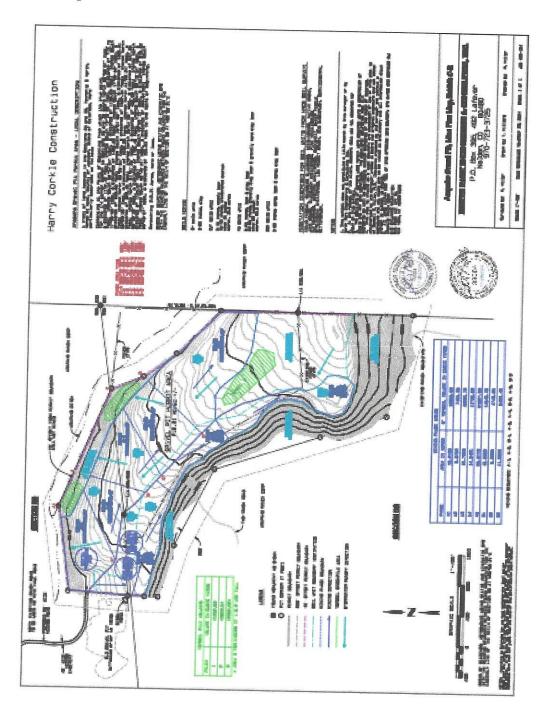
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## Mine Plan Map C-2



Please see attached full size maps in map folder.



In addition, the Operator proposes to use the site for stockpiling specialty products from other sites Corkel Construction owns. The "specialty materials" include different percentages of sand, and gravel as may be needed fulfill customer specific needs. These stockpiles will assist in the availability of specialty products for sale, especially during winter months, when access to other mine sites may be limited or impassable. The location of all stockpiles will be in mined out portions of the active mining area.

#### Other Equipment

Equipment Type:	Notes:
Portable screens for sizing, and stacker	And other equipment as may be necessary for efficient pit and processing operations
Portable crusher	Will allow the operation to size product for a specific use or job.
Scales for truck weights	A portable truck scale will be brought on site as needed.

Processing (crushing and screening) of the excavated material will occur as needed. Any processing which might occur will be by portable equipment brought onto the site. No footers are planned. Portable processing equipment will be placed in a mined-out portion of the pit.

Topsoil and overburden, if any, will be placed in stockpiles until needed for site reclamation. The Pre-mine/Mine Plan Map provides the locations of topsoil stockpiles during the initial phases. Topsoil from Phase A-1 and A-2 will be placed into stockpiles located on the northeast edge of Phases A-1 and A-2. Topsoil removed from the remaining Phases will be placed in the most operationally appropriate designated locations for topsoil stockpiles. As each new phase is initiated, topsoil will be cycled to a previous mined and graded phase for phase reclamation. Access roads will be maintained as needed.

If any overburden and/or crusher fines are generated, the fines will be placed close to the location requiring backfill in mined out areas of the operation. For example, the post mine topographic grade difference between Phases A and B.



farthest point. It should not be impacted significantly by the mining operation since appropriate Best Management Practices will be part of the proposed mining operation. In addition, all extraction activities will occur on the top of the plateau and not on the side slopes, toward Arapaho Creek.

# (d) The size of the area(s) to be worked at any one time:

Total acres to be stripped in a given year will be 5 - 6 acres, dependent upon market demand.

# (e) An approximate timetable to describe the mining operation:

This is an ongoing, *intermittent*, mining operation. The expected life of the mining area is 22-35 years, depending on market demand. We estimate the number of mineable acres, by phase, is as follows:

Table 1: Phase, Approximate Mineable Acres and Timetable\*

Phase	Approx. Production Period -Years (Assume 5 A/Yr.)	Approx. Mineable Acres
A-1	2.6	13.22
A-2	1.8	8.87
B-1	3.6	18.03
A-3	2.6	12.76
A-4	2.9	14.54
B-2	1.2	5.88
A-5	5.4	26.81
B-3	2.3	11.68
TOTAL	22.4	111.79

(Please Note: As mining in a Phase is completed and the next Phase begins, reclamation of the previous Phase will begin.)

# (i) An estimate of the periods of time which will be required for the various phases:

Please see the above Table 1.

# (ii) A description of the size and location of each area to be worked during each phase:

Please see Map C-2, and the above Table 1.



#### EXHIBIT "E"

#### **RECLAMATION PLAN**

# 6.4.5 The Reclamation Plan for the Arapaho Pit is as follows:

(1) In preparing the Reclamation Plan:

The Reclamation Plan addresses the following items: final grading, seeding, soil amendments, topsoil replacement, soil stabilization, and seedbed preparation.

- (2) The Reclamation Plan shall include provision for, or satisfactory explanation of the general requirements for the type of reclamation proposed:
  - (a) A description of the types of reclamation proposed to be achieved in the reclamation of the affected land and why chosen, the amount of acreage accorded to each, and a general discussion of the methods of reclamation as related to the mechanics of earthmoving:

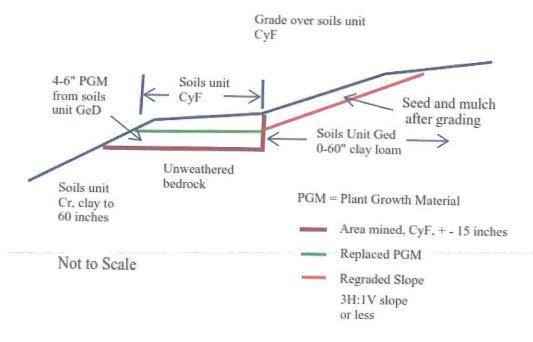
The existing land use for the proposed mining area is rangeland; and the owner wants the area returned to rangeland.

Table 1, above, (page 16) lists the various phases of mining and associated acres estimated to be affected. Reclamation will begin in Phase A-1. We will then proceed with mining Phase A-2. The remaining Phases will follow in sequence as mining is completed in a Phase. The last areas to be reclaimed will be the internal access roads and where processing operations will occur in the Phases.

Once the sands and gravels are removed, the final slopes will be mined or graded to 3H:1V or less. Depending upon the area mined, topsoil replacement depth will vary from zero inches to six (6) inches. For example, dependent upon the availability of plant growth material, the mined area which falls within soil unit CyF could receive approximately 6 inches of plant growth material. Fo may not need any topsoil due to its quality as a plant growth material. In any event we will insure 4-6 inches is replaced or available, in-place, if mining ceases

Topsoil replacement on to soil unit CfY will consist of pushing material downgradient from the soil unit Fo (to the northeast) on to soil unit CyF. Once mining moves to the south, beyond soils units GeD, and Fo, plant growth material will need to be brought from soils stockpiled on soil unit GeD.

- 0
- ✓ Where soil unit is adjacent to GeD, there will be a difference of approximately nineteen inches between the two soils units (Ged and CyF).
- ✓ Soils unit Ged will be graded downward, onto soil unit CyF, creating a 3H:1V or less slope. Four to 6 inches of plant growth material will be placed on to CyF from the down slope grading of GeD. See below:
  - Figure 1:



## Fig 1

- Soils Unit Extraction Area Fo:
  - The extraction area within soils unit Fo will daylight to the Northeast.
  - The west side of soil unit Fo and east of soil unit CyF will be graded as described in Figure 2 below. The east side of GeD will be graded over soils unit Fo, creating a 3H:1V slope terminating on soil unit mined area Fo.



#### ✓ Figure 2:

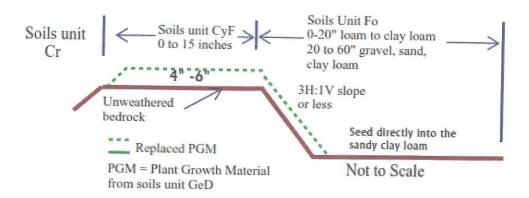


Fig 2

Note: The above two figures are illustrative and may not be taken as what will occur once field operations begin and site conditions receive further evaluation.

The pit floor will be final graded at approximately 1.5% or less away from the toe of any final slopes, toward the outer edge of the mined area. This will ensure no ponding of rain or snow melt yet prevent excessive site erosion.

(4) The Operator shall establish reasonable timetables consistent with good mining and reclamation Procedures:

We believe the mining and reclamation phases (timetable) discussed above will reduce the potential for the reclaimed areas being re-disturbed.

(5) All refuse and acid-forming or toxic producing materials that have been mined shall be handled and disposed of in a manner that will control unsightliness and protect the drainage system from pollution:

No refuse, toxic or hazardous materials are to be disposed of at the site.

(6) Any drill or auger holes that are part of the mining operation shall be plugged in accordance with methods approved by the Division:

There are no drill holes which are part of the mining operation. There are no adits or shafts associated with this mining operation. However, as part of the on-going mining operation, auger holes may be drilled to define mining operations prior to entering the next mining Phase, i.e., auger or backhoe pit sampling in Phase A-2 at the start of Phase A-1, and so on until the last mining Phase is reached. If there is an area where an auger hole has been drilled or backhoe pit and it is not mined through, it will be backfilled with the excavated material and seeded with the approved seed mix.

(7) Maximum slopes and slope combination shall be compatible with the configuration of the surrounding conditions and the selected post mining land use:

The proposed post mining land use will be rangeland. The steepest final pit slopes will be 3H:1V, or less which are suitable for use by all classes of livestock.

(8) If the Operator's choice of reclamation is for agricultural or horticultural crops which normally require the use of farm equipment, the Operator shall grade so that the area can be traversed with farm machinery.

The post mining land use will be rangeland. No lands within the proposed permit boundary will be reclaimed to either agricultural or horticultural uses.

- (9) Placement of inert structural fill imported from off-site:
  - (a) A narrative that describes the approximate location of the proposed activity.

It is unlikely inert waste material will be imported onto the site. If such a request should occur, we will submit a Technical Revision in compliance with Rule 3.1.8(9).

(b) the approximate volume of the inert material to be backfilled.

NA.

(c) a signed affidavit certifying that the material is clean and inert, as defined in Rule 1.1(20).

NA



(1) All aspects of the mining and reclamation plan shall take into account the safety and protection of wildlife on the mine site, and all associated facilities with special attention given to critical periods for wildlife:

Wildlife use during active mining is not anticipated. Regardless, the Operator will consider the safety and protection of any wildlife entering the site during mining and reclamation operations. Finally, no described critical periods or species of concern are known by Applicant/Operator/Landowner.

### (2) Creation of wildlife habitat and management:

The reclamation plan anticipates returning the site to rangeland. However, returning the site to rangeland will continue to make the site available for wildlife use, as it has in the past. Wildlife is opportunistic and will use what is available for food and cover.

In addition, a wildlife statement will be sent to the Colorado Division of Parks and Wildlife for comment.

### 3.1.9 Topsoil salvage, storage, and replacement:

#### (1) Protection of topsoil:

Topsoil necessary for site reclamation will be removed and placed in stockpiles. Topsoil stockpiles will be out of drainageways, and away from active mining areas. As stated above, where topsoil stockpiles will not be disturbed for at least 180 days, the topsoil stockpiles will be seeded with the approved topsoil pile seed mix.

## (2) Wood vegetation shall be removed:

The site is a grassland/sagebrush community, with little or no woody vegetation.

# (3) Storage, location, configuration of topsoil stockpiles for control of erosion and protection from mining operations:

Control of topsoil stockpiles from erosion and protection from mining operations are addressed in Section 3.1.9(1). The Pre-mine/Mine Plan Map shows the location of topsoil stockpiles, away from drainageways and separated to the extent possible from mining operations.

We estimate the topsoil piles, to be located in the current mining area (please see the Premine/Mine Plan Map for locations), will contain approximately 24,200 cubic yards of topsoil. This amount should be adequate for site reclamation in order to replace 4-6 inches



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No soil amendments are planned. However, as stated previously, the NRCS typically recommends 40 lbs. of nitrogen and phosphorous per acre. The need for soil amendments will be based on soil tests. If needed and available, well cured feedlot/barnyard manure could be applied at the rate of twenty tons per acre.

### (iv)Tree and shrubs planting:

No trees or shrubs will be planted. None exists on the mine site and the post mining land use is rangeland.

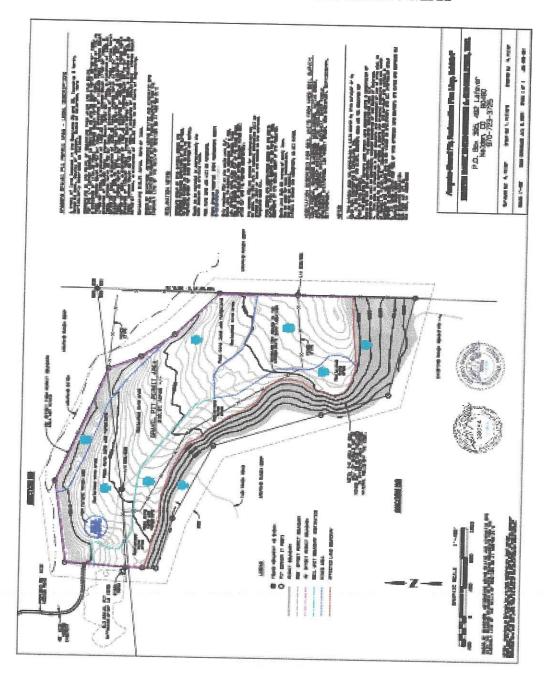
#### (v)Topsoil replacement depth:

Topsoil will be replaced to an average depth of 4 to 6 inches, with some areas receiving more, some less.



#### **EXHIBIT "F"**

# RECLAMATION PLAN MAP



**EXHIBIT "L"** 

#### 6.4.12 Reclamation Cost Information:

We intend to mine and reclaim using a phased approach. A rough estimate is \$1,200 per acre. No extensive grading will be needed. It is likely the Fo soils area will not need to be resoiled since the subgrade should be adequate for direct seeding once any soil compaction is addressed. There is excess plant growth material, so it is unlikely any material will need to be brought on to the site.

We understand the DRMS will calculate a reclamation bond for the first phase, A-1. Soil Unit GeD which may not be mined is not presently listed as a Phase. However, its actual boundary and whether or not it contains saleable product will be determined as mining operations occur. It will likely be used to store excess topsoil so, may be affected land to some degree. It will be addressed with the DRMS through the Technical Revision process, as appropriate.

Topsoil from A-1 and A-2 will be placed into the topsoil stockpile in Soil Unit GeD. Topsoil from A-2 will be used to reclaim Phase 1 (A-1). A-1 will be prepared for seeding and seeded to the approved seed mix. Little or no A-1 grading should be needed.

Reclamation Phase A-1 = 24.4 A. X \$1,200/A (estimate) = \$29,280.

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#### 11. Life of Mine (years): 22-35 years

# 12. Description of Operation and Reclamation:

#### **Operations Summary:**

This will be an intermittent mining operation, operating less than 180 days per year. Material will be removed by truck and shovel or loader. Some processing may occur onsite. The extraction depth will be up to sixty inches and will not expose ground water. All material will be used for regional projects. Water will be imported for fugitive dust control. The operation will have a Stormwater Management Plan to control erosion and runoff from the site.

#### **Equipment**

Equipment Type:	
Crusher and screens	Truck scale
Asphalt batch plant	Loaders, dozers, scrapers, and haul trucks

Topsoil will be placed in stockpiles until needed for site reclamation. Processing (crushing and screening) of the excavated material will occur as needed. The Premine/Mine Plan Map provides the locations of topsoil stockpiles. Any processing which might occur will be by portable equipment, brought onto the site, and will be placed in a mined-out area of the pit.

#### Reclamation:

The reclamation will consist of 3H:1V final slopes, replacing 4-6 inches of topsoil and seeding by either broadcast or drill seeding. The slope of the pit floor will be consistent with the existing slope.

No soil amendments are planned. However, as stated previously, the NRCS typically recommends 40 lbs. of nitrogen and phosphorous per acre. The need for soil amendments will be based on soil tests. If needed and available, well cured feedlot/barnyard manure could be applied at the rate of twenty tons per acre.

The proposed seed mix should result in a stable site, suitable to the post mining land use, rangeland.