



ENVIRONMENTAL SERVICES FOR MINING

ABR, Inc.—Environmental Research & Services (ABR), founded in 1976 as Alaska Biological Research, currently employs a diverse group of scientists with expertise and experience that are well suited for providing environmental services to the mining industry. Our expertise includes pre-development resource inventories, wetland science, water quality monitoring, GIS services, permitting, and land reclamation. Our experience includes over 20 years of serving clients, including the mining industry, throughout Alaska, in subarctic Canada, and in the lower 48 states. ABR’s staff has evolved in recent years to reflect the unique needs of the mining industry. We have developed the experience, expertise, and ability to design and implement innovative solutions, which meet both our client’s needs and agency requirements, for a wide range of environmentally sensitive issues.

SERVICES

- Reclamation and restoration**
- Wetland delineation and mitigation**
- Soil and water sampling**
- Wildlife and fish surveys**
- Environmental impact analysis**
- GIS analysis and mapping**
- Endangered species inventories**

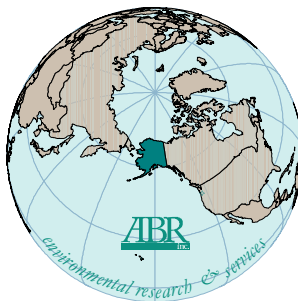
CLIENTS

- BHP Diamonds, Inc.**
- Coeur Alaska, Inc.**
- Newmont Gold Company**
- Fairbanks Gold Mining, Inc.**
- Teck Corporation**
- USMX, Inc.**
- WGM, Inc.**

ABR provides its own wildlife and fisheries biologists, invertebrate zoologists, soil chemists, statisticians, GIS/Mapping specialists, and ecologists to more effectively design and implement projects. Additional information is provided in our Statement of Qualifications. Copies of our SOQ are available upon request.



**Wetland Delineation, Mitigation,
and Creation**



GIS Mapping



Wildlife Surveys

RECLAMATION PROJECTS

Revegetation of Diamond Exploration Area, NT, Canada. *(BHPBilliton)*

ABR designed and began implementing a long-term research program to identify the best options for revegetation and habitat restoration at the Ekati™ Diamond Mine. Wildlife habitat and regulatory requirements were considered in the program design.

Rehabilitation of the Winter Ice Road to the Pogo Claim Site, Goodpaster River, Alaska.

(Teck Corporation)

ABR assisted in closeout and rehabilitation of the winter ice road constructed to the mining claim. After assessment of the 44-mile road, ABR recommended rehabilitation techniques to limit erosion and surface degradation along the route, particularly at stream crossings.

Northwest Alaska Coal Project: soil, water, and vegetation inventory.

(Arctic Slope Consulting Group)

ABR conducted a vegetation and soil resources inventory to provide baseline information for developing rehabilitation strategies for land disturbed by mining. A reclamation research program has been initiated at the mine site to test various plant-cultivation techniques. Monitoring of water quality also has been conducted in the mine site as part of fulfillment of the Alaska Surface Coal Mining Control and Reclamation Act.

GIS MAPPING

GIS Mapping and Support for Pogo Mine Advanced Exploration. *(Teck Corporation)*

ABR provided GIS mapping services to support the advanced exploration phase of the Pogo project. ABR also acted as the database manager for other GIS products developed by environmental contractors working on the Pogo project.

WILDLIFE SURVEYS

Caribou Monitoring Program for the Red Dog Mine and DeLong Mountains Transportation System. *(NANA Regional Corporation, Inc.)*

ABR provides the Project Caribou Specialist for this ongoing program to monitor movements by the Western Arctic Herd near the 850km DeLong Mountains Transportation System and the port site on Kotzebue Sound.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES

Endangered, Threatened, and Rare Species Evaluation for Proposed Mine Project.

(Newmont Gold Company)

ABR assessed the use of a proposed mine in the Fairbanks area by sensitive wildlife species. Aerial and ground surveys were used to identify nest sites of a rare species, the Northern Goshawk, as well as determine the abundance of other species of concern (neotropical migrants and lynx).

Survey of Endangered and Rare Wildlife and Plants, Pogo Mine Prospect, Alaska.

(Teck Corporation)

ABR conducted surveys for endangered and rare species of wildlife and plants in the Pogo mining claims near the Goodpaster River. Aerial surveys were used to assess nesting by Peregrine Falcons and Golden and Bald eagles, and ground-based surveys near the mine site located Olive-sided Flycatchers and Northern Goshawks, and plant species of concern.

Northwest Arctic Coal Project: Restoration of Wetlands Damaged by Vehicle Traffic.

(Arctic Slope Consulting Group, Inc.)

A restoration plan was developed to restore wetlands damaged by vehicle traffic and to monitor recovery. Evaluation included analyzing soil properties, measuring vegetative cover, and monitoring thaw subsidence and thermal erosion.

WETLAND DELINEATION

Wetlands Survey for a Proposed Mine Project, Fairbanks, Alaska. *(Newmont Gold Company)*

For a proposed gold mine near Fairbanks, Alaska, ABR classified and delineated wetlands in the mine project area.

Wetlands Survey for a Proposed Mine Project, Yukon River, Alaska.

(USMX, Inc., with Montgomery Watson)

For a proposed gold mine near the Yukon River in western Alaska, ABR classified wetlands in the vicinity of the mine site and an associated barge landing, and conducted a field reconnaissance survey along potential transportation corridors. Options for wetland rehabilitation were developed to mitigate impacts from road construction by a previous operator.