## **Exhibit C – Mining Plan**

### (a) Mining Dates

Mining will commence upon completion of the entire permitting process, which may be on or before September 15, 2007. Mining is anticipated to last of 20 years with an initial possible immediate production of 20,000 to 30,000 ton during the first year. Production at the site will be mainly for rip-rap and larger boulders for river stabilization projects. The site is remote with a limited commercial market and rock and boulder production for local projects may place as materials are needed and then selectively scaled from the outcrop.

Mining will begin along the reclaimed margins of the previous DRM&S Permit # M-1994-022. The flatter elevation area at the top of the access ramp will be used as before for an operations/temporary stockpiling area. Mining will start and follow the limits of the previously disturbed areas and will move along the general existing slope and (rock) high-wall (very slowly) extending the disturbed area to the west and north. The fractured and weathered rock (possible upper 2 to 4 feet to solid un-weathered bedrock) will be removed off the slopes or scaled off more sheer faces as/when necessary. Due to the nature of the outcrop, the sheer faces and limited annual production from the site the total disturbed area at the end of 20 years would be less than 6 acres. (Note: the 20 yr. limit line on Exhibit E Map)

Process equipment operation at the site would be temporary. The operations area is restricted so equipment may be mobilized as contracted material or stockpiles are needed. Estimated mining activities at the site would average less than 180 days per year. The number of days the mine operates depends on demand for the material that are sold. As demands increase the days of operation increase, as the demand decreases the days of operations will also decrease. Weather such as cold, rain, snow, and heat will affect days of operation. These materials are used mainly for river stabilization projects.

## (b) Topsoil – soil suitable as a plant growth medium

All of the soil within the 5.0 proposed permit area, as mapped and described by the U.S.D.A. Soil Conservation Service in this area of Moffat County consists of soils belonging to the **Ustorthents, Fridgid** – **Borolls Complex, 25 – 75% slopes.** These soils at the site are very well drained and have very little water holding capacity. Soil depth is shallow and thin and grades to un-weathered bedrock. Permeability is slow and runoff is high. Due to the steep slopes and limited soils and vegetation the area is unsuitable for livestock grazing although wildlife and livestock do occasionally use some of the side and upper slopes. There is very little topsoil/surface soil at the site. The proposed mine area is predominately weathered basalt outcrop and bedrock and has been assigned a "none" rating as an ecological site by the NRCS. Any and all topsoil and/or suitable surface material including some possible crusher fines will be reserved for site reclamation. The folded bedded basalt outcrop material at the site forms very high angle slopes and cliffs of bare rock with no topsoil. (see photos)

All of the soil within the 3.25 proposed permit storage area the **Evabot Yamo Complex** of soil is a loam soil that has H1 – H3 as a loam soil that is 60" deep. With the depth of topsoil being that deep and being a storage area and not a mining area the plan is to clean up all the storage from the surface with 2-3 inches of topsoil removal. Removed topsoil will be wind rowed on the south side of the storage area. After the removal of all stored material the soil surface will be ripped, disced and the stored top soil will be bladed onto the disturbed site. The disturbed site will be seeded.

# (c) Thickness of overburden or quantity of waste rock

Overburden within the 5.0 proposed permit area is minimal and is sufficient quality (fractured and weathered basalt mixed rock) to be used in base course and fill material. Material below the salvageable surface/topsoil horizon will be mined and hauled unless used onsite for access ramps or storm-water berms. There will be no stockpiles of waste rock or overburden. Boulders and large rip-rap may be mined and/or scaled from steeper areas as needed. Catch benches will be installed on the North/Northeast slope to stop rocks from landing in county road. Some scaling and rock fall mitigation will be done as necessary on the

higher angle slopes and cliffs above the county road. Rock fall and slide rock will be collected from the slope toe and roadside to assist in county maintenance.

### (d) Thickness of deposit to be mined

Material to be mined consists of the upper fractured and weathered surfaces of the basalt outcrop and loose rock from sheer faces and gullies on the outcrop. The fractured and weathered rock (possible upper 2 to 4 feet to solid un-weathered bedrock) will be removed off the slopes or scaled off the more sheer faces as/when necessary. As stated above in (c); some scaling and rock fall mitigation will be done as necessary on the higher angles slopes and cliffs above the county road. Rock fall and slide rock will be collected from the slope toe and roadside to assist in county maintenance. Rock-fall cleaned from the road would be moved to the operations are for temporary stockpiling. The unweathered bedrock is 170' high wall and runs in variable thickness seams and intermixed with soil. The depth/elevation will be mines to 6600 feet, level on the mine floor. Approximately 100 -120 feet of unweather rock to be removed.

- (e) Major components of the mining operation.
- Access to the site will be off Moffat County Road 1 using the load owner's private road/ramp, which
  was use for the previous site mining operation, to access the site operations area. This access will be
  utilized for the duration of the mining activities. The access will also be part of the Moffat County Special
  Use Permit.
- 2. The 1.34 acre "previously mined area" will be used for temporary process operations and stockpiling. In the future if demand for rock is needed we will mine under the previous mined area.
- 3. There is no shop presently on site. There is a small storage shed used for generator, tools and oil storage.
- 4. There are plans to provide for portable crushing or screening plants to process material at this site as needed. Along with the portable crusher and screening plants a generator with a control/storage van trailer will be onsite. All material will be handled onsite using tracked excavators, bulldozers and frontend loaders to temporarily stockpile and load to haul trucks. Material stockpiles may be temporary or may be produced and reduces on a daily basis and will be conveniently located adjacent to active mine pit areas as excavation activities precede. The 3.25 acre site which is 500 feet to the west of the 5.0 acres of Moffat County Road 1 will be used to store stockpile materials.
- 5. There will be no underground opening such as ventilations facilities or aducts. The operations will be an open pit operation. The permit boundary is located right next to Moffat County Road 1. We will load trucks in permit boundary.

## (f) Dimensions of any significant disturbance to land surface

- 1. Mining will start at and follow the limits of the previously disturbed area (1.34 acre) and will move along the general existing slope and (rock) high-wall (very slowly) extending the disturbed area to the west and north. The fractured and weathered rock (a possible upper 2 to 4 feed to solid un-weathered bedrock) will be removed off the slope or scaled off the more sheer faces as/when necessary. Due to the nature of the outcrop, the sheer faces and limited annual production from the site the total disturbed area at end of 20 years would be less than 5.0 acres. (Note: the 20 yr. limit line on Exhibit E Map) including the current 1.34 previously mined. Slopes would be 3:1 or less when possible, however remnant high-walls will resemble the current steep to sometimes vertical in places outcrop profile.
- 2. Since the bedrock runs in seams the benches are variable. (ex. Seam we are working on now is 60' 5' wide and the depth is not yet determined. The bench width will be from 60' 15' in width. The depth of the bench will vary depending on the depth of the seam of the rock. The depth has been 38' 40' in height and will vary from a straight high wall to a slope because of loose rock and fines at the site. The hard rock is mined from top of the mine site town in 40' increments.

3. Material stockpiles could be temporary or produced and reduced on a daily basis and will be conveniently located adjacent to the active mine area as excavation activities proceed or on land next to the mine site owned by land owner.

The stockpile material will be stored on the 3.25 acre site which is 500' to the east of the 5.0 site area. The processed material will be stored 207'x207'x12' high, stacked with a Dozer and a loader with a 2 to 1 slope prior to crushing. After crushing it will be stacked with a stacking conveyor and 37% slope. (40' high and 52' base)

- 4. The 5.0 proposed permit area is mostly a rock outcropping with very little fines as shown in the picture. The fines have been used to help make benches to mine the solid rock. The 3.25 acre area will be used for storage of rock, fines, and crushed material.
- (g) Dimensions of any existing or proposed roads that will be used for the mining operations.

The existing private road/ramp accesses the owners property at the southeast side of the proposed permit area is 15 feet wide and has a good gravel surfaces. Total length up and into the operations area is approximately 150 feet. Silt fences and sediment retentions berms or ditches will be maintained alongside road and excavation area to reduce erosion and limit runoff from storm events. Besides the access road/ramp there are no other new or improved roads to be included as part of the permitted acreage.

The road to the 4.8 acres storage site is approximately 500' East of the main 5.0 acre mining site along Moffat County Road 1. The access road is approximately 30 ft wide with a good gravel road covering a 12' pipe. The length of the access road off Moffat County Road 1 is 50' to the landowners fence and private land.

(h) Water to be used in conjunction with the operations and the source. Water will be used for dust control if needed.

Water required, if any, would be for occasional watering of the haul road and ramp areas. It is estimated that 1000 to 2000 gallons of water per day would be necessary for watering haul roads and ramp areas depending on weather conditions and the length of haul road. The owner has sufficient available water rights to supply this minimal amount. The water for dust control will be from the Morgan Slater Ditch which is held by the Baxter Ranch with J and Glynda Sheehan as owners. The water will be used for dust control.

(i) Ground water encountered and /or surface intercepted

As stated in Site Description (c), this will be a dry pit operation with no effect on water rights, drainage or hydrology of the area. No surface will be intercepted disturbed or stored in the pit area. Silt fences and sediment retention berms or ditches will be maintained alongside roads and excavation areas to reduce erosion and limit runoff from storm events.

- (j) Compliance with applicable Colorado water laws and regulations governing injury to existing water rights.
  - See (i) about and Site Description (c).
- (k) Refuse and acid forming or toxic materials exposed handling and disposal.

No refuse and acid forming or toxic materials will be involved in this operation. The operation will be a dry pit operation producing boulders, rock, sand, gravel, and soil materials with no chemicals required for processing and refuse will not be generated. Rock, Sand and gravel are basically inert materials.

(I) Measures to minimize disturbance to the hydrological balance, prevent offsite drainage, and provide for a stable configuration of the reclaimed area consistent with the proposed future land use.

The hydrologic balance issue has been addressed previously in Site Description (c), and items (i) and (j) above. A stable configuration will be accomplished by the 3:1 back slopping of the pit faces on the west and northwest sides of the pit area into the more sheer rock high-walls.

(m) Specify whether the deposit will be processed on-site.

As stated in (e) 4 above, there are plans to provide for a generator/control building and portable crusher or screening plant to process material at this site as needed. All material will be handled onsite using tracked excavators bulldozers and front-end loaders to temporarily stockpile and load to haul trucks. Material stockpiles may be produced and reduced on a daily basis or will be conveniently located adjacent to or on land owned by owner which is next to the active mine pit areas as excavation activities proceed. One storage shed will be on proposed site. Hydro carbons will be stored in storage shed. There will be fuel storage tanks on site with proper secondary containment structures.

(n) Primary and secondary commodities to be mixed/extracted and intended use.

The primary commodities to be mined onsite will be large boulders, rock, and crushed rock for sand and gravel and backfill soil. The intended use of these materials will be as river stabilization boulders, structural rip-rap, crushed rock and road gravel base course and fill material for road construction activities. There are no secondary commodities to be minded and/or extracted at this site.

(o) Incidental products to be mined and/or extracted.

There are no incidental products to be mined and/or extracted by the proposed operations

(p) Blasting

Blasting will be used to loosen rock so it may be moved with tracked excavators, bulldozers and front-end loaders. An outside third part will be hired for blasting.

On recommendation by Division of Reclamation Mining and Safety the geotechnical stability exhibit will not be required because of the location and type of rock.