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A Selected Bibliography: Remote Sensing Techniques for Evaluating the Effects of Surface Mining

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A SELECTED BIBLIOGRAPHY: REMOTE SENSING TECHNIQUES FOR EVALUATING THE EFFECTS OF SURFACE MINING

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A SELECTED BIBLIOGRAPHY:

REMOTE SENSING TECHNIQUES

FOR EVALUATING THE EFFECTS

OF SURFACE MINING

By David M. Carneggie and Donald O. Ohlen

Sioux Falls, South Dakota

1979

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A SELECTED BIBLIOGRAPHY: REMOTE SENSING TECHNIQUES FOR EVALUATING
THE EFFECTS OF SURFACE MINING

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ABSTRACT

This bibliography contains 39 citations of technical papers and other publications dealing with the applications of remote sensing techniques for analyzing and monitoring surface mining. These references summarize recent developments in methods used to identify, map, analyze, and monitor surface mining, particularly coal surface mining.

INTRODUCTION

The Surface Mining Control and Reclamation Act of 1977 mandated stringent new regulations for surface mining. The primary intent of this Act was to establish standards for the regulation of surface coal mining operations and the reclamation of both active and abandoned mines.

The new regulations increase the need for improving resource inventories and for monitoring compliance with environmental performance standards. Remote sensing technology, when used in combination with ancillary data such as ground-acquired data and field verification,

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provides the resource manager with an effective method that can be used to improve resource inventories, to analyze mine operations, and to assess mining impacts upon associated resources.

This bibliography includes recent publications on remote sensing methods applied to the analysis and monitoring of surface mining. It is not an exhaustive list but rather a representative selection of remote sensing references.

References were selected from major periodicals, proceedings, symposia, and National Aeronautics and Space Administration reports dealing with remote sensing. The list of references is divided into four sections. The first section, entitled "Data acquired from Landsat," contains papers and publications that pertain to the use of either manual or digital analysis of Landsat multispectral data for monitoring surface mining. The second section, entitled "Data acquired from aircraft," includes publications in which remotely sensed data acquired from aircraft on different film types at different photographic scales, and from different geographic areas, are used to assess the effects of mine activity. The third section, entitled "Data acquired from aircraft and Landsat," is a list of publications and papers in which data collected by a combination of Landsat and aircraft systems are used. The fourth section, entitled "Other remotely sensed data," includes publications in which data other than aerial photographs or Landsat multispectral imagery (for example, Skylab photographs or thermal infrared imagery) are used.

The references followed by a National Technical Information Service (NTIS) identification number are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia, 22161.

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