter. The number of roots and degree of darkening typically decrease with depth. Soil is the "growth media" that allows for successful revegetation. Soil in many areas is rocky, but that does not alter the need to save it for use in reclamation.
- Test hole and observation point locations must be shown on the Site Map *[ARM 17.24.221(3)]*.
- For tips on proper identification of soil depths and taking photos that will be accepted by the Opencut Mining Section, refer to the Opencut Mining Section's *Soil Photo Guideline* under G4 at: http://deq.mt.gov/Land/opencut/opencutpermitforms
- NRCS soil data can be used as a reference but does not replace onsite soil data.

2. **Date test pits were dug: 10/2018**
   Logged by: C. Fisher

*If test hole is dry, either answer with "none" in "Depth to Water" column, or leave it blank.

Soil Test Hole I.D. on Map	Soil Thickness (inches)	Overburden Thickness (inches)	*Depth to Water (ft)	Comments (e.g. soil and overburden type, texture, or structure, rock content, root description, etc.)
T1	16	0	none	
T2	12	0	none	
T3	10	0	none	
T4	10	24	none	
T5	8	0	none	
T6	10	0	25	
T7	12	12	none	
T8	12	0	none	
T9	12	0	none	
T10	10	0	none	
T11	12	12	none	
T12	14	0	none	
T13				
T14				
T15				
T16				
T17				
T18				
T19				
T20				

ARM 17.24.218(1)(c) requires that clear, labeled photos showing the top 3 feet of the soil profile with a visible scale must be provided to the DEQ for each test hole. Label the soil photos and site map with the proper *Test Hole I.D.* as provided in the table in Section C2-2 of the application (i.e. T1, T2, T3, etc.).

3. If the required number of test holes were dug, skip to C2-4. If the minimum number of required test holes were not dug for this site, then explain in detail why not:
   ☐ **Permit area is contained within seeded and/or growing cropland and is relatively flat and uniform throughout and a representative number of test holes were dug to adequately describe the proposed soil and overburden depths within the cropland area.**
   ☐ **Other:**
   Note: This application may be found deficient if test holes do not meet the specifications described in C2-1 above and ARM 17.24.218(1)(c).

4. **In the table below, provide soil and overburden thicknesses to be replaced for reclamation to the nearest inch.** If available, up to 24 inches of soil and overburden must be saved for reclamation.
   Note: If overburden is a mine material or will be used as binder, an appropriate quantity must first be saved to satisfy the soil plus overburden replacement thickness requirement (24 inches cumulative).

Soil	Average Soil Thickness (inches) to be Saved for Reclamation
Permit Area Soil	11
Permitted Access Road Soil	N/A
Overburden	**Overburden Thickness (inches) to be Saved for Reclamation**
Permit Area Overburden	0
Total Soil & Overburden to be Saved for Reclamation (up to 24 inches required if available).	11

   a. If the average depth of soil at this site is 24 inches or less, skip to C3. If the average depth of soil at this site is greater than 24 inches, explain what will be done with the excess soil:
      ☐ Soil in excess of 24 inches will be salvaged, stockpiled and replaced for final reclamation.
      ☐ Soil in excess of 24 inches will not be saved for final reclamation, but will leave the site. Operator understands they must save, stockpile and replace the top 24 inches of soil for final reclamation.
      ☐ Other: Explain
   b. Additional Information (if applicable):

5. Operator will strip, stockpile, and save 11 inches of Permit area soil, and N/A inches of Permitted Access Road soil for use in on-site reclamation.*
   a. The total volume of soil to be stripped, stockpiled and saved for reclamation is 73,301 cubic yards of Permit area soil, and 0 cubic yards of Permitted Access Road soil (unless the road will remain as a postmining land use).**
   b. Volume of soil in 1 acre: -1,479 cubic yards of Permit area soil per acre, and 0 cubic yards of Permitted Access Road soil per acre to be stripped, stockpiled and saved for reclamation.

6. Operator will strip, stockpile and save 0 inches of overburden for use in on-site reclamation.*
   a. The total volume of overburden to be stripped, stockpiled and saved for reclamation is 0 cubic yards.*
   b. Volume of overburden in 1 acre: 0 cubic yards of overburden per acre to be stripped, stockpiled, and saved for reclamation.

   **These soil & overburden thickness values must be used in the Reclamation Bond Spreadsheet.*

   ***The total volume of soil and overburden to be stockpiled is automatically calculated using the following formula:*

   Example – For 14 inches of soil on a 12 acre site:

   $$\frac{(12 \text{ acres} \times 43{,}560 \text{ ft}^2) \times (14\text{" soil} \div 12\text{" in one foot})}{27 \text{ ft}^3} = 22{,}586 \text{ cubic yards of soil to stockpile}$$

C3. EXISTING SITE CONDITIONS *[ARM 17.24.221(3)]*

1. Is an existing disturbance located within the proposed permit boundary (e.g. Permitted, Unpermitted, Historical, Short Form, Limited Opencut Operation, etc.)? ☒ Yes ☐ No
   If No, skip to C4.
   a. If Yes, provide the quantity of on-site soil currently stockpiled and available for reclamation of the disturbed site.

☐ None or ☒ **8500 cubic yards**

b. Is the quantity of soil listed in C3-1a adequate to reclaim the disturbed area?
☐ No, skip to C3-1c.
☒ Yes, an adequate quantity of soil is currently stockpiled on-site to successfully reclaim the disturbance with the depth of soil identified in Section C2-4 (i.e. **11** **inches of permit area soil**).
The location of these soil stockpiles must be identified on the site map. Skip to C3-1d.

c. If No to C3-1b above, where will the soil come from to reclaim the disturbance with the depth of soil identified in C2-4 (Average Soil Thickness to be Replaced for Reclamation)?
☐ The Operator calculated the thickness of soil to be saved for reclamation that is identified in C2-4 to ensure the existing disturbed area and all other areas of the permit will be reclaimed with **11** **inches of permit area soil** and **0** **inches of pemit area overburden**. This thickness of soil to be saved for reclamation was calculated using the volume of existing stockpiled soil (if present) in combination with averaging the amount of soil to be obtained from the currently undisturbed areas of the permit.
Additional Description (if applicable):
☐ Soil will be imported to the site: **Quantity of Soil to be Imported =** **cubic yards.** Ensure this quantity is added to the *Reclamation Bond Spreadsheet's* line item *Cost to Import, Purchase and Place Soil* and that it is identical to the quantity identified here.
Additional Description (if applicable):
☐ **Other Explanation:**

d. Will the disturbed area that is contained within the proposed permit boundary be used for further Opencut operations or will it be reclaimed only? ☐ **Reclaimed Only** ☒ **Used for further Opencut Operations** ☐ **Other-Describe:**

C4. ACCESS ROADS *[MCA 82-4-403(1) & 82-4-431(2)(c)] & [ARM 17.24. 202(1); 17.24.206(2); 17.24.218(1); 17.24.219(1)(e); & 17.24.221]*

1. An access road is an existing or proposed non-public road that connects an Opencut operation to a public road or highway [ARM 17.24.202]. A private road may be included as affected land only with the landowner's consent [MCA 82-4-403(1)]. Therefore, existing or proposed access roads are included in this permit only if:
   a. Question A on the *Landowner Consultation* form is marked "Yes," or
   b. The Operator is the landowner and has included access roads in this permit.

2. The following requirements apply to a Permitted Access Road:
   - Permitted access roads must be: 1) appropriately bonded, 2) delineated with coordinates, and 3) shown on the Site Map.
   - Surface water features within 500 feet of permitted access roads must be shown on the Area Map.
   - Permitted access roads that will not be left at the conclusion of Opencut operations must be reclaimed as follows:
     a. Remove the materials used for road construction, widening, or improvement (such materials may include culverts, gravel, and pavement).
     b. Backfill and grade the former road area in a manner that leaves stable surfaces which blend into the surrounding topography and drainages.
     c. Rip all compacted ground, replace soil, seed, and support revegetation as necessary.

C5. HOURS OF OPERATION *[MCA 82-4-434](3)(m)] & [ARM 17.24.218(1)(j)]*

1. The **DEQ may impose reasonable limits on hours of operation to reduce adverse impacts on residential and sage grouse areas. The Operator must propose hours of operation by checking box "a", "b" or "c" below (thereby adopting the hours stated), or by checking box "d" and providing the required information.**

   Note: Equipment start-up and warmup is part of operations and can only occur within the below designated hours of operation.

   a. ☐ Permitted hours and activities are as follows:
   - Monday–Friday: 7:00 am-7:00 pm Activities: All permitted activities allowed

   or

   b. ☒ Permitted hours and activities are as follows:
   - 24 hours a day, 7 days a week, 365 days a year Activities: All permitted activities allowed

   or

   c. ☐ Site is located in Sage Grouse Core and/or General Habitat and/or Interconnectivity area, and the permitted hours of operation are restricted to those recommended and/or stipulated in the attached Montana Sage Grouse Habitat Conservation Program's letter and/or in the Opencut Mining Section's *Addendum for Opencut Operations in Sage Grouse Habitat* document found here: http://deq.mt.gov/Land/opencut/opencutpermitforms

   or

   d. ☐ Permitted hours and activities are as follows:

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- Mon–Fri: _____ am- _____ pm Activities: ☐**All Activities** ☐**Crushing** ☐**Hauling** ☐**Loading** ☐**Maintenance** ☐**Mining** ☐**Other**
- Saturday: _____ am- _____ pm Activities: ☐**All Activities** ☐**Crushing** ☐**Hauling** ☐**Loading** ☐**Maintenance** ☐**Mining** ☐**Other**
- Sunday: _____ am- _____ pm Activities: ☐**All Activities** ☐**Crushing** ☐**Hauling** ☐**Loading** ☐**Maintenance** ☐**Mining** ☐**Other**

Additional information:

C6. MAPPING *[MCA 82-4-403(11)(b)] & [ARM 17.24.221]*

1. An application must include the following four maps: Site Map, Area Map, Reclamation Map, and Location Map. The application may also include any other maps necessary to describe the proposed Opencut operation. Except as provided in paragraph (6) of ARM 17.24.221, maps submitted to the Opencut Mining Section in accordance with ARM 17.24.221 must be legible and on a color air-photo base and in a scale sufficient to clearly describe the subject matter. Maps submitted in other than electronic format must fill an 8½- by 11- or an 11- by 17-inch sheet leaving margins of approximately ½ inch. Refer to the Map Guideline for additional information: http://deq.mt.gov/Land/opencut/opencutpermitforms
2. The following items must be shown on all maps provided to the DEQ:
   a. Map name;
   b. Operator name;
   c. Site name;
   d. Legal description of the proposed permit area;
   e. Bar scale;
   f. Date of drafting; and
   g. North arrow
3. **Site Map** – Displayed on an aerial photo base and must show and identify the applicable existing and proposed features identified in ARM 17.24.221(3).
4. **Area Map** – Displayed on an aerial photo base and must show and identify the applicable existing and proposed features within 1,000 feet of the proposed permit boundary as identified in ARM 17.24.221(4).
5. **Reclamation Map** - Displayed on an aerial photo base and must show and identify the applicable existing and proposed features as identified in ARM 17.24.221(5).
6. **Location Map** – Displayed on an aerial or topo base and must show the site's location in relation to the nearest town, city, or major intersection and be sufficient to allow the public to locate the proposed site [ARM 17.24.221(6)].
7. **Boundary Coordinate Table** – In accordance with the *Map Guideline*, WGS 84 Decimal Degree coordinates defining permit boundaries must be provided on the Opencut Mining Section's *Boundary Coordinates Table* and the appropriate box on page 1 must be checked. The Opencut Mining Section will not accept boundary coordinates on any other form or in any other format. Boundary coordinates must be provided as necessary to define the following points or line segments:
   a. Each corner of the proposed permit boundary;
   b. Each point where the direction of the proposed permit boundary changes;
   c. The Non-Bonded and Bond Reduction areas (refer to the *Boundary Coordinates Table* for further information); and
   d. The centerline of any permitted access roads as necessary to show the approximate locations of corners, curves, and the start and end points.
8. **LEGENDS** – Legends are a useful tool used to explain what the symbols and line types denoted on a map represent. If a legend is used, the Operator must display the symbol or line type that denotes a feature or features on the map with text explaining what the symbol or line type is. Text cannot be used in lieu of displaying the symbol in the legend (e.g. black line = stockpile & green dot = soil test pit; are not acceptable). Refer to the Map Guideline for additional information.

C7. MARKERS *[ARM 17.24.218(1)(a)]*

1. The following requirements apply to marking the permit boundary:
   - Markers must be in place when the application is received by the DEQ so the site is clearly defined for field inspections. DEQ staff cannot inspect sites that are not marked.
   - Markers should be durable (stout steel posts are recommended), and painted or flagged to be highly visible. Each boundary marker must remain in place until the adjacent permit area is reclaimed and released.

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- Markers must be placed to delineate the physical extent of the following permit areas:
  - Permit & Amendment boundaries
  - Bonded & Non-Bonded Areas
  - Permitted Access Roads - Once the road is constructed it will no longer need to be staked.
  - Bond Reduction Areas
  - Request to Commence Areas
- Markers must be placed in corners and along boundary segments and curves, such that the next marker is visible.

2. Unless the site is active farmland, the application for an unmarked site is deficient and cannot be inspected or approved until the permit boundary is appropriately marked.

C8. ADDITIONAL INFORMATION *[MCA 82-4-432(1) & 82-4-434(3)] & [ARM 17.24.222]*

1. If applicable, provide additional site preparation and planning information not addressed above.
   Answer: None

SECTION D – WATER PROTECTION, MINING & PROCESSING

D1. WATER PROTECTION *[MCA 82-4-434(3)(f)] & [ARM 17.24.218(1)]*

1. Operator must:
   a. Protect on-site and off-site surface water and ground water from adverse changes in quality and quantity that could be caused by Opencut operations.
   b. Prevent, minimize, or mitigate adverse impacts to on-site and off-site surface and ground water systems and structures that could be caused by Opencut operations.
   c. Properly establish, use, and reclaim hydrologic structures and systems used for Opencut operations.
   d. Keep waste and stationary equipment above the seasonal high water level of surface and ground water and dispose of all petroleum, solvent, and chemical wastes in compliance with applicable state laws and rules.
   If a facility has cumulative above-ground storage capacity of 1,320 gallons or more of regulated liquids, then a SPCC Plan (Spill Prevention, Control and Countermeasure Plan) is required for water protection. It is the Operator's responsibility to determine if the on-site storage for asphalt binder, fuel, oil, and regulated liquids at the site requires an SPCC Plan. If so, the Operator must have that plan in place in accordance with the EPA's rules (40CFR112).
   e. Manage fuel storage as follows:
      i. Install or construct secondary containment structures for all single-wall fuel storage tanks in accordance with the current codes adopted by the State Fire Marshall. Note: Secondary containment structures are required to be liquid tight. This requirement applies to such tanks placed and used in and within 300 feet of the permitted area (including permitted access roads).
      ii. Routinely inspect and maintain tanks, fittings, hoses, filters, and dispensers to prevent leaks and spills.
      iii. Retrieve, handle, and dispose of spilled fuel and contaminated materials and soil in a lawful manner.
      iv. Report a fuel spill that reaches state waters or is greater than 25 gallons to the Montana Spill Hotline (406-324-4777). Note: "State waters" includes most surface water or ground water.
   f. Operator has reviewed and will comply with the current DEQ *Spill Management and Reporting Policy* document found on the DEQ's Enforcement website. If surface water and/or ground water could be impacted by Opencut operations, a site specific spill plan may be required.

2. Describe how equipment would be fueled at this site (check all that apply):
   ☐ **Fueled Off-Site**
   ☒ **Mobile Fuel Truck**
   ☐ **Non-Mobile On-Site Fuel Tank:** ☐ **Single Wall* or** ☐ **Double Wall**
   ☐ **Other:**
   * If fueled using a single wall tank, secondary containment must be provided; see D1-1e above.

3. Indicate below which types of erosion control methods and/or erosion control Best Management Practices (BMPs) would be used to prevent sediment from leaving the permitted site:
   ☐ **Berms** ☐ **Check Dams** ☐ **Erosion Control Blankets** ☐ **Sediment/Detention Ponds** ☐ **Silt Fence**
   ☐ **Straw Bales** ☒ **Tracking of Slopes** ☒ **Vegetated Buffer Strips: Width = 10 ft.**
   ☐ **Wattles** ☐ **Other BMPs:**

D2. WATER MANAGEMENT & USE *[MCA 82-4-434(3)(f)] & [ARM 17.24.218(1)(g, h & i) & [ARM 17.24.219(1)(b)]*

1. Water use, diversion and capture.
   a. Indicate the proposed use(s) of water:

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☒**Asphalt Plant** ☐**Concrete Batch Plant** ☐**Crusher** ☒**Dust Control (i.e. roads, crusher, etc.)**
☐**Pug Milling** ☐**Wash Plant** ☐**Other:**

b. Is the water source within 300 feet of the permit area? ☐ **Yes** ☒ **No**
If **No,** skip to D2-1c.
If **Yes,** identify the source of the water to be used and show its location on a map.
☐**Irrigation Ditch** ☐**Pit** ☐**Pond** ☐**Well** ☐**Other:**

c. Will water be stored on-site? ☐ **Yes** ☒ **No**
If **No,** skip to D2-1d.
If **Yes,** what will the water be stored in?
☐**Detention/Retention Pond** ☐**Lined Detention/Retention Pond** ☐**Water Storage Tank**
☐**Other:**

d. Operator must take all necessary precautions and measures to protect the water rights of other parties.

e. Operator has consulted with DNRC and understands their requirements regarding water rights and ground water development related to this Opencut operation. Operator has or will obtain the appropriate and applicable water rights to conduct the activities identified in D2-1.
☒ **Operator Agrees:** Additional Information (if applicable):

2. Will dewatering be conducted at this site? ☐**Yes** ☒**No**
If **No,** skip to Section D3.
If **Yes,** show the location of all pertinent features, related to dewatering, on the site map and provide the following information:

a. Describe how the site will be dewatered:
☐**Surface water flow from site via a ditch, drainage channel, etc.**
☐**Pumping from:** ☐Pond ☐Pit ☐Wells ☐Other:
☐**Other:**

b. What is the maximum rate at which dewatering will be conducted? _____ **gallons per minute (gpm)**

c. What is the lowest elevation to which the water level will be drawn down? _____ **feet**
i. Either attach, or provide below, data and analysis supporting the above water level draw down depth.
ii. If dewatering data and analysis are attached, check the appropriate box on page 2, or present the data and analysis here:

d. Dewatering will be conducted during which month(s):

e. Where will the water be discharged?
☐**Pond** ☐**Pit** ☐**Ditch** ☐**Creek** ☐**River** ☐**Ground Surface** ☐**Wells** ☐**Other:**

f. Provide additional information that explains how dewatering will not negatively affect nearby surface water, the ground water aquifer, or nearby wells:

D3. SETBACKS, EASEMENTS & PROHIBITED AREAS *[MCA 82-4-434] & [ARM 17.24.218(1)(h-k) & 17.24.221]*

1. The Opencut Act states that the DEQ cannot accept a plan of operation unless the plan provides that surface water and ground water will be given appropriate protection, consistent with state law, from deterioration of water quality and quantity that may arise as a result of the Opencut operation [MCA 82-4-434 (3)(l)].
Will Opencut operations be conducted within a waterway (e.g. ephemeral drainage, river, stream/creek, pond/lake, wetland or other surface water feature)? ☐**Yes** ☒**No**
If **No,** skip to Section D3-2.
If **Yes,** The *Stream/Waterway Guideline* must be followed and the Operator will need to include with the application the required items (http://deq.mt.gov/Portals/112/Land/Opencut/Documents/Forms/StreamWaterway.pdf).
Provide the required information below, or as a separate attachment. If the documentation is provided in a separate attachment, check an "Other" box on page 2 and list the document. If the *Stream/Waterway Guideline* is used check it on page 2.
Discussion:

2. Are there easements within or adjacent to the proposed Opencut boundary? ☐**Yes** ☒**No**
If **No,** skip to D3-3.
If **Yes,** show the easements and/or required setbacks on the site map and/or area map, and provide the following information:

a. The width of easements within or adjacent to the proposed Opencut boundary are as follows:
☐**Ditch:** Easement = _____ **ft.**
☐**Above Ground Utilities (e.g. power lines, poles, structures, etc.):** Easement =

☐**Underground Utilities (e.g. gas, oil, fiber optic, etc.):** Easement = _____ **ft.**
☐**Road:** Easement = _____ **ft.**
☐**Other:** Easement = _____ **ft.**
Further Explanation (if applicable):

b. The Operator must provide documentation from the dominant estate holding the easement (e.g. utility company, ditch rider, agency, private individual, etc.) describing its requirements, if any, for the easement. Check the appropriate box below, and on page 2, and attach the documentation.

☐**Easement holder has requirements for the easement and documentation is attached.** These may include: *a)* the required setback; *b)* crossing requirements; *c)* maximum ground slope allowed; and *d)* any other requirements for activities conducted under, over, or adjacent to the easement or the infrastructure it contains (e.g. inspections, safety, excavation, stockpiling, etc.).

☐**Easement holder has no requirements for the easement and documentation is attached.**

3. What other man-made structures, not listed in section D3-2 above could be affected by Opencut operations?
☒**None** ☐**Fences** ☐**Roads** ☐**Buildings** ☐**Other:** In accordance with ARM 17.24.221, these structures must be shown on the site map or area map.
If any structures could be affected, describe the mitigation measures that would be implemented to protect, repair, or replace the structures.
Mitigation:

4. Are there drainages, waterways, or other areas within or adjacent to the proposed permit boundary where Opencut operations would be prohibited, and from which a setback or buffer would be required [*ARM 17.24.218(1)(h & j)*]?
☐**Yes** ☒**No**
If No, skip to D4.
If Yes, check those that apply, provide the buffer/setback distance from the edge of the feature, and show the buffer/setback location on the site map:
a. ☐**Ephemeral Drainage:** Setback from edge of defined channel = _____ **ft.**
b. ☐**River:** Setback from edge of defined channel = _____ **ft.**
c. ☐**Stream/Creek:** Setback from edge of defined channel = _____ **ft.**
d. ☐**Pond/Lake:** Setback from high water mark = _____ **ft.**
e. ☐**Wetland:** Setback from delineated wetland = _____ **ft.**
f. ☐**Other:** _____ Setback = _____ **ft.**
Further Explanation (if applicable):

D4. MINING DESCRIPTION *[MCA 82-4-434] & [ARM 17.24.218(1)]*

1. Is the site expected to be worked continuously or intermittently?
☒**Worked continuously (i.e. year round)**
☐**Worked intermittently (i.e. on occasion when material is needed)**
Additional information (if needed):

2. Will any of the processing equipment identified in Section A1-8 be moved on-site and off-site as needed, or is it expected to remain on-site during the life of the permit?
☐**No Processing Equipment** ☐**Remain on-site** ☒**Move on-site and off-site as needed**
☐ **Additional Information:**

a. If "**Move on-site and off-site as needed**" was checked, identify which processing equipment:
☐**All** ☒**Asphalt Plant** ☐**Concrete Plant** ☒**Crusher** ☒**Grizzly** ☒**Pug Mill** ☒**Screen** ☐**Wash Plant**
☐**Other:**

3. Will processing equipment be stationary on the site or move with the highwall as mining progresses across the site?
☐ **Mobile processing equipment checked in A1-8 and mineral stockpiles would remain in one general location throughout the life of the permit (location is identified on Site Map)**
☒ **Mobile processing equipment checked in A1-8 and mineral stockpiles would move with mining activity (i.e. migrate with the highwall, etc.), within the permit boundary and constraints described in the permit.**
Further Explanation (if applicable):
☐**Other:**

4. Typically the following excavating or hauling equipment is used on-site:
Backhoe, Dozer, Dump/Haul Truck, Excavator, Loader, Scraper and Skidsteer.

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If applicable, identify any other equipment that may be used on-site:
☐**Drag Line** ☐**Dredge - Type:** ☐**Other:**

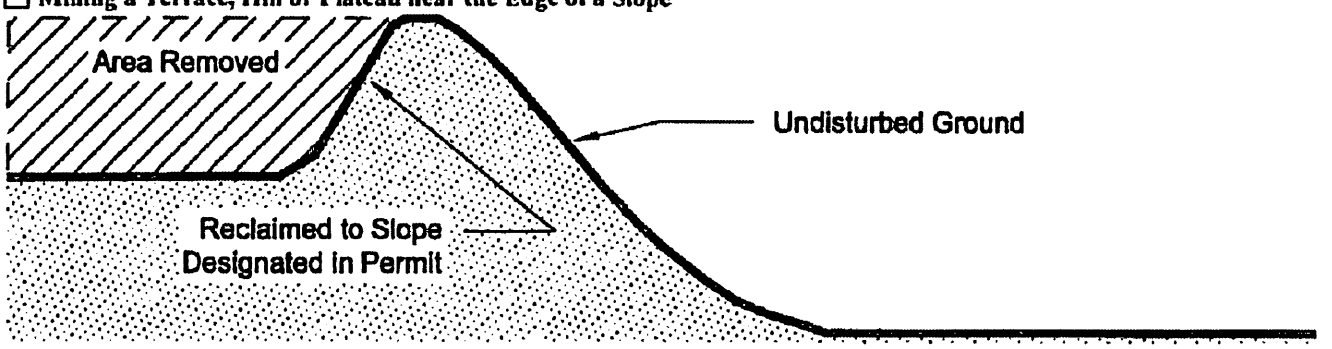
5. Describe where Opencut operations would begin at this site (e.g. north corner, west corner, southeast corner, etc.):
Opencut activities will begin at: Mining has begun in the southeast corner.

6. Describe the direction that Opencut operations would progress across the site over time (e.g. north to south, southeast to west then north, etc.):
Answer: Mining will progress to the west then north.

7. If there are no non-bonded areas, skip to Section D4-8 below. If the permit boundary contains non-bonded areas:
   a. Describe where Opencut operations will begin in the proposed non-bonded area(s), once they are bonded (e.g. north corner, west corner, southeast corner, center, etc.):
   Answer: Mining will begin in the south end of the non-bonded area.
   b. Describe in which direction the Opencut operation will progress in the proposed non-bonded area(s), once they are bonded (e.g. north to south, southeast to west then north, clockwise from center, etc.):
   Answer: Mining will progress north.
   Note: Operator must submit a *Request to Commence Operations in Non-Bonded Area* form and obtain written approval from the DEQ before any Opencut activities (i.e. disturbance, stripping, mining, parking, etc.) can be conducted in any non-bonded area(s).

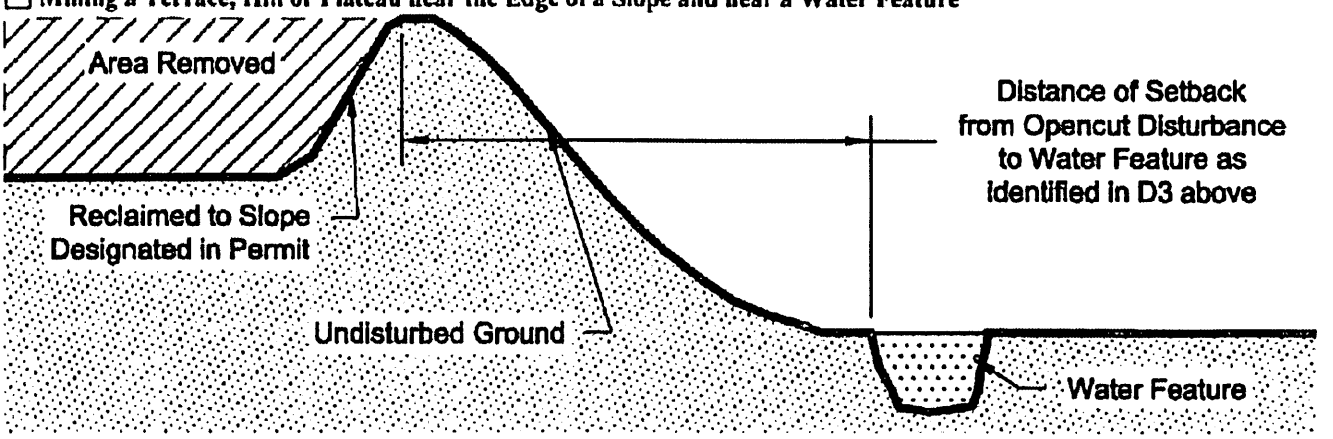
8. Choose all scenarios below that best describe the method of mining across the entire site. If none of the scenarios depict how the site would be mined, complete "8i" below with a detailed explanation.

   a. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope**



   i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐**All** ☐**North** ☐**South** ☐**West** ☐**East** ☐**Northwest** ☐**Northeast** ☐**Southwest** ☐**Southeast**
   Additional Information:

   b. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope and near a Water Feature**



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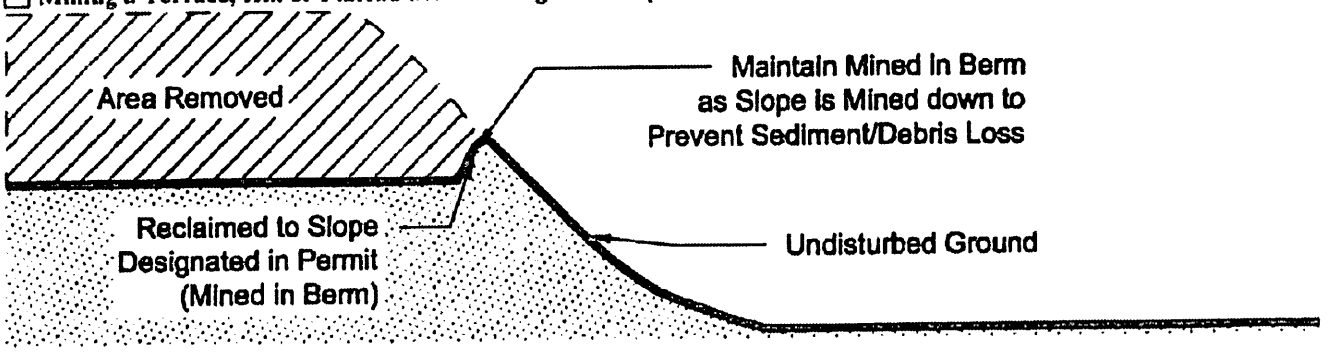
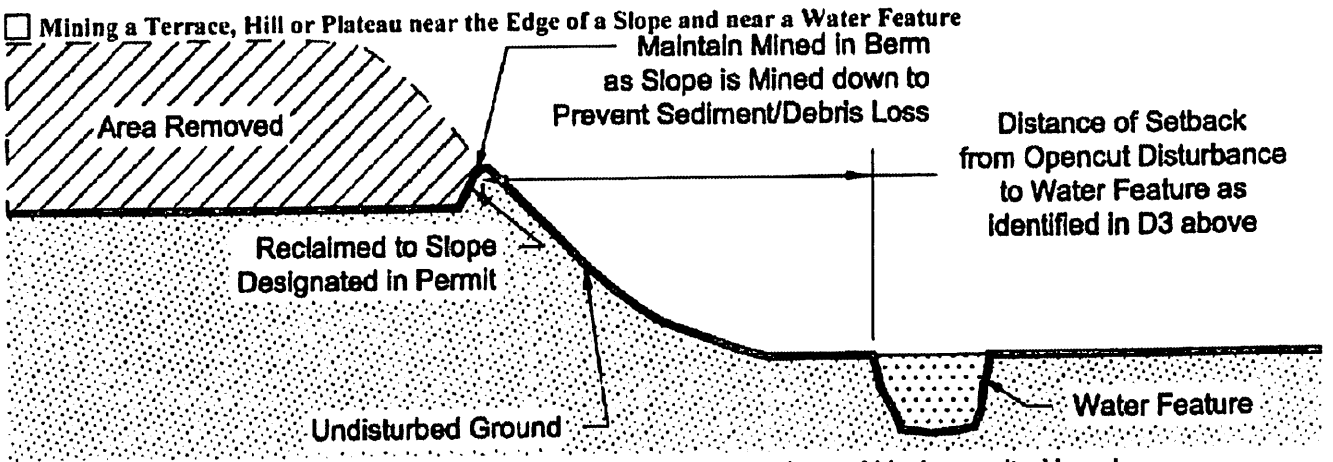
i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐All ☐North ☐South ☐West ☐East ☐Northwest ☐Northeast ☐Southwest ☐Southeast
Additional Information:

c. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope**



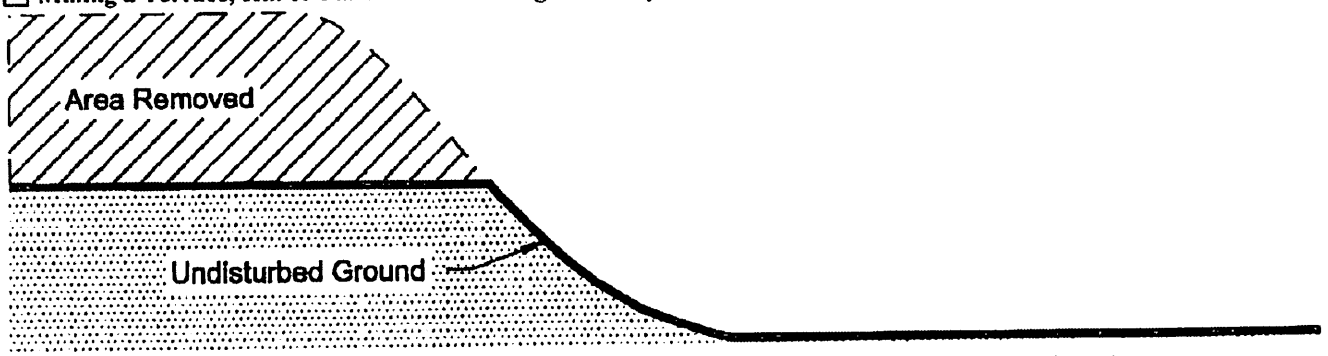
i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐All ☐North ☐South ☐West ☐East ☐Northwest ☐Northeast ☐Southwest ☐Southeast
Additional Information:

d. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope and near a Water Feature**



i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐All ☐North ☐South ☐West ☐East ☐Northwest ☐Northeast ☐Southwest ☐Southeast
Additional Information:

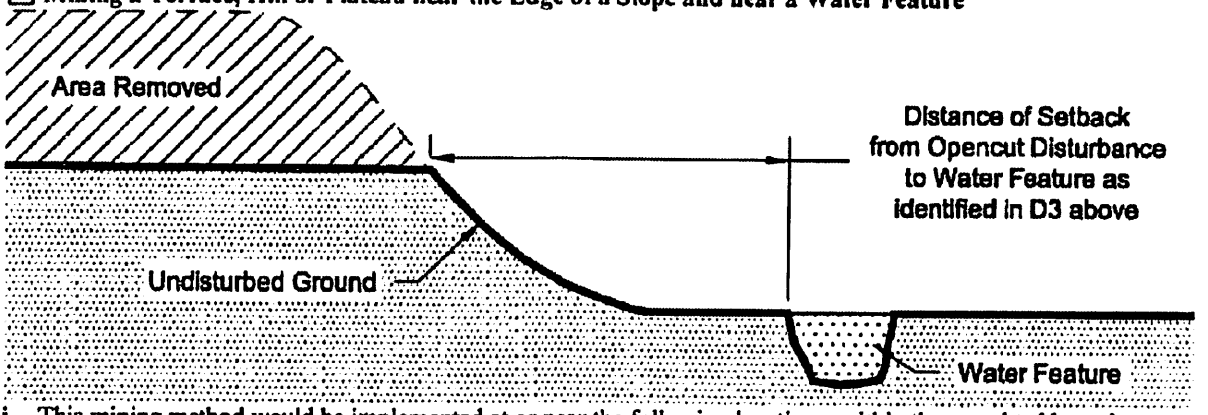
e. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope**



i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐All ☐North ☐South ☐West ☐East ☐Northwest ☐Northeast ☐Southwest ☐Southeast
Additional Information:

ii. This mining method requires the Operator to take extreme care to ensure that no sediment or debris erodes or rolls down the slope. The Operator would set up erosion control at the edge of the slope or slightly downslope of the edge (within permit boundary) to prevent loss of sediment and debris. Ensure D1-3 depicts the erosion control measures to be used.

f. ☐ **Mining a Terrace, Hill or Plateau near the Edge of a Slope and near a Water Feature**

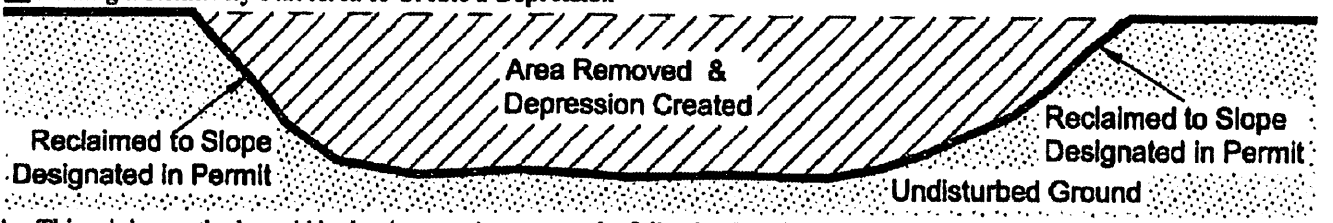


i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐**All** ☐**North** ☐**South** ☐**West** ☐**East** ☐**Northwest** ☐**Northeast** ☐**Southwest** ☐**Southeast**

Additional Information:

ii. This mining method requires the Operator to take extreme care to ensure that no sediment debris erodes or rolls down the slope. The Operator would set up erosion control at the edge of the slope or slightly downslope of the edge (within permit boundary) to prevent loss of sediment and debris. Ensure D1-3 depicts the erosion control to be used.

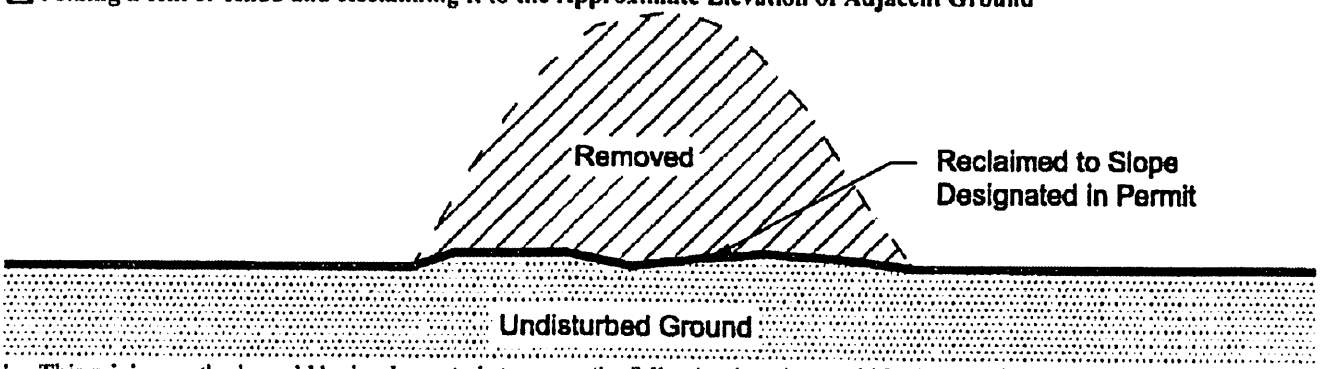
g. ☒ **Mining a Relatively Flat Area to Create a Depression**



i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐**All** ☐**North** ☐**South** ☒**West** ☐**East** ☒**Northwest** ☐**Northeast** ☒**Southwest** ☐**Southeast**

Additional Information:

h. ☒ **Mining a Hill or Knob and Reclaiming it to the Approximate Elevation of Adjacent Ground**



i. This mining method would be implemented at or near the following locations, within the permitted boundary (choose one or more and/or provide an explanation) ☐**All** ☐**North** ☐**South** ☐**West** ☒**East** ☐**Northwest** ☒**Northeast** ☐**Southwest** ☒**Southeast**

Additional Information:

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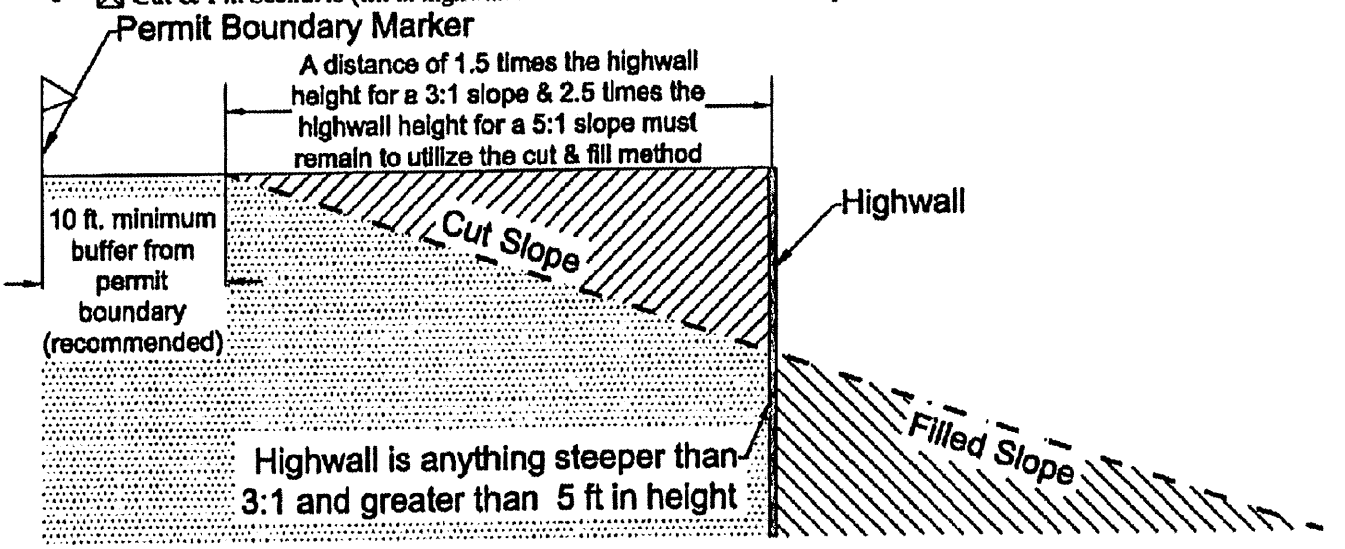
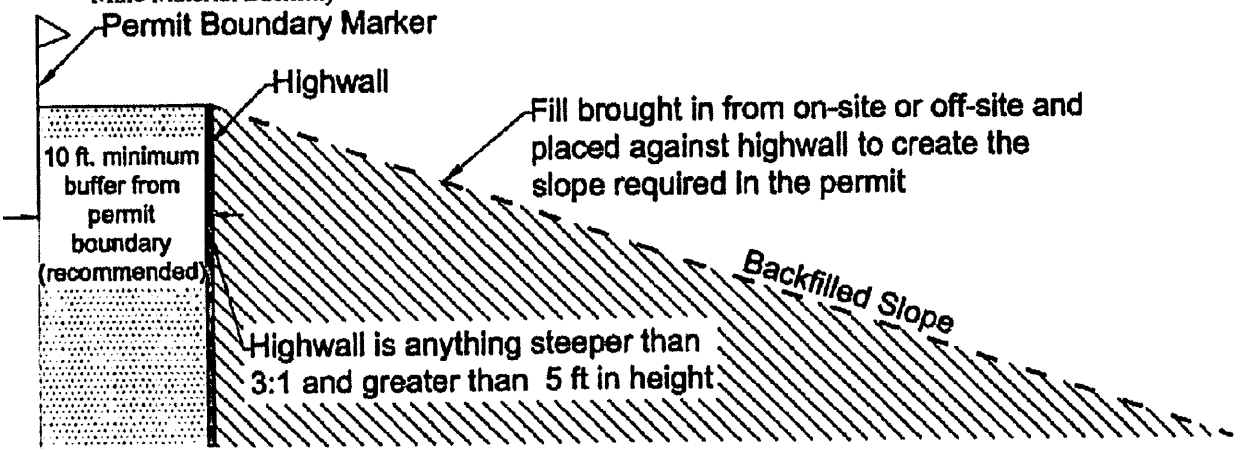
i. ☐ **Other Scenario-Describe:**

9. Any slope steeper than 3:1 with a height of 5 feet or greater, present for <u>any</u> length of time, is considered to be a highwall. Will this site have highwalls? ☒ **Yes** ☐ **No** If no, skip to D4-9b.
   a. If Yes,
      i. The maximum **length of highwall on-site at any given time will be: <u>1000</u> linear feet.** <u>Note</u>: This number must be used on the *Reclamation Bond Spreadsheet.*
      ii. The maximum **height of highwall on-site at any given time will be: <u>20</u> feet.** <u>Note</u>: This number must be used on the *Reclamation Bond Spreadsheet* and will typically be consistent with the maximum depth of mining (see Section C1-1).
      iii. If the maximum height of highwall identified in D4-9a above is not identical to the maximum mine depth identified in C1-1 (i.e. <u>20</u>) explain in detail how the site will be mined:
      iv. Choose the highwall scenario below that best depicts how this site will be mined:

- ☒ **Cut & Fill Scenario** (fill in highwall section on *Reclamation Bond Spreadsheet*)



- ☐ **Backfill Scenario for Areas Where the Cut & Fill Method is not an Option** (Complete Section D5 – Mine Material Backfill)



   b. If No, explain in detail how this site will be mined without ever creating a highwall on-site. Note that mining without a highwall is not typical and is difficult to achieve.

   Answer:

D5. MINE MATERIAL BACKFILL *[ARM 17.24.218(1) & 17.24.219]*

1. If "Backfill Scenario" was chosen in D4-9(a) or there are any mine area backfill locations planned (e.g. using material to raise the level of the pit floor), complete this section. If not, skip to Section D6.

   ☐ **Highwall Backfill*** ☐ **Mine Area Backfill****

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Show the planned backfill location(s) on the site map or reclamation map and provide the following information:

a. Describe where the backfill material will come from:
☐**On-site** – Describe:
☐**Off-site**- Describe:

b. Material type(s) to be used as backfill (check all that apply):
☐**Pit Run** ☐**Gravel** ☐**Oversize Rock** ☐**Reject Fines** ☐**Backhaul** (Clean Fill Only) ☐**Other:**

*Highwall Backfill: The Operator must identify the linear feet, height and slope of highwall to be backfilled on the *Reclamation Bond Spreadsheet* under "Highwall Backfill." Additionally, the Operator must bond for transport/placement cost for the quantity of material to be placed against the highwall for backfill under the "Backfill Transport/Placement" cost line item ($2/cy for on-site generated backfill and $15/cy for off-site generated backfill).

**Mine Area Backfill: The Operator must identify the acreage, depth and compaction percentage on the *Reclamation Bond Spreadsheet* under "Mine Area Backfill." Additionally, the Operator must bond for transport/placement cost for the quantity of material to be placed on-site for backfill under the "Backfill Transport/Placement" cost line item ($2/cy for on-site generated backfill and $15/cy for off-site generated backfill).

D6. FACILITIES *[MCA 82-4-434] & [ARM 17.24.218(1)(e) & 17.24.219(1)(b)]*

1. If an Asphalt Plant, Wash Plant or Concrete Plant was checked in A1-1c or A1-8 above, complete this section. If **Not**, skip to D6-2.

a. ☒**Asphalt Plant**
→ Must be checked in section A1-8 for a new permit and A1-1c for an Amendment
→Must remain in compliance with D1-1.
i. A small amount of asphalt waste generated from daily startup and shutdown of the asphalt plant is expected; and therefore a maximum of 300 cubic yards of asphalt can be located onsite, near the asphalt plant. However, the asphalt waste must be removed when the asphalt plant is removed from the site, unless the site is permitted and bonded to store asphalt onsite.

b. ☐**Concrete Plant** (Must be checked in section A1-8 for a new permit and A1-1c for an Amendment)
i. Where will the concrete plant be set up? **Answer:** Location must be identified on site map.
ii. Describe what will be done with wastewater created from the concrete plant.
☐ Operator will dispose of wastewater in an off-site location, greater than 300 feet from the permitted boundary, and in an area that does not impact surface or ground water.
☐ Operator will dispose of wastewater on-site or within 300 feet of the permitted boundary, and in an area that does not impact surface or ground water (Location must be shown on site map).
☐ **Other: Describe:**
iii. Where will the truck washouts occur?
☐ Operator will conduct truck washouts in an off-site location, located greater than 300 feet from the permitted boundary, and in an area that does not impact surface or ground water.
☐ Operator will conduct truck washouts on-site in or within 300 feet of the permitted boundary, and in an area that does not impact surface or ground water (Location must be shown on site map).
☐ **Other: Describe:**
iv. Describe how and where return loads and excess or reject product will be handled or stored. If on-site or within 300 feet of the permitted boundary, show the location on the site map.
☐**Concrete will be poured into casts to make products**
☐**Concrete will be poured on-site and buried**
☐**Other:**

c. ☐**Wash Plant** (Must be checked in section A1-8 for a new permit and A1-1c for an Amendment)
i. Where will the wash plant be set up? **Answer:**
ii. How many settling ponds will be used for the wash plant? ☐1 ☐2 ☐3 ☐4 ☐**Other** ____
iii. What will the approximate depth of the settling ponds be? **Answer:**
iv. Will settling pond(s) be lined? ☐**No** ☐**Yes - If yes, type of liner:**
v. Where will the wash plant obtain its water?
☐**On-site well or well within 300 feet of permit boundary** (Identify location on site map)
☐**Surface water source within 300 feet of permit boundary** (Identify location on site map)
☐**Source located greater than 300 feet from permitted boundary**
☐**Other:**
vi. Will the water from the wash plant be recycled back into the wash plant? ☐**Yes** ☐**No**
If No, explain:
vii. Operator must show the location of the wash plant and any settling ponds or other wash plant features on the site map. If a separate map is used to show the wash plant, ensure the "Other" box in the table on page 2 is

checked and list the document.

viii. If the Operator attaches the Opencut Mining Section's *Wash Plant Settling Pond Guideline*, check the Wash Plant Settling Pond Guideline on page 2.

2. Will salt or a salt mixed with product be stored on-site? ☐Yes ☒No

If No, skip to D7.

If Yes, complete the following:

a. Show the proposed salt material stockpile(s) on the site map.

b. Indicate the maximum quantity of salt or salt product that would be stored on-site: cubic yards

c. Describe how salt materials would be stored on-site:
Storage Pad: ☐**Asphalt Pad** ☐**Concrete Pad** ☐**Other Impermeable Surface – Describe:**
Cover: ☐**Enclosed Structure** ☐**Roof Only** ☐**Tarp** ☐**Other Cover – Describe:**
Other Storage Method:

d. Describe the measures to be taken to protect on and off-site surface water and ground water from deterioration of water quality due to salt storage per 82-4-434(3)(l), MCA & ARM 17.24.218(1)(h).
Answer:

D7. ASPHALT & CONCRETE RECYCLING *[ARM 17.24.206; 17.24.219(1)(b); & 17.24.221(3)]*

1. **Asphalt Recycling** – Typically, recycling involves accumulating materials containing asphalt, crushing these materials periodically, and stockpiling the resulting crushed asphalt product as-is or blending it with other suitable materials. These recycled products are commonly used to surface roads, and operations permitted to operate an asphalt plant may also use these as feed into the plant.

Asphalt is considered to have the potential to impact water quality. As a result:

- An operation that imports materials containing asphalt must be permitted to store the debris awaiting recycling. Note: Imported debris may be a mixture of various materials (e.g. asphalt, concrete, soil, gravel, etc.). However, if the debris contains asphalt, it must be permitted.
- Similarly, if a site permitted to operate an asphalt plant will stockpile asphalt produced on-site (e.g. excess or reject material), the operation must be permitted and bonded for asphalt storage.

a. Will asphalt or materials containing asphalt be stockpiled at the site? ☒Yes ☐No

If No, skip to D7-1b.

If Yes, the Operator must comply with the following requirements for stockpiled asphalt:

i. The maximum amount of asphalt or material containing asphalt waiting recycling that will be on-site at any time is **1000** cubic yards.

ii. This maximum value must be used in the *Reclamation Bond Spreadsheet* to calculate the cost to either recycle (i.e. crush) the asphalt, or dispose of it off-site in a lawful manner.

iii. Asphalt must be stored in the "asphalt stockpile area" shown on the site map.

iv. Asphalt must be kept out of ground water and surface water (runoff channels, puddles, ponds, etc.); the only water that should come in contact with the asphalt stockpile is rain and snow.

v. Imported asphalt must not be buried or otherwise disposed of on-site. During the final reclamation process, on-site asphalt stockpiles must be: a) removed from the site and disposed of in a lawful manner, or b) recycled into useful products which are removed from the site or used on-site to surface roads that are included in the approved postmining land use. Only on-site generated asphalt that has never left the site can be buried on-site as long as it is buried at least 25 feet above the ordinary high water table and under 3 feet of clean fill suitable for sustaining the postmining vegetation.

b. Will on-site generated asphalt be buried on-site? ☐Yes ☒No

If No, skip to D7-2.

If Yes, the *Landowner Consultation Form, item C* must be checked "Yes." In addition, 82-4-434(3)(l), MCA requires the DEQ to protect surface and ground water from deterioration of water quality and quantity that may arise as a result of the Opencut operations. The Opencut Mining Section may require that a ground water monitoring plan and monitoring well installation plan be designed to protect ground water. Therefore, the below items must be addressed to bury on-site generated asphalt.

i. What is the distance between the bottom of the proposed buried asphalt and the ordinary high water table?
Answer: ____ **feet.** (Buried on-site generated asphalt must be located at least 25 feet above the ordinary high water table.)

ii. How did you confirm the elevation of the ordinary high water table on-site?
☐**Monitoring wells were installed to confirm ordinary high water level** (data must be attached and the Monitoring Well Installation Plan on page 2 must be checked). RECEIVED VIA ELECTRONIC FTS 2/25/2019

☐Other:

iii. Where will the required 3 feet of material suitable for sustaining postmining vegetation be obtained?
Answer: (Ensure that the additional fill is bonded for on the *Reclamation Bond Spreadsheet*)

2. **Concrete Recycling** – Hardened concrete is not considered to have potential to impact water quality. As a result, concrete debris from construction or demolition projects may be imported to the site and stockpiled pending recycling or used as mined-area backfill. Similarly, sites permitted to operate a concrete plant may stockpile excess or reject product that becomes hardened on-site.

a. Will hardened concrete be stored at the site? ☒Yes ☐No

If No, skip to Section D-8.

If Yes, the Operator must comply with the following requirements for hardened concrete:

i. When concrete is deposited at the site, any protruding metal must be cut off and collected. Any metal exposed during subsequent handling, transfer, crushing, or recycling must promptly be freed and collected. As a result, no protruding metal should be visible at any time. Salvaged metal must periodically be transported off-site for recycling or other lawful disposal.

ii. Concrete must be stored in the "concrete stockpile area" shown on the site map.

iii. Concrete present at the site during the final reclamation process must be a) removed from the site and disposed of in a lawful manner, b) recycled into useful products, or c) buried on-site under at least 3 feet of material suitable for sustaining the postmining vegetation.

Note: If asphalt is present in concrete stockpiles, the site must be permitted for asphalt recycling (refer to Section D7-1 above.)

D8. REJECT FINES *[ARM 17.24.219]*

1. Reject fines are natural or crushed rock that is generally ¼ inch or smaller. Reject fines are usually created from screening product/material. Reject fines are typically pushed back into the pit to act as backfill before replacing the overburden and soil, or the reject fines are hauled off-site.
2. Will reject fines be created at this site?
☒Yes ☐ No
If No, skip to Section D9.

If Yes, how will reject fines be handled at this site? Check all that apply.

a. ☐**Reject fines will be hauled off-site before accumulating to 10,000 cubic yards.**
b. ☐**Reject fines will be periodically placed back into the mine area as operations progress through the life of the permit. Reject fines will not be allowed to accumulate to more than 10,000 cubic yards.**
c. ☒**Reject fines will be stockpiled and used for reclamation at a later date.**
   i. The maximum quantity of fines to be stockpiled is **10,000** cubic yards*
   *Note: If more than 10,000 cubic yards of stockpiled reject fines will be located on-site, the entire stockpile must be bonded for on the *Reclamation Bond Spreadsheet* at a rate of $1.00 per cubic yard. Ensure the *Reclamation Bond Spreadsheet* is consistent with the quantity entered into this section.
d. ☐Other:

D9. SOIL, OVERBURDEN & MINE MATERIAL COMMITMENTS *[MCA 82-4-434(3)(c)] & [ARM 17.24.218(1)(c-d) & 17.24.219(1)(c) & 17.24.220(2)(b)]*

1. The Operator will comply with the following requirements:

a. Prior to conducting any Opencut operations, soil and overburden must be stripped separately to the thicknesses identified in Section C2-4. (Note: Stripping soil may create low spots that collect water, necessitating the establishment of drainage ways, or the construction of raised roadbeds and work areas.)

b. The Operator must strip, stockpile, save and replace all soil (and overburden if sufficient soil is unavailable) to a minimum depth of 24 inches or to another depth approved in writing by the DEQ and record the average thicknesses of soil to be replaced in Section C2-4.

c. All stripped soil and overburden must be: i) hauled directly to areas prepared for reclamation and re-soiling, or ii) promptly stockpiled and protected from erosion, comingling, contamination, compaction, and unnecessary disturbance. At the first seasonal opportunity, the Operator must shape and seed, with an approved perennial seed mix, any stockpile that will remain for 2 or more years.

d. Designate soil and overburden stockpiles with signage that is legible, visible, and placed so that equipment operators and inspectors may readily identify the type of stockpile being worked for the life of the stockpile.

e. The Operator must not haul soil off-site, give it away, or sell it without written approval from the DEQ.

f. Soil and overburden must be handled separately and the Operator will avoid mixing these materials, or handling

them when wet or frozen. Overburden must be stockpiled only on areas where soil has been stripped to the required depth.

g. A minimum 10-foot wide buffer zone stripped of soil and needed overburden must be maintained along the crest of highwalls. This practice helps to ensure that soil will not be lost to mining.

h. Soil, overburden, and mine material stockpiles must be kept out of drainage bottoms and off of slopes steeper than 3:1. All excavated and/or processed mine material must be: i) removed from the site, ii) buried on-site, or iii) left for the landowner in accordance with the *Landowner Consultation* form and Section E7.

i. Burn pile residue, building demolition debris, metal, plastic, tires, and other wastes must be disposed of off-site and in a lawful manner, unless otherwise stated in the permit.

j. All clean fill (i.e. dirt, sand, fines, gravel, and oversize rock) that cannot, or will not, be buried during final reclamation must be removed from the permit area prior to bond or liability release request, with the exception of materials left for the landowner.

D10. ADDITIONAL IMPACTS *[MCA 82-4-434(3)(m)] & [ARM 17.24.218(1)(f & k)]*

1. Are there residences within 1,000 feet of the permit boundary? ☒ Yes ☐ No

2. Indicate the methods and materials you will use to mitigate impacts of the processing equipment listed in Section A1-8 from the neighboring properties.
   ☐ Berms ☐ Buffer zone ☒ Dust mitigation ☐ Equipment enclosures ☐ Fences ☐ Paving
   ☐ Restricted Hours ☐ Revegetation ☐ Speed limits ☐ Vegetative screens
   ☐ Other/Additional Information:

3. Are there additional Opencut operation impacts not addressed in other parts of this Plan? ☐ Yes ☒ No
   If Yes, describe:

D11. ADDITIONAL COMMITMENTS *[MCA 82-4-434(3)(g)&(h) & MCA 82-4-437] & [ARM 17.24.214 & 17.24.218(1)(l)]*

1. Operator understands that obtaining an Opencut Mining Permit does not relieve the Operator's obligation to comply with any other applicable federal, state, county or local statute, regulation, or ordinance. Therefore, the Operator is responsible for identifying and obtaining any other permits and approvals from other agencies required for the proposed activities (Refer to "How to Obtain and Comply with an Opencut Mining Permit" on the Opencut website). Obtaining an Opencut permit does not necessarily mean that an Operator can legally mine the site without first obtaining permits from other agencies.

2. The Operator will comply with the following requirements:
   a. Key personnel and subcontractors involved in Opencut operations must be informed of the requirements of this Plan and must be provided a copy of this Plan. In addition, they must be shown each boundary marker location and informed of their importance.
   b. Proper precautions must be taken to prevent wildfires.
   c. Appropriate protection must be provided for identified cultural resources that could be affected by Opencut operations. If any other cultural resources are found, the Operator must: i) temporarily halt work, or move to another area, and ii) promptly notify the State Historic Preservation Office (406-444-7715).
   d. By March 1st of each year, the Operator must complete and return the Annual Production Report (APR) form that the Opencut Mining Section sends early in the year. The Operator must report the requested information regarding mining conducted during the preceding calendar year. In addition, the Operator must calculate the fee for the preceding year's production (per cubic yard of material mined) and submit payment to the DEQ along with the APR.

D12. ADDITIONAL INFORMATION *[MCA 82-4-432(1) & 82-4-434(3)] & [ARM 17.24.222]*

1. If applicable, provide additional water protection, mining, and processing information not addressed above.
   Answer: None

SECTION E – RECLAMATION PLAN

E1. RECLAMATION TIMEFRAME *[MCA 82-4-434(3)(k) & 82-4-434(4)] & [ARM 17.24.219(1)]*

1. Reclamation must be:
   a. Completed in accordance with this Plan and as concurrent with the Opencut operations as feasible.

b. Completed on an area no longer needed for Opencut operations within one year after the cessation of such operations.

c. Completed on an area that the Operator no longer has the right to use for Opencut operations within one year after the termination of such right.

d. Completed by the Term of the Permit (final reclamation date) that the Operator specifies below.

Note: If reclamation is not completed within the term of the permit, after 30 days written notice the DEQ may order the Operator to cease operations, and if the Operator does not cease, may issue an order to reclaim, or may institute an action to enjoin further operation, and may sue for damages for breach of the conditions of the permit and for payment of the performance bond.

The Operator should specify the final reclamation date based on various business and environmental factors, including:

- The estimated demand for mine materials, the expected rate of production, and the volume and grade of permitted mine material.
- The time required to establish productive vegetation comparable to that growing on similar undisturbed land nearby. Typical minimum timeframes for revegetation are:
  i. At least 2 additional years to establish vegetation and control noxious weeds on grassland and forest areas.
  ii. At least 1 additional year for the first successful harvest on cropland.

Final reclamation of the site is complete when the postmining land use has been achieved, including successful revegetation or crop harvest, and noxious weed control. Therefore, the DEQ recommends that the Operator be sure to allow sufficient time for successful vegetative growth, thereby avoiding the need to submit an amendment application requesting only to extend the final reclamation date.

The Term (Final Reclamation Date) is: Month December, Year 2058

Note: If the postmining land use will not be achieved by this date, the Operator must submit an amendment application to extend the term of the permit (final reclamation date). Such an application should be submitted well in advance of the reclamation date to allow time for processing and approval of the amendment.

E2. POSTMINING LAND USES *[MCA 82-4-434(3)] & [ARM 17.24.219(1)(a)]*

1. The site will be reclaimed to the postmining land use(s) below. Show all postmining land uses on the reclamation map.

☐ **Permitted Access Road(s)** ☐ **Internal Road(s):** Length: _____ & Width: _____
☐ **Cropland and/or Hayland** ☒ **Rangeland and/or Pasture**
☐ **Year-round Pond:** ☐ Fishery ☐ Livestock ☐ Recreation ☐ Wildlife ☐ Other:
☐ **Seasonal Pond:** Purpose- ☐ **Wetland** ☐ **Seasonal Wetland**
☐ **Berms** ☐ **Fences** ☐ **Landowner Equipment Storage Area*** ☒ **Landowner Material Stockpile Area***
☐ **Industrial/Commercial**** ☐ **Residential**** ☐ **Vegetative Screens** ☐ **Other:**

***Landowner Equipment Storage Areas & Landowner Material Stockpile Areas** must be shown on the Reclamation Map (include approximate acreage) and have a description of why they are to be left.

****Residential** and **Industrial/Commercial** land uses may require submittal of planning documents and approvals.

Note: If site plans change, the Operator must submit an amendment application to update the postmining land use(s).

2. What facilities and structures will remain after reclamation of the site is completed?
☐ **None** ☐ **Concrete Structures** ☒ **Gravel or Paved Surface Area** ☐ **Office** ☐ **Scale** ☐ **Other:**

   i. Describe the purpose of leaving these facilities or structures intact. **Answer:The landowner wants the non-permitted gravel access road to remain to continue access to their property in the future.**

E3. PONDS and/or WETLANDS *[MCA 82-4-434(2)] & [ARM 17.24.219(1) & 17.24.221(5)]*

1. If Section E2 above does not designate a pond, seasonal pond, or wetland as a postmining land use, skip to Section E4; otherwise, proceed to E3-2 below.

2. Indicate whether ponds, wetlands, or both will remain as a result of Opencut Operations.
☐ **Ponds Only** ☐ **Wetlands Only** ☐ **Both Ponds and Wetlands**

3. Indicate the number of pond(s) to be constructed:
☐ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Other:

4. Indicate the number of wetland(s) to be constructed:
☐ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ Other:

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5. Indicate the maximum depth of the pond(s) and/or wetland(s) (check all that apply):
☐5-feet ☐10-feet ☐15-feet ☐20-feet ☐25-feet ☐30-feet ☐35-feet ☐40-feet ☐45-feet ☐50-feet ☐55-feet ☐Other:

6. Indicate the steepness of slopes that will remain along the pond/wetland areas (check all that apply and show slope locations on reclamation map):

Above High Water:	☐3:1	☐4:1	☐5:1	☐6:1	☐Other:
Between High and Low Water:	☐3:1	☐4:1	☐5:1	☐6:1	☐Other:
Below Low Water:	☐3:1	☐4:1	☐5:1	☐6:1	☐Other:

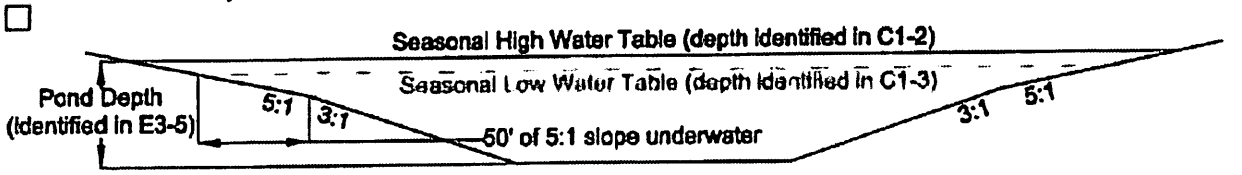
Note: Proposed slopes steeper than 3:1 would require a slope stability study prepared by a Professional Engineer or other appropriately qualified professional (see section E4-2 below).

7. Indicate below the physical features that will be included with this pond/wetland and show their location on the final reclamation map.
☐Boat Ramp ☐Inlets/Bays ☐Islands ☐Peninsulas ☐Submerged habitat features ☐Other:

8. Provide a detailed Pond Plan View of the final pond/wetland design on the reclamation map or other map as needed.

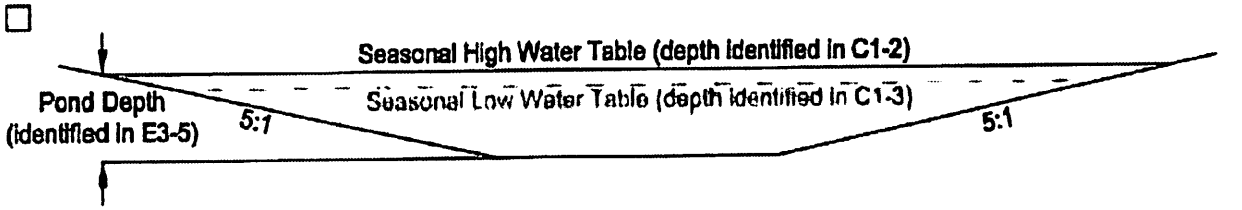
9. At least two "typical" labeled Cross-Sections of the long and short axis of the pond and/or wetland are required. Alternatively, a contour map of the finished pond may be attached. Choose the scenarios below that represent the pond and/or wetland and identify their location on the Pond Plan View:

a. ☐



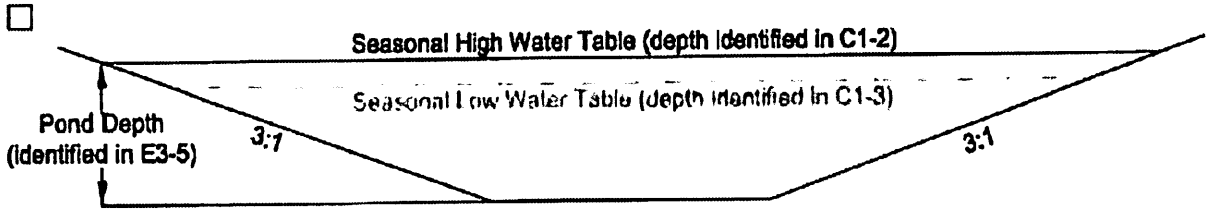
Additional Comments (if applicable):

b. ☐



Additional Comments (if applicable):

c. ☐



Additional Comments (if applicable):

d. If Additional cross-sections are needed to depict the pond/wetland, each cross section must contain the following:
   i. Depths as identified in E3-5,
   ii. Slopes as identified in E3-6,
   iii. Physical features as identified in E3-7, and
   iv. Seasonal high and seasonal low water levels
   ☐ Additional Cross-Sections are attached (check appropriate box on page 2).
   Additional Comments (if applicable):

e. ☐ Optional Alternative: Attach labeled Contour Map showing the depth of each proposed pond or wetland with a contour interval appropriate for the pond/wetland depth (check appropriate box on page 2).
Additional Comments (if applicable):

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10. Will the DEQ's *Pond Guideline* be followed (including variations in pond shape, sinuosity, slopes and depths, habitat features, and recommended wetland vegetation)? ☐Yes ☐No
If Yes, Check the appropriate box on page 2 and attach the guideline.

If No, the DEQ must assess whether the postmining pond and/or wetland will constitute a productive land use. Therefore, explain in detail how the pond design will achieve a productive postmining land use.
Answer:

11. Operator understands that all soil taken from the pond or wetland area must be kept on-site for reclamation and cannot be removed or sold until the DEQ has determined the postmining land use has been met, thereby verifying the soil is not needed to reclaim the pond or wetland area, or other remaining areas.

12. Operator has consulted with DNRC and understands their requirements regarding water rights and ground water development related to reclaiming to the postmining land uses identified in E2-1 and E3.
Additional Information (if applicable):

E4. SITE CLEANUP, GRADING AND RECLAMATION *[ARM 17.24.219(1) & 17.24.221(5)]*

1. The Operator must comply with the following requirements:
   a. Leave reclaimed surfaces in a stable condition, graded to drain to low areas, and blended into the surrounding topography and drainageways. Note: Irregular contours are preferred for livestock and wildlife habitat; areas of unvarying slope should be minimized; and drainageways must be reclaimed similar to surrounding natural conditions.
   b. Leave reclaimed surfaces with 5:1 or flatter slopes for hayland and cropland, 4:1 or flatter slopes for sandy surfaces, and 3:1 or flatter slopes for other areas (The DEQ may approve steeper slopes on a case by case basis).
   c. Leave reclaimed surfaces at least 3 feet above the seasonal high water table level for dryland reclamation and at least 3 feet below the seasonal low water table level for pond reclamation (The DEQ may approve seasonal ponds for certain situations).
   d. Retrieve and properly use, stockpile, or dispose of all refuse and spilled mine materials (e.g. chips, oversize, etc.) found in the permit area and along access roads as such materials will impair revegetation.

2. Indicate the grade of the steepest slope that will remain after the site is reclaimed.
☒3:1 ☐4:1 ☐5:1 ☐6:1 ☐Other:

Note: This reclamation slope ratio must be used on the *Reclamation Bond Spreadsheet.*
If a slope of 3:1 or flatter was checked, skip to E4-3.
If the ***Other*** box was checked above or in E3-6 and the Operator intends to have slopes that are steeper than 3:1, proceed to E4-2a.
   a. The Operator must provide a slope stability study prepared by a professional engineer licensed in accordance with Title 37, chapter 67, part 3, MCA, documenting that the slopes will remain stable [ARM 17.24.219 (c)].
   ☐**Slope Stability Analysis Attached** (Attach the *Slope Stability Analysis* and check the appropriate box on page 2)
   ☐**Further Description** (if applicable):

3. Will the site be graded to blend in with surrounding topography? ☒Yes ☐No
If No, explain in detail how the site will be graded:

4. Will a reclaimed depression remain that is not intended to be a seasonal or year-round wetland or pond?
☒Yes ☐No –**Mining will not create a depression that would collect water.**
   a. If Yes, Where will precipitation/stormwater/snow-melt, etc. concentrate or drain to in the reclaimed depression?
      i. ☒**Runoff collection area in bottom of depression** graded specifically to collect any runoff, thereby not impacting other areas of the site with ponding or pooling of water.
         • Approximate location of water collection area(s) must be shown on the **Reclamation Map**
         ☒Water collection area is ≤ ½ acre in size;
         ☐Water collection area is > ½ and ≤ 1 acre in size – Explain why water collection area needs to be greater than ½ acre in size
      ii. ☐**Other-Describe:**

   b. If No, describe where stormwater will concentrate or drain to, i.e. water will flow to the (check all that apply):
      i. ☐**East** ☐**North** ☐**Northeast** ☐**Northwest** ☐**South** ☐**Southeast** ☐**Southwest** ☐**West**
      ☐**Further Description:**
      ii. Water will flow off-site via:

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☐ **Reclaimed drainages, swales, etc. within the permitted boundary** ☐ **Reclaimed slopes**
☐ **Other-Describe:**

Note: The Operator should check with the DEQ Water Protection Bureau to determine whether a stormwater permit is needed for the proposed Opencut operation.

5. ARM 17.24.221(5) requires that the Reclamation Map contain arrows depicting the anticipated direction of water flow across the reclaimed site.

E5. SOIL AND OVERBURDEN SURFACE PREPARATION AND REPLACEMENT

[ARM 17.24.202(14) & 17.24.219(1)(g)]

1. Compacted soil and overburden must be tilled to allow air and water movement, root penetration, and the subsurface drainage necessary for plant growth. Will the Operator alleviate compaction by deep-tilling or ripping all compacted surfaces to a depth of at least 12 inches before re-soiling? ☒ Yes ☐ No

   Note: The DEQ recommends the following:
   a. Ripping or deep tilling is not required for non-compactable materials such as sand and gravel.
   b. Ripper shanks should be spaced about equal to the ripping depth.
   c. Rip along contours where possible and when soil and overburden are dry enough to shatter.
   d. Protect ripped areas from re-compaction.

   If No, explain in detail how you will alleviate overburden and soil compaction, or why you will not:

2. Indicate the methods to be used to relieve soil compaction and prepare the seedbed.
   ☐ **Chiseling** ☒ **Disking** ☒ **Harrowing** ☐ **Packing** ☐ **Other:**

3. Indicate the method(s) that will be used to limit the presence of large rocks (greater than 4 inches) in replaced soil as their presence may inhibit successful revegetation and agricultural production.
   ☐ **Blading Off and Removal of Large Rocks** ☒ **Rock Picker** ☐ **Rolling** ☐ **Screening** ☐ **Other:**

E6. REVEGETATION *[MCA 82-4-431(2)(c) & 82-4-434(3)] & [ARM 17.24.218(1)(j) & 17.24.219(1)(h)]*

1. Operator must comply with the following requirements:
   a. Establish vegetation capable of sustaining the designated postmining land use(s).
   b. Use certified weed-free seed and comply with local weed district requirements.
   c. Seed during the late fall or early spring seeding season (unless otherwise approved) and seed along contours for drill seeding.
   d. Ensure that areas seeded or planted to perennial species can be, and are, appropriately protected and managed from the time of seeding or planting through two growing seasons, or until site stabilization and revegetation are achieved, whichever is longer.
   e. Revegetation success on non-cropland areas is achieved when vegetation capable of sustaining the designated postmining land use has been established. Revegetation success on cropland areas is achieved when a crop has been harvested from the entire area and the yield is comparable to those of crops grown on similar undisturbed sites under similar growing conditions.
   f. Except for those postmining land uses that do not require vegetation, each surface area of the site that will be disturbed will be revegetated when its use for the Opencut operation is no longer needed.
   g. The Operator must attach the Opencut Mining Section's *Weed Board Notification of Opencut Operation* form that the Operator has submitted to the weed board in the county or counties in which the proposed operation is located and check the appropriate box on page 1.

2. Will the Operator apply fertilizer, compost, mulch, or other soil amendments? ☐ Yes ☒ No
   If No skip to E6-3.
   If Yes: Type of fertilizer to be applied: _____ Rate at which fertilizer will be applied: _____ lbs/acre
   Type of compost to be applied: _____ Rate at which compost will be applied: _____ lbs/acre
   Type of mulch to be applied: _____ Rate at which mulch will be applied: _____ lbs/acre

3. The primary method of seeding will be: ☒ **Drilling*** ☐ **Broadcasting****

   *Sagebrush seed cannot be drill seeded and must be broadcast at the rates in the sagebrush seed mix chosen. The grass and forb seeds in a sagebrush seed mix can be drill seeded.

   **Broadcast seeding must be at double the rate used for drilling (i.e. 24 lbs/acre or more).

4. The DEQ's *Seed Mix Guideline* is available on the Opencut Mining Section's website at http://deq.mt.gov/Portals/112/Land/Opencut/Documents/Forms/2016-Guideline-SeedMix.pdf.

Will seed mixes described in the seed mix guideline be used? ☒Yes ☐No
If Yes, check the appropriate box on page 2, attach a copy of the guideline, and indicate below which seed mix(s) will be used.

☒**Native Grazing/Pasture** ☐**Non-Native Grazing/Pasture** ☐**Native Rangeland** (for moist/riparian regions)
☐**Native Rangeland** (for arid regions) ☐**Wetland Seed Mix** (for pond edges or wetland areas)

Recommended Seed Mixes for Sage Grouse Habitat

If the site is in general, core or interconnectivity sage grouse habitat, the Operator must choose the appropriate seed mix below, unless the landowner has requested an alternate seed mix (refer to the Landowner Consultation form).

☐**Northern Region** ☐**Central & Southeastern Regions** ☐**Southwestern and South Central Regions**

If No, in the chart below describe the seed mix species and rates of seeding (pure live seed per acre) that will be used:

SEED TYPE	SEED RATE
TOTAL SEEDING RATE	0.0 pounds pure live seed/acre

Additional Seeding Information (if applicable):

5. Indicate the measures to be used to manage and protect the site until reclamation vegetation is established.
☒**Noxious Weed Control** (mandatory) ☐**Fencing** (include cost of fencing on the *Reclamation Bond Spreadsheet*)
☐**No Grazing** (Operator should secure written commitment from landowner) ☐**Other:**

6. Indicate the method(s) or types of erosion control Best Management Practices (BMPs) that would be used at this site during reclamation to inhibit erosion and promote plant growth. The Operator must maintain the below checked erosion control BMP's during reclamation to protect water quality and prevent sediment from leaving the site (as needed):
☒**Equipment Tracking** (orientated to trap moisture and break water flow) ☒**Erosion Control Blankets** ☒**Mulch**
☒**Seeding/Harrowing Along Contour** ☒**Slopes 5:1 or Flatter** ☒**Straw Bales** ☒**Vegetated Buffer Strip**
☒**Wattles** ☐**Other:**

E7. MATERIAL REMAINING FOR LANDOWNER *[ARM 17.24.203(5); 17.24.206; 17.24.219(1)(b); & 17.24.221(5)(c)]*

1. Does Question B of the *Landowner Consultation* form indicate that mine material will remain at the conclusion of Opencut operations; or, if the landowner is the Operator, will mine material remain at the conclusion of Opencut operations? ☒Yes ☐No
If No, skip to Section E8.
2. The following requirements apply to leaving mine material for the landowner at the conclusion of Opencut operations.
   - Landowner mine materials must be left in a single location that will be accessible by road. If the landowner stockpile is not adjacent to an existing public road, the road to the stockpile must be shown on the *Reclamation Map.*
   - Landowner mine material stockpiles must be segregated into piles of similar types and grades.
   - Landowner mine material stockpiles must be located in the area designated on the reclamation map.
   - Operator must leave the quantity of soil necessary to reclaim the stockpile area within 100 feet of the material stockpile to remain for the landowner.
     - Thickness of soil required to be stripped from the site is 11 inches * 0.2 acres (estimated number of acres that will be occupied by the soil stockpile area) = 296 cubic yards of soil that must remain for the landowner material stockpile area.

E8. ADDITIONAL INFORMATION *[MCA 82-4-432(1) & 82-4-434(3)] & [ARM 17.24.222]*

1. If applicable, provide additional reclamation information not addressed above.
Answer: None

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SECTION F – RECLAMATION BOND CALCULATION *[MCA 82-4-433] & [ARM 17.24.203 & ARM 17.24.220]*

Government Operators: Skip to Section G.

Non-Government Operators:

1. Attach a proposed *Reclamation Bond Spreadsheet* and check the appropriate box on page 1.
2. The purpose of the *Reclamation Bond Spreadsheet* is to provide a reasonable estimate of the cost for the DEQ to reclaim the site in accordance with the *Opencut Mining Plan of Operation & Application* at the time of the site's maximum permitted disturbance. As a result, the estimated costs include equipment mobilization and project administration. The DEQ will review the proposed bond calculation and make a final determination as to the required bond amount.
3. Bond is not required to be posted for acreage permitted as Non-Bonded until the acreage is needed for Opencut operations. Prior to commencing any such operations, the Operator must submit a *Request to Commence Operations in Non-Bonded Area* form, supporting documents, and post additional bond (if appropriate) on the undisturbed acreage. No Opencut activities, including equipment parking, can begin on non-bonded acreage until the *Request to Commence Operations in Non-Bonded Area* form, supporting documents, and bond are approved in writing by the DEQ.
4. Operator understands that the DEQ may adjust the bond yearly.
5. Is there additional information relevant to the *Reclamation Bond Spreadsheet* that you wish to provide? ☐Yes ☒No
   If Yes, describe:

SECTION G – CERTIFICATION *[MCA 82-4-432(1)(e)] & [ARM 17.24.222(3)]*

The person signing below represents that (check one box):

☐ I am an officer or an employee of the Operator and I am duly authorized to bind the Operator identified on page 1 of the *Opencut Mining Plan of Operations & Application* as a corporation, limited partnership, limited liability company, or other corporate entity in good standing and authorized to do business in Montana, and in this capacity I acknowledge and certify that:

Or

☒ I am the Operator identified on page 1 of the *Opencut Mining Plan of Operation & Application* and I acknowledge and certify that:

1) The attachments that follow my signature are incorporated into and enforceable as part of the *Opencut Mining Plan of Operation & Application*;
2) The Operator has the legal right to conduct Opencut operations in the permit area described in the *Opencut Mining Plan of Operation & Application*;
3) The Operator consents to and acknowledges that the DEQ and its representatives may access the site to inspect the permit area at any reasonable time, and that while the DEQ attempts to provide reasonable notice of an inspection to the Operator when practicable under the circumstances, inspections may be conducted without prior notice as necessary to determine whether Opencut operations are being conducted in compliance with the permit, Act, and rules [82-4-422(1)(d) and 425, MCA] & [ARM 17-24-206(3)].
4) I have read and understand all the information, representations, terms, requirements, and conditions set forth in *Opencut Mining Plan of Operation & Application*;
5) The information, representations, and statements provided or acknowledged in the *Opencut Mining Plan of Operation & Application* are, to the best of my knowledge and belief, true and correct; and,
6) The Operator agrees to abide by and comply with the Opencut Mining Act, Montana Code Annotated sections 82-4-401 through 82-4-446, and Administrative Rules of Montana 17.24.201 through 17.24.225, and all representations, terms, requirements, and conditions set forth in the *Opencut Mining Plan of Operation & Application* and the *Opencut Mining Permit* approved by the DEQ, and communicate the same to any contractor or supervisor who directs Opencut operations under authority of the *Opencut Mining Permit*.

By: _____ **Jake Yoder**
Signature — Legibly print or type name

Operator — 2-4-19
Title — Date

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MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps
View scanned well log (5/16/2017 2:44:40 PM)

Site Name: TROYER, ORLIE & MARY
GWIC Id: 292210

Section 1: Well Owner(s)

1) TROYER, ORLIE & MARY (MAIL)
1024 ROCKING HORSE LANE
STEVENSVILLE MT 59870 [02/28/2017]
2) TROYER, ORLIE & MARY (WELL)
4422 EASTSIDE HIGHWAY
STEVENSVILLE MT 59870 [02/28/2017]

Section 2: Location

Township	Range	Section	Quarter Sections
09N	20W	24	NW¼ NW¼

County	Geocode
RAVALLI	13-1764-24-1-01-22-0000

Latitude	Longitude	Geomethod	Datum
46.5281523216	-114.063811372	TRS-SEC	NAD83

Ground Surface Altitude	Ground Surface Method	Datum	Date
3397	NAV-GPS	NGVD29	2/28/2017

Addition	Block	Lot

Section 3: Proposed Use of Water

DOMESTIC (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Tuesday, February 28, 2017

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	120	6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	118	6			WELDED	STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
95	100	6	120	1 1/4 X 1/4	HOLTE PERFORATOR SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	25	BENTONITE	

Section 7: Well Test Data

Total Depth: 120
Static Water Level: 37
Water Temperature:

Air Test *

30 gpm with drill stem set at 100 feet for 2 hours.
Time of recovery 0.17 hours.
Recovery water level 37 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	2	TOPSOIL
2	30	CEMENTED SILTY SAND GRAVEL & COBBLES
30	50	TIGHTLY PACKED MOIST SILTY SAND & GRAVEL
50	68	BROWN CLAY & GRAVEL
68	71	SAND & SOME GRAVEL WITH WATER
71	117	GRAY CLAY, COARSE SAND & PEA GRAVEL & PURE FINE SAND LAYERS WITH WATER
117	120	HARD GRAY CLAY

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: JON NORCROSS
Company: CAMP WELL DRILLING AND PUMP SERVICE
License No: WWC-7
Date Completed: 2/28/2017

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MONTANA WELL LOG REPORT

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Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps
View scanned well log (6/10/2008 10:30:14 AM)

Site Name: SAWHILL DONALD J
GWIC Id: 60100

Section 1: Well Owner(s)
1) SAWHILL, DONALD J. (MAIL)
RT 1
STEVENSVILLE MT 59870 [01/01/1920]

Section 2: Location

Township	Range	Section	Quarter Sections
09N	20W	24	SW¼ NW¼

County: RAVALLI
Geocode:

Latitude	Longitude	Geomethod	Datum
46.524448	-114.063811	TRS-SEC	NAD83

Ground Surface Altitude: Ground Surface Method: Datum: Date:

Addition: Block: Lot:

Section 3: Proposed Use of Water
DOMESTIC (1)
STOCKWATER (2)

Section 4: Type of Work
Drilling Method:
Status: NEW WELL

Section 5: Well Completion Date
Date well completed: Thursday, January 01, 1920

Section 6: Well Construction Details
There are no borehole dimensions assigned to this well.
Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	22	36				

There are no completion records assigned to this well.
Annular Space (Seal/Grout/Packer)

There are no annular space records assigned to this well.

Section 7: Well Test Data

Total Depth: 22
Static Water Level: 10
Water Temperature:

Unknown Test Method *

Yield 50 gpm.
Pumping water level _ feet.
Time of recovery _ hours.
Recovery water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source
Unassigned
Lithology Data

There are no lithologic details assigned to this well.

Driller Certification
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:
Company:
License No: -
Date Completed: 1/1/1920

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MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Go to GWIC website
Plot this site in State Library Digital Atlas
Plot this site in Google Maps
View scanned well log (6/10/2008 10:26:19 AM)

Site Name: MEYER HENRY JAY
GWIC Id: 60097

Section 1: Well Owner(s)

1) MEYER, JAY (MAIL)
RT #3 3678 LOWER BURNT FORK SCHOOL RD
STEVENSVILLE MT 59870 [09/14/1979]

Section 2: Location

Township	Range	Section	Quarter Sections
09N	20W	24	

County: RAVALLI
Geocode:

Latitude	Longitude	Geomethod	Datum
46.522596	-114.055915	TRS-SEC	NAD83

Ground Surface Altitude: | Ground Surface Method: | Datum Date:

Addition: | Block: | Lot:

Section 3: Proposed Use of Water

DOMESTIC (1)

Section 4: Type of Work

Drilling Method: CABLE
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Friday, September 14, 1979

Section 6: Well Construction Details

There are no borehole dimensions assigned to this well.

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	254	6				

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
249	254	6		5 IN	SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	15	NATURAL	

Section 7: Well Test Data

Total Depth: 254
Static Water Level: 190
Water Temperature:

Pump Test *

Depth pump set for test _ feet.
30 gpm pump rate with _ feet of drawdown after _ hours of pumping.
Time of recovery _ hours.
Recovery water level _ feet.
Pumping water level 230 feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

RAVALLI DRILLING FILE NO: 806

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	6	OPEN HOLE
6	10	SAND GRAVEL BOULDERS BROWN
10	246	INTERMITTANT LAYERS OF VOLCANIC ASH SEDIMENTARY ROCK & CLAYS MOSTLY TAN SOME GRAY
246	249	SAND & GRAVEL WB
249	254	GRAY CLAY

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:
Company: RAVALLI DRILLING
License No: WWC-357
Date Completed: 9/14/1979

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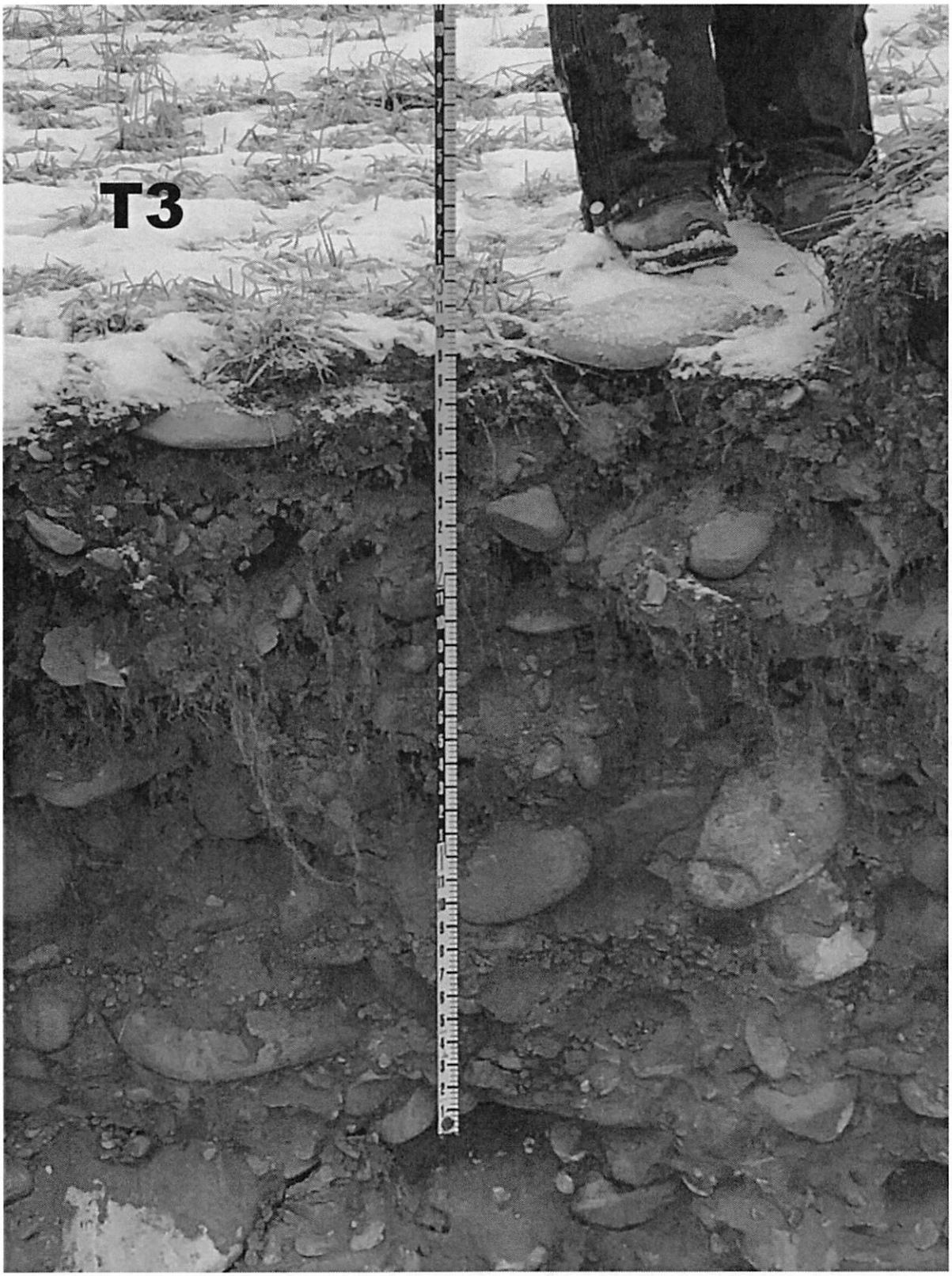

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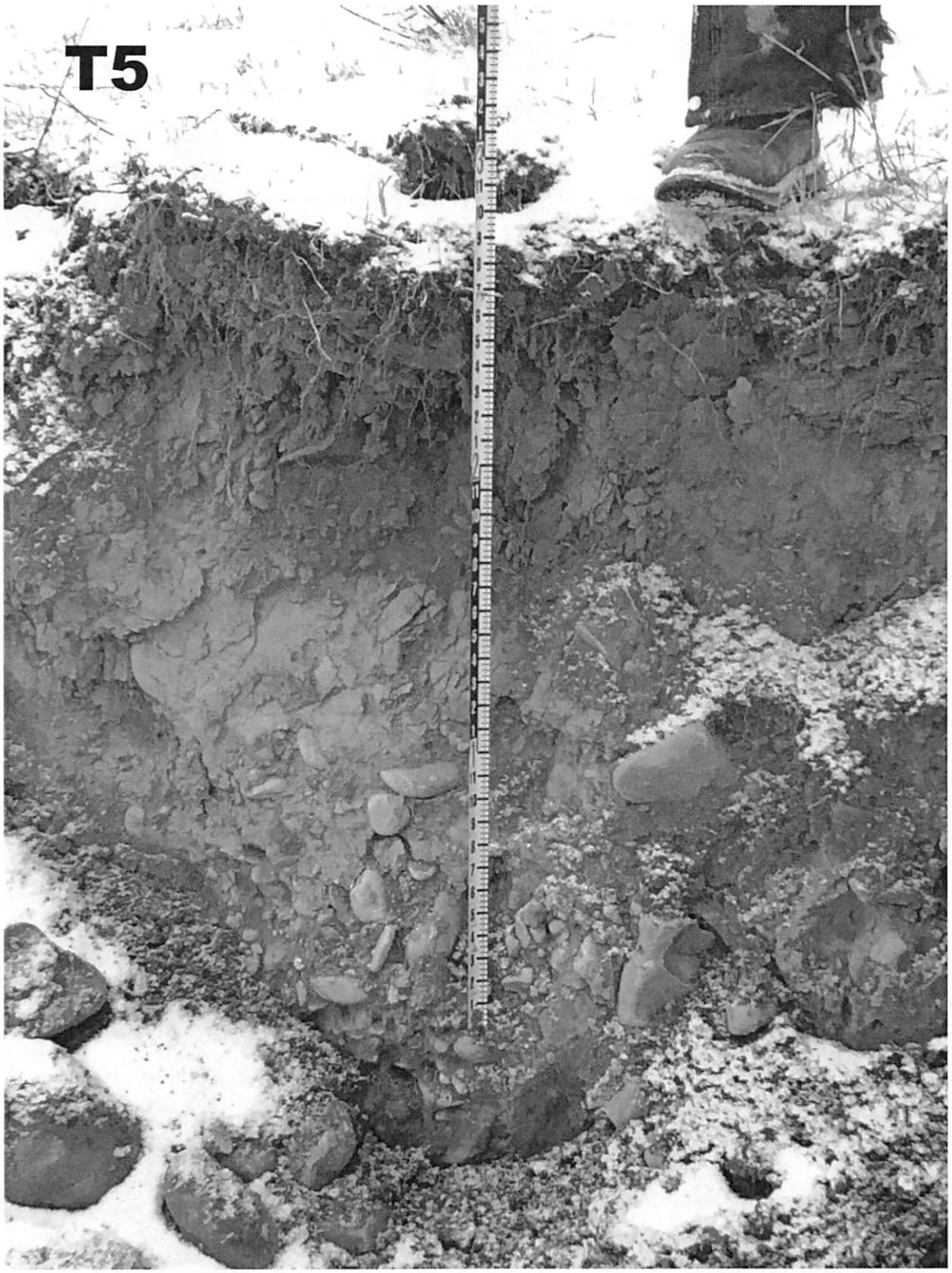

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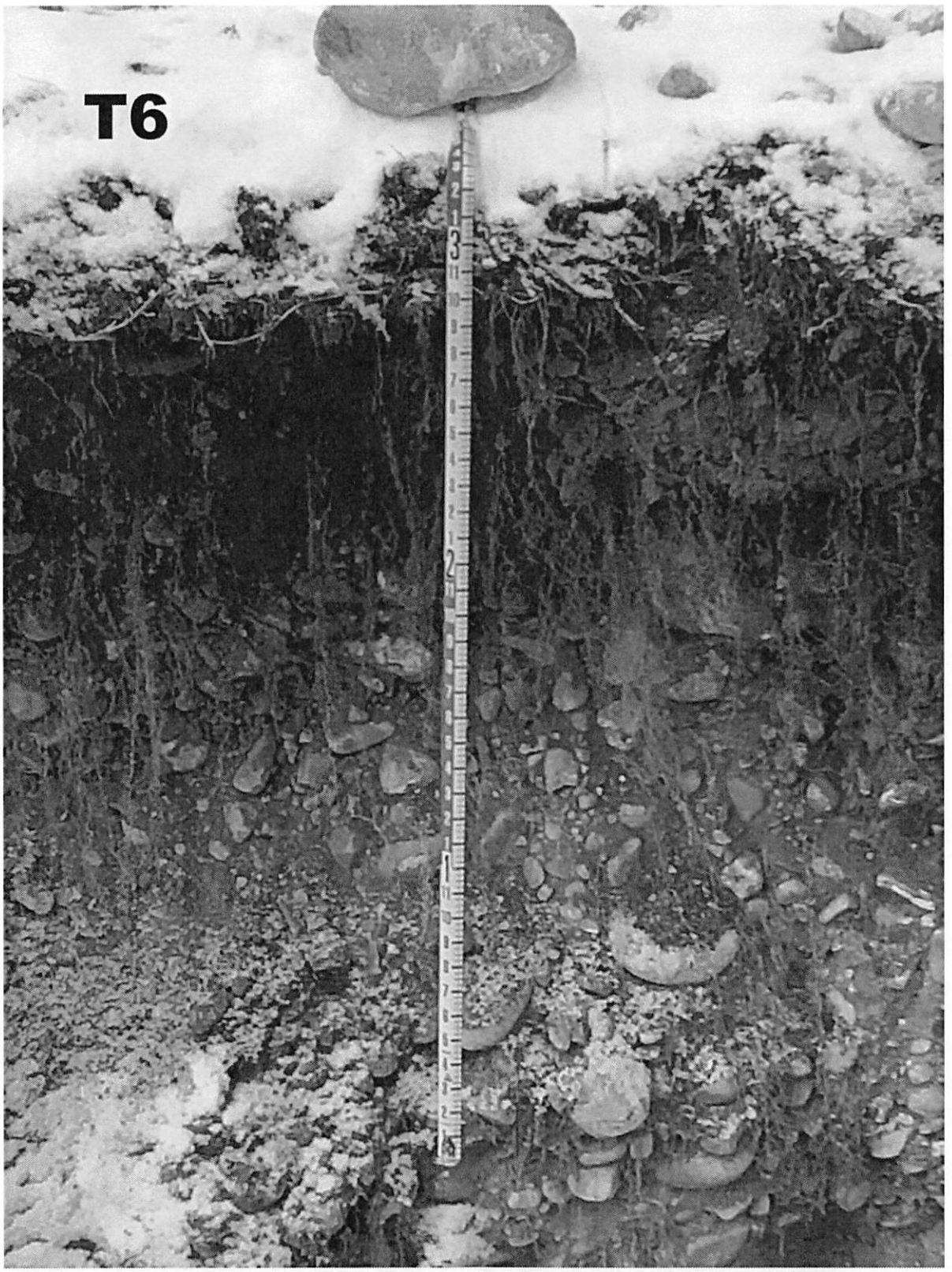

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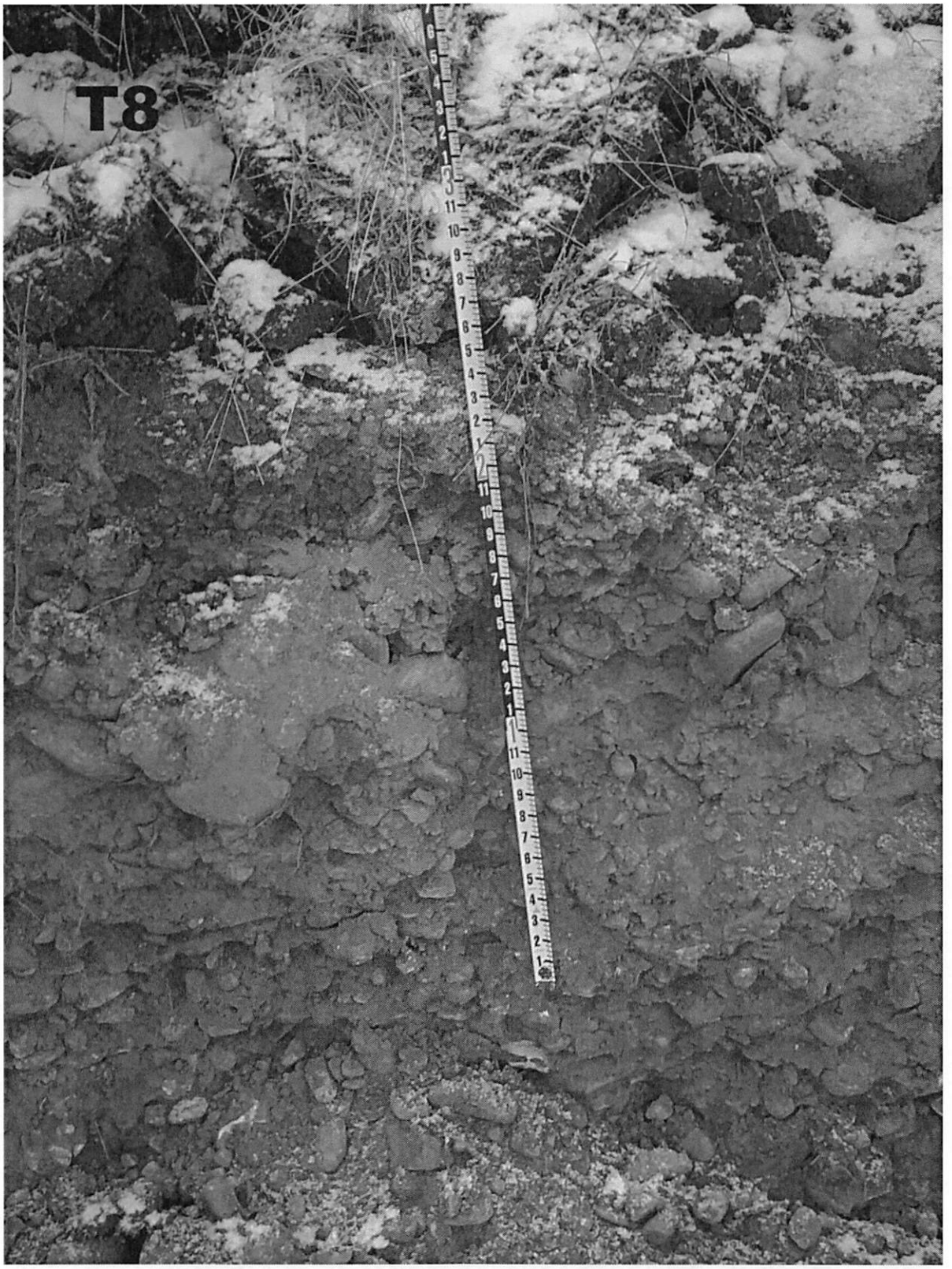

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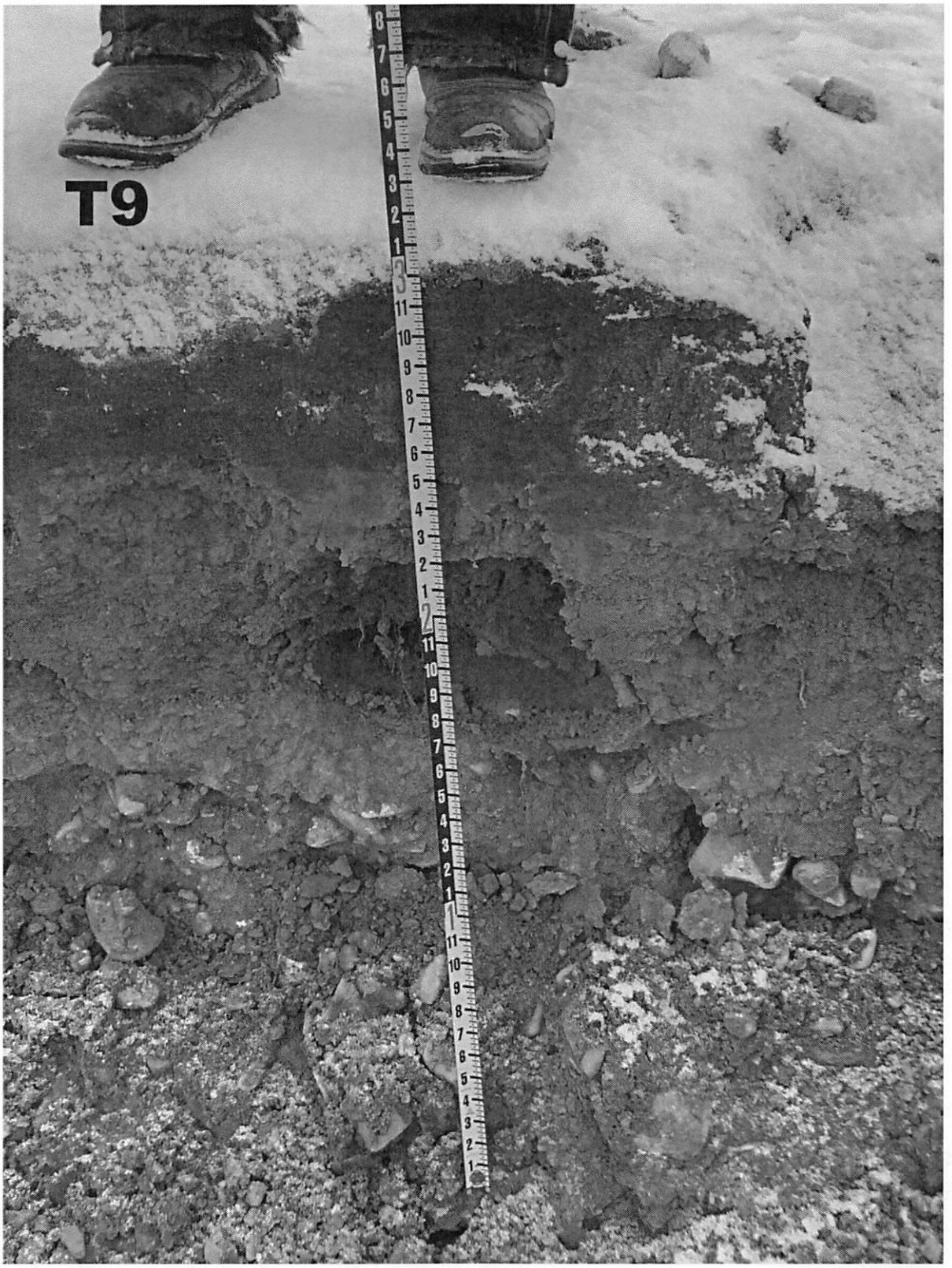

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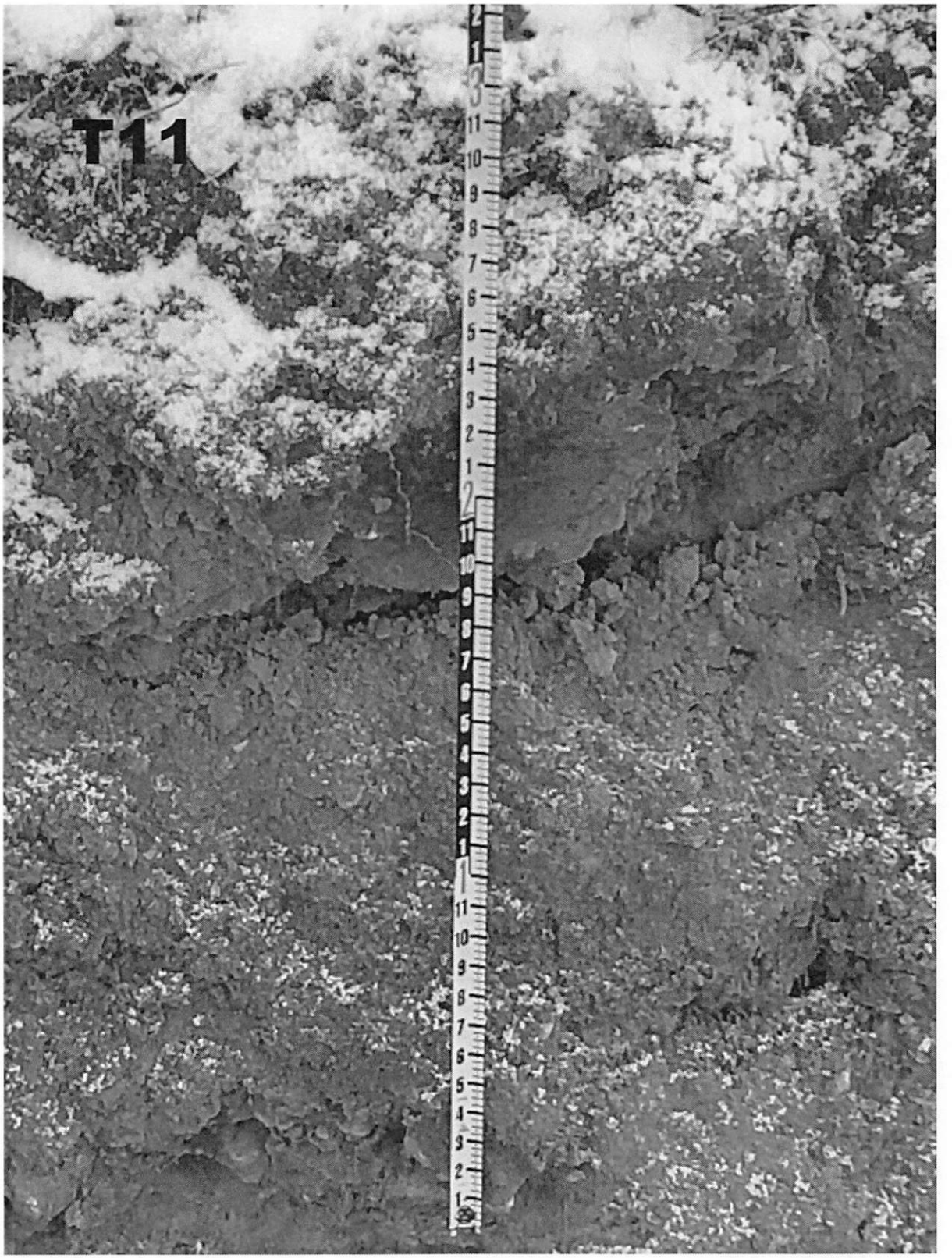

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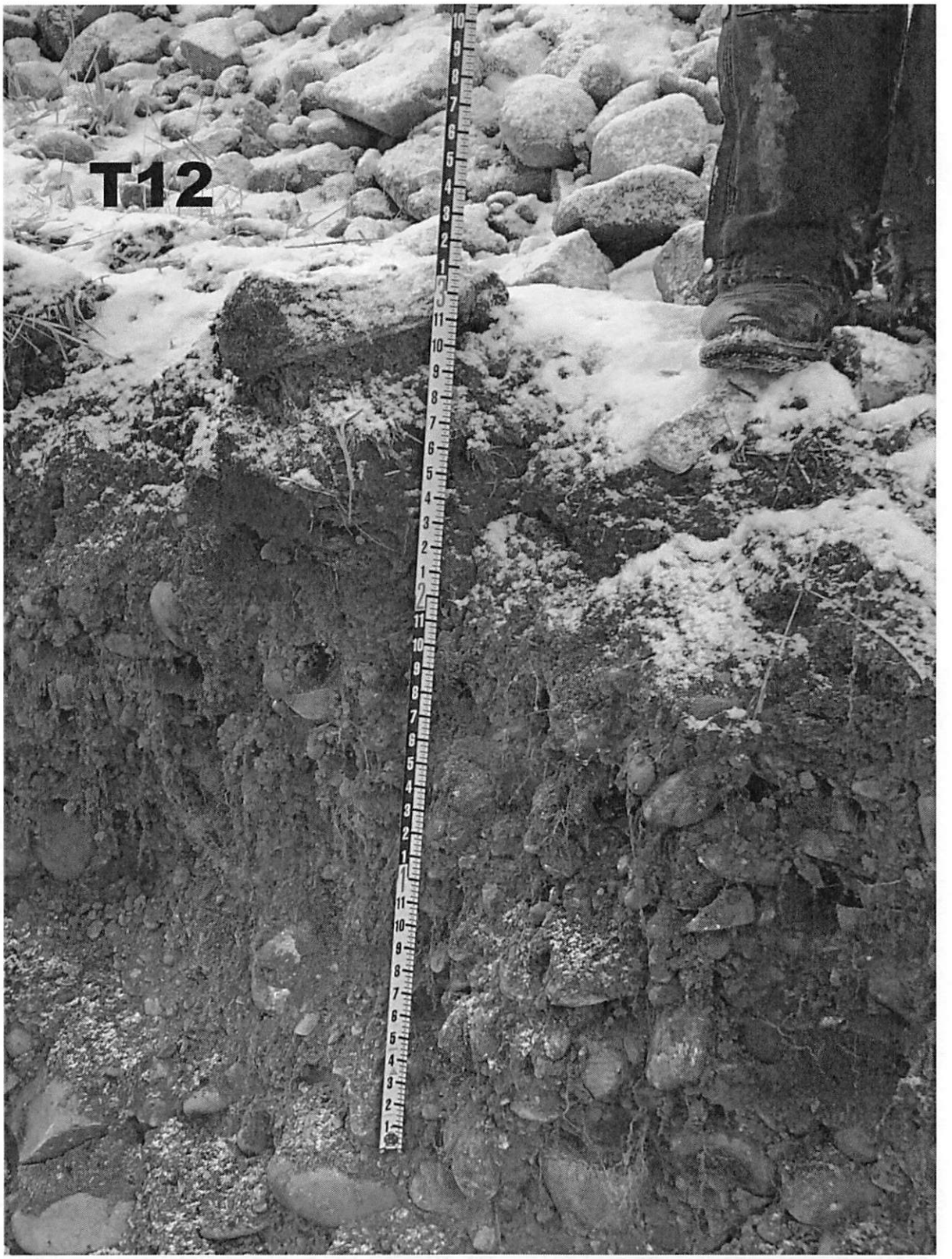

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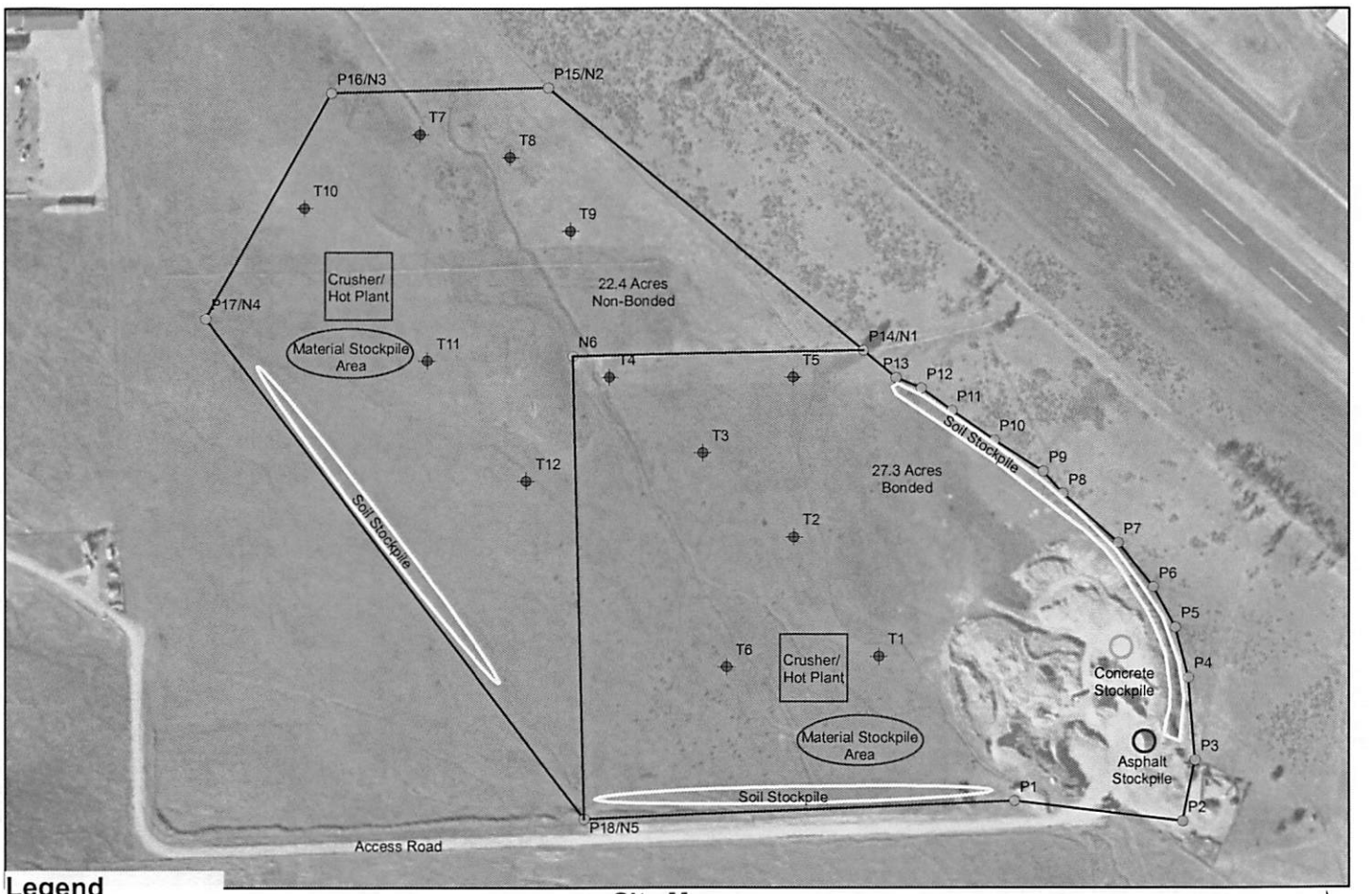

Legend

- Soil Test Holes
- Boundary Points
- Permit Boundary

300 Feet

1 inch = 300 feet

Site Map
Jake Yoder
Yoder Gravel Pit
January 2019

Sec. 24, T9N, R20W
Ravalli County

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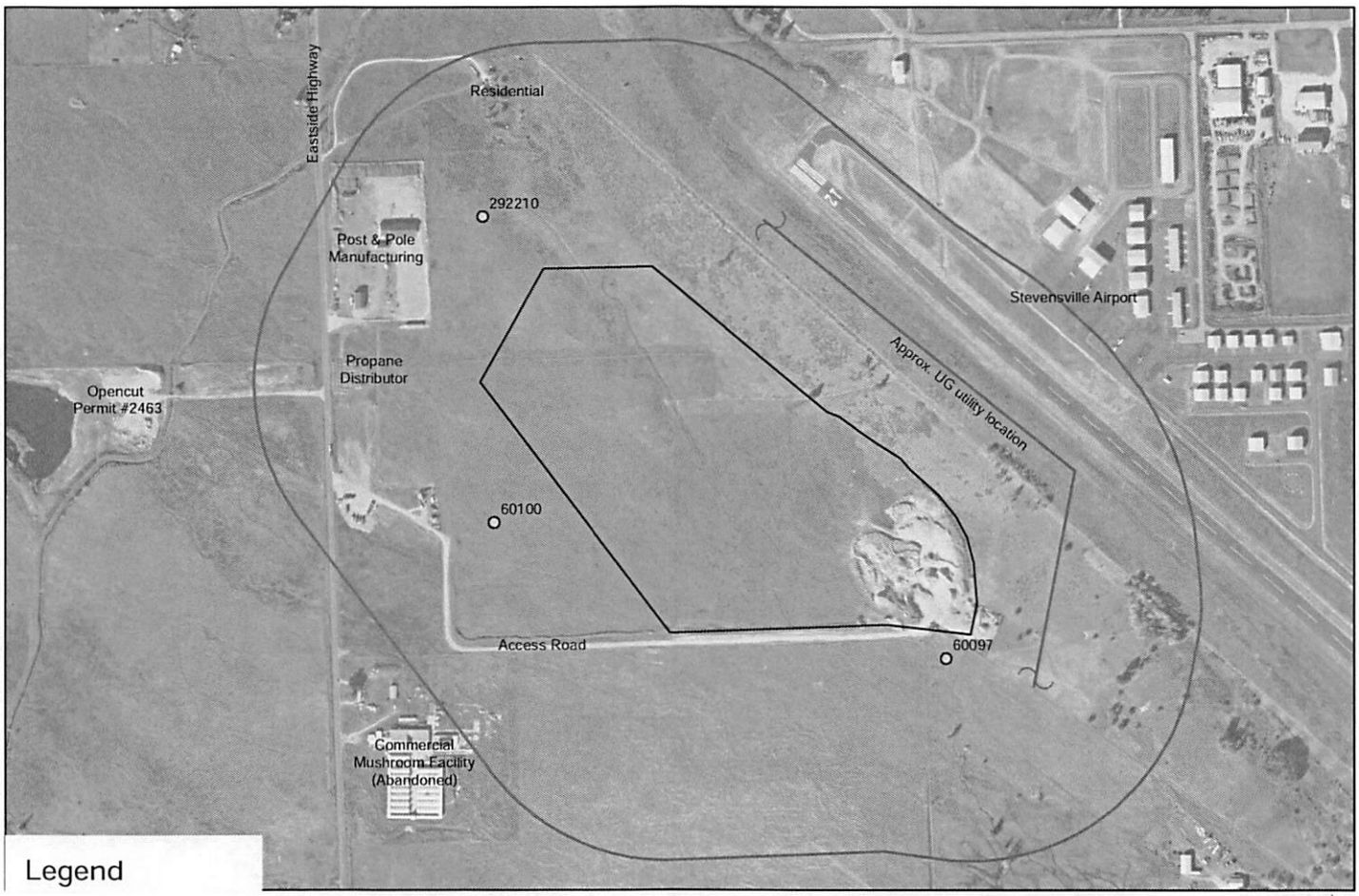

Legend

- GWIC Wells
- 1,000-FT Area
- Permit Boundary

600 Feet

1 inch = 600 feet

Area Map
Jake Yoder
Yoder Gravel Pit
January 2019

Sec. 24, T9N, R20W
Ravalli County

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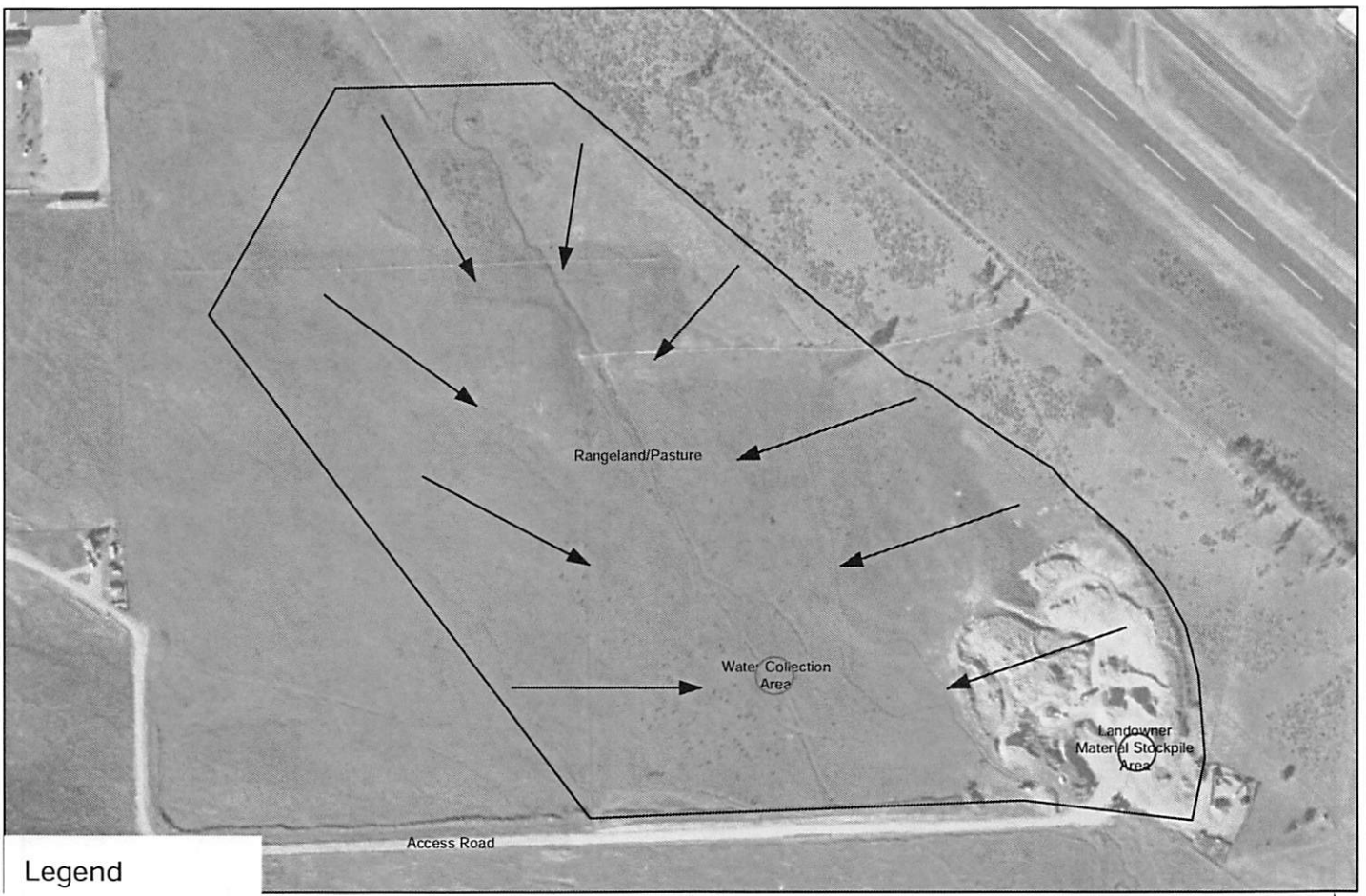

Legend

Permit Boundary

Site Drainage

300 Feet

1 inch = 300 feet

Reclamation Map
Jake Yoder
Yoder Gravel Pit
January 2019

N

Sec. 24, T9N, R20W
Ravalli County

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Legend

Permit Boundary

2,000 Feet 1 inch = 2,000 feet

Location Map
Jake Yoder
Yoder Gravel Pit
January 2019

Sec. 24, T9N, R20W

Ravalli County

N

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POINTS ARE VALID

OPERATOR PROPOSED PERMIT BOUNDARY COORDINATES TABLE

Purpose of this Boundary Coordinate Table: **Amendment Application**

1) Use this form to submit coordinates to delineate the **Operator Proposed Permit Boundary**.

2) If delineating multiple Permit Boundaries, use separate **Operator Proposed Permit Boundary** tables to delineate each Permit Boundary.

3) When providing coordinates for an **Amended** Permit boundary, you must include coordinates that delineate the ***entire*** new Operator Proposed Permit Boundary (i.e. one proposed boundary that encompasses both the existing permitted boundary and proposed amendment area).

4) If **Bonded** and **Non-Bonded** area is present, complete the **Operator Proposed Non-Bonded Boundary Coordinate** table **in addition** to this form.

5) All boundaries are created automatically by a computer program, therefore;

- All coordinates **must** be in geographic sequence, so that the Operator Proposed Permit Boundary is created by connecting Map ID #P1 to Map ID #P2 to Map ID #P3, etc.
- The last Map ID # in the BCT would connect to the first Map ID# to complete the boundary.
- The Map ID# for each coordinate (e.g. P1, P2, P3 etc.) must be shown on the site map.
- Coordinates must be submitted in **Decimal Degrees** and **WGS 84** datum and include a negative longitude to plot in Montana.

6) **Do Not** provide coordinates for any other features (e.g. screen, test holes, asphalt plant, etc.).

Do Not leave blank rows in between coordinates in the BCT. Providing coordinates for additional features or leaving spaces will result in a boundary that cannot be drawn and the BCT will be deemed incomplete and/or deficient.

7) Only put numerical coordinates in the Latitude or Longitude boxes (i.e. no "N" or "W"), or this BCT will not be accepted. Coordinates must be in decimal degree format and provided to the fifth decimal point.
Example: Latitude 46.58946 & Longitude -112.00480.

8) Email the completed Microsoft Excel table to: DEQopencut@mt.gov with "Subject" line: **BCT (Operator-Site Name)**. Do **not** include a printed version of this table with the paper application submitted to the Program's Helena office.

Operator Name: Jake Yoder

Site Name: Yoder Gravel Pit

Permit # (if not a new app) 2863 **Date:** 2/26/2019

MAP ID#	LATITUDE	LONGITUDE (must be negative)	DESCRIPTION (not required)
P1	46.52304	-114.05696	
P2	46.52288	-114.05548	
P3	46.52325	-114.05535	
P4	46.52375	-114.05538	
P5	46.52406	-114.05548	
P6	46.52431	-114.05566	
P7	46.52459	-114.05596	
P8	46.52490	-114.05643	
P9	46.52504	-114.05660	
P10	46.52524	-114.05702	
P11	46.52543	-114.05739	
P12	46.52557	-114.05765	
P13	46.52564	-114.05787	
P14	46.52581	-114.05815	
P15	46.52748	-114.06086	
P16	46.52750	-114.06278	
P17	46.52616	-114.06397	
P18	46.52303	-114.06078	

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POINTS ARE VALID

OPERATOR PROPOSED NON-BONDED BOUNDARY COORDINATE TABLE

Private Operators bonding the entire site would **Not** use this table.
Counties and other Government agencies not required to post a bond would **Not** use this table.
Use the **Operator Proposed Permit Boundary Coordinate** table to depict the operator proposed permit boundary.

1) Use this form to submit coordinates to delineate the Operator Proposed Non-Bonded boundary only. By default, the remaining area would be the Bonded area.

2) If delineating multiple Non-Bonded boundaries, use separate **Operator Proposed Non-Bonded Boundary Coordinate** tables to delineate each Non-Bonded boundary.

3) This table must be submitted in conjunction with the Operator Proposed Permit Boundary Coordinate Table, which delineates the entire proposed permit boundary, except when the existing permit boundary is not changing. If the permit boundary is already defined by coordinates and isn't changing, do not resubmit an Operator Proposed Permit Boundary Coordinates Table.

4) All boundaries are created automatically by a computer program, therefore:

- All coordinates must be in geographic sequence, so that the Operator Proposed Permit Boundary is created by connecting Map ID #N1 to Map ID #N2 to Map ID #N3, etc.
- The last Map ID # in the BCT would connect to the first Map ID# to complete the boundary.
- The Map ID# for each coordinate (e.g. N1, N2, N3 etc.) must be shown on the site map.
- Coordinates must be submitted in Decimal Degrees and WGS 84 datum and include a negative longitude to plot in Montana

5) **Do Not** provide coordinates for any other features (e.g. screen, test holes, asphalt plant, etc.).
Do Not leave blank rows in between coordinates in the BCT.
Providing coordinates for additional features or leaving spaces will result in a boundary that cannot be drawn and the BCT will be deemed incomplete and/or deficient.

6) Only put numerical coordinates in the Latitude or Longitude boxes (i.e. no "N" or "W"), or this BCT will not be accepted. Coordinates must be in decimal degree format and provided to the fifth decimal point.
Example: Latitude 46.58946 & Longitude -112.00480.

7) Email the completed Microsoft Excel table to: DEQopencut@mt.gov with "Subject" line: **BCT (Operator-Site Name)**. Do **not** include a printed version of this table with the paper application submitted to the Program's Helena office.

Operator Name: Jake Yoder

Site Name: Yoder Gravel Pit

Permit # (if not a new app) 2863 **Date:** 2/26/2019

MAP ID#	LATITUDE	LONGITUDE	DESCRIPTION (not required)
N1	46.52581	-114.05815	
N2	46.52748	-114.06086	
N3	46.52750	-114.06278	
N4	46.52616	-114.06397	
N5	46.52303	-114.06078	
N6	46.52585	-114.06073	
N7		-	
N8		-	
N9		-	
N10		-	
N11		-	
N12		-	
N13		-	
N14		-	
N15		-	
N16		-	
N17		-	

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WEED BOARD NOTIFICATION OF OPENCUT OPERATION

In accordance with the Opencut Mining Act and its implementing Rules (ARM 17.24.218(j)(iii)), an Operator applying for an Opencut Mining Permit must:

- Complete this form;
- Submit it to the weed board in the county or counties in which the proposed Opencut operation is located; and,
- Attach a copy to the Opencut Mining Permit application submitted to the Montana Department of Environmental Quality (DEQ).

All fields must be completed and a Location Map must be attached.

In accordance with ARM 17.24.221, the **Location Map** may be on an aerial or topo base, and must show the site location in relation to the nearest town, city, or major intersection and be sufficient to allow the public to locate the proposed site. The map must also provide:

- Operator name
- Site name
- Legal description of the proposed permit area (Section, Township, and Range)
- Bar scale
- North arrow
- Date of drafting

Operator Name: Jake Yoder

Site Name: Yoder Gravel Pit **County:** Ravalli

OPERATOR CERTIFICATION: The person signing below certifies that: *a)* a Location Map meeting the requirements of ARM 17.24.221 was attached; and *b)* the form and map were submitted to the weed board in the county or counties in which the proposed Opencut operation is located.

Printed Name: Jake Yoder **Title:** Operator

Signature: Jake Yoder **Date:** 10/18/16

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Reclamation Bond Spreadsheet

INSTRUCTIONS: Enter your data in the shaded boxes. See page 3 for detailed instructions.

Operator Name:	Jake Yoder
Site Name:	Yoder Gravel Pit
Prepared by:	C. Fisher
Date:	1/30/2019

Total Permitted Acres = 49.7 acres*

*Must match the "Total Permitted Acres" in A1-10 of the Opencut Mining Plan of Operation & Application.

Comments:

BONDED ACREAGE BREAKDOWN

Must match the "Acreage Breakdown" in section A1-10 of the Opencut Mining Plan of Operation & Application.

Bonded	27.3	acres
Phase I Release Bonded Area		acres
Non-Bonded	22.4	acres
Access Road		acres
Total Bonded Area =	27.3	acres**

**The Total Bonded Area must be identical to the acreage on the Bond submitted by the Operator to the Department.

Lineal Feet & Height must match section D4-9 of Opencut Mining Plan of Operation & Application, and reclamation slope ratio must match section E4-2

Highwall Cut/Fill (refer to section D4-9)

Description	linear feet	height	reclamation slope ratio		cubic yards	
	1000	20	3	:1	5,556	total
				:1	0	5,556

Highwall Backfill (refer to section D4-9 & D5) - Covers cost of grading & sloping fill material along highwall face to create the permitted slope. Must also complete **Backfill Transport/Placement** line item below.

Description	linear feet	height	reclamation slope ratio		cubic yards	
				:1	0	total
				:1	0	0

Mine Area Backfill (Refer to section D5) - Covers the cost of placing backfill material in the pit or to raise the level of the pit floor. Must also complete **Backfill Transport/Placement** line item below.

Description	acres	depth	compaction %	cubic yards	
				0	total
				0	0

Mine soil replacement	11	inches soil	Overburden Replacement	0	inches OB	total 11
Access road soil replacement		inches soil	Overburden Replacement		inches OB	total 0

* Soil and overburden inches much match section C2-4.

ITEM	UNIT	AMOUNT		RATE		TOTAL
Highwall Cut/Fill		5,556	cu yds	$1	per cubic yard	$5,556
Highwall Backfill & Mine Area Backfill		0	cu yds	$1.50	per cubic yard	$0
Backfill Transport/Placement Cost-Onsite $2cy, offsite $15c		0	cu yds		per cubic yard	$0
Bonded area grading		27.3	acres	$100	per acre	$2,730
Bonded area ripping		27.3	acres	$100	per acre	$2,730
Bonded soil and OB replacement	11 inches	27.3	acres	$1.25	per cubic yard	$50,467
Access road area grading		0.0	acres	$100	per acre	$0
Access road area ripping		0.0	acres	$100	per acre	$0
Access road soil replacement	0 inches	0.0	acres	$1.25	per cubic yard	$0
Seeding or other revegetation		27.3	acres	$600	per acre	$16,380
Weed control		27.3	acres	$100	per acre	$2,730
Fencing			linear ft	$1.40	per linear foot	$0
Cost to crush onsite asphalt		1000	cu yds	$4	per cubic yard	$4,000
Cost to import, purchase and place soil			cu yds	$18	per cubic yard	$0
Cost to bond for reject fines			cu yds	$1	per cubic yard	$0
						$0
						$0
						$0
					Total =	$84,593

Indirect Reclamation costs to DEQ (Mob/DeMob, Contingency, Engineering, Overhead, & Project Management) = 25% up to $1,000,000 bond and 20% for a bond over $1,000,000. Minimum Bond Amount is $25,000 $21,148

Total Area Bonded =	27.3	Rate Per Bonded Acre =	$3,873.31	**Total Bond =**	**$105,741**

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LANDOWNER CONSULTATION

This form is required for all applicants applying for an Opencut Mining permit or for an amendment that will: *a)* add acreage, an asphalt plant, or a concrete plant; *b)* change the postmining land use; or *c)* extend the reclamation date [MCA 82-4-432(2)(d); ARM 17.24.206].

OPERATOR SECTION: All fields must be completed.

Operator: Jake Yoder

Site: Yoder Gravel Pit County: Ravalli

Section 24 Township 9 ☒N or ☐S Range 20 ☐E or ☒W *and* Section ___ Township ☐N or ☐S Range ☐E or ☐ W

The person signing below represents that (*check one box*):

☐ I am an officer or an employee of the Operator and I am duly authorized to bind the Operator, which is a corporation, limited partnership, limited liability company, or other corporate entity in good standing and authorized to do business in Montana, and in this capacity I acknowledge and certify that:

Or

☒ I am the Operator and I acknowledge and certify that:

1) The Operator consents to and acknowledges that the DEQ and its representatives may access the site to inspect the permit area at any reasonable time, and that while the DEQ attempts to provide reasonable notice of an inspection to the operator when practicable under the circumstances, inspections may be conducted without prior notice as necessary to determine whether Opencut operations are being conducted in compliance with the permit, Act, and rules [82-4-422(1)(d) and 425, MCA] & [ARM 17-24-206(2)(f) and 206(3)].

2) The Operator shall complete reclamation: *a)* in accordance with the approved Plan of Operation and as concurrent with operations as feasible; *b)* within one year of the cessation of operations or the termination of the right to conduct operations; and *c)* no later than the permitted final reclamation date.

By: Jake Yoder
Signature — Legibly print or type name

Operator — 2/19/19
Title — Date

LANDOWNER SECTION: All fields must be completed. A private road may be included as affected land only with the landowner's consent [MCA 82-4-403(1)].

A. Does the Landowner want the Operator to permit an access road(s) (i.e. existing or proposed non-public road that connects an Opencut operation to a public access)?

☐ Not applicable: The site will be accessed from the immediately adjacent public road.
☒ No: The landowner does not want an access road included in the permit.
☐ Yes and: ☐ Access road will be reclaimed at final reclamation or ☐ Access road will remain at final reclamation

If the access road will remain at final reclamation, describe the length, width, and location of each permitted road to be left:

Road 1 - Length: ____ feet Width: ___ feet, Location must be identified on the site map and reclamation map.

Road 2 - Length: ____ feet Width: ___ feet, Location must be identified on the site map and reclamation map.

B. Does the Landowner want stockpile(s) of mine material left at the conclusion of Opencut operations? ☐No ☒Yes

Note: *a)* mine material must be left in a location that will be accessible by road; *b)* the total volume of mine material left is typically 10,000 cubic yards or less (to help ensure it can be consumed and the site reclaimed within 5-10 years); and *c)* once consumed, the Landowner is responsible for reclaiming the area using a soil stockpile left by the Operator for that purpose.

If Yes, as per ARM 17.24.219(1)(b), describe the type and volume of mine material(s) to be left:

1. Type of mine material(s) to be left: ☒Gravel ☐Sand ☐Other: ____
2. Total volume of mine material to be left in cubic yards: <10000
3. If the total is more than 10,000 cubic yards, identify potential local uses consistent with it being consumed within 5-10 years:

C. Does the Landowner consent to allow the burial of onsite generated asphalt on their land within the permitted boundaries?

☒No ☐Yes (in accordance with ARM 17.24.219(1)(b))

If Yes, refer to section D7-1 of the Opencut Mining Plan of Operation and Application.

LANDOWNER SECTION (Continued):

D. Landowner acknowledges and affirms the following:

1. The Operator is applying for a permit to conduct operations in accordance with: *a)* the Opencut Mining Act (Title 82, chapter 4, part 4, MCA); *b)* its implementing rules (ARM Title 17, chapter 24, subchapter 2); and *c)* the site-specific Plan of Operation.
2. The Landowner: *a)* owns the land and all its earthen materials; *b)* has been consulted by the Operator about the proposed Plan of Operation; and *c)* understands the Montana Department of Environmental Quality (DEQ) may require the Operator to revise that Plan before the permit or amendment is approved.
3. If the DEQ approves the permit, the following will apply to the permit area:
   a. The Operator will have the exclusive right to conduct Opencut operations.
   b. The Operator may allow another party to conduct permitted Opencut operations only if the Operator retains control over that party's activities and the Operator remains responsible for any violations that may occur.
   c. The Landowner may not authorize Opencut operations by another party until that party obtains the Operator's permission.
4. The DEQ can enforce requirements of the Act, rules, and permit. Any other arrangements or understandings between the Landowner and Operator are private matters that should be stated in a separate written agreement between those two parties.
5. DEQ personnel have the right to access the site to inspect the permit area at any reasonable time. The Operator and DEQ's agents or contractors have the right to access the site to complete reclamation in accordance with the Plan of Operation.
6. The Operator may request Phase 1 or Phase 2 release of the permit once the site or a portion of it has been reclaimed according to the Plan of Operation. DEQ will notify the Operator and the Landowner of its decision regarding each release request.
7. DEQ typically releases a site reclaimed to cropland after one successful crop; a site reclaimed to perennial vegetation is typically released after two complete growing seasons or when revegetation is established, whichever is longer.
8. It is the Landowner's responsibility to disclose this form to any purchaser of the site prior to closing and to advise the purchaser of the status of the Opencut Mining permit.
9. If a pond remains at final reclamation, it may be the landowner's responsibility to obtain a water right from the DNRC if one is required.

E. The following must be filled out for sites located in Sage Grouse Habitat:

If the site is in Sage Grouse habitat designated by Executive Orders 12-2015 and 21-2015, and any part of the proposed permit area is privately owned, the private Landowner acknowledges that he/she:

- Has knowledge of the Montana Sage Grouse Habitat Conservation Program letter contained in the Opencut permit application, and understands the letter provides recommendations for reclamation of this site to maintain sage grouse populations and habitat so Montana can manage its own lands, wildlife, and economy, and a listing under the Endangered Species Act will not be warranted.
- Understands Executive Order 12-2015 stipulates that:
  - Reclamation should re-establish native grasses, forbs, and shrubs to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community and replace sage grouse habitat to the degree conditions allow.
  - Landowners should be consulted on the desired plant mix on private land and have the option of deciding whether the site will be reclaimed with the recommended sage grouse seed mix or an alternate seed mix.

  Landowner chooses the following seed mix:

  ☐ **Recommended seed mix for sage grouse habitat** ☐ **Alternate seed mix as chosen in Section E6-4 of the application**

F. LANDOWNER SIGNATURE:

Landowner (print or type): Jake Yoder

Address: 964 Stevensville Airport Rd.

City: Stevensville State: MT Zip: 59870

Phone#: 406-274-8348 Cell Phone# (optional): _____

Email (optional): _____

Landowner Signature: Jake Yoder Date: 2/19/19

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ZONING COMPLIANCE

In accordance with Opencut Mining Act sections 82-4-431(8) & 432(2)(b), sand and gravel operations must meet applicable local zoning regulations. As a result, this form is required unless the Operator is proposing to mine **bentonite, clay, scoria, peat,** or **soil.**

In accordance with section 17.24.223 of the rules implementing the Act, this form is required for a sand or gravel operation to apply for a **permit** or **an amendment adding acreage, changing the postmining land use or adding an asphalt or concrete plant.**

RECEIVED

OPERATOR SECTION: All fields must be completed.

IC-19-01-76

Operator: Jake Yoder P# 388470

Site: Yoder Gravel Pit 4376 EASTSIDE HWY, STEVENSVILLE MT **County:** Ravalli OG-19-01-19

Section(s) 24 & ___ **Township** 9 ☒North or ☐South **Range** 20 ☐East or ☒West

Section(s) ___ & ___ **Township** ___ ☐North or ☐South **Range** ___ ☐East or ☐West

---

LOCAL GOVERNING BODY SECTION: Complete all items unless so directed by *italics* below.

In accordance with section 82-4-432(2)(b) of the Opencut Mining Act and section 17.24.223 of the rules implementing the Act, **the local governing body having jurisdiction over the area to be mined must certify that the proposed mine site and Plan of Operation comply with applicable local zoning regulations** adopted under MCA Title 76, Chapter 2. The certification must be submitted on this DEQ form.

1. The Operator has provided the local governing body with a site map, location map and a Plan of Operation for the proposed sand and gravel operation identified above: ☒Yes or ☐No If **No,** this form is not acceptable.
2. Check **one** box:

   a. ☒ Site is **not** zoned.

   b. ☐ Site is **zoned** and **does not comply** with local zoning regulations.; therefore, **no Opencut operations can occur**. Site is zoned as: _____

   c. ☐ Site is **zoned** and local zoning regulations **do not require** a local license or permit for the proposed Opencut operations. Site is zoned as: _____

   d. ☐ Site is **zoned** and local zoning regulations **require** a local license or permit for the proposed Opencut operations. Site is zoned as: _____
   Local zoning regulations require the following license or permit: _____

The application cannot be deemed complete until a copy of the local license or permit for the proposed operation is submitted to the Department.

CERTIFICATION BY LOCAL GOVERNING BODY:

Name of Local Governing Body: Ravalli County Planning Dept

Official's Name: Terry Nelson **Title:** Planning Administrator

Signature: Terry N **Date:** 2-1-2019

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SURFACE LANDOWNERS LIST

Operator: **Jake Yoder** Site: **Yoder Gravel Pit**

An Opencut mining permit or amendment application must include this form if the application is for either:

A. A new permit (MCA 82-4-432 [5]); or

B. An amendment increasing the acreage by 50% or more of the amount of permitted acreage in the original permit (MCA 82-4-4432 [11]).

If applicable, the Operator must submit this form to DEQ at two separate points during the application process.

First Submittal - For the application, the Operator must:

1- Provide the names of the surface owners of land located within one-half mile of the boundary of the proposed Opencut permit.
2- Compile the names using the owners of record as shown in the paper or electronic records of the county clerk and recorder for the county where the proposed Opencut operation is located.
3- Obtain the names no more than 60 days prior to submission of the application.
4- Include the landowner of the proposed permit area.

Second Submittal - For public notice, the Operator must provide:

1- The names and addresses of the surface owners notified pursuant to public notice.
2- The date each landowner was sent public notice.

NOTE: When determining the number of surface landowners eligible to request a public meeting: **1)** Multiple parties owning the same parcel of land are counted as 1 landowner. **2)** A party owning multiple parcels of land is counted as 1 landowner, regardless of the number of parcels owned.

#	Surface Landowner Name		Mailing Address				Public Notice Date
	First Name	Last Name	Street Address	City	ST	Zip	
1	Christopher	Agro	279 Morias Ln	Stevensville	MT	59870	
2	Billy & Joy	Banning	4274 Allum Rd	Stevensville	MT	59870	
3	Bitterroot Tool & Die, LLC		PO Box 130	Stevensville	MT	59870	
4	James	Booth	4523 Adellon Ct	Stevensville	MT	59870	
5	Bourne Family Trust		547 N Bundy Dr	Los Angeles	CA	90049	
6	Johnny & Debbie	Bush	275 Neva Lee Trail	Stevensville	MT	59870	
7	Jerald	Capp	4004 Wildfowl Ln	Stevensville	MT	59870	
8	Teresa	Carlton	5106 Holborn Way	San Ramon	CA	94582	
9	Dailey Bros Investment LLC		5433 Wildlife Way	Florence	MT	59833	
10	Winston	Davenport	5306 Woodrow Ln	Lolo	MT	59847	
11	Daniel & Laura	Denton	440 Airport Rd	Stevensville	MT	59870	

If necessary, use additional sheet(s) to list additional landowners.

Are additional sheets attached? ☑ **YES** ☐ **NO** If YES, how may additional sheets are attached? 2

By submitting this form the Operator affirms that this ☑ **First Submittal (Application) OR** ☐ **Second Submittal** (Public Notice) was completed pursuant to the public notice section of MCA 82-4-432. (Check One)

Email this completed form in Microsoft Excel format to: DEQOpencut@mt.gov with "Subject" line: **SLL (Operator-SiteName).** Do **not** include a printed version of this form with the paper application submitted to the Helena office.

#	Surface Landowner Name		Mailing Address - Required for public notice				Public Notice Date
	First Name	Last Name	Street Address	City	ST	Zip	
12	Randall & Debbie	Doane	513 Airport Rd	Stevensville	MT	59870	
13	Ellison Cattle Company	C/O Dan Ellison	2610 Gold Rush Ave	Helena	MT	59601	
14	James	Ertel	490 Stevensville Airport Rd	Stevensville	MT	59870	
15	Joe Fagnito	Lorraine Hoyt	283 Neva Lee Trail	Stevensville	MT	59870	
16	Darren & Jennifer	Ginn	4328 Paulee Ln	Stevensville	MT	59870	
17	Robby & JudiLynn	Goudette	290 Morias Ln	Stevensville	MT	59870	
18	Jon	Grenfell	440 N Burnt Fork Rd	Stevensville	MT	59870	
19	Bernard & Linda	Helldorfer	6067 69th Ln	Maspeth	NY	11378	
20	Scott	Henderson	PO Box 743	Stevensville	MT	59870	
21	Travis & Erin	Hill	295 Neva Lee Trail	Stevensville	MT	59870	
22	David & Sara	Kauffman	4436 Eastside Hwy	Stevensville	MT	59870	
23	Donald & Robin	Kester	278 Morias Ln	Stevensville	MT	59870	
24	Lisa	Kirkpatrick	562 N Burnt Fork Rd	Stevensville	MT	59870	
25	Jeffrey	Knopp	4018 Badger Ln	Stevensville	MT	59870	
26	Legal Resource Agency LLC		PO Box 93	Big Arm	MT	59910	
27	Loren & Susan	Lutzenhiser	7010 SE 36th Ave	Portland	OR	97202	
28	Joseph & Laura	Mast	590 N Burnt Fork Rd	Stevensville	MT	59870	
29	William	McNulty	3946 US Hwy 93 N	Stevensville	MT	59870	
30	Kathryn	McGinnis	648 Hollibaugh Rd	Stevensville	MT	59870	
31	Donald	Misevic	PO Box 514	Stevensville	MT	59870	
32	Montana Mushroom LLC		9951 Stoneglen Trail	Littleton	CO	80124	
33	David & Terri	Morrison	305 Stevensville Airport Rd	Stevensville	MT	59870	
34	Andrew & Tanya	Novak	397 Stevensville Airport Rd	Stevensville	MT	59870	
35	Ravalli County		205 Bedford St	Hamilton	MT	59840	
36	Gale & Ricky	Reissing	277 Morias Ln	Stevensville	MT	59870	
37	Sanlia, Inc	C/O Brad Lee	10 6th St	Havre	MT	59501	
38	Delbert	Schwaderer	3925 Flying Ln	Stevensville	MT	59870	
39	John & Carol	Steckelberg	294 Neva Lee Ln	Stevensville	MT	59870	
40	Stevensville Airport		PO Box 37	Stevensville	MT	59870	
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#	Surface Landowner Name		Mailing Address - Required for public notice				Public Notice Date
	First Name	Last Name	Street Address	City	ST	Zip	
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43	Jerry & Donna	Thorstad	4277 Paulee Ln	Stevensville	MT	59870	
44	Joseph & Terrese	Tifer	4475 Eastside Hwy	Stevensville	MT	59870	
45	Abe & Linda	Troyer	3226 Allison Rd	Saint Ignatius	MT	59865	
46	Christopher Trussell	Jolene Tollenaar	330 Hidden Valley Rd	Florence	MT	59833	
47	Vandergrift Family Trust		400 E Pedregosa St, Apt K	Santa Barbara	CA	93103	
48	Nicely Jamie	Wade	21275 Twin Oak	Yorba Linda	CA	92886	
49	Donald	Whitehair	367 Airport Rd	Stevensville	MT	59870	
50	Sheridan & Beverly	Wise	4524 Adellon Ct	Stevensville	MT	59870	
51	Robert & Janet	Wolfenden	1506 Wheelbarrow Creek Rd	Stevensville	MT	59870	
52	William Wyatt	Revocable Trust	PO Box 844	Philipsburg	MT	59858	
53	Stephen & Bridget	Yazvac	4324 Paulee Ln	Stevensville	MT	59870	
54	Jake	Yoder	964 Stevensville Airport Rd	Stevensville	MT	59870	
55	Jerome & Linda	Yoder	672 Hollibaugh Rd	Stevensville	MT	59870	
56	Silas & Paula	Torrey	4619 Torrey Ln	Stevensville	MT	59870	
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SURFACE LANDOWNERS LIST

Operator: **Jake Yoder** Site: **Yoder Gravel Pit**

An Opencut mining permit or amendment application must include this form if the application is for either:

A. A new permit (MCA 82-4-432 [5]); or

B. An amendment increasing the acreage by 50% or more of the amount of permitted acreage in the original permit (MCA 82-4-4432 [11]).

If applicable, the Operator must submit this form to DEQ at two separate points during the application process.

First Submittal - For the application, the Operator must:

1- Provide the names of the surface owners of land located within one-half mile of the boundary of the proposed Opencut permit.
2- Compile the names using the owners of record as shown in the paper or electronic records of the county clerk and recorder for the county where the proposed Opencut operation is located.
3- Obtain the names no more than 60 days prior to submission of the application.
4- Include the landowner of the proposed permit area.

Second Submittal - For public notice, the Operator must provide:

1- The names and addresses of the surface owners notified pursuant to public notice.
2- The date each landowner was sent public notice.

NOTE: When determining the number of surface landowners eligible to request a public meeting: **1)** Multiple parties owning the same parcel of land are counted as 1 landowner. **2)** A party owning multiple parcels of land is counted as 1 landowner, regardless of the number of parcels owned.

#	Surface Landowner Name		Mailing Address				Public Notice Date
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Are additional sheets attached? ☑ **YES** ☐ **NO** If YES, how may additional sheets are attached? **2**

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RECEIVED VIA OPENCUT EMAIL 3/5/2019

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DEQ OPENCUT MINING SECTION • PO BOX 200901 • HELENA MT 59620-0901 • PHONE: 406-444-4970 • FAX: 406-444-4988 • EMAIL: DEQOpencut@mt.gov

SEED MIX GUIDELINE - NON SAGE GROUSE HABITAT

The following seed mixes are recommended for Opencut mine site reclamation on Montana's plains, foothills, intermountain valleys, and wetland areas. The use of one of the site-specific seed mixes listed below may be appropriate depending on site conditions, the postmining land use, compatibility with surrounding vegetation, or landowner preference. The drill rates given are based on 12 pounds of pure live grass seed per acre, with an additional 1 to 2 pounds of forbs. The use of the forbs is highly recommended as they will fill the niche usually occupied by noxious weeds and other weedy species. The use of highly competitive introduced grasses, particularly crested wheatgrass and smooth brome, is not recommended unless the area to be seeded is in, or next to, an area where such species are already established. A nurse crop is recommended on highly erodible sites and, if used, should be seeded at 10 lbs/acre. The use of wheat, oat, or barley (in order of preference) is recommended for cover crop and nurse crop seeding.

- The Operator must purchase certified seed on a pure live seed (PLS) basis.
- Contact your local county extension agent or the Natural Resource Conservation Service (NRCS) for assistance with formulating alternative seed mixes.
- The seeding rate must be doubled for broadcast seeding.

NATIVE GRAZING/PASTURE MIX - For general use throughout the state

Species	Lbs PLS/Acre
Slender wheatgrass	2
Western wheatgrass	3
Thickspike wheatgrass	2.5
Bluebunch wheatgrass	2.5
Green needlegrass	2
Western Yarrow*	0.5

NON-NATIVE GRAZING/PASTURE MIX - For general use throughout the state

Species	Lbs PLS/Acre
Intermediate wheatgrass	3
Orchardgrass	3
Timothy	2
Tall Fescue	2
Alfalfa	2

NATIVE RANGELAND MIX - For moist/riparian areas

Species	Lbs PLS/Acre
Mountain brome	2
Bluejoint reedgrass	1
Tufted hairgrass	1
Canada wild rye	2
Western wheatgrass	3
Bluebunch wheatgrass	2
Western yarrow*	1

NATIVE RANGELAND MIX - For arid regions

Species	Lbs PLS/Acre
Slender wheatgrass	1
Thickspike wheatgrass	5
Western wheatgrass	3
Sandbergs bluegrass	2
Prairie junegrass	1
Yellow prairie coneflower*	1

WETLAND SEED MIX - For pond edges throughout the state

Species	Lbs PLS/Acre
Slough grass	2
Basin Wildrye	2
Baltic rush	1
Nebraska sedge	2
Creeping spike rush	2
Beaked sedge	2
Bluejoint reedgrass	1

* - Listed forbs may be substituted for other forb species depending on availability/pricing. Alternative forbs include but are not limited to Purple Coneflower, Yellow Prairie Coneflower, Western Yarrow, Lewis Flax, Rocky Mountain Bee Plant, Scarlet Globemallow, Alfalfa and Prairie Sagewort.

RECEIVED VIA ELECTRONIC FTS 11/21/2016

SEED MIX GUIDELINE - SAGE GROUSE HABITAT

The following seed mixes are **REQUIRED** for Opencut mine site reclamation within Sage Grouse General, Interconnectivity and Core Habitat areas; unless a baseline vegetative study is completed by a vegetation specialist using accepted sampling criteria. The Operator must choose the seed mix that is designed for the region that the Opencut mine will be located in. Refer to page 4 of this document for the Sagebrush Seeding Method that must be used with the below seed mixes.

Sagebrush **cannot** be drill seeded and must be broadcast seeded at the rates described below. It may be necessary to broadcast seed sagebrush separately from the other seeds, especially if the other seeds are drill seeded.

- The Operator must purchase certified seed on a pure live seed (PLS) basis.
- The seeding rate must be doubled for broadcast seeding.

NORTHERN REGION SAGEBRUSH SEED MIX

Grasses	Lbs PLS/Acre
Agropyron smithii – Western Wheatgrass	1.5 for drill seed rate & 3.0 for broadcast
Agropyron dasystachyum – Thickspike wheatgrass	.75 for drill seed rate and 1.5 for broadcast
Koeleria cristata – Prairie junegrass	0.05 for drill seed rate and 0.1 for broadcast
Poa sandbergii – Sandberg bluegrass	0.25 for drill seed rate and.5 for broadcast
Stipa comate – Needle and thread	1.25 for drill seed rate and 2.5 for broadcast
Forbs	
Achillea millefolium – Yarrow	0.025 for drill seed rate and 0.05 for broadcast
Artemisia frigida – Fringed sagewort	0.025 for drill seed rate and 0.05 for broadcast
Shrubs	
Artemisia cana – Silver sagebrush	5.0 for broadcast rate No Drill Seeding allowed
Artemisia tridentata ssp. Wyomingensis – Wyoming Big Sagebrush	2.0 for broadcast rate No Drill Seeding allowed
Chrysothamnus nauseosus – Rubber rabbitbrush	1.0 for drill seed rate and 2.0 for broadcast

Info:

1. The northern region includes the following counties: Blaine, Chouteau, Hill, Liberty Phillips, Roosevelt, and Valley.
2. In general, shrub seed should originate from areas within 300 miles of the project to insure compatibility with local conditions.
3. Seeding grass at a heavier rate than shown is likely to reduce sagebrush establishment.
4. The species described in the seed mix must be used at the rates required.

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CENTRAL & SOUTHEASTERN REGIONS SAGEBRUSH SEED MIX

Grasses	Lbs PLS/Acre
Agropyron smithii – Western wheatgrass	.75 for drill seed rate & 1.5 for broadcast
Agropyron spicatum – Bluebunch wheatgrass	.5 for drill seed rate & 1.0 for broadcast
Agropyron trachycaulum – Slender wheatgrass	.5 for drill seed rate & 1.0 for broadcast
Calamovilfa longifolia – Prairie sandreed	0.38 for drill seed rate & .75 for broadcast
Poa sandbergii – Sandberg bluegrass	0.25 for drill seed rate & .5 for broadcast
Schizachyrium scoparium – Little bluestem	0.25 for drill seed rate & .5 for broadcast
Stipa comata – Needle and thread	1.25 for drill seed rate & 2.5 for broadcast
Forbs	
Achillea millefolium – Yarrow	0.025 for drill seed rate & 0.05 for broadcast
Artemisia frigida – Fringed sagewort	0.025 for drill seed rate & 0.05 for broadcast
Shrubs	
Artemisia cana – Silver sagebrush	2.0 for broadcast rate No Drill Seeding allowed
Artemisia tridentata ssp. Wyomingensis – Wyoming Big Sagebrush	3.0 for broadcast rate No Drill Seeding allowed
Chrysothamnus nauseosus – Rubber rabbitbrush	1.0 for drill seed rate & 2.0 for broadcast

Info:

1. The central and southeastern region includes the following counties: Big Horn, Carbon, Carter, Custer, Dawson, Fallon, Fergus, Garfield, Golden, Judith Basin, McCone, Musselshell, Petroleum, Powder River, Prairie, Rosebud, Stillwater, Treasure, Wibaux, Wheatland, and Yellowstone.
2. In general, shrub seed should originate from areas within 300 miles of the project to insure compatibility with local conditions.
3. Seeding grass at a heavier rate than shown is likely to reduce sagebrush establishment.
4. The species described in the seed mix must be used at the rates required.

SOUTHWESTERN AND SOUTH CENTRAL REGIONS SAGEBRUSH SEED MIX

Grasses	Lbs PLS/Acre
Agropyron smithii – Western wheatgrass	.5 for drill seed rate & 1.0 for broadcast
Agropyron spicatum – Bluebunch wheatgrass	1.0 for drill seed rate & 2.0 for broadcast
Agropyron trachycaulum – Slender wheatgrass	.5 for drill seed rate & 1.0 for broadcast
Festuca idahoensis – Idaho fescue	0.13 for drill seed rate & 0.25 for broadcast
Poa sandbergii – Sandberg bluegrass	0.13 for drill seed rate & 0.25 for broadcast
Stipa comata – Needle and thread	1.0 for drill seed rate & 2.0 for broadcast
Forbs	
Achillea millefolium – Yarrow	0.025 for drill seed rate & 0.05 for broadcast
Dalea purpureum – Purple prairie clover	.5 for drill seed rate & 1.0 for broadcast
Shrubs	
Artemisia tridentata ssp. Tridentate – Basin big sagebrush	2.0 for broadcast rate No Drill Seeding allowed
Artemisia tridentata ssp. Vaseyana – Mountain big sagebrush	2.0 for broadcast rate No Drill Seeding allowed
Chrysothamnus nauseosus – Rubber rabbitbrush	1.0 for drill seed rate & 2.0 for broadcast

Info:

1. The southwestern and south central region includes the following counties: Beaverhead, Broadwater, Deer Lodge, Gallatin, Jefferson, Madison, Meagher, Park, Silverbow, and Sweetgrass.
2. In general, shrub seed should originate from areas within 300 miles of the project to insure compatibility with local conditions.
3. Seeding grass at a heavier rate than shown is likely to reduce sagebrush establishment.
4. The species described in the seed mix must be used at the rates required.

RECEIVED VIA ELECTRONIC FTS 11/21/2016

SAGEBRUSH SEEDING METHOD & TIPS

- Broadcast seeding is the best method to seed sagebrush.
- Ensure a relatively firm seedbed; a boot should register in the soil but not sink. If the soil is too hard, sagebrush seed will not establish.
- Sagebrush is to be seeded between October 15 and March 1 in Montana.
- Seeding on snow is an effective means of establishing sagebrush.
- Seeding immediately prior to snow or rain is often effective.
- Do not seed sagebrush seed more than 1/8 inch below the surface.
- Mix sagebrush seed and forb seed with grass seed in a broadcast seeder to prevent clogging. Seeding sagebrush by itself without a carrier, like native wheatgrass seed, is often difficult.
- Broadcast the seed manually or mechanically using cyclone-type bucket spreaders. Mix seed frequently to prevent clogging. Do not use a grain drill.
- Following broadcast seeding, good seed/soil contact must be established. Drag a flexible meadow harrow or a chain over the seeded area.
- Hydraulic seeding equipment (hydro-seeder) can be effective if the seed is applied without any hydro mulch. Sagebrush and other forbs often stick in hydromulch, do not contact the soil, and often do not grow. Apply hydromulch in a second application after seeding.

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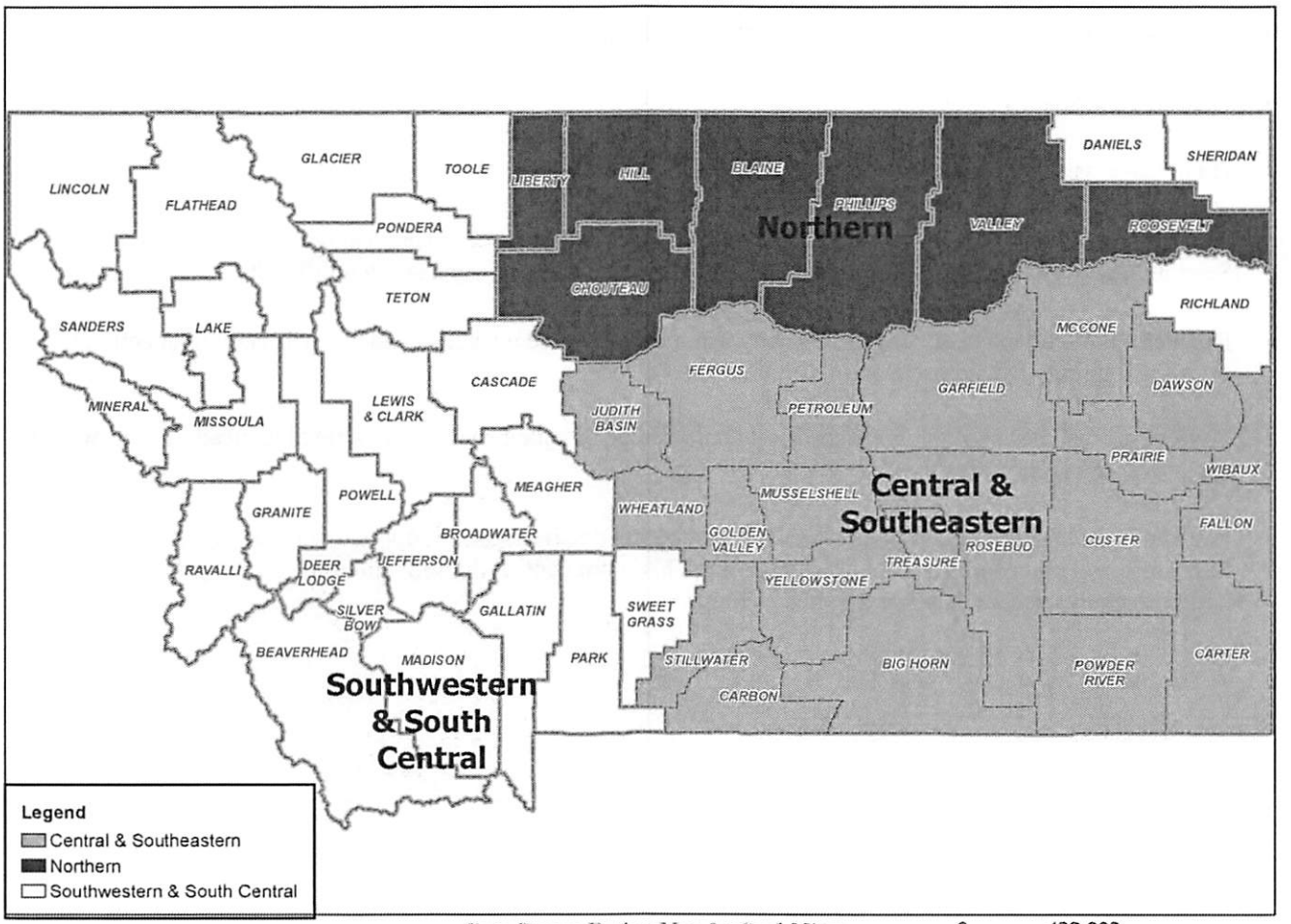

Sage Grouse Region Map for Seed Mixes

J.J. Conner
3/17/2016
Aerial Photo 2013

0 420,000 Feet
N
1 inch = 420,000 feet

DEQ
Industrial and Energy Minerals Bureau
Opencut Mining Program

RECEIVED VIA ELECTRONIC FTS 11/21/2016

October 10, 2016

Opencut Mining Program
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

RE: Site Name: Yoder Gravel Pit
Operator: Jake Yoder
Opencut #: 2863
Location: Stevensville, Ravalli County, Montana

To Whom This Concerns,

The proposed opencut mining operation does occur in the Airport Affected Area of Town of Stevensville Airport as mentioned on the Zoning Compliance form by Ravalli County. However, the proposed site is approximately 1000 horizontal feet to the south and 100 vertical feet below the airport property and due to the proposed opencut site operations, the Stevensville Airport has no concerns or comments regarding these proposed operations and the Operator may proceed with the proposed plan of operations.

Sincerely,

Chris Soto

Chris Soto, Assistant Manager
Stevensville Airport
Town of Stevensville
P.O. Box 30
Stevensville, MT 59870

C. Jake Yoder – 964 Stevensville Airport Rd, Stevensville, MT 59870

RECEIVED VIA ELECTRONIC FTS 11/21/2016