

**Venture Stone, LLC
Operating Permit No. 00189**

**Amendment 002
Ryegate, MT**

**September 8, 2023
Final Environmental Assessment**

Contents

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT.....	4
PROPOSED ACTION	4
PURPOSE AND NEED.....	4
SUMMARY OF POTENTIAL IMPACTS:.....	14
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE	14
2. WATER QUALITY, QUANTITY, AND DISTRIBUTION	19
3. AIR QUALITY:	20
4. VEGETATION COVER, QUANTITY AND QUALITY:	21
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	22
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	23
7. HISTORICAL AND ARCHAEOLOGICAL SITES:	25
8. AESTHETICS:	26
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:.....	27
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:	27
11. HUMAN HEALTH AND SAFETY:	28
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:.....	29
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:	29
14. LOCAL AND STATE TAX BASE AND TAX REVENUES:	30
15. DEMAND FOR GOVERNMENT SERVICES:	30
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:	31
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:	32
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:	32
19. SOCIAL STRUCTURES AND MORES:	33
20. CULTURAL UNIQUENESS AND DIVERSITY:	33
21. PRIVATE PROPERTY IMPACTS:	33
22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	35
PROPOSED ACTION ALTERNATIVES:	35
CONSULTATION:	36
PUBLIC INVOLVEMENT:	36
OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:	36
NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS	37
References	46

Tables

Table 1: Summary of Proposed Action	6
Table 2: Venture Stone permitted and proposed sites	13
Table 3: Soil map unit legend for Site 15.....	18
Table 4: Assessment of Significance (ARM 17.24.608).....	40

Figures

Figure 1: Site 13 (currently permitted), Site 14 (proposed) and Site 15 (proposed) location overviews.	9
Figure 2: Proposed project site area map for Site #14	10
Figure 3: Proposed project site area map for Site #15.....	11
Figure 4: Proposed project site 15 with adjacent Hardrock Mining Operating Permit areas.....	12
Figure 5: Soil Map of Site 14 and Map Unit Legend	16
Figure 6: Site 15 Soil Map	17

Montana Department of Environmental Quality
Air, Energy, & Mining Division
Mining Bureau
ENVIRONMENTAL ASSESSMENT (EA)

COMPANY NAME: Venture Stone, LLC
EA DATE: September 8, 2023
PROJECT: Site 14 and Site 15
PERMIT/LICENSE: Operating Permit No. 00189
AMENDMENT #: 002
LOCATION: Site 14: 46.202°N, 109.089° W;
Site 15: 46.258° N, 109.187°W
COUNTY: Golden Valley

PROPERTY OWNERSHIP: FEDERAL ___ STATE ___ PRIVATE X

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The proposed action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This EA will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

PROPOSED ACTION

DEQ would approve an amendment (Amendment 002) to Venture Stone, LLC (Venture Stone) Operating Permit No. 00189 if DEQ has determined that Venture Stone has met the criteria set forth in Section 82-4-342, Montana Code Annotated (MCA). If approved, the amendment to the permit to conduct mining activities would be granted for the remaining operational life of the mining projects which is estimated to be approximately 10 years.

PURPOSE AND NEED

DEQ's purpose and need in conducting this environmental review is to act upon Venture Stone's application for Amendment 002 to Operating Permit No. 00189. Amendment 002 would authorize the mining of rock products on two project sites in compliance with the Metal Mine Reclamation Act (MMRA). On October 3, 2022, Venture Stone submitted an application for Amendment 002. DEQ provided an initial deficiency review on December 12, 2022. Deficiency responses and updates to the application were submitted by Venture Stone on February 2, 2023, followed by a second deficiency review from DEQ on March 1, 2023. Venture Stone submitted a second deficiency response on March 31, 2023. Pursuant to Section 82-4-342, MCA, the deficiency responses, and application updates were determined to be complete and compliant on April 19, 2023.

The applicant's purpose and need in proposing this action is to mine rock products from beneath the surface of the earth up to a depth of 15 feet below the pre-existing ground surface. Mining would take place in locations that have previously been mined under a Small Miner Exclusion (SME) or mined without authorization. Site 14 is on the location of SME #15-015. Five acres of that site have been partially reclaimed. Site 15 contains disturbance from unpermitted mining activities. If Amendment 002 is approved, all previous disturbances on both project sites would be incorporated into Operating Permit No. 00189, and mining disturbances on both locations may be increased by 17.7 acres to a maximum of 44.7 acres. Mining activities are estimated to continue for approximately eight years on both project sites, which would be followed by two years of reclamation activities.

Table 1: Summary of activities proposed Amendment 002 application.

Summary of Proposed Activities in application	
General Overview	<p>The applicant currently holds Hard Rock Mining Operating Permit No. 00189 to mine rock products from 13 project sites in Cascade County, Golden Valley County, and Wheatland County. The applicant proposes adding two additional project sites to the permit through Amendment 002; this would add a total of 1,686 acres to the permit area. Site 14 would add 79 acres to the permit area and would add an additional 21 acres of permitted disturbance to the permit. Site 14 is located on privately-owned land held by William Charles Ramage. Site 15 would add 1,608 acres to the permit area and would add an additional 23.7 acres of permitted disturbance to the permit. Site 15 is located on privately-owned land held by James J. and Kathleen A. Ott. Mining on the project sites would occur when weather and road conditions permit.</p> <p>The area within and surrounding the proposed project sites is primarily used for grazing and crop cultivation. After mining is complete, all disturbed areas would be reclaimed to comparable use and stability of surrounding land. Almost all immediately surrounding land is privately owned, except for one parcel owned by the State of Montana which is located to the north of Site 15.</p> <p>Quarrying activities would take place at both proposed Site 14 and Site 15. The applicant would begin mining by stripping the area of topsoil and overburden. Soil would be separated into topsoil and overburden stockpiles and stored adjacent to the area of excavation. Once the target layer of rock has been accessed, the applicant would remove the product and backfill the trench with overburden. Processing of rock with a rock splitter may be done on Site 15; waste rock would be used as backfill at the site. Once mining is complete, the applicant would grade the site to approximate the original contour and spread stockpiled soil on the disturbed area. The soil would then be prepared for seed and seeded. Seeding would take place at an appropriate time of year. Reclamation would take place concurrently with mining where possible. Reclamation would be complete approximately 10 years after approval of Amendment 002.</p>
Proposed Dimensions	
Total Permit Area	1,686 acres total (78 acres on Site 14, 1,608 acres on Site 15)
Current Disturbance (acres)	32 acres total (18 acres on Site 14, 14 acres on Site 15)
Total Additional Disturbance	44.7 acres total (21 acres on Site 14, 23.7 acres on Site 15)
Existing road	Pre-mining two track roads exist on both sites, and would remain after mining
Total new surface disturbance	12.7 acres total (3 acres on Site 14, 9.7 on Site 15)
Specific Proposed Activities	
Duration and timing	<ul style="list-style-type: none"> • Mining operations would continue over approximately 8 years following the approval of Amendment 002. Reclamation would conclude approximately 10 years following the approval of Amendment 002. • Active operation would take place when weather and road conditions permit. Mining could take place year-round. • Reclamation activities would occur concurrent with mining and include: stockpiling of waste rock and soil; backfilling areas where product has been removed; spreading soil; and, seeding. • Final reclamation would include grading of pits to approximate preexisting contours, laying down of topsoil, and seeding all disturbed areas. Reclamation would require vegetation

	from an approved seed mix to become established in the disturbance area.
Equipment	Excavators, loaders, and skid steers would be used for mining. Smaller trucks would remove product from the site for loading on semi-truck trailers outside of the location. A hydraulic rock splitter may be used on Site 15 to process product.
Location and Analysis Area	The analysis area for the proposed action includes the proposed permit areas (Figures 2 and 3) and immediately adjacent land, as well as approximately 26.4 miles of county roads connecting the sites to major highways, and a 1-mile stretch of Big Coulee Road (HWY 300) on the east side of Site 15.
Personnel On-site	Both sites would have three to four workers on location during active operation hours as detailed above. Operations would take place whenever weather and road conditions permit.
Structures	The applicant does not propose to build any permanent mining-related structures at either location.
Project Water Source	All water required for operations would be hauled from off-site or obtained from the landowners. Water usage for mining activities would be limited to wetting down roads and disturbed areas for dust suppression.
Supplemental Lighting	Mining activities would occur during daylight hours and supplemental lighting would not be necessary at either project site.
Air Quality	The applicant proposes to wet any surface with water hauled from town or provided by the landowner if surface becomes a nuisance. A hydraulic rock splitter at Site 15 may produce dust. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to air quality.
Water Quality	The applicant proposes to keep all operations associated with the Amendment 002 at least 25 feet away from existing intermittent or emergent wetlands, and at least 100 feet away from any spring or the seasonal high-water mark of any perennial stream. The applicant has filed a notice of intent for storm water discharges associated with industrial activity with the Water Protection Bureau for Sites 14 and 15. Best Management Practices (BMPs) under the mine's Multi-Sector General Permit for Industrial Stormwater Discharge would be in place on both project sites. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to water quality.
Erosion Control and Sediment Transport	The applicant proposes to employ BMPs to prevent incidental runoff from disturbed areas reaching any stream. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to erosion control and sediment transport.
Solid Waste	No on-site disposal of solid waste would occur. All solid waste would be hauled to an appropriate disposal facility. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to solid waste.
Cultural Resources	The applicant proposes to notify the State Historic Preservation Office (SHPO) if any cultural resources are discovered during mining operations and stop all work until advised by SHPO. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to cultural resources.
Hazardous Substances	The applicant proposes to store the following hazardous substances for machinery on-site when necessary for operations: fuel, motor oil, hydraulic oil, gear oil, lubricating grease, antifreeze, power steering fluid, and brake fluid. Fuel would be stored in tanks on both locations, which would be double walled or have secondary spill containment of 110% of storage capacity. All liquid hazardous substances would be stored over 100 feet from any spring or seasonal high-water mark of any perennial stream. The applicant proposes to implement a Spill Control and Countermeasure plan, which has been approved by the State Fire Marshal, a copy of which would be kept at the project locations. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to hazardous substances.
Reclamation Plans	<ul style="list-style-type: none"> No permanent facilities or structures associated with proposed Amendment 002 would be constructed or located at the proposed project sites. All land disturbed by mining would be reclaimed to habitat suitable for agriculture or

	<p>grazing, with comparable stability of the surrounding geology.</p> <ul style="list-style-type: none"> • During mining, topsoil and overburden would be removed and stockpiled on location to access the target rock layer for quarrying. After the product is mined, reclamation would begin by replacing overburden and topsoil. • Waste rock would be used to fill any pits at the proposed project locations, and any pits or highwalls would be graded to approximate the original contour. • The applicant would spread topsoil and prepare the soil for seeding, including scarifying the soil. Livestock would be kept away from disturbed ground until reclamation is achieved. The soil would be planted with the approved vegetation mix, consisting of approximately 14.85 pounds of Pure Live Seed per acre.
Cumulative Impact Considerations	
Past Actions	<ul style="list-style-type: none"> • Site 14 was previously mined under SME #53-015 held by Brian Caballero. Mining under the SME has disturbed a total of 18 acres. Approximately five acres of this area has been partially reclaimed. All previous disturbance within the proposed permit area would be reclaimed at closure if Amendment 002 is approved. • Site 14 is immediately adjacent to inactive SME #53-017, which was held by Marcus Vacca. There is no current active mining at the site. A total of 9.6 acres of disturbance on the site was documented by DEQ staff in 2021. • Site 15 has 14 acres of disturbance from unauthorized mining. All previous disturbance within the proposed permit area would be reclaimed at closure under Amendment 002.
Present Actions	<ul style="list-style-type: none"> • Both project sites are located south of the town of Ryegate, Montana in an area that has seen increased mining of rock products in the past two decades. Within 10 miles of the proposed locations there are currently seven other hard rock mining project sites regulated under a hard rock mining operating permit held by four different permittees and two active SME sites. Additionally, there are approximately 14 permitted Open Cut sites in the general area of mining (south of US 12, East of Hwy 3, West of Barber, MT and North of Broadview, MT) • Site 14 would primarily be accessed by Short Lane from the west and east. Vehicles traveling to the west of the site may also use HWY 300 which sees vehicles from many other sites. • Site 15 would primarily be accessed by Big Coulee Road (HWY 300). This road currently serves many of the other Rock Product, Open Cut, and SME sites in the area.
Related Future Actions	<ul style="list-style-type: none"> • No new applications, amendments or revisions have been submitted to DEQ for mining in the general area of the proposed sites.

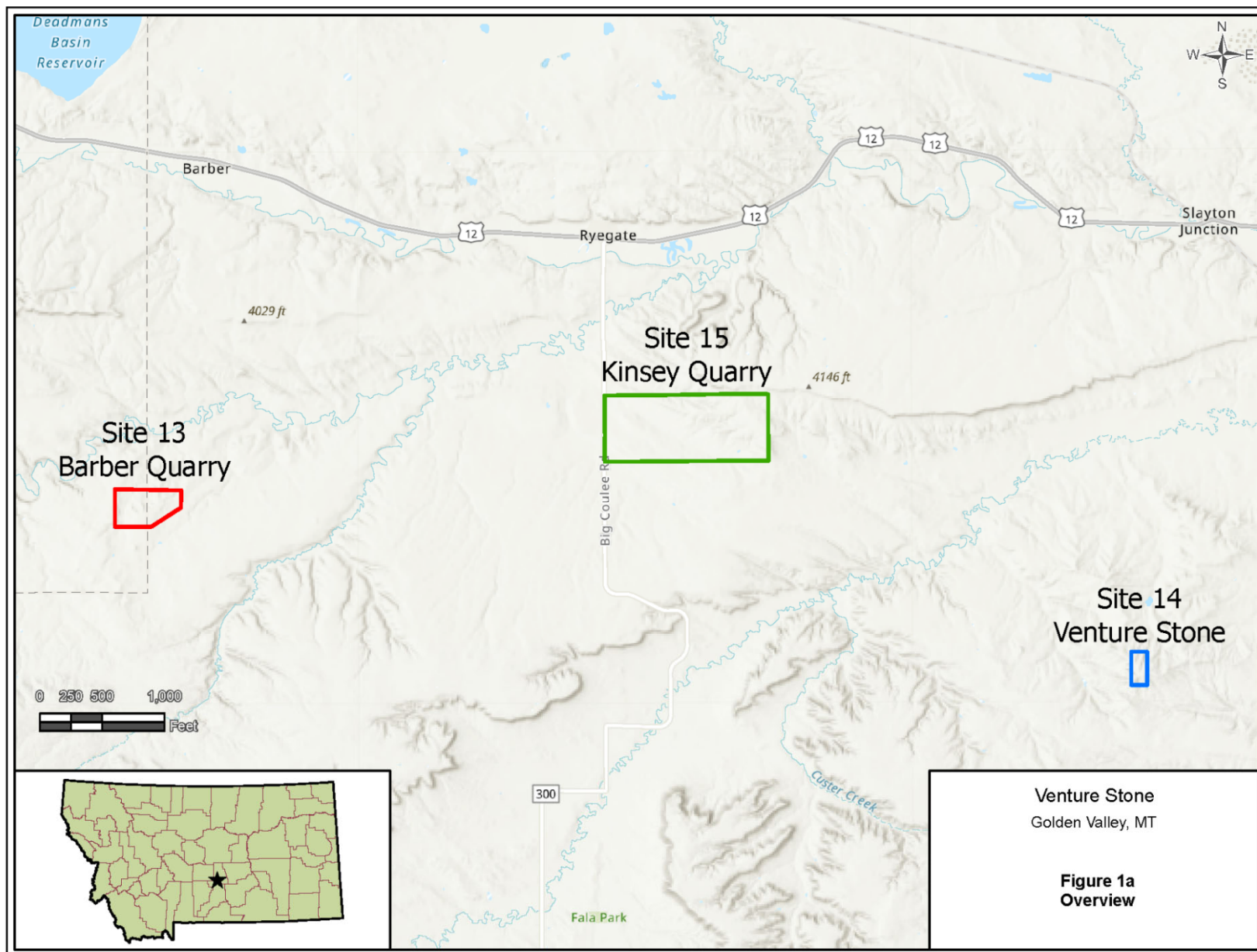


Figure 1: Site 13 (currently permitted), Site 14 (proposed) and Site 15 (proposed) location overviews.

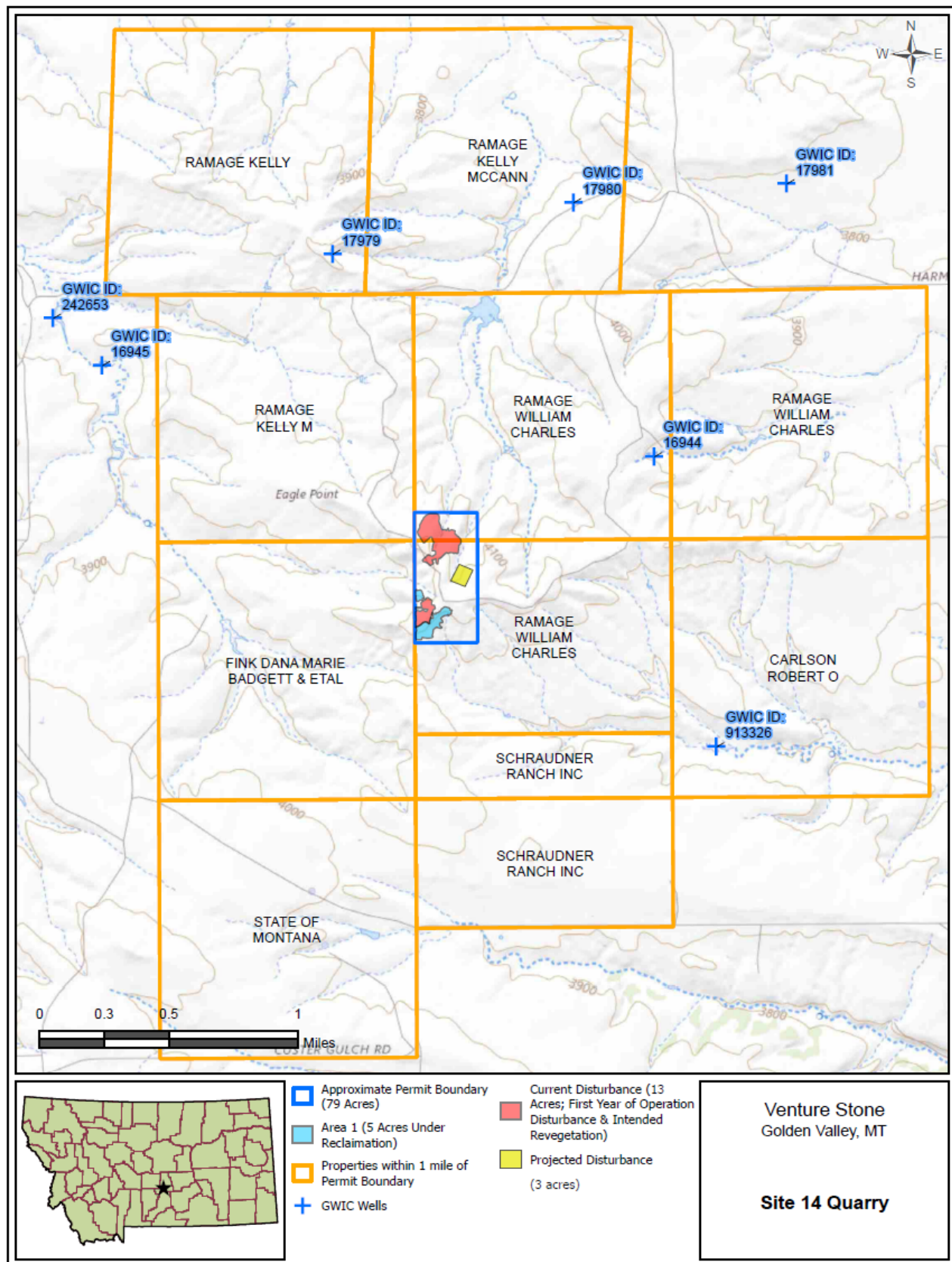


Figure 2: Proposed project site area map for Site #14

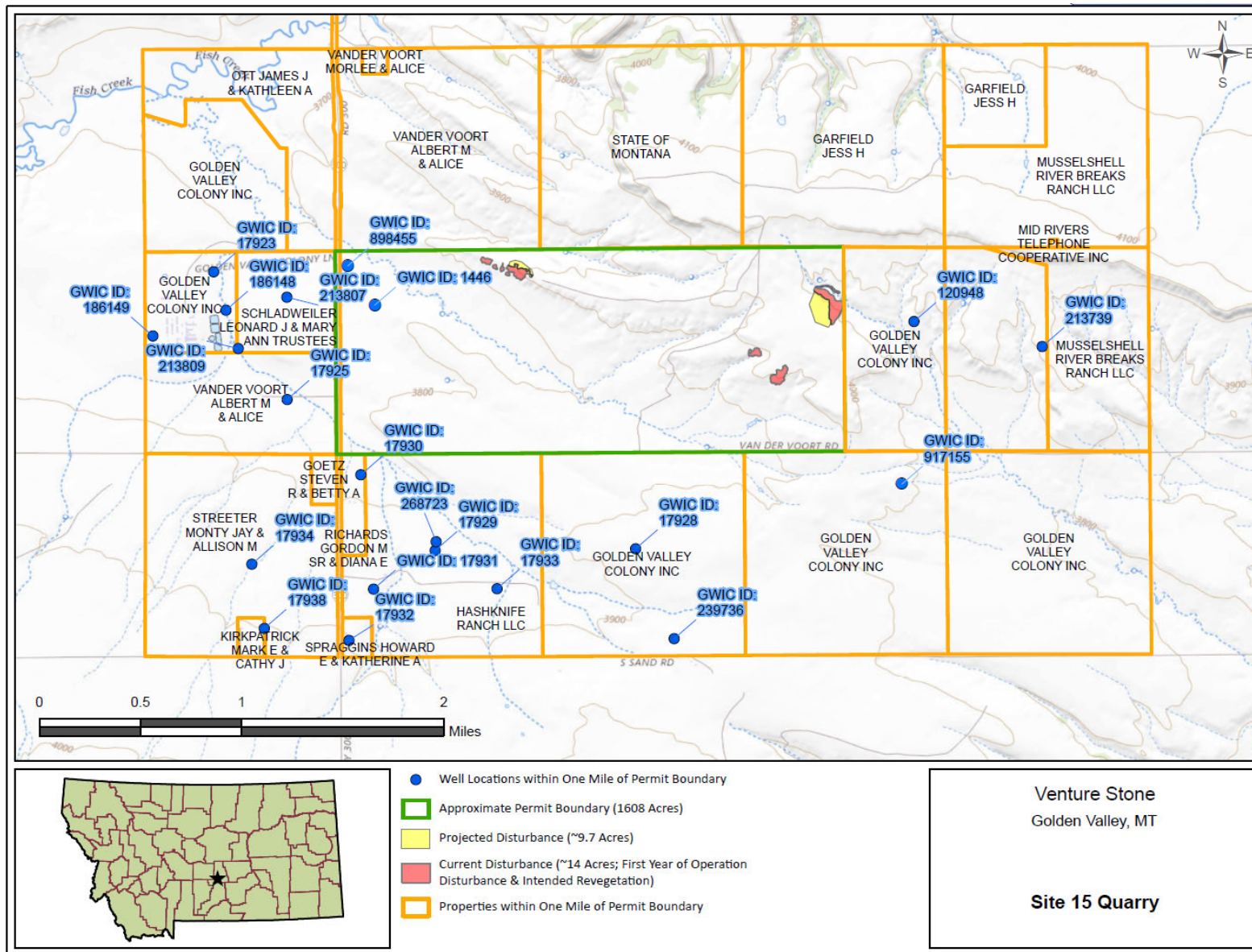
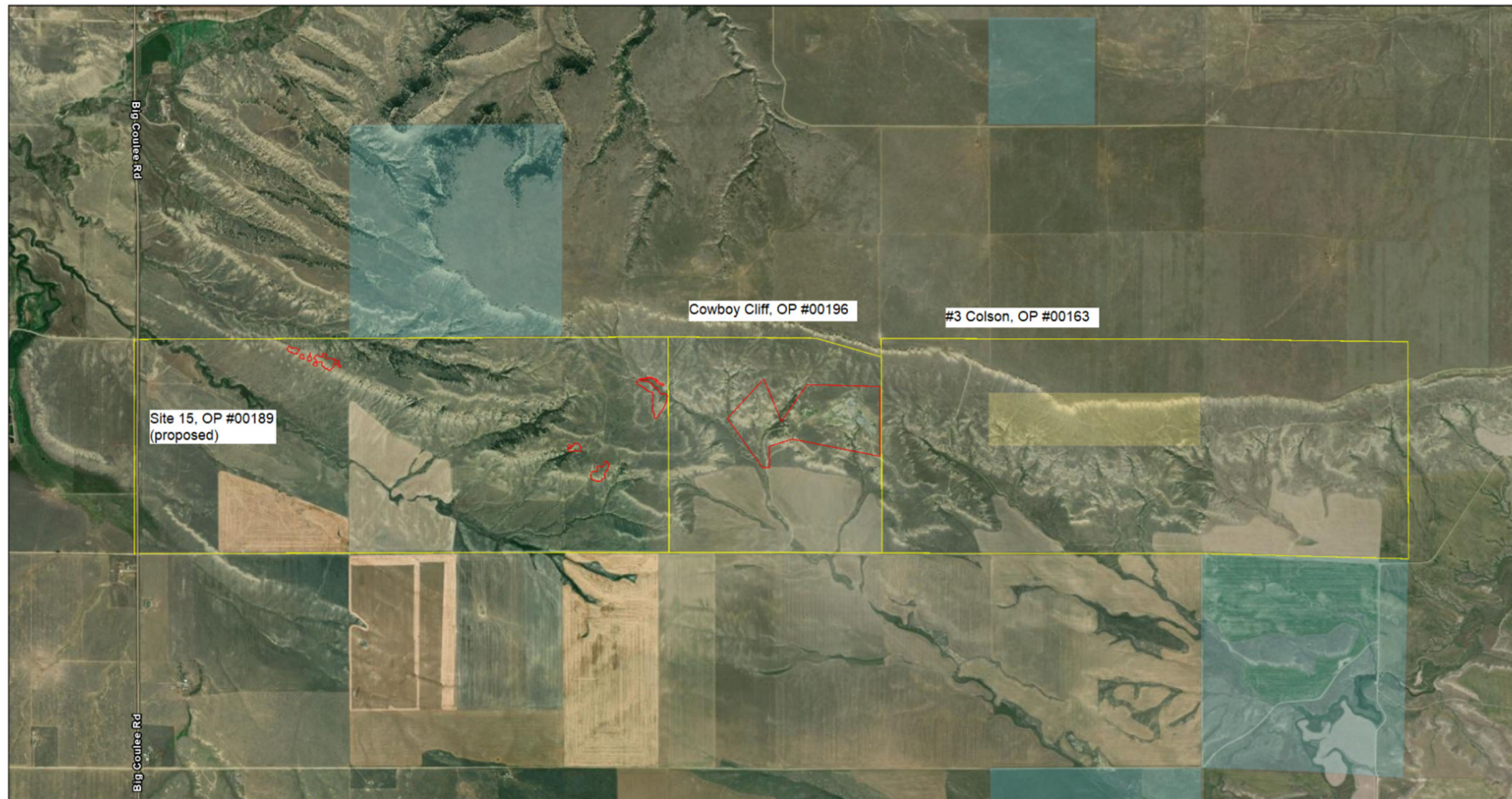


Figure 3: Proposed project site area map for Site #15.

Hardrock Operating Permits



5/16/2023, 9:28:12 AM

Hardrock Mining Operating Permit Boundaries

Disturbance Boundary

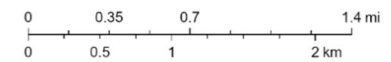
Permit Boundary

Public Lands

US Bureau of Land Management

Montana State Trust Lands

1:41,164



Montana State Library, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Earthstar Geographics

Maxar | Montana State Library | Montana State Library, USGS, NRCS | Montana Natural Heritage Program | USGS, MSL | MSL, MDT, County Govt, Federal, Tribal | Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community | Montana State Library, Montana Department of Revenue, Flathead County, Montana DEQ

Figure 4: Proposed project site 15 with adjacent Hardrock Mining Operating Permit areas.

Table 2: Venture Stone permitted and proposed sites.

Site Number	Permit Area (acres)	Area to be Permitted for Disturbance (ac)	Current Disturbance (ac)	5yr Proposed Disturbance (ac)	County	Township	Range	Section
1	1016.7	944.7	20	50	Cascade	18N	04E	20, 21, 28, 29
2	5137.7	4,922.7	50	75	Cascade	18N	03E	13, 14, 15, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29
3	995.9	928.9	10	20	Cascade	18N	04E	20, 28, 29, 30, 32
4	759.1	759.1	0	0	Cascade	18N	04E	33, 34
						17N	04E	3, 4
5	2260.6	2,152.6	20	50	Cascade	18N	06E	32
						17N	06E	5, 6, 7, 8, 17, 18, 19
6	39	39	7.5	10	Cascade	21N	02E	31 (Lot 1, Lot 2)
7	763.3	763.3	25	50	Cascade	20N	01E	3, 4, 9, 10
8	161.3	161.3	0	20	Cascade	20N	01E	14, 23
9	295.1	295.1	20	50	Cascade	19N	02E	23
10	1376.6	1,376.6	10	20	Cascade	18N	02E	13
						18N	03E	18,19
11	917.3	917.3	0	20	Cascade	19N	04E	24, 25, 26
						19N	05E	19
12	20	20	5	5	Cascade	20N	01E	2
13	320	38	20	25	Golden Valley, Wheatland	06N	19E	30
						06N	18E	25
14*	78	21	18	3	Golden Valley	05N	21E	10
15*	1608	23.7	14	9.7	Golden Valley	06N	20E	20
Total	15748.6	13363.3	219.5	407.7				

*Project Sites proposed in Amendment 002

SUMMARY OF POTENTIAL IMPACTS:

The impact analysis will identify and estimate whether the impacts are direct or secondary impacts. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The projects identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE

Are soils present, which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?

The proposed project sites contain soil that has high runoff potential. Soil types in proposed project areas are shown in Figures 5 and 6 and Table 3. The proposed disturbance on both sites is located mainly on Cabbart-Yawdim-Badland complex and Yawdim Arbor complex. The typical profile of the Cabbart-Yawdim-Badland complex (84D) is 16 inches to 5 feet of loam and silty clay loam above bedrock. This soil is produced by loamy residuum weathered from interbedded sedimentary rock and is considered 'not prime farmland'. The typical profile of the Yawdim-Arbor Complex (460E) is 18 inches to 5 feet of silty clay loam and silty clay above bedrock. This soil is produced by the weathering of shale and clayey shale and is considered 'not prime farmland'. Both soil groups in the planned area of disturbance is reported as being part of Hydrologic Soil Group D, which has high runoff potential when thoroughly wet. Water movement through this soil is restricted or very restricted. In some areas, this soil also has high shrink-swell potential. Both sites receive a mean annual precipitation of 10-14 inches per year.

The proposed project sites do not contain unusual or unstable geologic features. Venture Stone has proposed to extract stone from the Judith River Formation on Site 14 and from the Claggett Formation on Site 15. The Judith River Formation is fine-to-course-grained sandstone with interbeds of gray to black carbonaceous shale, silty shale and thin coal. No coal was found on site during a pre-permitting inspection, however a stipulation to the draft permit contains special procedures in case coal is discovered. Venture Stone has agreed to limit mining to decorative stone products only. If coal beds or other beds with significant pyrite are accessed during mining, the applicant has agreed to cease mining in the area and backfill completely as to prevent any surface runoff and objectionable groundwater discharge from the coal bed. The Claggett Formation is generally dark gray shale with thin sandstone laminae and beds in the upper and middle parts, and calcareous concretions in the lower part. The Claggett and Judith

River Formations are common outcrops in this part of Montana and are not considered unique or fragile (MBMG).

Amendment 002 proposes to increase the present 32-acre disturbance on both locations by 12.7 acres to a total maximum disturbance area of 44.7 acres. During mining operations, pits would be dug to a maximum of 15 feet below ground surface (bgs) to mine rock products

Direct Impacts:

The proposed action may create wind and water-driven erosion of soil from open pits and soil stockpiles. To mitigate the risk of erosion the applicant would keep reclamation concurrent with quarrying operations where possible and would grade areas no longer needed for mining activities within one year of the cessation of such activities in that area. Reclamation would include backfilling pits with overburden and waste product and grading disturbed areas to the approximate pre-mining contour of the land.

Venture Stone has proposed to mitigate water-driven soil erosion by implementing Best Management Practices (BMPs) in mining operations. See Section 2: Water Quality, Quantity, and Distribution for more information on BMPs.

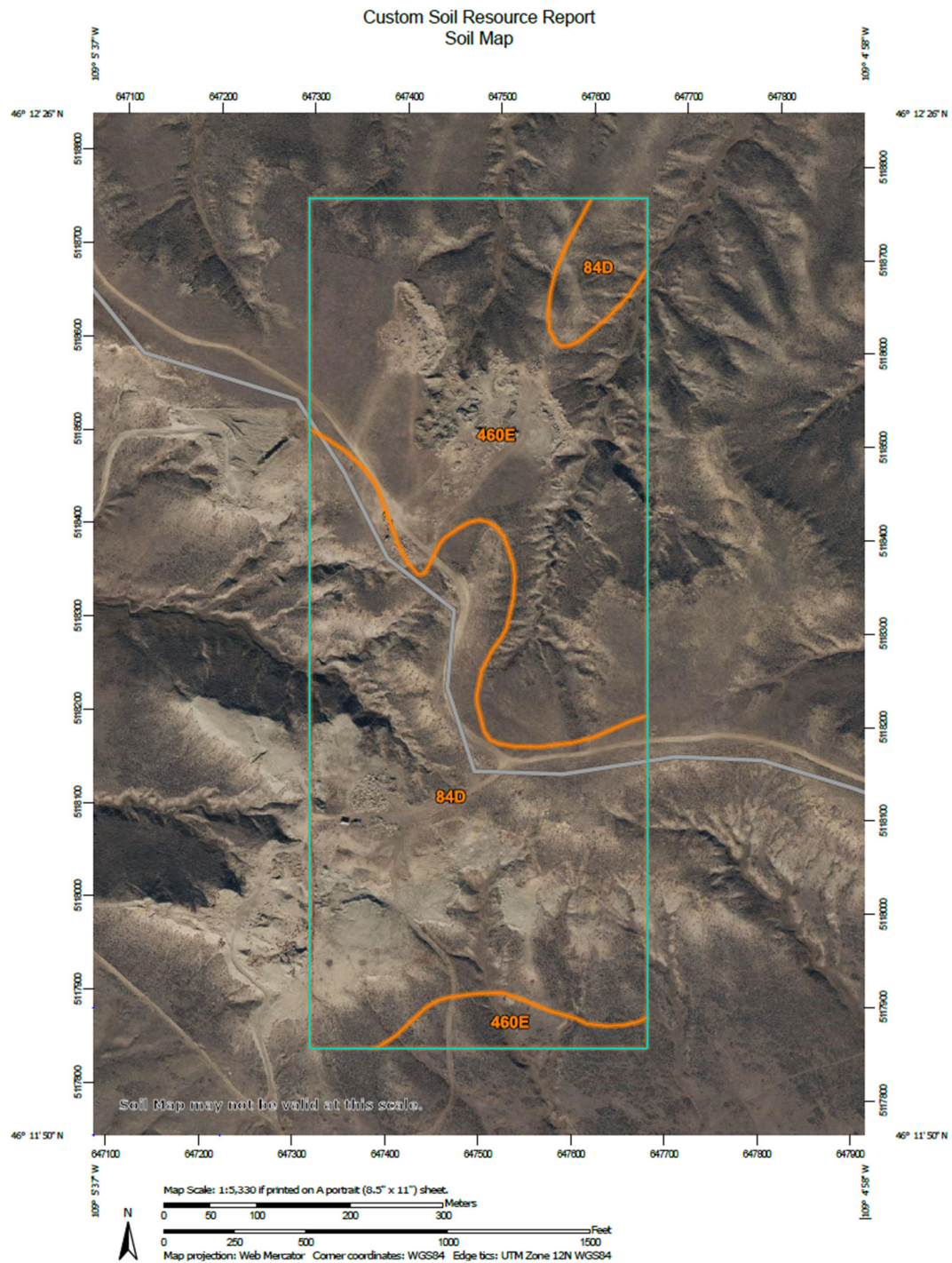
Wind-driven soil erosion from soil stockpiles would be mitigated by Venture Stone's commitment to cover or seed all soil stockpiles if erosion becomes a problem. The risk of wind-driven erosion on other disturbed areas would be mitigated by Venture Stone's commitment to wet the surface if dust becomes a nuisance. See Section 3: Air Quality for more information on dust control measures. The significance assessment is presented in Table 4.

Secondary Impacts:

The proposed disturbance of soil in the area could lead to the propagation of weeds. Venture Stone has committed to implementing a weed control plan approved by Golden Valley County. See Section 4: Vegetation Cover, Quantity and Quality for more information. The proposed disturbances may also lead to the production of dust. See Section 3: Air Quality for more information.

Cumulative Impacts:

Wind and water-driven erosion of soil would add to cumulative impacts of historic and current mining.



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
84D	Cabbart-Yawdim-Badland complex, 4 to 35 percent slopes	42.4	51.8%
460E	Yawdim-Abor complex, 8 to 35 percent slopes	39.5	48.2%
Totals for Area of Interest		81.8	100.0%

Figure 5: Soil Map of Site 14 and Map Unit Legend

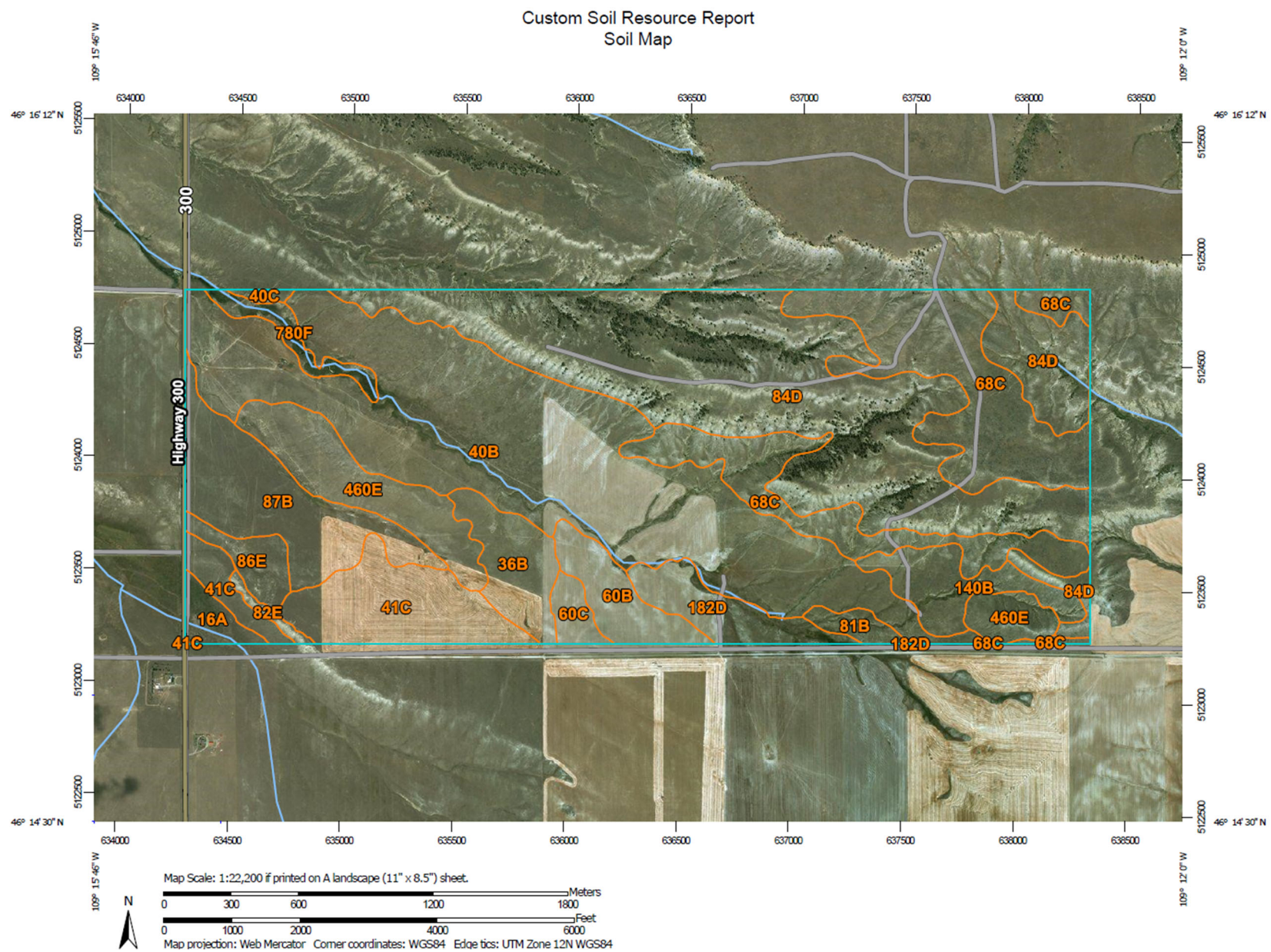


Figure 6: Site 15 Soil Map

Table 3: Soil map unit legend for Site 15

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
16A	Havre, occasionally flooded-Yamacall loams, calcareous, 0 to 4 percent slopes	14.9	0.9%
36B	Yamacall-Delpoint loams, 2 to 8 percent slopes	44.0	2.8%
40B	Kobase silty clay loam, 2 to 8 percent slopes	412.2	26.2%
40C	Kobase silty clay loam, calcareous surface, 1 to 8 percent slopes	3.1	0.2%
41C	Yamacall-Delpoint loams, calcareous, 2 to 8 percent slopes	93.1	5.9%
60B	Abor silty clay, 1 to 8 percent slopes	36.8	2.3%
60C	Abor-Neldore silty clays, 2 to 8 percent slopes	12.8	0.8%
68C	Megonot-Yawdim silty clay loams, 4 to 15 percent slopes	219.3	13.9%
81B	Delpoint-Cabbart loams, 2 to 8 percent slopes	10.8	0.7%
82E	Cabbart-Delpoint, calcareous-Rock outcrop complex, 8 to 45 percent slopes	5.2	0.3%
84D	Cabbart-Yawdim-Badland complex, 4 to 35 percent slopes	419.1	26.6%
86E	Cabbart-Rock outcrop complex, 4 to 35 percent slopes	20.4	1.3%
87B	Delpoint, calcareous-Cabbart loams, 2 to 8 percent slopes	95.8	6.1%
140B	Kobase-Megonot silty clay loams, 1 to 8 percent slopes	43.1	2.7%
182D	Cabbart-Delpoint loams, 4 to 15 percent slopes	39.2	2.5%
460E	Yawdim-Abor complex, 8 to 35 percent slopes	87.2	5.5%
780F	Cabbart-Yamacall-Havre, rarely flooded, loams, 2 to 60 percent slopes	17.2	1.1%
Totals for Area of Interest		1,574.4	100.0%

2. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?

Potential surface water contaminants from the activities proposed in Amendment 002 would include sediment eroded from open pits and soil stockpiles. Sediment would be composed of the soil and rock described in Section 1: Geology and Soil Quality, Stability, and Moisture.

Surface Water

Both proposed project areas receive an average of 10 to 14 inches of precipitation annually. The nearest surface water to proposed disturbance in Site 14 is Big Coulee Creek, located 2.9 miles to the northeast of the permit area. The closest surface water to Site 15 is Fish Creek, located 1.3 miles north-northwest of the location. The Montana Natural Heritage Program (MTNHP) Wetland and Riparian Mapping Database did not identify any wetlands located on Site 14; however, several intermittent and emergent wetlands were identified within the permit boundary of Site 15. Signs of wetlands were observed by DEQ staff on Site 15 during a pre-permitting inspection. Wetland areas were narrow (less than 100 feet wide) and intermittent within the drainage on the east boundary of the location (Inspection Report, April 26, 2023).

Ground Water

A search of the Groundwater Information Center (GWIC) found several wells within a one-mile radius of both project sites, uses for these wells include domestic water supply, public water supply, and water supply for livestock (Amendment 002, Attachment: Well Logs). The nearest well to Site 14 (GWIC Id 16944) is approximately the same elevation as the proposed disturbance (Figure 2) and has a recorded static water level of 80 bgs (GWIC, 2023). The closest well to the proposed disturbance on Site 15 (GWIC Id 120948) is approximately the same elevation as the proposed disturbance area in the proposed project site (Figure 3) and shows a static water level of 75 bgs (GWIC, 2023).

The applicant proposes to source water for mining operations by either hauling water to the sites or obtaining water from the landowner. Projected water needs for both project sites would be limited to dust control during mining and reclamation. See Section 3: Air Quality for further information.

Direct Impacts:

Potential direct impacts to surface water from the proposed action may include the discharge of pollutants to surface water, including silt and mud from erosive surfaces. The applicant has not proposed to use any explosives or leaching agents in the mining process. Eroded material may be produced from open pits, soil and overburden stockpiles, and other disturbed areas.

Venture Stone would also put in place BMPs to minimize the risk of runoff of any pollutants. Precipitation and surface water in the proposed project sites would generally be expected to discharge into the drainages on or around the areas and evaporate in those drainages before

meeting any perennial surface water bodies.

The proposed action does not allow the applicant to mine within 100 feet of any spring or typical seasonal high-water mark of any perennial stream, or within 25 feet of wetlands. Previous unauthorized mining on Site 15 may have disturbed areas within 100 feet of springs and typical seasonal high-water marks of perennial stream, or within 25 feet of wetlands. These disturbances would be reclaimed at or before mine closure.

Groundwater levels at both proposed project sites is predicted to be more than 50 feet bgs. The proposed Amendment would require the applicant to cease mining activities if any surface water is encountered during quarrying activities. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to water quality, quantity, and distribution are expected from the proposed action.

Cumulative Impacts:

Discharge of objectionable effluents would add to cumulative impacts of historic and current mining.

3. AIR QUALITY:

Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?

The proposed project is located over 90 miles away from the nearest Class I Airshed. The immediate area meets the National Ambient Air Quality Standards. The applicant proposes to use heavy machinery on both project sites, including skidsteers, excavators, loaders, and hydraulic rock splitters, the emissions of which are not regulated under an Air Quality permit (Amendment 002, Section 2.1: Mining, p. 14). Use of generators is not proposed at either project site. A hydraulic rock splitter on Site 15 may run on diesel fuel and produce emissions as well.

Mining operations would likely produce dust, including stripping vegetation and soil, extraction of product, processing of product on Site 15, and reclamation work. Disturbed areas such as open pits and soil stockpiles would also be a potential source of dust.

Direct Impacts:

Dust would be produced from employees or contractors driving on and off the sites, as well as from trucks hauling product from the sites or water to the sites. Mining activities on the site, including splitting of rock on Site 15, would also likely produce dust. The applicant proposes to wet any surface which produces enough dust to become a nuisance in the project area. Water would be hauled from town or acquired from the landowner. The applicant proposes to seed or cover any soil stockpiles that are not being used for an extended period if wind erosion

becomes a problem. Mechanized equipment could produce negligible amounts of exhaust fumes during normal operations from the proposed action. The applicant would be expected to maintain compliance with Montana's law regarding the need to take reasonable precautions to control airborne particulate matter. Impacts to air quality would occur during normal operating hours. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to air quality are expected from the proposed action.

Cumulative Impacts:

Production of dust from traffic to the project sites and from mining activities would add to cumulative impacts of historic and current mining.

4. VEGETATION COVER, QUANTITY AND QUALITY:

Will vegetative communities be significantly impacted? Are any rare plants or cover types present?

The land cover at the proposed Site 14 location is dominantly Big Sagebrush Steppe and Great Plains Mixedgrass Prairie. Land cover at the proposed Site 15 location varies and is dominantly Great Plains Mixedgrass Prairie and Big Sagebrush Steppe, with additional land cover of Cultivated Cropland and Introduced Upland Vegetation (Forbland).

The Big Sagebrush Steppe and Great Plains Mixedgrass Prairie systems are typically dominated by Wyoming big sagebrush and western wheatgrass. Other significant species are thickspike wheatgrass, green needlegrass, blue grama, and needle and thread. Site 15 also contains significant amounts of Cultivated Cropland and Introduced Upland Vegetation (Forbland). Cultivated crop land is used to produce domestic crops on an annual cycle. Agricultural plan cover may vary depending on the season and rotation cycle. Forbland is land cover significantly altered/disturbed by introduced annual and biennial forbs. Typical species that dominates these areas are knapweed, oxeye daisy, Canada thistle, leafy spurge, pepperweed, and yellow sweetclover.

Great Plains Mixed Grass Prairie is classified as an S4 System by MTNHP due to having "been fragmented by section roads, and is overgrazed in places, but [being] widespread". Big Sagebrush Steppe is Classified as a S5 system, which is the lowest-priority classification by the MTNHP (MTNHP Field Guide). The applicant proposes to add 12.7 acres of total disturbance on Site 14 and Site 15. All proposed future disturbance is located on Great Plains Mixed Grass Prairie and Big Sagebrush Steppe.

A search of the Montana Natural Heritage Program (MTNHP) identified potential habitat for eight vascular plant species of concern: Crowe's Sedge, Long-sheath Waterweed, Platte Cinquefoil, Slim-pod Venus'-looking-glass, Scribner's Ragwort, Desert Groundsel, Persistent-sepal Yellow-cress, and Silver Bladderpod. No Species of Concern (SOC) or endangered vegetation has been identified at the proposed disturbance area (MTNHP Project Summary,

2023). An inspection of Site 15 on April 26, 2023, documented infestations of knapweed on disturbance from previous unpermitted mining activities.

The State of Montana lists four noxious weeds in Golden Valley County; Golden Valley County lists 11 noxious weeds on their “Hit List”. During site inspections, noxious weed populations were observed widely scattered and generally located near the existing surface disturbances such as roads and mine exploration pits. The noxious weeds located at the site include:

- State of Montana Weed List for Golden Valley County: Black Henbane, Common Mullein Poison Hemlock, and Scotch Thistle (Montana Field Guide, 2023)
- Golden Valley County “Hit List”: Field Bindweed, Whitetop, Canadian Thistle, Diffuse Knapweed, Spotted Knapweed, Dalmatian Toadflax, Leafy Spurge, Sulfur Cinqufoil, Houndstongue, Saltcedar, and Black Henbane (Golden Valley County Weed District Website, 2023)

The applicant has submitted Weed Management Plans for both project sites, which have been approved by the Weed District Representative for Golden Valley County. The plans include seeding of stockpiles to prevent weed infestation and spraying herbicide when necessary for weed prevention (Amendment 02 Operating Plan, Attachments: Weed Management Plan Site 14, Weed Management Plan Site 15).

Direct Impacts:

The proposed action would result in the stripping of vegetation from an additional 12.7 acres of land, which would primarily be Big Sagebrush Steppe and Great Plains Mixedgrass Prairie. Land disturbance at both sites may result in propagation of noxious weeds. Any surface disturbances would be reclaimed and seeded with an appropriate seed mix. If the action were approved, weed control as stipulated in the weed Management Plans for Site 14 and Site 15 during and after the activity would be a requirement. Disturbed areas no longer in use would be seeded during active mining, and all disturbance areas would be seeded after the cessation of mining in 10 years. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to vegetation cover, quantity, or quality are expected from the proposed action.

Cumulative Impacts:

Stripping of vegetation and propagation of noxious weeds would add to cumulative impacts of historic and current mining.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Is there substantial use of the area by important wildlife, birds or fish?

Common wildlife may utilize the project area and may be temporarily displaced while

machinery and equipment are operating. The proposed project sites are on private land and adjacent to private land. A parcel owned by the State of Montana is adjacent to the north permit boundary on Site 15 (Figure 3). Both sites are predominantly Great Plains Mixed Grass Prairie and Big Sagebrush Steppe.

Five avian, terrestrial, and aquatic Species of Concern (SOC) occur or have been observed in or near the proposed permit areas: Greater Sage Grouse, Sharp-tailed Grouse, Long-billed Curlew, Golden Eagle, Ferruginous Hawk, Northern Redbelly Dace, and Brassy Minnow. Additionally, Site 15 contains Important Animal Habitat for Non-cave Bat Roost (MTNHP, 2023). Both sites also contain historical habitat for the Black-footed Ferret and Grizzly Bear Habitat. See section 6: Unique, Endangered, Fragile or Limited Environmental Resources for more information.

Direct Impacts:

Impacts to terrestrial and avian life and habitats would include the disturbance of 12.7 additional acres of Great Plains Mixed Grass Prairie and Big Sagebrush Steppe. Because the proposed disturbance on Site contains small cliff faces, impacts to non-cave bat roost habitat are possible. Direct impacts include habitat loss, habitat fragmentation, displacement, and avoidance. Disturbed habitat will be reclaimed to comparative use and stability after mine-life (10 years). The surrounding area contains abundant Big Sagebrush Steppe and Great Plains Mixed Grass Prairie, which is expected to contain abundant habitat similar to that in the proposed disturbance area. The significance assessment is presented in Table 4.

Secondary Impacts:

The avoidance of mining activities including human presence and noise can reduce the carry capacity of an area by reducing vital rates and thereby population abundance. Other secondary impacts include changes in predator communities and increase of diseases. These impacts can reduce vital rates by lowering nest survival, causing brood failure, reducing adult fertility and survival, along with other vital rates. The surrounding area is expected to contain abundant habitat similar to that in the proposed disturbance area.

Cumulative Impacts:

Destruction of terrestrial and avian habitats would add to cumulative impacts of historic and current mining.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?

Consultation with the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool indicated that the Wolverine (Proposed Threatened) and the Monarch Butterfly (Candidate Species) may occur within the project area. There are no additional regulatory requirements for Proposed and Candidate species; however, DEQ analyzed the potential impact of the project on the Wolverine and the Monarch Butterfly at the proposed project site. The proposed project sites do not contain potential

habitat for three of the four federally listed endangered species in Montana (Pallid Sturgeon, White Surgeon, and Whooping Crane). Both proposed project sites contain historical habitat for one federally listed endangered/Non-Essential Experimental Population species, the Black-footed Ferret. A search of the MTNHP's database identified no reports of Black-footed Ferret in the area in over 20 years and there have been no introductions of experimental populations near the proposed project site. The USFWS also did not identify critical habitat for black-footed ferret in either project site (USFWS, 2023). Both proposed project sites contain the historical habitat of a federally listed threatened species, the Grizzly Bear. A search of the MTNHP database identified no reports of Grizzly Bears in Golden Valley County in over 20 years (MTNHP, 2023). The USFWS did not identify critical habitat for grizzly bear at either project site (USFWS, 2023). Due to the absence of riparian habitat connecting with any known areas of Grizzly Bear occupation, it is unlikely for any Bears to utilize this habitat via any expansive migration of sub-adult bears, as bear migration is generally restricted to riparian corridors.

Five avian, terrestrial, and aquatic Species of Concern (SOC) occur or have been observed in the general area of the proposed project sites: Greater Sage Grouse, Sharp-tailed Grouse, Long-billed Curlew, Golden Eagle, Ferruginous Hawk, Northern Redbelly Dace, and Brassy Minnow. Additionally, Site 15 contains Important Animal Habitat for Non-cave Bat Roost (MTNHP, 2023).

Both sites are located in the general habitat of Greater Sage Grouse and Site 14 is located within two miles of one active Greater Sage Grouse lek, which was identified by the Montana Sage Grouse Habitat Conservation Program.

The MTNHP Wetland and Riparian Mapping Database did not identify any wetlands located on Site 14; however, several intermittent and emergent wetlands were identified within the permit boundary of Site 15. Signs of wetlands were observed by DEQ staff on Site 15 during a pre-permitting inspection. Wetland areas were narrow (less than 100 feet wide) and intermittent within the drainage on the east boundary of the location (Inspection Report, April 26, 2023)

Direct Impacts:

No impacts to threatened or endangered species are expected because no threatened or endangered species are expected to exist at the proposed project sites. Habitat removal may impact the Monarch Butterfly. However, the disturbance is relatively small and is outside of the distribution of the main two populations and would not contribute to the listing of the species. There is no Wolverine habitat within the proposed project site and therefore direct impacts to Wolverine are unlikely to occur.

The removal of 12.7 acres of Great Plains Mixed Grass Prairie and Big Sagebrush Steppe may impact several SOC including Greater Sage Grouse, Sharp-tailed Grouse, Long-billed Curlew, Golden Eagles, Prairie Falcons and Ferruginous Hawks. Impacts would include direct habitat loss, habitat fragmentation, and avoidance of the mining operation and presence of humans.

Habitat removal could directly cause loss of nests, loss of lekking habitat, loss of individuals during removal, and displacement of individuals. Additionally, removal of cliff faces on Site 15 may affect non-cave bat roosts, which are classified as Important Animal Habitat by the MTNHP.

To mitigate impacts on the Greater Sage Grouse population, Venture Stone has agreed to implement mitigation plans approved by the Montana Sage Grouse Habitat Conservation Program. The mitigation plans explain that Venture Stone would make contributions to the Stewardship Account to fulfill the mitigation debit obligation.

Because the proposed action does not allow the applicant to mine within 100 feet of any spring or typical seasonal high-water mark of any perennial stream, no impacts to Northern Redbelly Dace and Brassy Minnow are expected. Because Venture Stone does not propose to mine within 25 feet of any wetlands, direct impacts to wetlands are not expected. The significance assessment is presented in Table 4.

Secondary Impacts:

The avoidance of mining activities including human activity and noise can reduce the carrying capacity of an area similar to that of direct habitat destruction by reducing vital rates and thereby population abundance of Greater Sage Grouse, Sharp-tailed Grouse, Golden Eagles, Prairie Falcons, Ferruginous Hawks, and Long-billed Curlew. Noise can interfere with courtship and reduce reproductive success. Other secondary impacts include changes in habitat quality (increase in invasive species, woody encroachment, and reduction in food availability), changes in predator communities, and increase of diseases. These impacts can reduce vital rates by lowering nest survival, causing brood failure, reducing adult fecundity and survival, along with other vital rates.

Cumulative Impacts:

Destruction of Greater Sage Grouse, Sharp-Tailed Grouse, Long-billed Curlew, Golden Eagle and Ferruginous Hawk life and habitats would create cumulative impacts with historic and current mining. Because both sites include the general habitat of Greater Sage Grouse, Venture Stone would implement Mitigation Plans approved by the Montana Sage Grouse Habitat Conservation Program.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:

Are any historical, archaeological, or paleontological resources present?

The Montana Cultural Resource Database under the State Historic Preservation Office (SHPO) indicates that the project site areas in the proposed action contain no documented cultural resources. The applicant has proposed that if any cultural resources are discovered during mining operations, SHPO would be notified and all work would be stopped until advised by SHPO. If unlisted archaeological or historical resources are encountered during operations, the applicant proposes appropriate protections for any resources identified in the permit area. The applicant

would route equipment around the site of discovery and promptly notify SHPO. Any site would remain undisturbed until a proper evaluation is made. If any previously unknown sites are discovered, disturbance to those sites would cease. In the event that sites are discovered in the course of mining, appropriate measures to protect the site would be implemented. The significance assessment is presented in Table 4.

Direct Impacts:

No direct impacts to historical and archaeological resources are expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No expected secondary impacts to historical and archaeological sites are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts on historical and archaeological resources are expected from the proposed action.

8. AESTHETICS:

Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?

The proposed activities would be located on private land. The applicant does not propose to erect any permanent structures associated with mining. Both sites are in rural areas with low population density but are located on prominent topography compared to the surrounding area (Figures 2 and 3). Equipment used on both locations would include excavators, loaders, and skidsteers, all of which may be visible to surrounding areas and produce noise. A hydraulic rock splitter on Site 15 may be visible to surrounding areas and produce noise during hours of operation. Site 15 is located next to Big Coulee Road, a State Highway with annual average daily traffic (AADT) of 176 vehicles (Montana Traffic Data, MDT). Several parcels of State Land are in the viewshed of the proposed disturbances.

Direct Impacts:

The proposed project would create pits and stockpiles that may be visible to the surrounding area. Disturbance on Site 14 would be visible from several parcels of land owned by the State of Montana and several county roads including Short Lane, Harms Road and Van der Voort Road. Site 15 is located adjacent to Big Coulee Road, and disturbance and equipment would be visible from two parcels of land owned by the State of Montana, Big Coulee Road and Van der Voort Road.

The operation of heavy equipment could be audible to the sparsely populated surrounding area and visible to receptors located at observation points that are unobstructed by topography. Final reclamation would be required within two years of completion of the project. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to aesthetics are expected from the proposed action.

Cumulative Impacts:

Creation of pits, stockpiles, and noise would add to cumulative impacts of historic and current mining.

9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?

The proposed project would use diesel fuel for heavy equipment on both locations, including excavators, loaders, and skidsteers. A rock splitter may be operated on Site 15 which may consume diesel fuel. Water for the proposed project sites would be supplied from a local municipality and trucked to the project site or would be provided by the landowner. No additional wells are proposed in Amendment 002.

Direct Impacts:

Diesel and water use would increase for equipment operation and dust suppression. No additional impacts on land, water, or air would be expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

Secondary impacts to demands on environmental resources of land, water, air or energy are not expected from the proposed action.

Cumulative Impacts:

Cumulative impacts from increased municipal water and diesel use are not expected from the proposed action.

10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:

Are there other activities nearby that will affect the project?

DEQ queried the following websites, databases, and organizations for nearby activities that may affect the project, however no other projects were identified from the following entities:

- Montana Department of Environmental Quality (DEQ)
- Montana Department of Fish, Wildlife and Parks (FWP)
- Montana Department of Natural Resources and Conservation (DNRC)
- Montana Department of Transportation (MDT)
- Golden Valley County Commission
- US Fish and Wildlife Service (USFWS)

DNRC has issued a license for outfitting in a parcel of land owned by the State of Montana to the north of Site 15 (Figure 3), as well as grazing leases for that parcel (DNRC, personal correspondence). For more information, please see Section 17: Access to and Quality of Recreational and Wilderness Activities and Section 12: Industrial, Commercial and Agricultural Activities and Production for more information.

MDT has some projects planned in the general areas, including a gravel road rehabilitation on HWY 300 south of Van der Voort Road and a reconstruction project on HWY 3 on 12 miles of road south of Lavina (MDT, personal correspondence). These stretches of road would not provide primary access to Site 14 or Site 15.

Direct Impacts:

Impacts on other environmental resources are not expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts on other environmental resources are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts on other environmental resources are expected from the proposed action.

11. HUMAN HEALTH AND SAFETY:

Will this project add to health and safety risks in the area?

The applicant would be required to adhere to all applicable state and federal safety laws. Industrial work such as the work proposed by the applicant is inherently dangerous. The Mine Safety and Health Administration (MSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Because both project sites are located on private property, few, if any, members of the public would be in the general project proximity during mining operations.

Direct Impacts:

Impacts on human health and safety are not expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts on human health and safety would be expected due to the proposed action.

Cumulative Impacts:

No cumulative impacts on human health and safety are expected from the proposed action.

12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:

Will the project add to or alter these activities?

The applicant proposes to reclaim all land disturbed by mining to comparable use and stability of adjacent areas. Agricultural operations, including cattle grazing and crop production, (Figure 4) are currently being undertaken on Site 15. A parcel of state land abutting the north site of Site 15 is leased for commercial cattle grazing. Proposed disturbance areas in Site 15 are not on land currently used for crops, and private roads used to access quarry areas are not used for access to cropland (Figure 4). A commercial outfitting license has been issued for State-owned land adjacent to the north side of Site 15. No other commercial or industrial activities have been identified by DEQ in the immediate area of the proposed project sites.

Direct Impacts:

No direct impact to industrial, commercial, or agricultural activities or production would be expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts on industrial, commercial, and agricultural activities and production would be expected from the proposed action.

Cumulative Impacts:

No cumulative impacts to industrial, commercial, or agricultural activities or production would be expected from the proposed action.

13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Will the project create, move or eliminate jobs? If so, estimated number.

The proposed projects would employ a combined total of six to eight limited duration contracted and otherwise employed people at the project sites. Employment would be year-round. Site 14 is actively mined under SME #53-015. Venture Stone employees currently engaged on other project sites are expected to work on Site 15 (Personal Correspondence, Site Inspection 4/26/2023).

Direct Impacts:

No change in the number of local jobs is anticipated from approval of the proposed action. If market conditions fluctuate the work force may marginally increase or decrease. If DEQ does not approve Amendment 002 there may be a small negative impact on the quantity of employment. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts on quantity and distribution of employment are expected from the proposed action.

Cumulative Impacts:

Creation of limited duration jobs would add to cumulative impacts of historic and current mining.

14. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Will the project create or eliminate tax revenue?

Local jobs can provide tax revenue to the state and/or local governments. No change in the number of local jobs is anticipated from approval of the proposed action. A small decrease in the number of local jobs may occur if Amendment 002 is not approved. See Section 13: Quantity and Distribution of Employment for more information. The landowners may receive royalties from the applicant.

Direct Impacts:

No impacts to local and state tax base and tax revenues would be expected from the proposed action. If Amendment 002 is not approved by DEQ there may have small, negative impacts on local and state tax base and revenues. Additional revenues may come from leases to local landowners. The significance assessment is presented in Table 4.

Secondary Impacts:

Secondary impacts to local and state tax base and tax revenue are not expected from the proposed action.

Cumulative Impacts:

Cumulative impacts to local and state tax base and tax revenue are not expected from the proposed action.

15. DEMAND FOR GOVERNMENT SERVICES:

Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?

Site 14 would be accessed by a county road, Short Lane, which would be used to access Montana Highway 3 (HWY 3) and Big Coulee Road (HWY 300) by a network of county roads. Overall, 26.4 miles of county road may be utilized to access Site 14. The entrance to Site 15 is on Van der Voort Road, approximately 2 miles from HWY 300. The applicant proposes to staff both project sites with three to four employees who would commute to the proposed sites. Up to eight employee personal vehicles would use state and county roads to access the proposed project sites five days a week, year-round. Two to three loads of product would be removed weekly from both sites when weather permits and when road conditions are accessible, using semi-trucks with trailers.

Fully loaded semi-trucks weighing approximately 80,000 pounds would utilize county roads to access both sites. Hwy 300 would be used by both sites for transporting product (Amendment 002 Operating Permit, Section 2.1: Mining, pp. 14-15). Additionally, trucks hauling water from town may be used for dust control on both sites if dust becomes a nuisance.

Fire protection for both project areas would be provided by the Golden Valley County Fire Department. The risk of using fire department resources would be minimized by utilizing the Fire Protection Plan submitted by Venture Stone.

Direct Impacts:

The proposed action would be located on private land. Increased use of county roads and highways would potentially increase the need for road maintenance. The first two miles of Van der Voort Road to the east of Hwy 300, which is a dirt county road that provides access to both project sites would receive the greatest impacts due to increased use. The MDT reports an annual average daily traffic (AADT) of 8 vehicles on this section of road (Montana Traffic Data, MDT).

Hwy 300, which is a paved two-lane state highway would also see increased use, on the approximately 3.5-mile stretch between Van der Voort Road and Hwy 12. MDOT recorded AADT of 176 vehicles on this section of highway in 2021 (Montana Traffic Data, MDT). Increased road use would occur during mining activities and reclamation but would cease at the end of the mine's life. The proposed activity is not expected to require frequent use of fire department services. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impact to demand for government services is expected from the proposed action.

Cumulative Impacts:

Increased demand for road maintenance would create cumulative impacts with historic and current mining.

16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?

The proposed activities would occur on privately held land outside of city limits. The project area would be subject to any plans or rules set forth by Golden Valley County and the State of Montana, including the Golden Valley County Weed Control Plan for Open Mine Operations.

Direct Impacts:

Weed control in the proposed project area is expected to prevent weed infestations. DEQ is not aware of any other locally adopted environmental plans or goals that would impact this proposed project or the project area. Impacts from or to locally adopted environmental plans and goals would not be expected from this project. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts on locally adopted environmental plans or goals are expected from the proposed action.

Cumulative Impacts:

No cumulative impact on locally adopted environmental plans or goals are expected from the proposed action.

17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?

The proposed activities would occur on private land. The proposed permit area for Site 15 is adjacent to a one square mile parcel of land owned by the State of Montana, and a private road links Van der Voort Road to the parcel. A private outfitter is licensed by DNRC to operate on the State of Montana parcel north of Site 15. No other formal recreation facilities or permits were identified in the parcel by DEQ. All access to public land through the road would continue to require permission from the landowner. The road providing access to the parcel is not planned to be disturbed by the proposed mining activities (Figure 4). The parcel of public land is accessible by alternative routes.

Direct Impacts:

Impacts to the access or quality of recreational and wilderness activities are not expected from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to access or quality of recreational and wilderness activities are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts to access to and quality of recreational and wilderness activities are expected from the proposed action.

18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Will the project add to the population and require additional housing?

No change to the number of local jobs would be expected from the proposed action, therefore no additional housing requirements would be expected from the proposed action.

Direct Impacts:

No impacts on density and distribution of population and housing are anticipated from the proposed action. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to density and distribution of population and housing are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts to density and distribution of population and housing are expected from the proposed action.

19. SOCIAL STRUCTURES AND MORES:

Is some disruption of native or traditional lifestyles or communities possible?

It is not anticipated that this project would disrupt native or traditional lifestyles or communities.

Direct Impacts:

The proposed activities are not expected to disrupt native or traditional lifestyles or communities. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to native traditional lifestyles or communities are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts to native traditional lifestyles or communities are expected from the proposed action.

20. CULTURAL UNIQUENESS AND DIVERSITY:

Will the action cause a shift in some unique quality of the area?

It is not anticipated that this project would cause a shift in some unique quality of the area.

Direct Impacts:

The proposed project is not located in an area with identified culturally unique qualities. The significance assessment is presented in Table 4.

Secondary Impacts:

No secondary impacts to a culturally unique quality are expected from the proposed action.

Cumulative Impacts:

No cumulative impacts to a culturally unique quality are expected from the proposed action.

21. PRIVATE PROPERTY IMPACTS:

Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required. Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required. Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If

not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.

The proposed project would take place on private land owned by Charles William Ramage (Site 14) and William Richard and Lori M. Kinsey (Site 15) and leased by Venture Stone. DEQ's approval of Amendment 002 to Operating Permit No. 00189, with conditions, would affect the property owners' real properties. DEQ has determined, however, that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Metal Mine Reclamation Act and demonstrate compliance with those requirements or have been agreed to by the applicant. Therefore, DEQ's approval of Amendment 002 to Operating Permit No. 00189 would not have private property-taking or damaging implications.

Montana's Private Property Assessment Act, Section 2-10-101, et seq., MCA establishes an orderly and consistent internal management process for state agencies to evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions, as those clauses are interpreted and applied by the United States and Montana Supreme Courts.

Section 2-10-104, MCA required Montana's Attorney General to develop guidelines, including a checklist, to assist state agencies in identifying and evaluating proposed agency actions that may result in the taking or damaging of private property. In turn, Section 2-10-105(1) and (2), MCA set out a process for each State Agency to evaluate whether a State action may result in an unconstitutional taking of private property. Those provisions direct that:

- A. Each state agency shall assign a qualified person or persons in the state agency the duty and authority to ensure that the state agency complies with this part. Each state agency action with taking or damaging implications must be submitted to that person or persons for review and completion of an impact assessment. The state agency may not take the action unless the review and impact assessment have been completed, except that the action with taking or damaging implications may be taken before the review and impact assessment are completed if necessary to avoid an immediate threat to public health or safety.
- B. Using the attorney general's guidelines and checklist, the person shall prepare a taking or damaging impact assessment for each state agency action with taking or damaging implications that includes an analysis of at least the following:
 - i. the likelihood that a state or federal court would hold that the action is a taking or damaging;
 - ii. alternatives to the action that would fulfill the agency's statutory obligations and at the same time reduce the risk for a taking or damaging; and
 - iii. the estimated cost of any financial compensation by the state agency to one or more persons that might be caused by the action and the source for payment of the compensation.

DEQ has utilized the Montana Attorney General's Checklist and analytical Flowchart revised in January 2011 to evaluate the legal impact to property rights resulting from the proposed project (Attachment 1). These flowchart questions have been applied by DEQ to the proposed project area, which takes place on private real property owned by the Permittee, as follows:

- Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? Answer: Yes.
- Does the action result in either a permanent or indefinite physical occupation of private property? Answer: No.
- Does the action deprive the owner of all economically beneficial use of the property? Answer: No.
- Does the action require a property owner to dedicate a portion of property or to grant an easement? Answer: No.
- Does the action deny a fundamental attribute of ownership? Answer: No.
- Does the action have a severe impact on the value of the property? Answer: No.
- Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? Answer: No.

Given the results from the legal flowchart questions, DEQ has determined that the permit conditions are reasonably necessary to ensure and demonstrate compliance with applicable requirements of the Metal Mine Reclamation Act, Section 82-4-301, et seq., MCA, and have been sought by the Applicant and private property Owners. Therefore, no taking or damaging of private property rights will occur because of DEQ's approval of the Amendment Application by Venture Stone.

22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Due to the nature of the proposed mining activities, and the limited project duration, no further direct or secondary impacts would be anticipated from this project.

PROPOSED ACTION ALTERNATIVES:

In addition to the proposed action, DEQ also considered the "no action" alternative. The "no action" alternative would deny the approval of Amendment 002. The applicant would lack the authority to mine rock products on Site 14 and Site 15. Any potential impacts that would be authorized under Amendment 002 would not occur. However, DEQ does not consider the "no action" alternative to be appropriate because the applicant has demonstrated compliance with all applicable rules and regulations as required for approval. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

CONSULTATION:

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. As part of the permitting process, an inspection of both project sites was performed by DEQ staff on April 26, 2023. Inspections of Site 15 were conducted by DEQ staff on July 21, 2021, and October 20, 2022, which collected drone data and documented disturbances on the location.

External scoping efforts included a public comment period on the draft EA that began on July 25, 2023, and ended on August 29, 2023. External scoping efforts also included queries to the following websites/ databases/ personnel:

- Montana State Historic Preservation Office (SHPO)
- Montana Department of Natural Resource and Conservation (DNRC)
- Montana Department of Environmental Quality (DEQ)
- Montana Department of Transportation (MDT)
- Golden Valley County
- US Geological Society – Stream Stats (USGS)
- Montana Natural Heritage Program (MTNHP)
- Montana Cadastral Mapping Program
- Montana Groundwater Information Center (GWIC)
- Montana Bureau of Mines and Geology (MBMG)
- United States Census Bureau (USCB)

PUBLIC INVOLVEMENT:

Notice of the application for the Amendment was published on October 23, 2022. No comments on the application were received. Scoping for the proposed action included a 30-day public comment period that ended on August 29, 2023. The public was notified of the opportunity for comment through a DEQ-issued press release and posting on the DEQ website. All substantive public comments received by DEQ would be addressed in the final EA; however, no public comments were received during the comment period.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:

The proposed project would be located on private land. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, federal, or tribal agency jurisdiction.

This environmental review analyzes the proposed project submitted by the applicant. Any impacts from the project would be insignificant and would be fully reclaimed at the conclusion of the project and thus, would not contribute to the long-term cumulative effects of mining in the area. Final reclamation would be required within two years of completion of the project, except in the event of an emergency or suddenly threatened or existing catastrophe.

DEQ has identified other DNRC projects in the vicinity of the planned mining area, including a

grazing lease and outfitter license on land owned by the State of Montana to the north of Site 15. The proposed mining activities are not expected to affect these projects.

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;
6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed mining activities would be limited. The proposed action would result in the disturbance of about 44.7 acres total at both sites. The applicant is proposing to quarry rock products up to 15 feet below the pre-disturbance ground surface. The mine life is proposed to be up to 8 years. The land proposed to be disturbed does not contain unique, endangered, fragile, or limited environmental resources. The surface disturbance would be reclaimed within two years of completion of the mining activities.

The applicant is proposing to excavate dirt and overburden up to 15 feet below the pre-mine surface and stockpile said material. The applicant then proposes to backfill, grade to approximate pre-existing topography, lay soil on, and seed where mining has been completed. Impacts to local topography would occur and the viewshed of nearby residents and visitors would be altered.

As discussed in this Environmental Assessment, DEQ has not identified any significant impacts associated with the proposed mining activities for any environmental resource. DEQ does not believe that the proposed mining activities by the applicant would have any growth-inducing or growth-inhibiting aspects, or significantly contribute to cumulative impacts. The proposed operating permit site does not contain unique or fragile resources. There would be minor impacts to geology through removal of rock product, although limited in area. The site would be reclaimed to provide comparable utility and stability of adjacent undisturbed areas.

Minor impacts to soil would occur through soil salvage, which would disrupt the soil horizon. Where possible soil would be salvaged during reclamation and then seeded with a DEQ approved seed mix.

Water resource impacts would be minor as storm water would be controlled through best management practices under a Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity. No water would be used on site except for dust control. There is no surface water at the site. Groundwater would not be impacted as the depth to ground water is expected to be over 50 feet below ground surface and well below any disturbance to be made by Venture Stone.

Impacts to air quality would be minor due to the limited area of operation and use of water for dust control.

Impacts to vegetation would be minor due to concurrent reclamation with a DEQ approved seed mix. Weed control would take place and meet Golden Valley County standards. There would be minor impacts to terrestrial, avian, and aquatic life and habitats. These impacts would be reduced through concurrent reclamation to comparable utility and stability as adjacent undisturbed land. Impacts during mining would include removal of Great Plains Mixed Grass Prairie and Big Sagebrush Steppe habitat.

Unique, endangered, fragile, or limited environmental resources have been evaluated. There are no unique or endangered fragile resources in the project area. SHPO has determined that, based on ground disturbance that currently exists, there is no need for a cultural resource inventory. If a resource is discovered, SHPO would be notified immediately, and the site left further untouched until a proper evaluation is made.

There would be minor impacts to viewshed aesthetics as the mining disturbance would strip away vegetation, create pits up to 15 feet in depth, and create soil and overburden stockpiles. While viewshed aesthetics would be impacted by the proposed operations, the visual disturbance would not dominate the landscape. Disturbance to aesthetics would be temporary and would cease after reclamation is completed. Demands on environmental resources of land, water, air, or energy would be minor. The impacts from the proposed action may create additional demand on municipal water supplies and would temporarily remove landscape used for cattle grazing.

As discussed in this EA, DEQ has not identified any long-term or significant impacts associated with the proposed activities on any environmental resource.

Issuance of an operating permit to the applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the applicant submits another operating permit, amendment, or revision application to conduct additional mining, DEQ is not committed to issuing those authorizations. DEQ would conduct an environmental review for any subsequent authorizations sought by the applicant that require environmental review. DEQ would make a permitting decision based on the criteria set forth in

the MMRA.

Issuance of the permit to the applicant does not set a precedent for DEQ's review of other applications for permits, including the level of environmental review. The level of environmental review decision is made based on case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed mining activities by the applicant would have any growth-inducing or growth-inhibiting aspects that would conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed operation is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of environmental review for MEPA.

Table 4: Assessment of Significance (ARM 17.24.608)

Affected Resource and Section Reference	Potential Source of Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability ⁵ impact will occur	Cumulative Impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
1) Geology and Soil Quality, Stability and Moisture	Erosion of disturbed soils	<p>S-High: Of the 44.7 acres of ground that would be disturbed, all disturbance would be susceptible to erosion.</p> <p>E-Small: Total surface disturbance susceptible to erosion would be 44.7 acres.</p> <p>D-Seasonally, short term: most erosion would occur during rain events in the spring and summer. Erosion of disturbed soil would return to ambient rates at mine closure.</p> <p>F- Infrequent: During occasional storm or high-wind events.</p> <p>U/F-Not unique, somewhat fragile: Class D soil is susceptible to erosion</p>	Certain	Impacts to soil stability from the proposed action would create cumulative impacts with historic and current mining.	BMPs would be put in place during mining operations including drainage ditches and straw wattles or bales. Soil stockpiles would be covered or seeded if not in use. Reclamation would be performed concurrent with mining if feasible.	No
2) Water Quality, Quantity, and Distribution	Discharge of pollutants to surface water	<p>S-Low: Pollutants would include silt and mud from eroded surfaces.</p> <p>E- Small: Nearest non-wetland surface water is over one mile away from project locations.</p> <p>D- Year-round, short term: Pollution from erosion is likely only during spring and summer. The risk of pollutant discharge would cease after reclamation.</p> <p>F- Infrequent: Sediment sources would occur during infrequent rainfall.</p> <p>U/F- Non-unique, fragile.</p>	Possible	Discharge of pollutants would create cumulative impacts with historic and current mining.	See "Geology and Soil Quality, Stability and Moisture" for measures to control erosion in the proposal. No mining activity would be done within 25 feet of any existing intermittent or emergent wetland, or within 100 feet of any typical seasonal high-water mark of any perennial stream.	No
3) Air Quality	Production of wind-blown dust	<p>S- Medium: Dust from regular operations would be produced from a maximum of 44.7 acres of disturbance. The use of mobile equipment would produce dust. Splitting rock on Site 15 would produce dust.</p> <p>E- Medium: A maximum of 44.7 acres may have dust-producing, disturbance, and a larger area may be affected by dust.</p> <p>D- Seasonally, short term. Dust would most likely be produced in late summer and fall and end after reclamation (10 years).</p> <p>F- Frequent: Dust would be produced during windy conditions.</p> <p>U/F- Non-unique, non-fragile: surrounding air is not near any class 1 airsheds or nonattainment areas.</p>	Probable	Production of dust from traffic to the project sites and from mining activities would create cumulative impacts with historic and current mining.	The applicant proposes to seed or cover any soil stockpiles that are not being used for an extended period if wind erosion becomes a problem. The applicant proposes that, if dust becomes a nuisance, any dust-producing area would be wetted with water.	No

4) Vegetation Cover, Quantity and Quality	Stripping of vegetation for mining and propagation of noxious weeds	<p>S- High: All vegetation would be stripped from up to 44.7 acres of mining disturbance. Noxious weeds may spread to land adjacent to land outside of disturbance areas, and outside the proposed project site.</p> <p>E- Small: Up to 44.7 acres will be stripped of vegetation; it is possible noxious weed infestations may affect more acreage.</p> <p>D- Year-round, long-term. Stripping of vegetation would occur during quarry operations and cease at the end of mine life (10 years). Weed infestations may persist after mine closure.</p> <p>F- Frequent: stripping of vegetation would progress with mining.</p> <p>U/F- Non-unique, non-fragile: No rare or endangered vegetation has been identified at the proposed disturbance areas.</p>	Certain	Stripping of vegetation and propagation of noxious weeds would create cumulative impacts with historic and current mining.	Disturbed areas no longer in use would be seeded during active mining. Weed control would be a requirement of the operating permit. The project would be subject to the Golden Valley County Weed Management Control Plan. Venture Stone would be required to follow the approved reclamation plan.	No
5) Terrestrial, Avian and Aquatic Life and Habitats	Removal of terrestrial and avian life and habitat.	<p>S- High: Vegetation and soil up to 15 feet in thickness would be removed in the disturbance area. Non-cave bat roosts may be removed from mining of cliff faces.</p> <p>E- Small: An additional 12.7 acres of habitat would be removed. No additional habitat would be removed for roads.</p> <p>D- Year-round, short-term. The disturbed area would be returned to comparable use and stability after reclamation.</p> <p>F- Frequent: Habitat removal would occur during mining operations.</p> <p>U/F- Non-unique, not particularly fragile</p>	Probable	Removal of terrestrial and avian habitat would create cumulative impacts with historic and current mining.	The applicant would return habitat to comparable use and stability at the end of reclamation.	No
6) Unique, Endangered, Fragile or Limited Environmental Resources	Loss and fragmentation of habitat for SOC.	<p>S- Low: Mining Operations would impact up to 12.7 additional acres of Greater Sage Grouse, Sharp-tailed Sage Grouse, Long-billed Curlew, Golden Eagle, and Ferruginous Hawk habitat.</p> <p>E- Small: Effects would most likely occur in areas of active mining, which may be as much as 44.7 acres total on both locations.</p> <p>D- Year-round, short-term: Effects on habitat and individuals would occur during operations but cease after reclamation is complete.</p> <p>F- Frequent: Loss of habitat and individuals would likely take place during expansion of mining operations, habitat fragmentation would occur during all operations before reclamation.</p> <p>U/F- Unique and Fragile: Affected SOC may include Greater Sage Grouse, Sharp-tailed Sage Grouse, Long-billed Curlew, Golden Eagle, and Ferruginous Hawk.</p>	Certain	Loss and fragmentation of habitat of SOC would add to cumulative impacts from historic and current mining.	The applicant has committed to implementing mitigation plans on both locations approved by the Montana Sage Grouse Habitat Conservation Program. Disturbed habitat will be reclaimed to comparative use and stability after mine-life (10 years).	No

7) Historical and Archaeological Sites	No anticipated impacts	N/A	N/A	N/A	N/A	No
8) Aesthetics	Creation of disturbance visible to the public and noise	<p>S- Low: Pits up to 15 feet deep and soil stockpiles would likely be visible to surrounding areas. Some heavy equipment used on the sites would be visible and create noise.</p> <p>E- Small: Both sites are fairly prominent. Disturbance on Site 15 may be visible from a section of HWY 300, from several parcels of public land, and from Van der Voort Road.</p> <p>D- Year-round, Short term: Aesthetic impacts should end at the end of reclamation.</p> <p>F- Frequent: Soil stockpiles may be visible during typical weather conditions on HWY 300, a State Highway with 176 AADT.</p> <p>U/F- Non-unique, not fragile.</p>	Probable	Creation of unsightly pits, stockpiles and noise would create cumulative impacts with historic and current mining.	The applicant would return all disturbed areas to comparative use and stability after reclamation. Pits, stockpiles and highwalls would be graded to approximate the original contour of the area. All disturbed areas would be vegetated with an approved seed mix.	No
9) Demands on Environmental Resources of Land, Water, Air or Energy	Increased demand for water and diesel fuel.	<p>S- Low: Water demands for mining operations would likely be limited to dust control measures. Diesel would likely be used in heavy equipment, including skidsteers, loaders, excavators, and rock splitters.</p> <p>E- Small: Increased demands on water would be limited to local wells and municipal supplies. Increased demand for diesel would likely be limited to use in no more than eight pieces of heavy machinery operating in tandem and rock splitters.</p> <p>D- Year-round, short-term: Demand for water would likely be limited to dry months when dust control is needed, demand would cease after reclamation. Increased demand for diesel may occur during active mining operations.</p> <p>F- Frequent: Dust control measures may be frequent in dry months. Demand for diesel may be increased during all active mining operations.</p> <p>U/F- Non-unique, not fragile.</p>	Certain	None	None	No
10) Impacts on Other Environmental Resources	No anticipated impacts	N/A	N/A	N/A	N/A	No

11) Human Health and Safety	No Anticipated Impacts	N/A	N/A	N/A	N/A	No
12) Industrial, Commercial, and Agricultural Activities and Production	No anticipated impacts	N/A	N/A	N/A	N/A	No
13) Quantity and Distribution of Employment	No anticipated impacts	N/A	N/A	N/A	N/A	No
13) Local and State Tax Base and Tax Revenues	Increase in local and state tax revenue	<p>S- Low: Some benefits to the landowners' income from leases to operators.</p> <p>E- Small: Additional tax revenue from income would go to state taxes.</p> <p>D- Yearly, Short Term: additional revenue would end after reclamation is completed.</p> <p>F- Frequent: Increased tax revenues would be collected yearly.</p> <p>U/F- N/A</p>	Possible	None	None	No
14) Demand for Government Services	Increased traffic to site from personal vehicle and truck traffic	<p>S- Low: Commute from employee vehicles would add over eight vehicles per day, five days a week, year-round to county road and highway traffic. Trucks traffic would add up to 3 trucks per week when weather and road conditions permit access. Water trucks would add intermittent traffic.</p> <p>E- Up to 26.4 miles of county dirt road may be given additional maintenance.</p> <p>D- Increased usage would occur seasonally when weather permits, and would be short-term.</p> <p>F- Increased usage would occur daily from employee traffic and the weekly from increased truck traffic maintenance may be required yearly and short-term.</p> <p>U/F- N/A</p>	Certain	Increased traffic may create cumulative impacts with historic and current mining.	None	No

15) Locally Adopted Environmental Plans and Goals	Weed infestations interrupting county goals	<p>S- Low: Impacts would be limited to the propagation of weeds.</p> <p>E- Medium: Infestations are not expected to spread beyond permit areas.</p> <p>D- Seasonally, Short-term: Weed infestations may spread in spring and summer and would cease after reclamation is complete.</p> <p>F- Infrequent: Implementation of weed control plans is expected to make infestations infrequent.</p> <p>U/F- N/A</p>	Possible	Weed infestations may create cumulative impacts with historic and current mining.	The applicant has agreed to implement the Golden Valley County Weed Control Plan.	No
16) Access to and Quality of Recreational and Wilderness Activities	No anticipated impacts	N/A	N/A	N/A	N/A	No
17) Density and Distribution of Population and Housing	No anticipated impacts	N/A	N/A	N/A	N/A	No
18) Social Structures and Mores	No anticipated impacts	N/A	N/A	N/A	N/A	No
19) Cultural Uniqueness and Diversity	No anticipated impacts	N/A	N/A	N/A	N/A	No

1. Severity describes the density at which the impact may occur. Levels used are low, medium, high.
2. Extent describes the land area over which the impact may occur. Levels used are small, medium, and large.
3. Duration describes the time period over which the impact may occur. Descriptors used are discrete time increments (daily, monthly, yearly, and seasonally). Short-term impacts occur only during before reclamation, long-term impacts occur after reclamation of the mine has been performed.
4. Frequency describes how often the impact may occur.
5. Probability describes how likely it is that the impact may occur without mitigation. Levels used are: impossible, unlikely, possible, probable, certain

Environmental Assessment and Significance Determination Prepared By:

Timothy Matthews

Reclamation Specialist, Hard Rock Mining Section, Mining Bureau

Faye McNew

Reclamation Specialist, Field Services and Technology Section, Mining Bureau

Environmental Assessment Reviewed by:

Betsy Hovda

Reclamation Specialist, Hard Rock Mining Section, Mining Bureau

Millie Olsen

Reclamation Specialist, Hard Rock Mining Section, Mining Bureau

Tommy Butler, J.D.

DEQ Staff Attorney

Approved by:



Signature

Eric Dahlgren, Hard Rock Mining Section Supervisor
Mining Bureau

September 8, 2023

Date

References

Golden Valley County. *Musselshell/Golden Valley Weed District*. Retrieved from website: <https://www.goldenvalleycountymt.org/weed-control-district> (2023).

Montana Bureau of Mines and Geology. *Ground Water Information Center Database*. Retrieved from website: <https://mbmggwic.mtech.edu> (2023).

Montana Bureau of Mines and Geology. *Geologic Map of Montana*. Retrieved from website: <https://mbmgmap.mtech.edu/server/rest/services/Geology/Geology500k/MapServer> (2023).

Montana Bureau of Mines and Geology. *Ground Water Information Center Database*. Retrieved from website: <https://mbmggwic.mtech.edu> (2023).

Montana Department of Environmental Quality. *Discover DEQ's Data*. Retrieved from website: <https://discover-mtdeq.hub.arcgis.com/> (2023).

Montana Department of Transportation. *Montana Traffic Data*. Retrieved from Website <https://www.arcgis.com/apps/mapviewer/index.html> (2023).

Montana Natural Heritage Program. *Big Sagebrush Steppe — Inter-Mountain Basins Big Sagebrush Steppe, Montana Field Guide*. Retrieved from website: https://FieldGuide.mt.gov/displayES_Detail.aspx?ES=5454 (May 17, 2023)

Montana Natural Heritage Program. *Great Plains Mixedgrass Prairie — Northwestern Great Plains Mixedgrass Prairie, Montana Field Guide*. Retrieved from website https://FieldGuide.mt.gov/displayES_Detail.aspx?ES=7114 (May 17, 2023).

Montana State Library. *Montana Natural Heritage Project Environmental Summary*. Montana State Library. Retrieved from website: <https://svc.mt.gov/msl/mtcadastral> (2023).

Montana State Library. *Noxious Weeds: For Golden Valley County*. Retrieved from website: [\(Invasive Species\) - Montana Field Guide \(mt.gov\)](#) (2023).

Natural Resources Conservations Service. *Web Soil Survey*. Retrieved from website: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> (2023).

US Census Bureau. *Quick Facts Golden Valley, Montana*. Retrieved from website: <https://www.census.gov/quickfacts/fact/table/goldenvalleycountymontana/PST045222> (2023).

US Fish and Wildlife Service. *Information for Planning and Construction*. Retrieved from website: <https://ipac.ecosphere.fws.gov> (2023).

US Fish and Wildlife Service. *Wetlands Data*. Retrieved from website:
<https://www.fws.gov/program/national-wetlands-inventory/data-download> (2023).

US Geological Survey. *USGS Stream Stats*. Retrieved from website:
<https://streamstats.usgs.gov/ss/> United States Department of Agriculture (2023).