



State of Utah

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DIVISION OF OIL, GAS AND MINING

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TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

RE: Willow Creek As-Built, Cyprus Plateau Mining Corporation, Willow Creek Mine, ACT/007/038-98G, Folder #2, Carbon County, Utah

SUMMARY:

Cyprus Plateau Mining Corporation submitted as-built maps for the Willow Creek Mine on September 29, 1998. These maps are needed to accurately show the permit area boundary, the disturbed area boundary, and contours of the facilities area.

While some changes were needed to the maps in the plan, the new maps are, in general, much more difficult to read. The maps reviewed for this memorandum, 5-8 and 11, were black and white where the originals were mostly in color. While it is possible to discern most of the required information, it tends to be difficult.

ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: R645-301-411. R645-301-323

Analysis:

Cultural Resource Maps

Map 11 is a map of cultural resources in the area of the mine. Included are several

historic and prehistoric sites and paleontological resources. This map has been in the confidential file and needs to remain there.

The new map has updated disturbed area information, but the baseline information has not changed. However, the new map is very difficult to read, and it is impossible to read all the contours. In this regard, it does not meet regulatory requirements and should be redone.

Vegetation Reference Area and Wildlife Maps

Map 5 shows vegetation in the region, including two reference areas near the Castle Gate Preparation Plant and two near the Willow Creek Mine. The reference area in Dry Canyon is not part of the revegetation success standards and should be eliminated. This map, like the others, does not have nearly the quality of the original, but, except for reference area locations, detailed information is not vital. Therefore, other changes are not required.

The Facilities Area Vegetation Map, Map 6, contains more detail of vegetation communities and sample locations in the area of the mine. On the new map, it is easier to tell the limits of the disturbed area boundary, but every other aspect is more difficult. The approved map is colored yellow and blue for areas previously disturbed by mining and not previously disturbed, and the new map is speckled in the areas of previous disturbance. Since the contour lines are also speckled, it becomes difficult to tell where the boundaries are.

The design of the original vegetation sampling was based on whether the site was previously disturbed, and the vegetation cover success standard is a weighted average of cover in areas previously disturbed and not previously disturbed by mining. Therefore, when sampling for revegetation success, it will be important to know exactly where the boundaries are. The map needs to clearly delineate these vegetation types. As with the other maps, the elevations on the contour lines need to be legible.

The Regional Wildlife Map, Map 7, is unacceptable. The legend includes several designations for different categories of wildlife habitat, and, except for wetlands and riparian areas, it is impossible to tell exactly where the boundaries for these areas are. This information is on the approved version of this map. Also, it is impossible to tell where all but the major contours are.

Map 8 shows where biological surveys were taken in and near Willow Creek. There are several problems with this map:

1. The map still shows the "existing substation" from the old Willow Creek disturbed area.
2. The legend says "proposed" Willow Creek Mine surface disturbance area.

3. The relocated sections of Willow Creek are shown as a dark line, but the legend should include this as one of the symbols. Without knowing the location, it would be impossible to tell the creek has been relocated. In addition, the legend should include a note explaining the difference in notation for the samples taken before and after relocation.
4. It is understood this map is intended to show as-built conditions, but the contours are all for premining conditions.

Findings:

Information provided in the proposal does not meet the requirements of this section of the regulations. Prior to approval, the applicant must supply the following in accordance with:

R645-301-121.200 and R645-301-140, The maps provided in this submittal need to contain all the types of information that are set forth on U.S. Geological Survey maps of the 1:24,000 scale series. In addition, the maps need to clearly show revegetation reference areas, vegetation communities in the area of the mine, wildlife habitat, and current information.

RECOMMENDATIONS:

The proposal should not be approved until the problems discussed in this memorandum have been rectified.