

EXHIBIT D: MINING PLAN

The 1987 mining plan information still applies. Please see attached.

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EXHIBIT D - THE MINING PLAN

Excavation is occurring on a deposit of Valley-fill materials of the Pleistocene and recent ages which makes up the flood plain of the Cache La Poudre River. The deposit can occur naturally at the surface, or where it has been exposed by flooding or other erosion. The majority of the deposit is overlain by soil. The deposit extends to a variable depth of 10 to 20 feet, with the majority of the deposit occurring to a depth of 15 feet.

Referring to the soil series descriptions under Exhibit I, deposit material will be considered to commence at the top of the C soil profile horizon for affected soils. The C horizon occurs at depths of one to five feet from the surface, depending upon the soil. A and B soil profile horizons will be salvaged as soil and managed as discussed under Exhibit I. The exception will be on areas lacking soil profile development [(92) - Riverwash soils], or where soil was removed prior to 1973 [(42) - Mined-out areas]. On such areas, the deposit will be considered to occur at the surface.

Underlying the deposit throughout the affected lands is a deposit of Pierre Shale. The shale is encountered as a result of deposit variations. Since the shale occurs under reduced conditions, it appears grey to dark grey when exposed. Shale will be treated as waste material and will be left in piles on the pit floor to aid in the creation of an irregular pond bottom for improved aquatic habitat. The shale is not expected to have an adverse effect on the water quality of the resulting pond since it is a natural part of the local hydrology. It should be noted as well that the shale will be minimally encountered, and will not comprise the majority of the pit floor, since residual deposit material and reject fines will remain there as well. A typical cross section of area geology, and related drill log information, is located at the back of Exhibit G - Water Resources.

Site preparation prior to mining will occur in the following manner. First, trees and other woody vegetation, where encountered and requiring removal, will have the slash windrowed and burned, or will be hauled off site to a designated land fill. Tree trunks and limbs will be stored for disposal into final ponds for fish habitat enhancement; or will be bucked and sold or given away as firewood; or will be hauled off site to a designated land fill. Every effort will be made to avoid nonessential removal or impact to mature woody vegetation. Existing woody vegetation can be viewed under Exhibit C - 3, Existing Conditions Aerial Photograph.

Next, soil to be salvaged will be removed with scrapers in advance of one years anticipated excavation. Maintaining optimum vegetation cover as excavation progresses over the site, will aid in maintaining overall site stability. Salvaged soil will be stockpiled on the excavation perimeters. The stockpile will not exceed 25 feet in width or 3 feet in height, and all final slopes will be at 3h:1v. Excess soil to be set aside as additional reserves for reclamation will be stockpiled in areas identified under Exhibit C - 5, Soils Map. Excess soil stockpiles will have 3h:1v slopes, and stockpile height will be limited by the area extent to which they are confined, and by the percent slope as indicated. All remaining excess soil will be stockpiled at plant site locations and made available for sale. Soil volume records will be maintained to assure adequate soil replacement depth. Stabilization of soil stockpiles, soil replacement depths, and other soil management information is detailed under Exhibit I - Soils Information.

Following soil salvage, excavation will proceed to remove the aggregate deposit and transport it to one of the plant site/deposit stockpile areas for processing. All earth moving operations utilize modern earth-moving equipment, including (but not limited to): scrapers, front-end loaders, shovels, draglines, bulldozers, backhoes, haulers, and other equipment of various makes, sizes, and capacities.

As excavation advances, grading of the perimeter will occur concurrently with mining. Only the advancing pit wall will be steeper than 3h:1v (with the exception of areas of excavation greater than 10 feet below the final anticipated pond water level, where slopes may approach 2h:1v). All other slopes will be maintained at 3h:1v, or flatter. Some slope anomalies may occur where slopes exceed 3h:1v, but not steeper than 2h:1v. Such anomalies will generally not exceed 25 linear feet, but may occur within five feet above to ten feet below the anticipated final elevation of the water in the resulting ponds. This is contrary to Rule 6.1 (f), and is mentioned, not in an effort to circumvent the rule, but to allow some room for error. Such anomalies will not exceed 10% of the total linear feet of the final shoreline for each individual pond, resulting in an allowance of 10% slope error.

Before excavation can occur to any significant extent, and in order to mine the resulting pits in a dry condition, dewatering must occur. Eventually, dewatering trenches are created at the bottom of the pit floor. Water is discharged at points identified on Exhibit C - 7, Water Resources Map. The dewatering of pits is discussed in detail under Exhibit G - Water Resources. The dewatering trenches will not be backfilled in order to add to the irregularity of the resulting pond bottom for

enhanced aquatic habitat.

The excavation limits are represented under Exhibit C - 4, and establish specific minimum distances between the excavation and man-made structures or natural features. Anomalies of 10% of the total length involved may occur where excavation breaches the minimum setbacks, however, such anomalies will not exceed 10% of the required setback distance. These setbacks, or buffers, are specified below:

- * Adjacent property (i.e., permit boundaries) = 25 feet.
- * Irrigation ditches = 50 feet.
- * Residential buildings (unless a written agreement specifying closer distances exists) = 200 feet.
- * Colorado Southern Railroad and adjacent power line = 50 feet.
- * Taft Hill Road = 75 to 125 feet.
- * Fort Collins Recreation Trail = 25 feet.

As indicated under Exhibit C - 1, Permit Boundary Changes, area 6 under that exhibit is a leased area. It contains several buildings that would be located within 200 feet of the excavation as proposed under area G, phases I & II, as presented under Exhibit C - 4, Mining Plan Map. At the time of this amendment, the leased area is up for sale. No current written agreement exists with the present owner to allow mining within 200 feet of their buildings. The operator will attempt to negotiate such an agreement with the ultimate owner of the property prior to implementation of excavation of area G. If no such agreement can be obtained prior to commencement of excavation of area G, in the area requiring a written agreement, then a technical revision would be submitted at that time which adjusts the excavation limits of area G to reflect a 200 foot setback from the buildings concerned. Excavation of area G is scheduled to commence in the year 2017 (refer to Table III, under this exhibit).

In area I, which is scheduled for completion of mining in 1987, past excavation did occur within 200 feet of adjacent residential buildings. Excavation is now completed within those areas, and no objections or complaints were filed with the operator, during or after operations. Reclamation is scheduled to begin in 1988 for area I (refer to Table IV, under Exhibit E).

Where excavation will continue, a 100 foot undisturbed buffer will be maintained between the excavation and the Cache La Poudre River. Again, anomalies of 10% of the total length involved may occur where excavation breaches the minimum setbacks, however,

such anomalies will not exceed 10% of the required setback distance. Where excavation has already occurred, or is near completion, there exist areas where the excavation came closer to the river than 100 feet. This occurred on some pre 1973 areas, as well as in areas B, C, and I. There were no existing buffer commitments under the original permits when this occurred however. River erosion has also contributed to narrower buffers between the excavation and the river. Construction of access roads, and the use of rip rap, all identified under Exhibit C - 4, have also contributed to disturbance within 100 feet of the river. Areas where intrusions have occurred to within 100 feet of the river cannot be immediately remedied, however, the reclamation and revegetation of these areas will tend to mitigate their past impact.

Excavated materials will be stockpiled or processed at areas 1 through 5. Where material is washed at the wash plant, a settling pond is used to minimize siltation of resulting ponds. Settling pond locations are identified on Exhibit C - 4. They presently occur in areas 1, 2, and F. Area 1 settling pond is no longer used and is gradually being backfilled. All settling ponds will eventually be backfilled as part of reclamation. Area A has an existing pond that may be utilized as a settling pond once excavation occurs there, however, for the present it is not functioning in that manner and is therefore not identified on Exhibit C - 4 as a settling pond. Area 5 plant site/deposit stockpile will be mined as part of phase III of area E excavation. Areas 3 and 4 plant site/deposit stockpiles will also be mined, extending east and west a pre 1973 pond. This will occur immediately preceding the excavation of area 5, or during excavation of area E, phase II. Areas 1 and 2 will function as plant sites long after mining at the HOME OFFICE MINE is completed. Presently, the principal processing occurs in area 1. Area 1 also houses other service buildings north of the office. They were not included due to space limitations on Exhibit C - 4, but can be viewed on Exhibit C - 3. Area 5 is the present location of the asphalt processing facilities.

Areas W, X, Y, and Z, were affected by mining operations prior to 1973, and have not been reaffected since. They have a commercial/industrial use at present, and are used by different companies, including Keeton Fisheries Consultants, Inc. These areas will only be marginally affected by excavation of areas 3, 4, and G - phase I. Areas T, U, and V, will remain undisturbed for the life of the mining operation.

The acreage of each area indicated on Exhibit C - 4, and discussed herein, is listed under Table II. A general description of the sequencing of the excavation and mining timetable follows, and is summarized in Table III. Excavation is completed in areas D and H, and the pits have been inundated, forming ponds. Excavation is completed in

area B, however, dewatering is continuing since asphalt waste must be removed, and slopes properly established at 3h:1v, before inundation can occur. Additionally, the berm between areas B and C must be completed. Excavation is scheduled for completion in 1987 for areas C and I. Excavation commenced in 1986 for areas F and J. Excavation of area E, phase I, will commence in 1988. Excavation of areas A and G is not scheduled to occur before 1997. All excavation that will occur in future phases, as indicated under Exhibit C - 4, will occur in five year increments. Due to variability of market demand, such estimates can vary $\pm 2\frac{1}{2}$ years ahead or behind the five year estimate. Therefore, the mining timetable will be adjusted in the annual report as necessary, and in a format similar to Table III. Reclamation will follow immediately behind each phase, and will be completed within the five year period required by law. Reclamation is detailed in the following Exhibit E.

TABLE III
EXCAVATION SEQUENCE AND MINING TIMETABLE

AREAS W, X, Y, Z - PRE 1973 DISTURBANCE.

AREAS T, U, V - UNAFFECTED LANDS.

AREAS B, D, H - MINING COMPLETED.

AREAS C, I - MINING COMPLETED 12/31/87.

AREA F PHASE I - 1987 THROUGH 1992.

AREA J PHASE I - 1987 THROUGH 1992.

AREA E PHASE I - 1988 THROUGH 1993.

AREA F PHASE II - 1992 THROUGH 1997.

AREA J PHASE II - 1992 THROUGH 1997.

AREA E PHASE II - 1993 THROUGH 1998.

AREAS 3, 4 - 1993 THROUGH 1998.

AREA A - 1997 THROUGH 2002.

AREA 5 - 2002 THROUGH 2007.

AREA G PHASE I - 2007 THROUGH 2012.

AREA G PHASE II - 2012 THROUGH 2017.

AREA G PHASE III - 2017 THROUGH 2022.

ADDENDUM - EXHIBIT D - THE MINING PLAN

Response to the CMLRD letter of adequacy of 15 October 1987

1. Backfilling of the Area 1 pond is dependent upon reject materials from the wash plant and other inert, non-toxic fill for which a rate cannot be determined. However, due to the length of the project and relatively small size of the pond, backfilling is assured within the periods provided for the life of the mining and reclamation timetables.

This area is included in the revised warranty calculations under the 10/15/87 addendum to Exhibit L, and is scheduled for alternate reclamation as detailed under the 10/15/87 addendum to Exhibit E.

It should be noted that it is in the operator's interest to expedite the completion of backfilling of this area in order to facilitate relocation of the Home Office Mine office buildings. A proper technical revision will be provided to the CMLRD for approval prior to such relocation of structures. Such a relocation is consistent with the targeted end-use of this area as industrial in intent.