6.4.12 EXHIBIT L - Reclamation Costs

(1) All information necessary to calculate the costs of reclamation must be submitted and broken down into the various major phases of reclamation. The information provided by the Operator/Applicant must be sufficient to calculate the cost of reclamation that would be incurred by the state.

(2) The Office may request the Operator/Applicant to provide additional, reasonable data to substantiate said Operator/Applicant's estimate of the cost of reclamation for all Affected Lands.

Summary of Reclamation Costs:

$ 68,648.00±	Site Discharge
$ 268,078.71±	Total Grading per Extraction Front.
$ 82,674.32±	Total Liner Construction Expense
$ 47,939.42±	Total Re-soiling (inc. Processing area)
$ 64,983.74±	Total Re-vegetation Expense (inc. Processing area)
$ 14,192.80±	Total Processing Removal Expense
$ 546,516.98±	Sub-Total
$ 2,978.00±	Mobilization and Demobilization Costs (per DRMS estimate)
$ 549,494.98±	**Sub-Total Direct Costs**
$ 209,413.02±	Indirect Costs based on DRMS Indirect Costs Estimate @ 38.11 % of Total Reclamation Costs
$ 758,908.00±	**Grand Total – Financial Warranty Amount – Pending OMLR Review**

SUMMARY OVERVIEW:

Table 1 - Primary Data on Area of Total Proposed Affected Lands and Reclaimed Features:

Entity	Central Field	North-West Field	Combined
Extraction – finished basin (Acres)	162.57	41.04	203.61
Static Water Area – surface (Acres)	151.38	36.28	187.66
Static Water Area – elevation (ft.)	4,673	4,675	
Basin Lands Above Static Water Level (Acres)	11.19	4.76	15.95
Basin Area Volume (cu.yds.)	7,278,366	1,649,937	8,928,303
Static Water Level Volume (Gallons)	1,470,040,694	333,244,376	1,803,285,070
Static Water Level Volume (Acre Feet)	4,511.4	1,022.7	5,534.1
Plant Processing Area (Acres)			18.40
Wash Pond Area (Acres)			5.80
Total Lands Above Static Water Level (Acres)			37.31

NOTE Well: All lands within the 409.234± acre permit area are considered as affected lands under C.R.S. 34-32.5-103(1) respective of this permit application and any

6.4.12 EXHIBIT L - Reclamation Costs

subsequent permit revisions or amendments to the permit as originally approved. Previously affected ground prior to on-set of Operations under this permit will not be reclaimed under the terms of this permit unless otherwise re-affected beyond their original state. Public Lands and other easements and Right-of-Ways are offset from operations and while they may fall within the 409.234± acre parcel – are excepted from the permit conditions to the extent of their approved setbacks.

The following estimates utilize assumptions based upon the pre-disturbed state of the application for purposes of determining estimated costs of reclamation and correlated financial warranty. Where appropriate, information is generalized and approximated from similar estimates determined by the Colorado Office of Mined Land Reclamation (OMLR), as indicated.

RECLAMATION EXPOSURE:

Based upon the Extraction and Reclamation Plans of this application, the status and trend of activities and affected land; and related calculations to estimate reclamation liability, are determined as follows.

Please Note: Due to the difficulty of calculating heavy equipment costs similar to the Division's software program, unit costs from previous and reasonably current Division estimates of like or similar kind have been utilized to create a reasonably close estimate. The per unit basis from Division records are shown along with other sources used or referenced to determine unit costs, at the back of this exhibit.

METHOD OF EXTRACTION:

Before concurrent grading, resoiling, and revegetation for reclamation can commence, a perimeter keyway (dewatering trench[1]) must first circumnavigate the area where the perimeter slopes form along the extraction limits. For Two Rivers, this includes four sequential areas of extraction:

- 121.86± Acres - Central Field – Center Section
- 15.58± Acres - Central Field – North-East Section
- 25.09± Acres - Central Field - West Section
- 41.04± Acres - North-West Field

Exhibit L: Financial Warranty Map, shows Initial Extraction will begin in the northwest corner of the yellow hatch area shown on the Exhibit L Map. The direction of extraction will first progress southward, following the perimeter of the extraction limits in order to

[1] Adequacy Item 15: Keyway clarification

establish the western perimeter keyway for the 121.86± acre Center Section of Central Field. An advancing front will then be pushed eastward as extraction progresses. The initial extraction area comprises approximately 51.07± acres and will leave approximately 70.79± acres that may be extracted as needed as keyway drainage capacity allows.

The initial extraction area is bordered to the South adjacent to a near 800± foot section of oil and gas line that is pending removal; along with the two oil and gas wells, also pending removal (refer to Exhibit C for ownership details). Extraction will not occur within 10 feet of these lines, or 25 feet from the wells, as indicated in the setbacks detailed under Exhibit D: Extraction Plan. Below this gas line is an existing pond and well that will be used as a Settling Basin Area, containing at present a solitary settling basin and pump as a point of discharge of groundwater. This pond may be expanded or added to below this line.

Perimeter Keyway Extraction will maintain a perimeter slope no steeper than 1.25H:1V, except for the perimeter shown in red along it's extraction limit, and respective toe where cut slopes will not exceed 2.00H:1V; as indicated (refer to Exhibit S: Stability Analysis for additional information). At the toe of the cut perimeter slope is the keyway that runs below the extracted deposit of the basin, into the bedrock, which allows the subsurface waters to flow to the settling basin and discharge pumps necessary to keep the cut basin dry during a time of extraction and reclamation of the affected perimeter slopes.

The keyway dimensions may vary more or less from 4± to 8± feet in depth and 4± to 16± feet in width. Extraction must be broad enough to allow equipment to safely approach the toe and excise the bed dimensions where the resulting channel is sufficient to convey the groundwaters to the settling basin for discharge.

Please Note: The graphic representation of the Perimeter Keyway Extraction is idealized, and may vary in shape and size presented. Annual Reports will report on the nature and extent of affected lands and more properly reflect actual conditions on the ground in a given year of operations.

UNITS OF DISTURBANCE:

The life of the operation is based upon a base rate of extraction approximating 8.0± acres of disturbance in a given year. This time will pulse with the market and may average 8.0± acres, but could be faster or slower. Starting out, initial warranty necessary to cover the costs of reclamation for the extent of disturbance in a given year will also vary in time and circumstance, as the initial disturbance is generally less at the onset. So, a rate of disturbance can be estimated and the warranty adjusted incrementally with time and circumstance.

6.4.12 EXHIBIT L - Reclamation Costs

Starting out in the initial projected 5 years of Operations, and incrementally thereafter, necessary warranty can be estimated and adjusted in incremental Units based upon the projected Life of the Operation. Essentially, a 28-33± year Life of Operations assumes a rate of extraction of approximately 8.0± acres per year.

Considering the Mining-Regrading Schedule included as Table E-1 in Exhibit E, and the general development concept shown on Exhibit L: Financial Warranty Map, Raptor estimates for the initial 5-year period, development of an initial 51-acre excavation in the Center Section of Central Field will result in creation of approximately 4,310-foot of external perimeter pit wall. No reclamation or lining is anticipated in the initial 5-year period.

Raptor estimates for Financial Warranty purposes an approximately 2,131-foot wall excavated at 2H:1V and a 4,069-foot wall at 1.25:1V slopes.

It is important to note that the financial warranty estimates the closure cost of the operation at the end of the expected first 5-year period. It is assumed in this initial estimate that no reclamation activities (regrading, lining, topsoiling) will take place. The cost estimate then reflects reclaiming the projected excavation at that point in time. The actual extents and shape of the excavation may change, and actual progress will be addressed in the annual reports.

Raptor will update this Exhibit L, the reclamation cost estimate, and any other exhibits as required for purposes of determining financial warranty prior to disturbance reaching the limits projected in the initial 5 years of Operations as described in this Exhibit and shown conceptually on Exhibit map C-2 and L.

In the following breakdown of components for estimating reclamation cost, factoring of the 5-year projected disturbance against the final pits is used where appropriate to obtain a reasonable estimate of work required. Various approaches to obtain the necessary quantities exist, but Raptor believes the approaches and quantities are reasonable and alternate approaches would be no more certain as to the accuracy obtained. This is simply due to the variable nature of the deposit and the need to field fit the excavation to ensure safety in the conditions encountered.

DEWATERING:

Raptor assumes that the pit would be in an unlined state and if operations had ceased, would recharge to static water level requiring dewatering of the pit to allow reclamation operations to be completed.

95 hp. 2,800 gal./min./pump x (up to) 5 pumps @ 24 hours/day

6.4.12 EXHIBIT L - Reclamation Costs

Volumes:

For the initial 5-year excavation: 436,778,685± gallons

Total Cost for initial 51.1± acres of Discharge = 436,778,685± ± gallons x $ 0.000131/gal. discharge (refer to Kurtz est. utilizing similar pump and rates.)

$ 57,218.01-Initial Discharge Cost for 51.1± acres

It is assumed that ongoing dewatering will be required during reclamation of the pit and Raptor has allowed for 30 days once the pit has been dewatered.

The estimated inflow rate to the fully excavated pits has been estimated at 15,190,000 gallons/day. The estimate is based on modeling of the groundwater by AWES in support of Exhibit G: Water Information. A memo summarizing the basis of the estimate is attached as a new addendum. The initial 51.1-acre excavation area represents approximately 25.1% of total extraction area (203.61 acres). Total discharge to maintain dry conditions for reclamation then is:

15,190,000 gallons/day x 25.1% x 30 days = 114,299,882± gallons

Cost for 30 working days of Discharge = 114,299,882± gallons x $ 0.0001/gal. discharge (rate taken from the DRMS March 23, 2023 Reclamation Cost Estimate for Two Rivers.)

$ 11,429.99 30 days Dewatering Cost for 51.1± acres

$ 68,648.00 Total Dewatering Cost for 51.1± acres

Please Note: [2]The basins will be lined or otherwise segregated from the area groundwater, in order to liberate the water otherwise retained to supplement loss from evaporation in the unlined state.

GRADING:

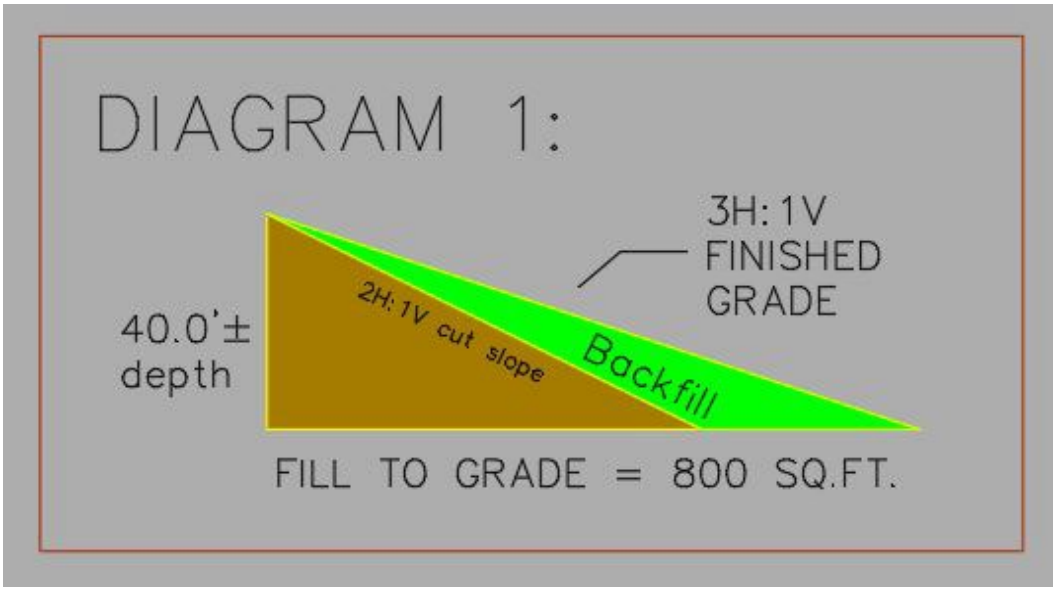
As stated above, Raptor conservatively estimates for Financial Warranty purposes an approximately 2,131foot wall excavated at 2H:1V and a 4,069-foot wall at 1.25:1V slopes along the extraction limits flanking WCR 396; and 2H:1V along the South Platte River levee, as shown on Exhibit D: Extraction Plan, and Exhibit L: Financial Warranty Map.

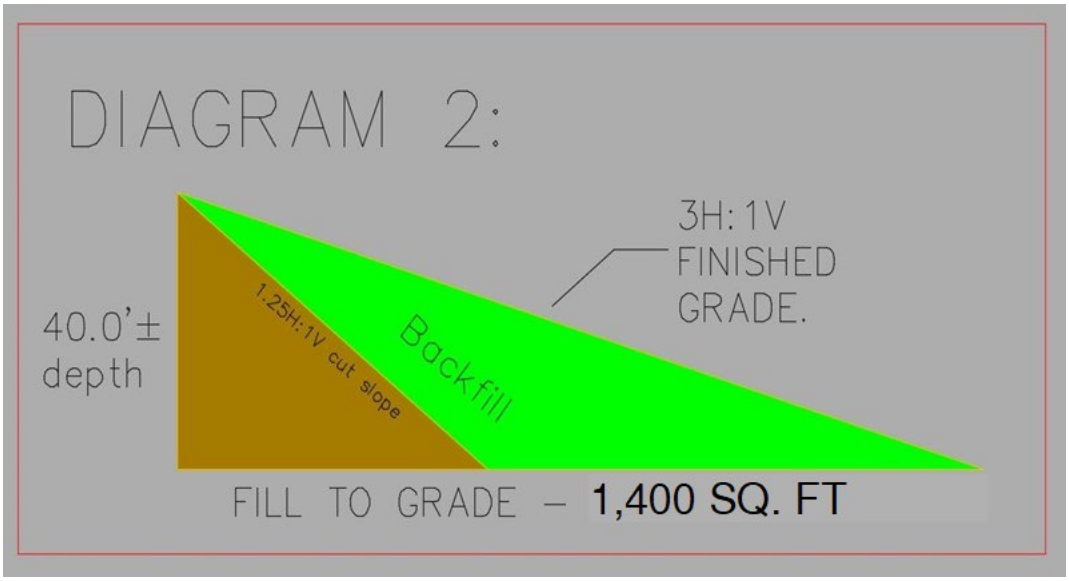
Actual volume of fill required to grade at 3H:1V for a respective cut slope is determined in the graphics, below. Square Foot volume of backfill x linear feet of slope divided by

[2] Adequacy Item 28

6.4.12 EXHIBIT L - Reclamation Costs

27 will yield the required cubic yards needed for each section of highwall. A rate per Loose Cubic Yard of fill taken from the previously approved values determined by the OMLR, is used to better ensure the integrity of the resulting values.

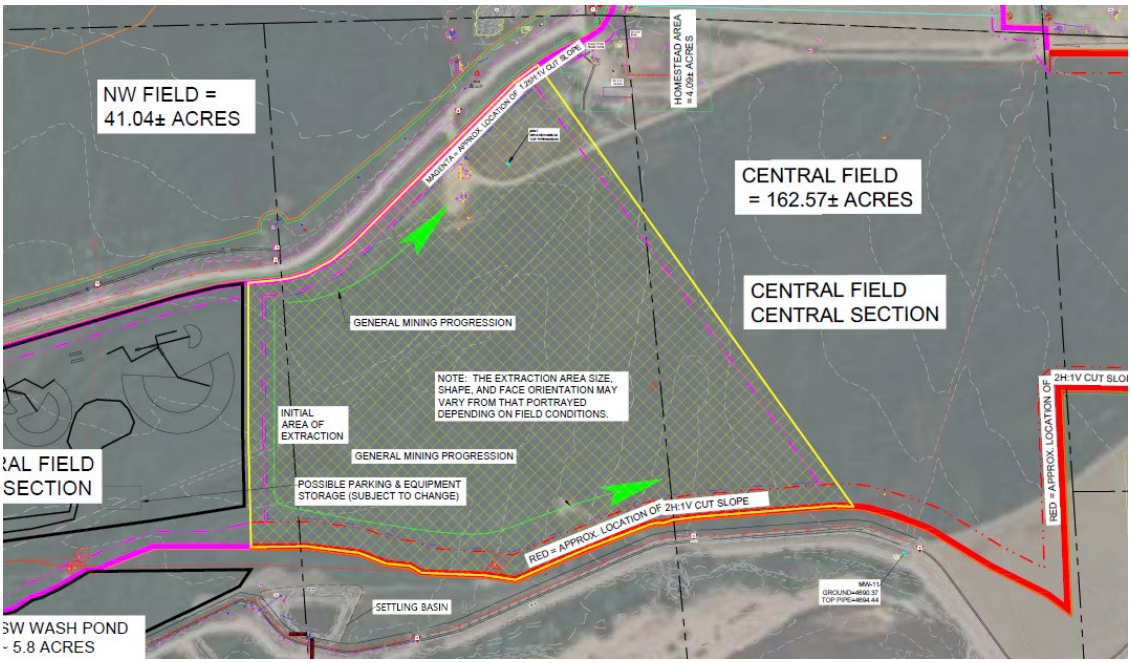




Hauls are expected to be very short excavating material from the core area where material is readily available to establish final grade on those walls at 3H:1V and placed on the exterior walls to establish the required grades. It is estimated that there would be approximately 1,880-foot of advancing wall and side slopes in addition to the 4,320-foot extraction limit wall. Due to the very short hauls it may only require a wheel loader operating in load/carry/dump mode with a supporting Tracked Dozer. At most, the

6.4.12 EXHIBIT L - Reclamation Costs

method of fill will utilize one (1) Excavator/Loader, two (2) Haul Trucks, together with a supporting Tracked Dozer and one (1) Sheep's Foot Compactor. The concept for establishing the regraded slopes for financial warranty purposes is shown in the following figure.



Approach to regrading interior and extraction limit slopes for financial warranty purposes.

Assuming a mean depth of advancing cut of **1.25H:1V** at the extraction limits of 40.0± feet depth:

4,069± lin.ft. (extraction limit) x 1,400.00± sq.ft. (required fill – Diagram 1, above) = 210,985± LCY

210,985± LCY
x $ 0.947± per LCY.

$ 199,802.97± fill along an 4,069-foot extraction limit cut at 1.25H:1V.

Assuming a mean depth of advancing cut of **2:1V** at the extraction limits of 40.0± feet depth:

2,131± lin.ft. (extraction limit) x 800.00± sq.ft. (required fill – Diagram 1, above) = 63,141± LCY

63,141± LCY
x $ 0.947± per LCY.

$ 59,794.28 Sub Total-Grading to 3H:1V along an 2,131-foot extraction limit cut at 2H:1V

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To compact the soil required for regrading, a total volume of 210,985 LCY + 63,141 LCY = 274,125 LCY is considered with a 0.91 shrinkage factor, for a total of 249,455 compacted cubic yards (CCY).

249,455 CCY
x $ 0.034± per CCY.

$ 8,481.46 Sub Total-Compacting fill above the length of the entire liner (6,200 linear ft)

$ 199,802.97 Sub Total-Grading to 3H:1V along a 4,069-foot extraction limit cut at 1.25H:1V.
+ $ 59,794.28 Sub Total-Grading to 3H:1V along a 2,131-foot extraction limit cut at 2H:1V.
+ $ 8,481.46 Sub Total- Compacting fill above the length of the entire liner

$268,078.71± Total – Initial Grading.

Liner Installation:

Raptor has made allowance for liner installation on the regraded slope. Assumptions are that a 4-foot-thick liner will be keyed into bedrock at the base of the regraded slope and up the slope to approximately 5-foot below the original surface elevation. The keyway dimensions in bedrock are assumed to be 4x4-foot.

For the exterior walls at extraction limits, the regrade and liner installation is as described in Exhibit E. Typical liner installation as described previously in Exhibit E is shown in the following figure. The volume of liner material required will vary according to the slope of the wall the liner is installed on. The volume of liner material is conservatively estimated based on the perimeter length at the top of the liner.

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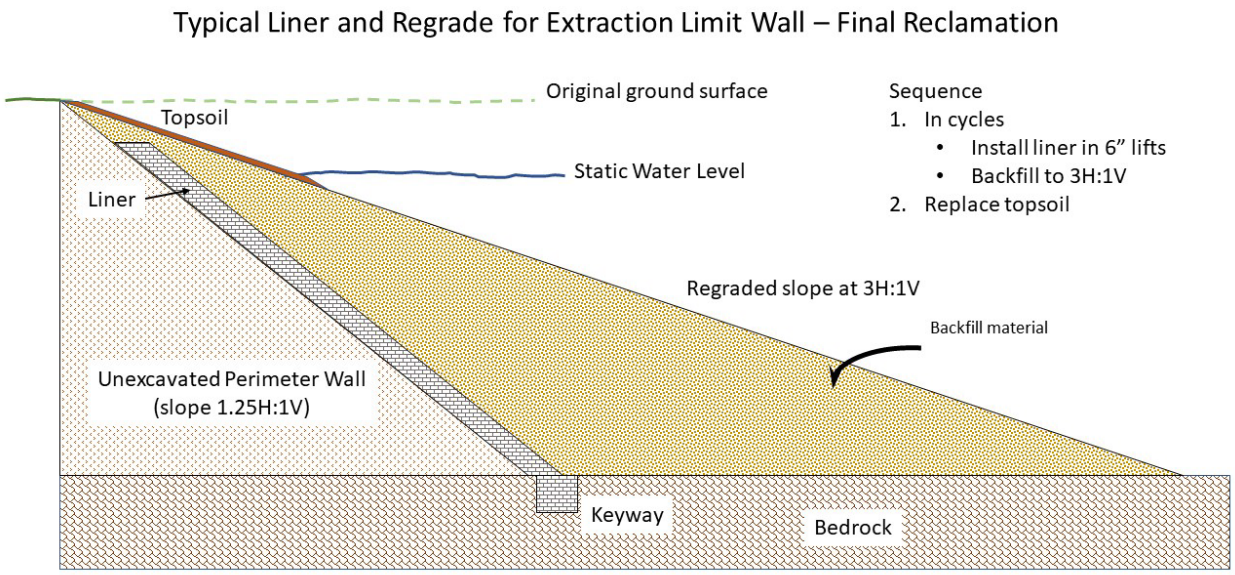

Typical Liner and Regrade for Extraction Limit Wall

Raptor conservatively estimates for Financial Warranty purposes an approximately 2,131-foot wall excavated at 2H:1V, a 4,069-foot wall at 1.25:1V slopes. The average length of slope to be regraded is proportional to the length of the initial excavation occupied by 1:25:1 slopes (65.6%) and 1:2 slopes (34.3%): 0.656 x 56 ft + 0.344 x 78 ft = 63.6 ft.

The total cost of installing the liner includes grading the slope under the liner, hauling liner material to the pit area, mixing the liner material, and compacting the liner. Assume that half of the total liner material will need to be mixed.

Grade Slope under Liner
Cost: (6,200 lin.ft. x 63.6 ft. x 1ft. depth)/27 x 1.215 (swell factor) x $0.425/LCY = $7,537.

Haul Liner Material to Pit Area
Vol (liner): (6,200 lin.ft. x 63.6 ft x 4 ft. depth)/27 x 1.00 (swell factor) = 58,383 CY
Vol (keyway): (6,200 lin.ft. x 16 sq.ft.)/27 x 1.00 (swell factor) = 3,674 CY
Vol total: 58,383 CY + 3,674 CY = 62,057 CY
Cost: 62,057 CY x $0.947/CY = $58,768

Mix Material for Liner
Vol (mixed): 62,057 CY / 2 = 31,028 CY
Cost: 31,028 CY x 1.215 (swell factor) x $0.232/LCY = $8,746

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Compact Liner
Cost: 62,057 CY x 0.91 (shrinkage factor) x $0.135/CCY = $7,624

$ 82,674 Total Liner Installation Cost
NOTE: This is a conservative approach to the estimation of reclamation cost for financial warrant at the projected 5-year disturbance. The distance of 2H:1V wall is maximized which has a higher lining cost than wall at 1.25H:1V. Also, if sufficient backfill material were available or accessible on site from either topsoil or overburden material in temporary stockpiles, or readily accessible from bedrock exposed, backfilling all the slopes with available material and installing the liner in typical fashion as described in Exhibit E would be significantly less expensive.

Soil Demand AND Re-soiling of Affected Lands (refer to Exhibit D):

In the mined area, soil demand is limited to the cut basin slopes remaining above the static water level. For Central Field, the total area above the anticipated static water level of the basins is 11.19 ± acres. Additionally, the areas disturbed in the Materials Processing Area and the Wash Pond will require re-soiling and revegetation. We conservatively estimate that the entirety of the Materials Processing Area (18.4 acres) and the Wash Pond (5.8 acres) will require re-soiling for the purpose of this Financial Warranty.

To estimate the area involved in resoiling the Center Section of Central Field – we'll use a percentage of the total perimeter length of the extraction limits involved:

14,311 Total perimeter length Central Field

4,310 External perimeter length Center–Central Field–extraction limits
+1,890 Internal perimeter length along advancing front
6,200 Combined perimeter length

6,200 ÷ 14,311 = 43%
11.19 acres x 43% = 4.8± acres requiring resoiling and revegetation (see Establishment of Vegetation over Affected Lands, below.

At a depth of 0.5± feet, total volume = 4.8± acres x 0.5± feet of soil replacement, is:

4.8± acres x 43,560.0± sq.ft./acre ÷ 27 cu.ft./cu.yd. x 0.5' depth = 3,911± cu.yds..

The majority of soil placement can occur using the average placement distance of 600 ft., or less along embankments, (utilizing the same assumptions utilized at either Kurtz or Heintzelman Projects).

6.4.12 EXHIBIT L - Reclamation Costs

The cost to haul the topsoil to the pit area is:

	3,911± cu.yds of soil demand
x $	0.947 per LCY.
$	3,703.36± to replace 0.5± feet of soil over the existing affected lands remaining above the anticipated final water level at the Center of Central Field along the perimeter cut slopes at the extraction limits.

The cost to spread the topsoil along the pond bank is:

	3,911± cu.yds of topsoil x 1.215 (swell factor) = 4,751 CY
x $	0.257 per LCY.
$	1,221.11± to spread the topsoil along the disturbed banks of the pond at the extraction limits above the final water surface elevation.

Similar calculations can be performed for re-soiling the Materials Processing Area and the Wash Pond:

For a total area of 24.2 acres, 0.5 ft of topsoil will be required for a total topsoil volume of 24.2 acres x 0.5 ft depth x 43,560 sq.ft./acre / 27 x = 19,521 CY

The cost to haul topsoil to the Materials Processing Area and Wash Pond:

	19,521± cu.yds of soil demand
x $	1.191 per LCY.
$	23,249.91±

The cost to spread topsoil on the Materials Processing Area and Wash Pond:

	19,521± cu.yds of topsoil x 1.215 (swell factor) = 23,718 CY
x $	0.232 per LCY.
$	5,502.67±

Ripping will be required in the Materials Processing Area and the Wash Pond due to compaction by heavy machinery during operations; the slopes of the Center Section of the Central Field are not anticipated to require ripping due to relatively recent disturbance and no compaction.

	24.2 acres
x $	589.34/acre
$	14,262.37±

$ 47,939± Total Soil Replacement Cost for the Initial Extraction Area of the Central Field, the Materials Processing Area, and the Wash Pond.

6.4.12 EXHIBIT L - Reclamation Costs

Establishment of Vegetation over Affected Lands:

The demand establishment of vegetation over the affected lands will also diminish proportionately with the planned extraction of the Tracts. For now, the total exposure is estimated as indicated above to be 4.8± acres for the Center Section of Central Field and 24.2 acres for the Materials Processing Area and Wash Pond (see Soil Demand):

NOTE: The cost for seed is equal to the price provided in the 2023 Reclamation Cost Estimate for the Two Rivers Sand, Gravel, and Reservoir Project, which includes the cost of seed application; however, the costs are known to fluctuate seasonally – and are estimates based on prior seasons. The seed mixture includes a substitute for mulch in the inclusion of a wheatgrass hybrid. The Division has historically agreed with and approved the inclusion of this hybrid as a substitute for mulch. The Optional Seed Mix will be used if the Primary Mixture fails, but costs less, so that cost is accounted for. These costs are as follows:

$ 1,789.70/acre± Preferred Seed Mix
x 4.8± acres
$ 8,676± Sub-Total Seed and Application

Assume a 25± percent failure and add half the expense back into the total for reseeding, or:
$ 2,169± Sub-Total Re-seeding costs
$ 10,845± Excavation Area Re-vegetation Expense

Re-vegetation of the 24.2 acre processing area and wash pond is also estimated.

$ 1,789.70/acre ± Preferred Seed Mix
x 22.4± acres
$ 43,311± Sub-Total Seed

Assume a 25± percent failure and add half the expense back into the total for reseeding, or:
$ 10,828± Sub-Total Re-seeding costs
$ 54,138± Processing Area Re-vegetation Expense

$ 64,984 Total Re-vegetation Cost

6.4.12 EXHIBIT L - Reclamation Costs

Processing Area Decommissioning:

Raptor has estimated decommissioning costs for the Processing Area. All plant and equipment in the processing area is portable and would have more value that the cost of loading and removing it.

Decommissioning will involve the removal of concrete pads for processing equipment and concrete supports for truck scales and temporary buildings.

Three 12-inch-thick concrete pads are assumed in the processing area with dimensions 15- x 30-feet, 15- x 60-feet, and 15- x 25-feet. Demolition and removal costs are estimated at $2.30/sq.ft. for 12" concrete pads.

The truck scale will have concrete supports with an estimated volume of 10 CY. Additionally temporary buildings for the scale house/site entrance area and processing area will have concrete support blocks with estimated at 8 CY of concrete. Estimated costs for the concrete supports is $6.89/lin.ft. (of 1ft thick, 1 yd deep concrete slab).

Concrete pads: 1,725 sq.ft. x $2.30/sq.ft. = $ 3,962.33

Concrete supports: 18 CY x 9 lin.ft/CY x $6.89/LF = $ 1,116.18

The removal of two 6,000 to 8,000-gallon fuel tanks located on-site for vehicle refueling is estimated to cost $5,416.35 each, for a total of $10,832.70.

$ 14,193 Total Process Area Decommissioning

6.4.12 EXHIBIT L - Reclamation Costs

OTHER MISCELLANEOUS COSTS:

Mobilization and demobilization costs are based upon the Division's estimates, which were provided in their March 24, 2023 estimate at $2,978.

Demolition of Structures:

None. Building Permits for structures will be obtain where required from the Weld County Building Department.

Please Note: Since there is no possibility of the applicant in fully reproducing the Division's methods, utilizing similarities from past OMLR calculations is the most viable and accurate means available for the applicant to derive reasonable estimates of per unit costs and should result in estimates very reliable with that of the Division.