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STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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August 13, 1986

Mr. Jack Higgins, President
Summit Minerals, Inc.
221 West 2100 South
Salt Lake City, Utah 84115

Dear Mr. Higgins:

Re: Initial Completeness Review, Reclamation Plan, Summit Minerals
#1 Mine, (Blackhawk Mine), INA/043/001, Summit County, Utah

The Division has reviewed the submittal of June 18, 1986 (entitled "Application for Coal Exploration With Removal Of More Than 250 Tons") as a Reclamation Plan for the existing disturbance at the Summit Minerals #1 minesite (formerly the Blackhawk Mine). This is in concert with the Board of Oil, Gas and Mining's order to file a Reclamation Plan for the site.

The submittal has been found to be deficient as a Reclamation Plan. Specific deficiencies are addressed in the following review document. Summit Minerals needs to provide specific information in the Reclamation Plan to address each deficiency. Since the present submittal is not formatted appropriately for a Reclamation Plan, a new document incorporating the responses to this review will need to be submitted in the proper format for a Reclamation Plan, as discussed with Mr. Richard Kopp on August 8, 1986. The Division will need seven (7) copies of the next submittal, as copies need to be sent to other agencies for review and concurrence prior to the issuance of a permit.

Please feel free to contact me or Susan Linner if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "L. P. Braxton".

L. P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

SCL:jvb
cc: Richard Kopp
Mark Moench
Ken May
B Team

0028R-47

Initial Completeness Review

Summit Minerals
#1 Mine Reclamation Plan

INA/043/001
Summit County, Utah

August 13, 1986

UMC 771.23 General Requirements for Format and Contents - SCL

The plan must be reformatted to stand alone as a reclamation plan for the existing disturbance. This is all the Division will be permitting at this time.

UMC 771.25 Permit Fees - SCL

This fee has not been paid.

UMC 782.13 Identification of Interests - SCL

Sections (a)(3), (4) and (6) and (b) through (g) have not been addressed and must be.

UMC 782.14 Compliance Information - SCL

This regulation has not been addressed.

UMC 782.16 Relation to Areas Designated Unsuitable for Mining - SCL

This regulation has not been addressed.

UMC 782.18 Personal Injury and Property Damage Insurance
Information - SCL

An insurance certificate meeting the requirements of this regulation must be provided before a permit can be issued.

UMC 782.19 Identification of Other Licenses and Permits - SCL

This regulation has not been addressed.

UMC 782.20 Identification of Location of Public Office for Filing
of Application - SCL

This regulation has not been addressed.

UMC 782.21 Newspaper Advertisement and Proof of Publication - SCL

This regulation has not been addressed.

UMC 783.12 General Environmental Resources Information - SCL

Further cultural resource information may be required by the State Historic Preservation Officer after he has had a chance to review the plan.

UMC 783.13 Description of Hydrology and Geology: General Requirements - DC

The applicant must provide baseline information on water quantity and quality in Chalk Creek and all adjacent tributary drainages. The applicant must also provide baseline information on the groundwater characteristics in and adjacent to the mine plan area.

UMC 783.15 Groundwater Information - DD

The applicant shall submit data and reported information which describes the groundwater regime as discussed on page 776.12-27 of the Exploration Application submitted June 18, 1986.

UMC 783.16 Surface Water Information - DC

The applicant has not addressed this section. Information must be provided on all surface waters in and adjacent to the mine plan area. This information must include the location of all surface water bodies, discharge conditions of Chalk Creek and all tributaries and water quality data from Chalk Creek and all tributaries.

UMC 783.17 Alternative Water Supply Information - DC

The applicant has not addressed this section.

UMC 783.18 Climatological Information - LK

The applicant must provide specific data regarding the average seasonal precipitation and seasonal temperature ranges.

UMC 783.19 Vegetation Information - LK

The applicant must provide a description of the vegetation communities that were presumed to have existed prior to mining and a narrative noting past perturbations and present land uses. Vegetation communities are to be correlated with wildlife use areas/habitats (See also comments under UMC 784.13(b)(5)(vi)).

UMC 783.20 Fish & Wildlife Information - LK

Adequate for reclamation only.

UMC 783.21 Soil Resources Information - JSL

- (3)(i) The operator has submitted a soil survey and map. However, several deficiencies are evident. The permit and disturbance area boundaries must be delineated on Plate 1.5. This will allow the operator and the Division to assess the affiliated soil materials in regards to the development of the reclamation plan. The soil series description must include estimated vegetation productivity values (ave. yield of food, fiber, or wood products) and a profile description of the soil series to be disturbed. Soil Conservation Service soil surveys commonly have this information provided. The plan is unclear as to the subsoil depth of the EKA - Kovich loam - 0-2 percent slope soil series. Please clarify. Plate 5 depicts a soil series titled WB, however, there is no corresponding soil in the legend. Please amend.

UMC 783.22 Land Use Information - LK

The application must include a narrative describing the premining land uses and land use classifications under local (County/City) law, including the condition, capability and productivity of the land, and an analysis of existing land use with the capability to support a variety of land uses.

UMC 783.25 Cross Sections, Maps and Plans - DD

The applicant shall supply the dates that mining operations were conducted. Identify the locations of all exploration bore holes.

UMC 784.13 Reclamation Plan: General Requirements - DC

- (b)(1) The applicant must submit a detailed timetable for the completion of each major step in the reclamation plan.

UMC 784.13 Reclamation Plan, General Requirements - LK

- (b)(5)(i) Spring seeding a native species is not acceptable unless irrigation is used. Seeding should be done in late fall or, if spring seeding is necessary, it is recommended that only a cover crop be used. Sediment control structures must not be reclaimed until the disturbed area is revegetated as per UMC 817.111 - UMC 817.117.

- (b)(5)(ii) The general seeding rates discussed on pages 71 and 72 conflict with each other. Page 72 is correct in that the rate for broadcast seeding methods is to be double the drill seeding rate.

The proposed species for reclamation (Table 7) are not acceptable for this site. This seed mix is apparently a copy of a seed mix for a coal mine in Southern Utah. Many of the species listed are not adapted or would not do well given the environmental conditions of the site. It is highly recommended that two seed mixes be developed, one for the relatively flat areas and one for the steeper slopes. Species selected should be representative of the postmine land use and the reclamation success standard.

- (b)(5)(iii) Please be specific as to what seeding methods will be used and show the location(s) on a reclamation map. Eliminate references to any methods that are not intended for use.

- (b)(5)(iv) Please be specific as to the type(s) and rates of mulch that will be used and the methods for anchoring the mulch. Show location(s) for different types and rates on the reclamation map. Minimum mulching rate should be 2000 lbs/acre. Also, a harrow is not acceptable to anchor mulch.

- (b)(5)(vi) The applicant must establish a reference area or provide an acceptable alternate standard for reclamation success (See comments under UMC 783.19).

The reference area (success standard) should be representative of the intended post mine land use. With regards to the proposed monitoring plan, it is recommended that productivity only be measured on revegetated areas during years nine and ten of the liability period (when it is required). Sampling for bond release on cover and productivity must meet the 90% statistical confidence level.

In addition to monitoring reference areas for range condition every five years, they must be quantitatively sampled for cover, productivity and woody plant density during years nine and ten of the liability period.

UMC 784.13 Reclamation Plan: General Requirements - JSL

- (b)(5)(vii) The applicant must specify a fertilization program. Soils must be sampled from each soil series to be disturbed. Each representative sample must include both a topsoil and subsoil sample. The applicant must not composite the samples.

A minimum of three samples must be taken from each affiliated soil series. The variability of the soil affected will be determined as pursuant to previous soil survey & map review comments. Each soil sample must be analyzed for the following parameters: available phosphorus, potassium, electrical conductivity, pH, zinc, iron and percent rock fragments. A fertilization program would include the type and rate of fertilizer and the operational description for fertilizer distribution.

UMC 784.13 Reclamation Plan: General Requirements - DD

- (b)(8) The applicant shall provide a detailed description accompanied by drawings and cross-sections of the measures to be used to seal mine openings and exploration bore holes.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - DC

The applicant has not addressed this section. The applicant must describe the methods to be used to protect quality of all surface waters during reclamation construction and during the reclamation period prior to bond release. The applicant must present the type and location of all water rights and water users in and adjacent to the mine plan area. The applicant must present a drainage and sediment control plan for the reclamation construction phase and for the reclamation period prior to bond release. The applicant must include a determination of the probable hydrologic consequences of the reclamation activities.

UMC 784.15 Reclamation Plan: Postmining Land Use - LK

The application must provide a detailed description of the proposed postmine land use including a discussion of the utility and capability to support a variety of land uses and the relationship to existing land use policies and plans, and how the proposed land use will be achieved and the necessary support activities needed. If the proposed land use is different from the premine land use, the requirements of UMC 817.133(c) must be met.

UMC 784.16 Reclamation Plan: Ponds Impoundments, Banks, Dams and Embankments - DC

The applicant must address this section as it applies to the reclamation plan. Designs submitted apply to the exploration phase and not to reclamation.

UMC 784.17 Protection of Public Parks and Historic Places - SCL

This regulation has not been addressed.

UMC 784.20 Subsidence Control Plan - DD

The applicant shall provide a subsidence control plan that consists of the following information:

Provide a detailed description of the measures to be taken to mitigate subsidence effects and identify any material damage or diminution of value to land use.

Provide a list of measures to be taken to notify landowners on and adjacent to the mine site of the potential effects of subsidence.

UMC 784.21 Fish and Wildlife Plan - LK

Adequate for Reclamation only.

UMC 784.22 Diversions - DC

Diversion designs have been presented for the exploration phase however, plans must be submitted for the reclamation phase as discussed in the August 8, 1986 meeting in the Division offices.

UMC 784.26 Air Pollution Control Plan - SCL

(b) The applicant must address fugitive dust control during the reclamation operations.

TECHNICAL DEFICIENCIES

UMC 800 Bonding Requirements - JRH

The Operator shall clearly show which facilities are to remain as a result of Phase I reclamation of the site and Phase II reclamation of the site. That is, during Phase I reclamation of the site, sediment controls including the sediment pond shall be left in place until such time as revegetation has been established. Phase II reclamation will involve the removal of the sediment pond and other sediment control structures as required upon achieving the required vegetative cover and meeting water quality standards. In general the bonding cost estimate and the reclamation plan for the site should closely correspond and provide a detailed plan for the reclamation activity and associated costs.

The sequence and the timing of the reclamation activities on the site are required in the form of a timetable in the reclamation plan. The operator has provided a tentative timetable for the initialization of the exploration activities proposed on the site which does not satisfy the above requirements. The timetable required shall show the logical sequence and the duration of the reclamation activities to be accomplished on the site. The reclamation timetable need not be specific to actual calendar dates for reclamation work but should be shown with consideration to seasonal restrictions and requirements for reclamation work.

The quantities, equipment selection, productivity and costs must be determined for the reclamation work accomplished on the site. Please refer to the bonding guidelines provided following this review.

UMC 817.11 Signs and Markers - SCL

The applicant must commit to maintain signs as required throughout the reclamation and monitoring period.

UMC 817.13-.15 Casing and Sealing Exposed Underground Workings - JRH

No plans are included for temporary and permanent closure of existing mine openings. The applicant must provide the plans and designs required in order to receive approval for this section. Portals must be sealed with a block stopping and backfilled a minimum of 25 feet. The applicant must show that the existing portals on the site were closed in this manner or shall be closed in this manner upon reclamation of the site.

UMC 817.25 Topsoil: Nutrients and Soil Amendments - JSL

The Division recommends that the operator till the top six inch depth of topsoil material with 0.75 ton of alfalfa to alleviate compaction and enhance the soil nutrient status and microsphere. This should be included in the soil stabilization plan.

UMC 817.41 Hydrologic Balance: General Requirements - DC

The applicant must address this section as it applies to the reclamation phase. See specific comments under UMC 817.42 -.57.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations - DC

The applicant must address this section as it applies to the reclamation phase as discussed in the August 8, 1986 meeting in the Division offices.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overload Flow, Shallow Ground Water Flow, and Ephemeral Streams - DC

The applicant must address this section as it applies to the reclamation phase as discussed in the August 8, 1986 meeting in the Division offices.

UMC 817.45 Hydrologic Balance: Sediment Control Measures - DC

The applicant must address this section as it applies to the reclamation phase as discussed in the August 8, 1986 meeting in the Division offices.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - DC

The applicant must address this section as it applies to the reclamation phase as discussed in the August 8, 1986 meeting in the Division offices.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments - DC

The applicant has not addressed this section.

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharge - DC

The applicant must state if any water is being made in the mine and if so, how it will be prevented from draining out of the mine. If discharge will occur from the mine, then a plan for treatment of the discharge must be submitted.

UMC 817.52 Hydrologic Balance: Surface and Ground Water
Monitoring - DC

The applicant must submit a comprehensive surface and groundwater monitoring plan in order to determine any impacts to the hydrologic regime. This monitoring plan must be in accordance with the Water Monitoring Guidelines established by the Division as discussed in the August 8, 1986 meeting in the Division offices.

UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of
Sedimentation Ponds, Diversions, Impoundments and
Treatment Facilities - DC

The applicant must state whether any permanent ponds, diversions, impoundments, or treatment facilities will be left on the site. If so, this section must be addressed.

UMC 817.57 Hydrologic Balance: Stream Buffer Zones - DC

The applicant must address whether any land within 100 feet of Chalk Creek will be affected by reclamation activities. If so, this section must be addressed.

UMC 817.97 Protection of Fish, Wildlife & Related Environmental
Values - LK

Adequate for reclamation only.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

Contour maps and cross sections provided show existing reclamation contours. Contours provided on the post reclamation map are identical to those shown on the existing contour map. Determination as to whether the site will be reclaimed to approximate original contour cannot be made and the amount of earthwork required for reclamation cannot be determined.

Highwall stabilization plans presented in the plan are not adequate. No analysis is provided in the reclamation plan to show that the existing or the proposed slopes are stable. The Operator refers to Ben Seegmiller as providing analysis of the highwall but no calculations or analysis are provided to support this reference. Investigation and design of the highwall for post reclamation stability must be provided prior to approval of the reclamation plan. The applicant should provide information and designs showing the measures required to stabilize the existing highwall including appropriate cross sections.

The estimate of reclamation costs provided in the plan does not provide sufficient information to determine the bond amount to be adequate. Suitable maps must be provided to indicate the location and the extent of the reclamation work to be implemented. Drawings provided show no changes between the existing and the post mining contours. Mass balances should be provided with appropriate cross sections to show pre- and post-reclamation contours. Mass balances should be provided to show the required amount and location of suitable topsoil or substitute topsoil materials needed. The location and amount of footings and foundations to be removed shall be included in the cost estimate. The existing portals shall be located for reclamation.

UMC 817.106 Regrading or Stabilizing Rills and Gullies - JSL

The operator must commit to fill (with topsoil), regrade, and seed all rills and gullies before they degrade to a depth of nine inches.

UMC 817.111 - .117 Revegetation - LK

Technical adequacy of these regulations cannot be determined until the data and plans requested under UMC 783.18, 783.19, 783.22, 784.13(b)(5), and 784.15 are submitted.

UMC 817.133 Postmining Land Use - LK

Technical adequacy cannot be determined until the data and plans requested under UMC 783.22 and 784.15 are submitted.

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