CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT
WILDCAT LOADOUT FACILITY
PRO/007/033

Superseded
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Andalex Resources, Inc.
Carbon County, Utah
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I. INTRODUCTION

The purpose of this report is to provide a Cumulative Hydrologic Impact Assessment (CHIA) for Andalex Resources, Incorporated's (Andalex Resources) Wildcat Loadout Facility, located in Carbon County, Utah. The assessment encompasses the probable cumulative impacts of all anticipated coal mining in the general area on the hydrologic balance and whether the operations proposed under the application have been designed to prevent damage to the hydrologic balance outside the proposed permit area. This report complies with federal legislation passed under the Surface Mining Control and Reclamation Act (SMCRA) and subsequent Utah and federal regulatory programs under UMC 786.19(c) and 30 CFR 784.14(f), respectively.

Andalex Resources' Wildcat Loadout Facility is located along the western margin of Castle Valley approximately six miles northwest of Price, Utah (Figure 1).

II. CUMULATIVE IMPACT AREA (CIA)

Figure 2 delineates the CIA for the Wildcat Loadout Facility. The CIA includes Section 33 and the E1/2 of Section 32, Township 13 South, Range 9 East. The CIA encompasses 960 acres.

III. SCOPE OF MINING

Andalex Resources operates the Wildcat Loadout which is the coal storage and loading facility for the Andalex Centennial Mine, a mine 22 miles from the loadout. This unit train loadout is designed to load and crush about 1.5 million tons annually.

The permit area encompasses about 60 disturbed acres for the stockpiling and reclaim system as well as the unit train loading area.

All of the surface structures and coal will be removed and the entire area reclaimed.

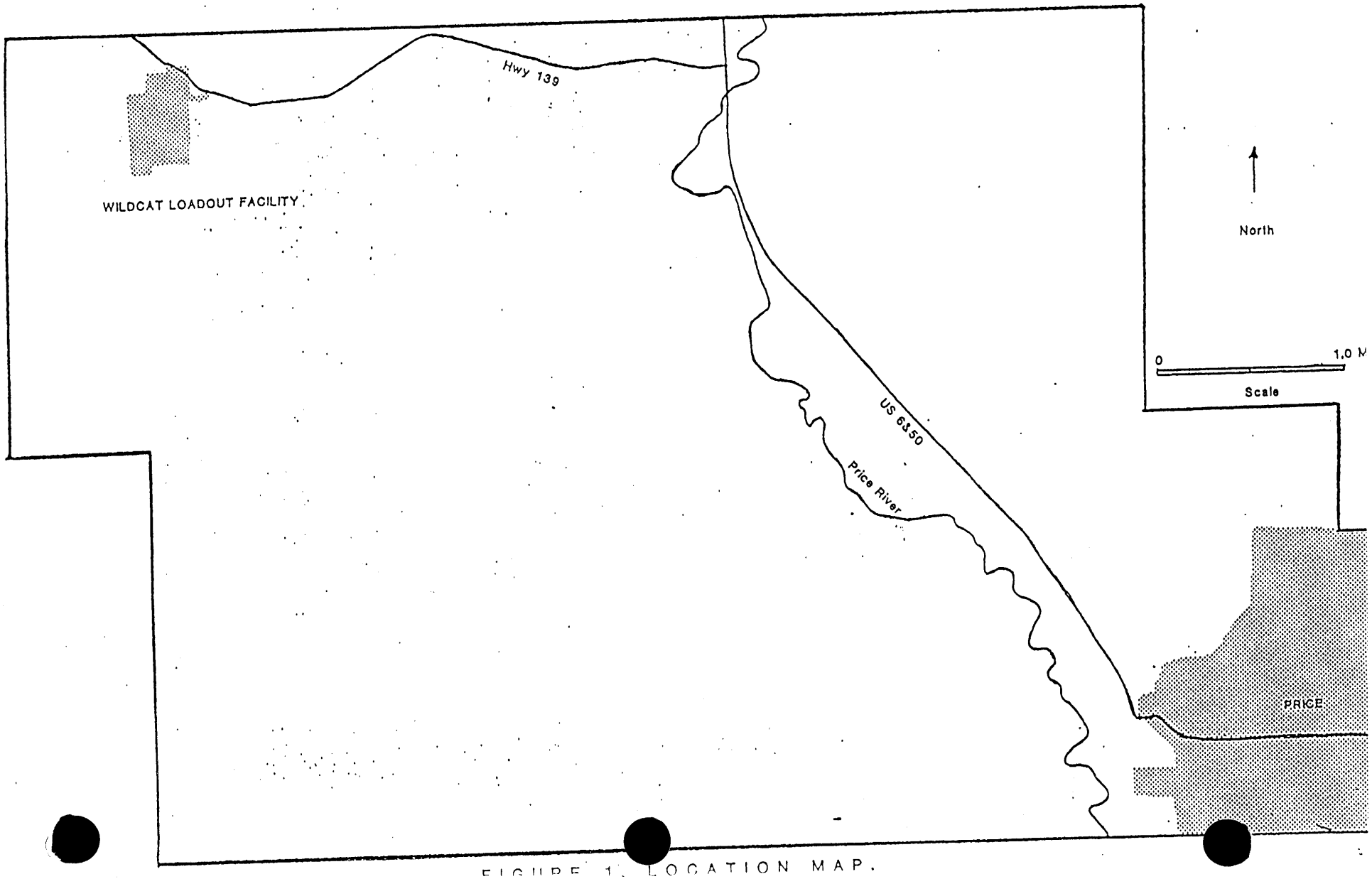

FIGURE 1. LOCATION MAP.

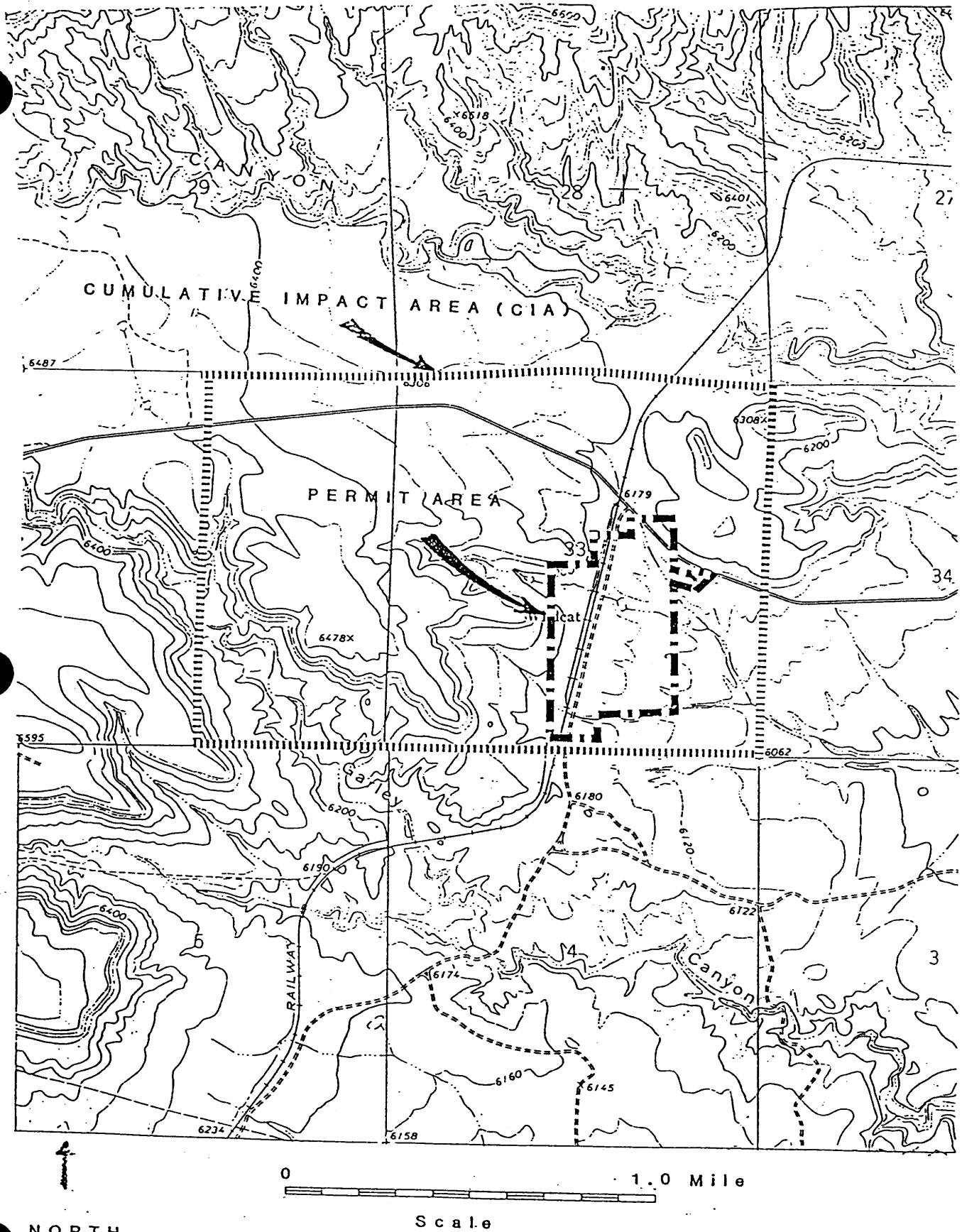

FIGURE 2. CUMULATIVE IMPACT AREA (CIA).

IV. STUDY AREA

A. Geology

The Wildcat Loadout Facility is located on the Masuk Member of the Mancos Shale. The Masuk Member is a dark-gray marine shale with thin, discontinuous layers of gray limestone and sandstone that is from 600 to 800 feet thick in the Castle Valley area (Danielson, et al., 1981). The Masuk Member generally acts as an aquaclude, however, it may sporatically yield water to springs locally.

Rocks in the study area strike generally north and dip one to two degrees to the west. No faults have been identified in the study area.

B. Topography and Precipitation

Topography ranges from approximately 6,000 feet to over 6,450 feet.

Average annual precipitation is 10 to 12 inches. The CIA may be classified as semiarid.

C. Vegetation

Dominant vegetation types around the loadout facility are pinyon/juniper and sagebrush/grassland. In general, vegetation varies from the desert saltbush community at lower elevations to Douglas Fir and aspen communities at higher elevations. Between elevation extremes occur other vegetation communities.

These include mountain brush, pinyon-juniper, and pinyon-juniper/sagebrush. The primary non-mining land use is livestock grazing and wildlife habitat.

V. HYDROLOGIC RESOURCES

A. Ground Water

No springs occur within the CIA. One spring, located approximately 1,400 feet south of the CIA in Garley Canyon, discharges at a rate of three gallons per minute at the contact between Quarternary alluvium and the Upper Cretaceous Masuk member.

Two boreholes, drilled to a total depth of 60 feet, were utilized to investigate ground-water resources within the permit area. Neither borehole encountered water during the drilling program and subsequent monitoring did not identify infiltrated ground water.

The only potentially significant ground-water resource within the CIA apparently occurs beneath the Masuk member at a depth exceeding 600 feet.

B. Surface Water

The Wildcat Loadout is located in the lower Gordon Creek drainage basin. No perennial or intermittent streams exist within the CIA. The North Fork of Gordon Creek and the Price River, perennial streams, occur within one-and-one-half miles and three-and-a-half miles respectively of the CIA. All streams in the CIA are ephemeral (Figure 2).

Disturbed area runoff is controlled by sedimentation facilities. Undisturbed area runoff is diverted away from the loadout. All sediment ponds are regulated by NPDES permit, and are designed to prevent additional contributions of sediment to the hydrologic balance.

VI. POTENTIAL HYDROLOGIC IMPACTS

A. Ground Water

No shallow ground-water resources were identified within the CIA. Although a ground-water resource may occur at depth beneath CIA, potential impacts to this resource from surface leaching associated with the Wildcat Loadout Facility are herein determined to be practically non-existent.

B. Surface Water

Leachate and acid- and toxic-forming material analysis has been performed on all materials stored on-site. Results of the analyses indicate that no potential impacts will occur to the surface waters in the CIA.

A surface water monitoring plan has been proposed for the loadout facility. Two ephemeral drainages above the site and two below will be monitored quarterly for parameters outlined in the Division's Water Monitoring Guidelines.

The combination of surface water monitoring, NPDES monitoring, and annual leachate analysis will enable determination of any potential impacts to the hydrologic balance.

VII. SUMMARY

The operational designs proposed for the Wildcat Loadout Facility are herein determined to be consistent with preventing damage to the hydrologic balance outside the permit area.

REFERENCES

Andalex Resources Incorporated, Mining and Reclamation Plan, August 15, 1988, Wildcat Loadout Facility, Carbon County, Utah

Danielson, T. W., Re Millard, M. D., and Fuller, R. H., 1981, Hydrology of the Coal-Resource Areas in the Upper Huntington and Cottonwood Creeks, Central Utah: U. S. Geological Survey, Water Resources Invest., Open-File Report 81-539, 85p.