

Section III
PUD Final Development
Plan Application

Section III

Planned Unit Development Final Development Plan Application

Moltz Rock Quarry

A. Legal Description:

The E.B.I. Lode Mining Claim, United States Mineral Survey No. 4335, the Y.B. Lode Mining Claim, United States Mineral Survey No. 4335, and the J.E.B. Lode Mining Claim, United States Mineral Survey No. 4335, situate in Battle Mountain Mining District, all located in Section 4, Township 7 South, Range 80 West of the 6th Principal Meridian, County of Eagle, State of Colorado and being more particularly described as follows:

The Southerly line of Tract 43 between angle points three and four of said Tract, in sections 19 and 20, T6S, R80W, 6th P.M. assumed to bear N 89°53'17" E and being monumented as shown hereon with all bearings herein relative thereto.

Beginning at Corner # 1 of aforesaid Y.B. Lode Mining Claim, United States Mineral Survey No. 4335 thence N 45°24'01" W a distance of 300.27 feet to the Corners 6 & 7 of said Mineral Survey No. 4335; thence N 45°26'57" W a distance of 299.71 feet to Corners 10 & 11 of said Mineral Survey No. 4335; thence N 45°30'13" W a distance of 300.01 feet to Corner 14 of said Mineral Survey No. 4335; thence N 44°08'01" E a distance of 1,500.67 feet to Corner 13 of said Mineral Survey No. 4335; thence S 46°18'28" E a distance of 297.48 feet to Corners 9 & 12 of said Mineral Survey No. 4335; thence S 44°43'00" E a distance of 289.39 feet to Corners 5 & 8 of said Mineral Survey No. 4335; thence S 46°18'46" E a distance of 150.64 feet to Corner 4 of said Mineral Survey No. 4335; thence S 43°43'16" W a distance of 150.68 feet to Corner 3 of said Mineral Survey No. 4335; thence S 46°20'43" E a distance of 150.70 feet to Corner 2 of said Mineral Survey No. 4335; thence S 43°40'45" W a distance of 1,355.48 feet to Corner 1 of said Mineral Survey No. 4335 said point also being the Point of Beginning. Containing 30.327 acres more or less and being subject to all easements and rights of way of record.

B. Submittal Date:

January 30, 2009

C. Owner:

V. Paul Moltz
PO BOX 1914
BUENA VISTA, CO 81211

See Title Commitment attached as **Exhibit D**

D. Technical Consultants Referenced and Used:

Knight Planning Services, Inc.
Otten, Johnson, Robinson, Neff & Ragonetti, P.C.
Dr. Robert Young
William Cohan and Associates
Western Ecological Resources
TDA Colorado, Inc.

E. Introduction:

The Moltz property is comprised of three existing mining claims, the EBI Lode Mining Claim, The YB Lode Mining Claim and the JEB Lode Mining Claim (also known as the Badger State Mine). Collectively, these three claims constitute a parcel of approximately 30 acres (the "Property"). The mining claims were patented by the United States Government in the late 19th century and underground mining for gold and silver occurred on these claims between 1880 and 1890, and again in the early 20th Century.

One of the unique geologic features of the Property is the presence of an exposed outcropping of Sawatch quartzite. This is a popular construction stone that is also a desirable material for landscaping. This stone is used for a variety of purposes including exterior veneer of houses, fireplaces, retaining walls, and for drainage way stabilization (commonly known as rip rap). Local demands for this stone are currently satisfied by stone imported from quarries on the Front Range or from neighboring states to the east. According to a report prepared by Dr. Robert Young, Sawatch quartzite is exposed at the surface of the earth only along deep canyons within a confined area in north-central Colorado. Dr. Young found that these outcroppings typically occur on steep canyon walls on National Forest Lands that are difficult or impossible to access. This particular exposed and accessible outcropping of Sawatch quartzite on privately owned land along U.S. Highway 24 is unusual. It is also noteworthy that this outcropping of Sawatch quartzite occurs on a patented mining claim that at the turn of the Twentieth Century was the site of a gold mine.

Paul Moltz acquired the Property from Eagle Rock and Stone, LLC in May of 2004. Eagle Rock and Stone, LLC had conducted and prepared a

number of various studies of the Property for use as a stone quarry. These studies included a Limited Impact (110) Operation Reclamation Permit Application (see **Exhibit Q** for outline), an Environmental Impact Report, as well as several other specific topical investigations of the Property and proposed quarry operation. With the purchase of the Property, Eagle Rock and Stone, LLC granted Paul Moltz permission to use these studies in support of any potential uses or rock quarry applications. References to these studies are made in various sections of this Planned Unit Development Final Development Plan ("FDP") Application.

F. Land Use:

In conjunction with annexation of the Property into the Town of Red Cliff, Paul Moltz requests approval of this FDP allowing a rock quarry on a portion of the Property constituting approximately 10 acres (located along the Property's south-western side) The quarry operation is anticipated to last for approximately 7 to 15 years after permitting.

The Vicinity and Zoning Maps, attached hereto as **Exhibit B**, provide conceptual images of the Property. The attached engineering plans identify the quarry area as approximately 200 feet wide by 600 feet long. This area is currently the location of a steep rock outcrop.

William Cohan and Associates, a mining engineering company based in Grand Junction, has prepared detailed plans for the proposed quarry addressing various issues such as storm drainage, access, and operations. The applicant requests that these attached plans form the basis of the approved FDP. All quarry operations shall be conducted in compliance with all state permits required for quarry operation, as they may be amended from time to time, pursuant to applicable state procedures. Obviously, there may be adjustments in regards to storage areas, storm drainage requirements or reclamation plans that occur during submittal, review and approval of these plans by various state and federal agencies involved in the approval process. General parameters such as the extent of the quarry operation and any noise and visual impact mitigation measures adopted will be established by the FDP and will not be subject to any changes without amendment to the FDP. **Exhibit E**, attached hereto, provides a list of the various permits required for the quarry operation and the respective issuing agencies.

As shown on the Vicinity Map (**Exhibit B**), the Property is generally rectangular in shape and is oriented in a southwesterly to northeasterly direction. The southwesterly boundary is generally parallel to U.S. Highway 24 and is separated from the highway by approximately 200 feet of U.S. Forest Service property. Access to the Moltz Property is permitted

by an easement over this Forest Service land. The elevation differential across the westerly portion of the site ranges from a low of approximately 9240 feet on the southwest to a high of 9630 feet near the center of the site. The northeasterly or back side of the Property is part of the west rim of a canyon of the Eagle River and the currently inactive Union Pacific Railroad Track. The northeasterly boundary of the Property ranges in elevation from approximately 9400 feet to about 9200 feet. The overall site is moderately steep in gradient and contains two cliff bands. The westerly of these cliff bands, which has sloughed considerable material into a talus slope over the years, contains significant amounts of the Sawatch quartzite stone described above. This area of approximately 10 acres is the focus of the proposed quarry operation and will constitute the entire property for purposes of quarry permit applications to the Colorado Department of Natural Resources. The second cliff band overlooks the Eagle River along the northeasterly boundary. No quarrying is proposed on the cliff overlooking the river. We are sensitive to the scenic highways and will use our best efforts to minimize the visual impact.

The first stage of this Planned Unit Development Final Development Plan Application is for the extraction and processing of the Sawatch quartzite materials that are located on the westerly one-third of the Property as shown on attached plans submitted under **Exhibit F**:

- Vegetation Type Map [B-2]
- Quarry Road Plan at Start of Mining [E-1]
- Quarry Road Plan at End of Mining [E-2]
- High Wall Detail [E-3]
- Haul Road Cross Section [E-4]
- Reclamation Grading Plan [E-5]
- Reclamation Revegetation Plan [E-6]
- Cross Section A-A [E.5.1]
- Cross Section B-B [E.5.2]

All proposed quarry activity will occur on approximately ten acres (30%) of the 30.48 acre property, see **Exhibit P**. All quarry and processing work, including haul roads, will be contained within this area. Ample areas on site are provided for parking and maneuvering of trucks and equipment involved in the quarry operation. Stone from the quarry will be stored in the south westerly portion of the Property where it will be loaded onto trucks for delivery. All vehicles accessing or leaving the site will use the Forest Service access easement and its intersection with Highway 24 in a head-in or head-out orientation. Any required improvements to Highway 24 will be determined by the Colorado Department of Transportation ("CDOT") through application of the State Highway Access Code. These improvements will be designed and constructed under the supervision of CDOT. This access permit will be obtained and constructed prior to

operation of the quarry. The applicant is familiar with State Highway Access Permit requirements associated with other sand and gravel operations he owns and manages.

The temporary access ramp shown on the drawings entitled "Quarry Plan at Start of Mining" [E-1] and attached hereto as part of **Exhibit F**, is needed during the early stages of the quarry to allow equipment to access the top of the quarry. The quarry operations will commence at the top and proceed to excavate downward. As the quarry is developed, the permanent access road will be constructed. The temporary access ramp will be re-graded and planted as part of the Reclamation Plans.

The extraction of the Sawatch quartzite rock from the Property will provide a unique opportunity to supply local stone for structural uses, such as retaining walls, as well as a number of decorative purposes. The quarried stone will be provided in a range of sizes. Stone with a 3" to 6" thickness is useful for veneer on the outside of houses and fireplaces. Area landscapers prefer 8"-16" material for drystack walls used for landscaping decoration, as well as an 8" to 24" black moss rock for rock gardens. Local contractors prefer to use structural, dimensional boulders from 1' to 5' in size for retaining walls.

In addition, engineers in the area use the quartzite material for wall stabilization and drainage areas, which is typically 18" to 24" in size, commonly known as a rip-rap product. Each of these needs can be met and supplied by the proposed quarry. We understand there are currently no production sources of quartzite decorative material in Eagle County. Therefore, similar stone is brought from further away, increasing the cost for contractors and consumers and contributes to green house gasses due to increased transportation requirements. Most similar decorative stone is brought from areas such as Boulder, Montrose, and Canon City. It should also be noted that some of these similar materials come from as far away as Kansas and Oklahoma to meet the local demand. With this resource conveniently located on Highway 24 close to the recently approved Ginn Development and ongoing work in the Eagle Valley along the I-70 corridor, we are confident that there is a strong demand for this locally supplied material.

The operation will be fundamentally small scale, with one or two full-time employees on site. The current business plan calls for several pieces of heavy equipment and several pieces of light equipment on site.

Given that there are only one or two employees anticipated for the quarry operation, a housing plan has not been prepared to accompany this application. These one or two employees are anticipated to commute to the quarry from residences located in Red Cliff or Leadville and its

surrounding area. Portable toilets will be provided for employees and customers, as well as drinking water. The existing residential structure on the property is to be demolished prior to quarry operations.

Much of the initial quarry activity on the Property will involve simply picking up stone from the talus slopes and separating it. Once a certain amount of the existing material on the existing talus slope has been removed, it will be necessary to use limited and contained blasting to create additional inventory. A licensed blasting contractor will be used and will limit blasting to occur no more than six times per year. This blasting will gradually move the cliff face back towards the northeast. As shown on the plans, the overall area of the quarry operation will not exceed a total of approximately ten acres, inclusive of haul roads, stockpiles and staging areas.

The proposed calendar for quarrying would be from April through November, weather permitting. Shipments from stockpiles would occur throughout the year. With an existing elevation about 9200 feet above sea level, weather will play a significant factor in the operation. Since there are no residential neighbors within 1 mile, it is proposed that hours of operation will be from 6:30 a.m. to 7:00 p.m., Monday through Saturday. Delivery of product will be from 8:00 a.m. to 5:00 p.m., Monday through Saturday.

Access to and from the Property will be along an existing road which crosses Forest Service land. An easement from the Forest Service for this road was approved at the time the quarry was first opened in 1996, a copy of which is attached hereto as **Exhibit G**. A revised State Highway Access Control Permit from CDOT will be obtained.

A State Highway Access Permit for this access point will be obtained. The initial Traffic Impact Assessment is attached as **Exhibit H**. Based on this analysis, a maximum of 52 trips per day is estimated in association with the rock quarry. By agreement with the Town of Red Cliff officials, loaded trucks will not be dispatched before 8 AM or after 5 PM. The low volume of traffic added to US 24 volumes, coupled with the agreement to preclude trucks from operating during morning and afternoon commute hours means the quarry operation will have minimal perceived effect on US 24 traffic operations.

An Environmental Impact Report ("EIR") has been prepared for the project by Western Ecological Resources (WER) of Boulder, Colorado, and is attached hereto as **Exhibit I**. WER conducted a site investigation of the Property in early November of 1999, prior to any snow accumulation on the Property. Included in the environmental assessment of the Property is an extensive review of the wildlife habitats associated with the Property,

and the potential impacts of the project on the Property. The Property was also thoroughly examined for the presence of wetlands and threatened/endangered/sensitive plants and wildlife species. As stated in the EIR, "there are no federally listed threatened, endangered and sensitive plants known to occur in Eagle County." Potential habitat for two federally listed threatened or endangered wildlife species (peregrine falcon and Mexican spotted owl) and three species proposed for federal listing (North American lynx, northern goshawk, and boreal toad) is discussed for the Property. A review of the specific habitat for each of these species revealed a very low probability that any of these species would be found on the site or that the site is critical habitat for any of them. Information on big game, raptors, game birds and waterfowl, as well as small game and furbearers is also presented and discussed. In summary, the environmental impacts of this project have been found to be very low. The environment of the Property and surrounding land has changed very little since this EIR was prepared in 1999.

G. Quarry Plan:

1. Schedule:

The development of the rock quarry and quarry activity is anticipated to commence in the year 2010 or 2011 and continue for approximately 7 to 15 years depending upon market conditions.

The quarrying of rock is anticipated to occur during the period between April and November of each year. However, shipments from stockpiles of materials will continue year-round.

The quarry will operate 6 days per week depending on demand. Hours of operation will be 6:30 A.M. to 7:00 P.M. The impact on neighboring property owners will be negligible since the property is surrounded by the White River National Forest.

2. Topsoil:

Topsoil depths are shallow, less than 4 inches in most areas. Any topsoil of sufficient depth will be salvaged and stored on-site along berms created to mitigate visual impact. The topsoil will be stabilized with the seed mix recommended by Western Ecological Resources as shown in the attached **Exhibit J**. Bulldozers, front-end loaders and rear dump trucks will be employed to harvest the topsoil.

3. Overburden:

Overburden varies from 0 to 70 feet in depth and consists of quarternary talus, glacial till and sandstones, dolomites and quartzites of the peerless and parting formations. The quarternary formations are free digging. However, the peerless and parting formation rocks will require drilling and

blasting to loosen them. Crawler-mounted percussion drills will be employed for drilling the blast holes, which will be 2 1/2 to 3 1/2 inches in diameter. Front-end loaders and off-highway trucks will be employed to load and transport the overburden to the stockpile areas.

The initial overburden will be employed to fill in a low area near the southeast corner of the permit area, identified as "Quarry Plan at End of Mining" submitted as part of **Exhibit F**, [Exhibit E-2]. The material will be used to form a level area approximately 200 feet long and 50 feet wide. It will attain a maximum depth of 20 feet. This area will be utilized for staging equipment and storing product. The area and the access road leading to it will contain an exterior berm, 5 to 8 feet high for safety purposes, runoff control and visibility screening.

Any remaining overburden will be crushed and sold to address the emerging need for this type of material in the area.

4. Resource:

The deposit to be quarried consists of quartzite of the Cambrian Sawatch formation. The formation is approximately 125 feet thick but is separated by a shale parting and a younger, igneous sill, the Cretaceous Pando formation. This parting zone is approximately 5 feet thick and lies approximately 50 - 55 feet below the top of the Sawatch quartzite formation.

5. Quarry Development:

Initial quarry development is shown on "Quarry Plan at Start of Mining" submitted as part of **Exhibit F**, [Exhibit E-1]. This initial development will consist of constructing a haulage road, approximately 30 feet wide and approximately 1600 feet long. Haul road design criteria are based upon those contained in U.S. Bureau of Mines publication IC-8758, "Design of Surface Mine Haulage Roads - a Manual".

The road will commence in an existing excavation and terminate on top of the bluff near the north center of the permit area. The road cross section (refer to Drawing E-4 of **Exhibit F**) will be 30 feet wide, consisting of an outer safety berm 4 feet high and 11 feet wide at its base, a 9 foot wide traveled way, inner and outer shoulders of 2 feet in width and an interior gutter, 5 feet wide and 1 foot deep. The road will be constructed by side hill cut and fill techniques. The fill will be placed at its natural angle of repose. Cut slopes will be 1H: 1V in unconsolidated materials and 1H: 2V in rock. The road surface will consist of local materials. Some quarry waste rock may be used for surfacing.

Because of the steepness of the terrain and limited work area, haul road gradients will be relatively steep in some areas. Therefore, a vehicle escape lane will be provided at the first switchback. This escape lane will be approximately 100 feet long and have an opposing gradient of

approximately 25%. Nonetheless, mining/construction duty trucks with auxiliary retarding (braking) systems will be employed for rock haulage.

A temporary ramp will be constructed to provide access to the top of the bluff for blast hole drilling equipment. This is necessary to construct the main haulage road through the quartzite bluff near the northeast corner of the permit area. This temporary ramp will be approximately 20 feet wide, including the outer width taken up by a safety and drainage control berm. The ramp will be 500 feet long and grades will average approximately 26%. This ramp is solely for access by crawler and specialized rubber tired equipment such as small (5 -10 ton cap) trucks designed for rock quarry use. The ramp is temporary in nature and will be decommissioned and reclaimed once the main haul road is completed.

6. Drainage Control:

Drainage control for the temporary access ramp consists of a gutter and outer edge berm. This system is considered to be adequate, especially given the short service life of this roadway.

Main haul road drainage control is provided by conveying runoff down the inside gutter of the haul road to a 15 inch diameter, 14 gauge, corrugated metal culvert pipe cross drain, located above the first switch back, at the point where the through cut "daylights" in order to have the water discharge onto undisturbed material. A riprap rock base will be installed to deter erosion.

A second, 18 inch diameter, 14 gauge culvert will be installed at the junction of the new haulage road and the exiting road near the scale. Both culverts will be installed in conformance with A.A.S.T.O. recommendations for H-20 live loads.

The "rational method" was employed to size the culverts. The following assumptions were employed:

Upper Culvert Installation

Cover Description	Tributary Area, Acres	Hydrologic Condition	Soil Group	Runoff Coefficient
Exposed rock	1.909		B	0.90
Bare earth, unpaved roads	0.339		B	0.80
Sage brush, grass understory	0.476	Fair	B	0.25
Forest	1.657	Fair	B	0.10
Total:	4.381			0.52

Maximum rainfall intensity, unusual conditions: 3.75 inches/hour
(U.S. Dept of Commerce, Weather Bureau TP-25, 1955)

$Q_{cfs} = C \times I \times A = 0.52 \times 3.75 \times 4.381 = 8.54 \text{ cu.ft./sec}$

Design storm: 24 hours 10 year frequency

Rating tables for corrugated metal pipe culvert indicate that a 10" diameter pipe, flowing two thirds full would convey 9.112 cfs. However a 15" diameter x 14 gauge pipe is selected to provide clearance for brush.

Lower Culvert Installation

Cover Description	Tributary Area, Acres	Hydrologic Condition	Soil Group	Runoff Coefficient
Exposed rock	2.067		B	0.90
Bare earth, unpaved roads	1.737		B	0.80
Sage brush, grass understory	3.100	Fair	B	0.25
Forest	2.819	Fair	B	0.10
Total:	9.723			0.425

Maximum rainfall intensity, unusual conditions: 3.75 inches/hour
(U.S. Dept of Commerce, Weather Bureau TP-25, 1955)

$$Q_{cfs} = C \times I \times A = 0.425 \times 3.75 \times 9.723 = 15.50 \text{ cu.ft./sec}$$

Design storm: 24 hours 10 year frequency

Rating tables for corrugated metal pipe culvert indicate that a 12" diameter pipe, flowing two thirds full would convey 17.29 cfs. However an 18" diameter x 14 gauge pipe is selected to provide clearance for brush.

Pit benches will be constructed to drain onto the in-pit ramp or haul road. This runoff will then be diverted into the pit floor. The working pit floors will be sloped at 2% gradient towards the highwall to provide detention of runoff. Runoff in excess of the detained volume will be conveyed down the haul road gutter to the previously described cross drain. Runoff below the cross drain will be conveyed by the haul road gutter to a sediment pond located adjacent to the scale. Detention pond volumes were determined using the methods described in US Soil Conservation Service Publication TR-55 "Urban Hydrology for Small Watersheds," 2nd Edition, June 1986.

The following assumptions were employed to determine detention basin volumes. Design storms of 25 years frequency, 24 hours duration and 2.4" depth were employed in all cases.

Existing Site Conditions

Cover Description	Tributary Area, Acres	Hydrologic Condition	Soil Group	Runoff Curve No.
Buildings	0.047		B	98
Exposed rock	0.562		B	98
Bare earth, unpaved roads	2.641		B	82
Sage brush, grass understory	4.294	Fair	B	51
Forest	5.175	Fair	B	48
Total:	12.719			58

Time of concentration: 0.39 hours

Lower Detention Pond at Start of Quarrying

Cover Description	Tributary Area, Acres	Hydrologic Condition	Soil Group	Runoff Curve No.
Buildings	0.047		B	98
Exposed rock	1.466		B	98
Bare earth, unpaved roads	4.003		B	82
Sage brush, grass understory	3.556	Fair	B	51
Forest	3.647	Fair	B	48
Total:	12.719			65

Time of concentration: 0.44 hours

In-Pit Detention Pond at End of Quarrying

Cover Description	Tributary Area, Acres	Hydrologic Condition	Soil Group	Runoff Curve No.
Buildings	0.000		B	98
Exposed rock	1.909		B	98
Bare earth, unpaved roads	0.339		B	82
Sage brush, grass understory	0.476	Fair	B	51
Forest	1.657	Fair	B	48
Total:	4.381			73

Time of concentration: 0.40 hours

The required volumes and actual design volumes are as follows:

Basin	Required, cu.ft.	Design, cu.ft.
Lower	4,200	5,000
In-Pit	4,500	10,000

Check dams will be installed in the gutters of steep road sections to minimize erosion, as may be required. The frequency and spacing will depend upon the gradient of the road. The sediment pond at the lower end of the haul road will be regularly cleaned out and the sediment placed on the overburden stockpile.

The majority of the run-off leaves the property via the access road's north side gutter, near the southwest corner of the Property. It then flows southwesterly approximately 900 feet along the access road contained in the easement on the adjoining U.S. Forest Service land. As this road is unpaved and the adjoining lands are grass-covered, a certain amount of infiltration will occur. The remaining runoff joins that in the north-side gutter of U.S. Highway 24. This gutter extends northwestward for approximately one quarter mile where it discharges into wetlands along a tributary to Homestake Creek. Homestake Creek is a tributary of the Eagle River.

A small amount of run-off leaves the southwest boundary of the Property as sheet flow and discharges onto grass lands on the adjoining U.S. Forest Service land.

7. Water Requirements:

Water requirements would concern the haul road, drilling dust control, crushing operations and sanitary facilities. All necessary water, including drinking water, will be imported to the property by truck. As necessary, this will include water tanker trucks for dust control and quarry operation, as well as bottled drinking water. Water for dust control, if necessary, will not exceed 4,000 gallons per working day. Any such necessary water will be purchased from the Parkville Water District at Leadville. However, the applicant may also seek other, local supplies. The applicant will conform to all Federal, State and County regulations governing the acquisition of water and water rights prior to developing and using water from such alternate sources.

8. Ground Water:

No seepage springs have been observed in the area to be quarried. Old mine tunnels, located 150 feet below the planned pit, show no evidence of discharge. This on site observation by Bill Cohan, the mining engineer that prepared the quarry plans was also confirmed in the Environmental Impact prepared by Western Ecological Resources submitted as **Exhibit I**. This indicates that quarry operations will occur above the water table.

9. Quarrying Method:

Overburden removal and quarrying will commence in the northwest corner of the quarry area, at an elevation of approximately 9470 feet (refer to **Exhibit F** [E -1], "Quarry Plan at End of Mining"). The operation will be quarried by advancing 15 foot high benches downward and to the northwest. The final highwall will consist of approximate 7 1/2 feet wide benches on approximately 15 foot vertical intervals. The faces of the benches will be sloped at approximately 1H: 2V (63.4°), which is actually less steep than the face of the existing quartzite bluff (refer to Cross Sections A-A & B-B, contained in Reclamation Grading Plan submitted as part of **Exhibit F**). The overall slope of the final highwall will be approximately 45°.

Blast holes will be drilled from the top of the bench, while haul units will be loaded at the base of the bench (and top of the next bench to be quarried). Front-end loaders or hydraulic excavators will be used to load the haul trucks. The haul trucks will be construction/quarry duty units with braking systems.

Blast holes will be advanced by crawler-mounted percussion drills. Blast hole diameters will range from 2 1/2" to 3 1/2 " in diameter. Ammonium nitrate/fuel oil (anfo) blasting agent will be employed. Charge weights per delay and blasting rounds will be designed such that the peak particle velocity for ground vibration at the southwest property line will not exceed 1.0 inch/second and the scaled distance will be equal to or greater than 55, in accordance with US Office of Surface Mining Regulations. A licensed contractor or other qualified person will be employed to perform the blasting. Precautions will be taken to insure that fly rock is confined to the area of the blast and does not leave the Property. Such precautions will include the following:

1. Avoid excessive burden on individual blast holes;
2. Employing sufficiently long delay periods to avoid excessive confinement between rows of blast holes;
3. Adequately stem the collars of each blast hole;

The completed quarry will be a northwest trending rectangular opening approximately 600 feet long and approximately 200 feet wide. The pit will be open on its northwest and southwest sides (please see "Quarry Plan at End of Mining" submitted as **Exhibit F**, [E-2])

Modular office trailers will be used for a field office, storage facility and change room. The location of this modular office trailer is planned in the vicinity of the truck scale shown on the plans. **Exhibit O** shows the modular office trailer and scale at the owner's River Park Operation. The modular office trailer may be provided with security lighting.

No shops or additional buildings are contemplated in relation to the quarry. Fuel will be stored on site in an above ground tank near the existing truck scale. Fuel storage will be in compliance with Federal MSHA requirements, which include a secondary containment structure.

Water will be available for dust control measures as needed.

See the attached **Exhibit K** for a Geologic Review of Property.

10. Refuse and Acid or Toxic Producing Materials:

No acid or toxic producing materials will be employed. The overburden and quartzite resource are chemically inert.

The waste stream produced by the office and on site employees will be hauled to an approved disposal facility such as the Eagle County Landfill.

11. Hydrologic Balance:

Steps to minimize potential impacts to the prevailing hydrologic balance have been discussed in detail in the previous section, titled "Drainage Control". Since the operation will be above the water table, potential impacts to ground water will be minimal.

The construction of two sedimentation/detention ponds and the routing of runoff through the haul road gutters will minimize the impacts of increased surface runoff. Check dams will be installed in gutters along the steeper sections of the haul road.

The uppermost detention pond consists of the floor of the completed pit, which will be gently sloped towards the highwall. The second and lowermost detention pond is located near the existing building and truck scale. The lower pond has been sized to detain the additional runoff created by the haulage road and initial quarrying disturbances. Once quarry benches have been opened, the bench floors will be sloped northward toward the highwall to serve as in-pit detention ponds.

Silt fences will be installed along the southwest boundary of the Property. Additional silt fencing will be installed around the toe of the staging and stockpile area embankment, as may be required.

The irregular topography of the currently disturbed area at the southeast corner of the Property will be graded to a gentle slope before commencing stockpiling of overburden in this area. The majority of the overburden stockpiled will consist of glacial till, which contains sufficient fines to support plant growth. The regraded area will be planted with an appropriate seed mixture.

The depression at the east side of the building will be filled and graded to a gentle slope to the north. The area will then be revegetated.

The revegetation of the disturbed areas will mitigate erosion and soil loss. The quarry walls will consist of hard, erosion resistant competent rock (witness the existing cliff). The completed quarry floor has been designed to function as a sedimentation and detention pond and will remain as a component of the reclamation plan.

No toxic chemicals will be employed except for the fuel storage which shall be provided with an overflow containment area in compliance with Federal MSHA regulations. The overburden and quartzite rock are chemically inert. Therefore, no deleterious agents will be released to ground or surface waters.

A Storm Water Management Plan will be prepared and filed with the Water Quality Control Division of the Colorado Department of Health and Environment prior to commencing operations of the quarry.

12. Existing Single Family Unit:

An existing single family residential unit is currently located on the Property. This unit will be demolished prior to commencement of the quarry operation.

13. Waste Water Disposal:

For the daily use of the employees and customers, portable toilets will be provided for sewage disposal purposes.

The existing septic tank and leach field for the single family structure on the property are located to the south east of the structure, as identified on the "Existing Conditions Map" Submitted as **Exhibit L**. However, as this structure will be demolished, this septic tank and leach field is not planned to be used.

H. Reclamation Plan:

Upon completion of the quarry operation the quarry reclamation plan will be implemented on the Property.

Reclamation will include removing all roads except those to and from the staging and stockpile area.

The roads, as well as currently existing trails and other disturbances from prior operations, will be re-contoured by pulling down the cut slopes and pulling up material from the embankment section of the roadway prism, employing a hydraulic excavator. The upper portions of the cuts through solid rock will remain as low to moderate height scarps, depending on the original height of the cut. All road drainage structures will be removed during the re-contouring operation. Top soil, to the extent that it is available, will be replaced to a minimum depth of 4 inches, per Federal Reclamation regulations. The disturbed areas will be revegetated with the native grass seed mixtures as described on the Landscape Plan attached as **Exhibit M**. Where topographic conditions permit, the seed bed will be prepared by mechanical methods and the seeds will be applied by drilling. Where the slopes are too steep to safely employ mechanized equipment, the seeds will be applied by broadcasting and the seed bed will be raked by hand.

Neither back filling nor slope reduction of the quarry area is contemplated as the opening will be in massive competent rock. The design pit walls will be somewhat less steep than the undisturbed quartzite cliff, thus the quarry slopes will blend in with the pre-quarrying topography. Over time, sloughed material from the highwall face will accumulate on the safety berms. This will reduce the visual impacts of these berms and provide sites for volunteer growth, once sufficient fines have been deposited in the rubble. The pit floor will be sloped to provide a sedimentation and storm water detention pond, having a capacity of approximately 10,000 cubic

feet. This is more than adequate to detain the peak inflow anticipated to result from the 25-year frequency, 24-hour storm.

The outside berm of the ramp will be removed to the bottom of the ramp and the ramp will be incised to divert storm water from the ramps inside gutter into the detention pond. This pond will discharge as sheet flow, approximately 50 feet wide, over the level section of residual haul road at the base of the ramp. As this section of residual haul road consists of in place rock and boulders ranging up to several feet in diameter, it is considered capable of withstanding the energy of a 24-hour 100-year storm event.

The existing building will be demolished. The truck scale will be removed and the scale pit will be backfilled to the surrounding grade. The sediment/detention pond adjacent to the scale will remain intact to continue its function.

The stockpile and staging area and its surrounding berm will remain intact for use by the occupants of the residence.

Reclamation costs are estimated to be approximately \$42,000.

ESTIMATED RECLAMATION COSTS

<u>Item</u>	<u>Cost, \$</u>
Remove litter & drainage structures	500
Regrade roads and existing disturbed areas	15,273
Revegetate disturbed areas	23,100
Contractor's Foreman	3,450
Total	\$42,323

The temporary ramp will be reclaimed soon after the main haul road is completed. This is anticipated in the first full year of operation. Existing disturbances from prior operations will, to the extent that they do not interfere with production, be reclaimed throughout the first few years of operation. However, the haul roads and overburden stockpile area cannot be reclaimed until after the quarry operation has been completed. It is anticipated that reclamation can be completed within one 7 month construction season and that adequate vegetation be established in 2 to 3 growing seasons.

I. Landscape Plan:

A Landscaping Plan has been prepared and is attached hereto as **Exhibit M**. The focus of the landscaping plan is to provide berming and tree cover along the southerly portion of the Property to provide screening of the operation from passers-by, and revegetation of the site at the end of quarry operation.

This Property is well screened due to abrupt elevation changes from the adjacent highway and the heavily forested nature of the existing lands. A number of evergreen trees will be planted on-site to further screen the quarry operations from U.S. Highway 24.

The majority of the Property has steep slopes of 40% or greater and a shallow soil layer. The soils are of moderate to rapid permeability and low water holding capacity. Due to the slope, poor soil, and high altitude, this site will be difficult to vegetate. Western Ecological Resources, Inc. has recommended a seed mixture which has proven to be successful on similar sites. This mixture of shrubs, grasses and forbs will stabilize the soil and provide forage for wildlife.

The ability to plant larger vegetation on the Property is limited by the steep slopes and the lack of deep soil. Larger plantings are typically limited to a maximum of 30% slope. The proposed evergreen trees being planted for additional screening will need to be placed in the flattest location in the general area as shown on the Landscape Plan. The evergreen trees will require additional earthwork to create water wells and prevent erosion. These trees are close enough to the existing road that they can be monitored and receive the supplemental water that will be required for the first several years after planting.

The site will be reclaimed in the areas of disturbance, with the exception of the quarry area, a portion of the haul road and a small area northeast of the quarry. A small portion of the site northeast of the quarry has slopes in excess of 80% and will not support vegetation.

The driveway, scale, and staging and stockpile area will be screened by an existing natural ridge and a man-made berm ranging between approximately 5 and 8 feet in height. Both the berm and ridge will be revegetated with the prescribed seed mixture. The remaining areas shown on the Landscaping Plan will be reclaimed in a similar manner. Soil stabilization practices will be followed in these areas to ensure proper seed propagation.

The seed mixture should be applied in the early fall. It is anticipated that the natural winter precipitation and spring thaw will supply enough moisture for proper seed propagation. A second application of the seed mixture may be necessary to ensure sufficient vegetative cover.

J. Feasibility of Operation:

As noted above, there is an available market in Eagle County and the surrounding region for the range of quartzite products that can be obtained

from the Property. At this time there are no local production sites for this material. Similar, but in many cases less desirable, material is currently imported to Eagle County from other locations throughout Colorado, and in some instances from out of state. With the amount of construction that is occurring in the area, particularly with the recent approval of the Ginn development, this proposed rock quarry will support considerable demand.

The stone materials produced will be used for both decorative and structural needs. The range of products available from the quarry will include decorative veneer for residences, fireplaces and outdoor grills, landscaping materials such as flagstones for walkways, black moss rock for gardens, larger boulders for retaining structures, and a mixture of rock types for drainage structures and rip-rap. The goal of the applicant is to produce a quality product from the Property, while providing competitive prices to local contractors. The owner would like to offer up to 250 tons of road base annually free of charge to the Town of Red Cliff.

K. Three Mile Plan and Master Plan Analysis:

Under the Town Policies for Annexation, as identified in the Town of Red Cliff's Three Mile Plan, there is clear direction provided that the Town's position is to annex only those lands that offer material benefit to the Town's infrastructure and economic development. The provision also recognizes the limited availability of developable properties within the existing Town Boundaries.

The Three Mile Plan further emphasizes that annexations must demonstrate a benefit to residents and taxpayers by contributing to the Town's goals. It is also clear that any community services related to an annexation should be paid for by the annexation and not the by current residents of the Town of Red Cliff.

The Three Mile Plan references that the thousands of acres of Forest Service land surrounding the Town of Red Cliff currently provide much of the open space and habitat necessary for the continued enjoyment of residents and visitors. This statement recognizes the limited availability of private properties within the Three Mile Plan and their relative importance to the Town's ability to grow.

The Property is located within the Town's Three Mile Plan boundaries in an area referred to as "Highway 24 South to Camp Hale." The Property was historically the site of an underground gold mining operation in the latter part of the 19th Century. More recently, during the mid 1990's, the Property was the site of a surface rock quarry operation. The Property contains a rare outcropping of Sawatch quartzite rock located on private property. Section 1.2 of the Town of Red Cliff's Master Plan, entitled "Red

Cliff – The Vision,” states “the citizens of Red Cliff would like a town that provides the traditional public services while maintaining the historical, mining mountain town environment.” The Three Mile Plan also encourages small business opportunities and an environment conducive to steady but measured growth. The rock quarry proposed on this historical mining claim complies with this vision statement.

Using conservative sale price estimates the quarry is anticipated to generate sales tax in the amount of approximately \$397,701 over fifteen years (see the Financial Analysis attached as **Exhibit N**). A seven to fifteen years timeframe is reasonable for this quarry operation. Actual production rates will be driven by market demand for the stone.

In addition there will be secondary positive financial impacts to the Town. Both employees of the rock quarry and the residents of the homes will be customers of the existing and future restaurants, services and retail businesses in Town. These purchases will generate additional sales tax dollars to the Town. Paul Moltz, owner of the Property and operator of the quarry, has also offered to have up to 250 tons of road base annually available to The Town of Red Cliff at no charge.

One of the key elements related to the fiscal advantages is that the Property is located along Highway 24 and that water and wastewater will be provided on site rather than by the Town of Red Cliff. In addition the Town will not provide road services on the Property. Another key element of the project is that this is a small quarry operation, involving exposed rock outcroppings, located approximately 1 mile from the nearest resident. Noise levels are monitored with a digital sound level meter (see **Exhibit R** for meter and readings from owner’s Leadville plants) and must be kept within Federal noise limits. Therefore, there will be negligible impacts on the neighboring private property owners from the operation of the quarry. The proposed limited quarry is in keeping with the character and history of this area, the Town of Red Cliff’s Three Mile Plan and the Town of Red Cliff’s Master Plan.

L. FDP Submittal Information:

This Planned Unit Development Final Development Plan application is for a rock quarry. Consequently, the information submitted for this Final Development Plan is specifically related to this proposed land use. Please find below a list of submittal information for Final Development Plan and where that information has been provided in this application.

Required Plans (Town of Red Cliff Zoning Regulations §12.6.820(A))	Compliance
1. FDP Site	See Exhibit F [E-2, E-3]
2. Environmental Site Plan	Environmental Impact Report [Figure 3 & 9] Quarry Topography Plan [Vegetative Type Map & Post View] Exhibit I
3. Grading Plan	Environmental Impact Report, Fig. 8 & 9 [Pre and Post Quarry Topography] Exhibit I
4. Landscape Plan	Exhibit M
5. Architectural Elevations	N/A
6. Cross Sections	Environmental Impact Report, Fig. 10 & 11, Exhibit I
7. Utility Plans	N/A
8. Transportation Plan	Quarry Plan, Exhibit C
9. Technical Studies	A. Soils Report Environmental Impact Report: Fig 2,5,6& 7 Exhibit I B. Drainage Report: Submitted under Cover C. Traffic Report: Exhibit H
FDP Text (Town of Red Cliff Zoning Regulations §12.6.820(B))	Compliance
1. Title Block, legal description, submittal date, ownership, technical consultants.	Provided
2. Character and development concept	Provided
3. Land Use Table	N/A
4. Character Discussion	Provided
5. Covenants and agreements	N/A
6. Phasing Plan	Provided
7. Lighting Plan	N/A
8. Environmental Impact Report (Town request)	Provided

Approval Block:

The Moltz Planned Unit Development Final Development Plan was approved by the Board of Trustees of the Town of Red Cliff this _____ day of _____, 2009.

Mayor