

# SUBSURFACE RESOURCES

---

## A. GOALS

1. Allow and encourage development of coal and other subsurface resources.
2. Reduce the adverse impacts of coal development on environmental and habitat values in the Range through compliance with the provision of the Alaska Surface Coal Mine Control and Reclamation Act (ASCMCRA) (AS 27.21) and other applicable state, federal, and local laws and specific plan guidelines.
3. Assure that mined lands are reclaimed as wildlife habitat, primarily beneficial to moose.

## B. MANAGEMENT STRATEGY

All land within the Moose Range will be open to mineral exploration and development with the exception of the southern face of Castle Mountain, certain small areas around specific mineral licks, and, at least temporarily, mental health lands. The southern face of Castle Mountain will be closed to locatable mineral entry and will not be available for mineral leasing to assure that this unique, highly visible geologic feature is protected in its existing natural state. This closure will protect scenic values, maintain the local community character and promote tourism. Mineral licks (shown on Map 3 on page 23) will be closed to locatable mineral entry for one year for approximately 1/2 mile around each lick. During that year, criteria for permanent closures will be developed and further evaluations of each lick will be made. (This constitutes an amendment to the Susitna Area Plan for the licks to which it applied. Three licks are currently under a leasehold location order and cover nine sections each (see guidelines C3d on mineral licks, pages 84-86). The leasehold location order for the balance of the nine sections will be lifted when the area in the immediate vicinity of the lick is closed.

When coal leases are offered within the Range, they will be in response to industry interest. The areas that are most likely to be offered in the near term are the areas judged by the Division of Mining and Geology to have the highest commercial potential. These areas are small tracts contiguous with existing leases in the Wishbone Hill area and large tracts in the Young Creek area, and at the base of Castle Mountain. The preferred order in which they will be offered for leasing is as listed above. However, this order may be changed due to new information, development of new mining technology, changed conditions or market demand. These existing 1984 coal lease sale areas are shown on Map 5b: on page 35. The future potential coal lease sale areas are shown on Map 10, page 199.

## C. GUIDELINES

### 1. COAL

- a. Process for Coal Development. Approval of coal exploration, development and mining activities shall be consistent with the Alaska Surface Coal Mining Control and Reclamation Act (ASCMCRA) (AS 27.21) and its implementing regulations, with interagency agreements such as the Cooperative Agreement between DNR, ADF&G, and the Alaska Department of Environmental Conservation signed November 4, 1984, and with guidelines developed in the Susitna Area Plan and this plan. As outlined in ASCMCRA, surface coal mining activities are controlled by issuance of a surface coal mining permit after a thorough technical review of the application by state agencies. The surface mining permit is the principal mechanism for reducing the potential adverse impacts of coal development. It includes an operation and reclamation plan designed to protect environmental resources such as wildlife habitat, air quality and water quality and to ensure contemporaneous reclamation for a specified post-mining land use (see below).
- b. Post-Mining Land Use. Within the Matanuska Valley Moose Range, the post-mining land use is designated as wildlife habitat. Reclamation must be directed to a habitat type and density which is primarily beneficial to moose consistent with ASCMCRA.
- c. Utilization of Surface Resources. The Division of Mining and Geology (DOMG) will encourage the utilization of potential forest, grazing, habitat enhancement, and recreational resources in areas where coal leasing is projected for the future. The Division of Mining and Geology will notify affected divisions of the general area and estimated schedule of future sales. Other consumptive resource uses will be directed toward these proposed areas during the period before leasing. Generally, habitat enhancement efforts will be the resource to be given priority consideration for use, although other important resource uses, such as use of existing historic trails or use of existing available material sources, should also be considered. However, these other uses should not interfere with or disturb the natural condition to the extent that the use may interfere with the collection of necessary baseline data under ASCMCRA. The presence of these uses prior to leasing will not preclude, limit or affect lease issuance.

## SUBSURFACE RESOURCES

- d. Preferred Order of Development. The preferred sequence for issuing coal leases in the Moose Range is from the west to the east. The preferred order for offering leases will be:
  - (1) Small (80 - 160 acre) tracts contiguous with the Wishbone Hill coalfield leases in existence at the time of adoption of this plan (except that a tract that does not exceed one section in size may be offered adjacent to ADL 501265).
  - (2) The Young Creek area.
  - (3) The base of Castle Mountain.
  - (4) Other areas within the Range.
2. LOCATABLE MINERALS (e.g., GOLD, AND CHEMICAL GRADE LIMESTONE) AND OTHER LEASABLE MINERALS (e.g., OIL AND GAS)
  - a. Best Management Practices. ADF&G will utilize its manual, Best Management Practices for Placer Mining in issuing its own Title 16 permits and in its review of and development of recommendations for the Division of Mining and Geology's plans of operations and miscellaneous land use permits for mining. Any recommendation by ADF&G for rejection or modification of a miscellaneous land use permit or a plan of operations for placer mining will be based on the Best Management Practices. (This document is available from ADF&G or DNR for reference to any miner interested in its use in designing mining plans. It is available for review from ADF&G Habitat Division offices in Fairbanks, Anchorage and Palmer; DLWM in Anchorage and Wasilla; DOMG in Anchorage; and Palmer, Sutton, Willow and Anchorage libraries.)
  - b. Scenic Values. DNR authorization for mineral exploration and development must include assessment of impact on scenic values.
  - c. Mineral Development
    - (1) Mineral development will follow existing established DNR procedures and include interagency review of the following:
      - (a) Development plan and schedule.
      - (b) Operation plan.
      - (c) Access plan.
      - (d) Impact assessment on fish and wildlife, their habitat and related uses.
      - (e) Impact assessment on scenic values.
      - (f) Proposed mitigation and wildlife habitat rehabilitation.

- (2) Removal of Vegetation. The area of vegetation removal will be for the immediate areas of the excavations, sites for overburden storage, settling ponds, access roads, equipment storage and necessary structures within the mine or drilling site. This must be outlined in the plan of operations or application for a miscellaneous land use permit.
  - (3) Tailings and Overburden. Overburden and tailings will be stockpiled and/or deposited in accordance with the mining plans.
  - (4) Pollution. The mine or drilling site must be managed to minimize non-point sources of pollution.
  - (5) Mine or Drilling Site Consultation. An on-site, predevelopment conference between the mine operator, DNR, ADF&G and DEC officials will be held when staff and budget allow. The intent is to assist the mine operator in developing the operation in a manner which will promote compatibility with wildlife and habitat enhancement in the vicinity of the mine or drilling site.
- d. Rehabilitation of Mining Sites
- (1) Reclamation plans will be required for mining activities authorized by a miscellaneous land use permit or a plan of operations. Reclamation shall be developed for wildlife habitat primarily beneficial to moose.
  - (2) Disturbed acreage will be kept to a minimum and reclaimed as phases of the mine operations are completed unless this is not feasible or prudent.
  - (3) Excavated areas and waste disposal sites will be recontoured to a natural appearing shape at an average slope of no more than 3:1 or equivalent to the original slope, topsoil replaced and revegetated. ADF&G and DOA's Plant Materials Center should be consulted as to types of vegetation most conducive for returning the mined area to a state of wildlife productivity and/or design of contours to best benefit fish and wildlife.
- e. Miscellaneous Land Use Permits. Prior to issuance of any Miscellaneous Land Use Permit within the Moose Range, the Alaska Department of Fish and Game (ADF&G) will provide comments to the Alaska Department of Natural Resources (DNR) on the consistency of the proposed action with the approved Matanuska Valley Moose Range Plan. DNR will include in Miscellaneous Land Use Permits those stipulations recommended by ADF&G that are within ADF&G authority and are necessary to provide adequate protection for fish and wildlife and their habitats consistent with ADF&G authority and the Moose Range enabling legislation.

## SUBSURFACE RESOURCES

- f. Oil and Gas. The state Division of Geological and Geophysical Survey has determined that the potential for oil and gas in the entire Moose Range is low to no potential. Oil and gas exploration and development in the Moose Range may be permitted as long as development does not conflict with the enabling legislation and the Moose Range plan. Any proposals for development will follow normal DNR and ADF&G procedures.

### 3. AREAS CLOSED TO MINERAL LOCATION AND DEVELOPMENT

- a. Castle Mountain Face. The southern face of Castle Mountain has high scenic values and is an attraction for those traveling the Glenn Highway. To preserve these values, this area is closed to locatable mineral entry and will not be made available for the exploration or development of leasable minerals (see Map 10 on page 199).

#### Legal Description for Castle Mountain Mineral Closing Order

T20N, R5E, S.M., Sec. 12, SW1/4, N1/2SE1/4, N1/2S1/2SE1/4,  
N1/2S1/2S1/2SE1/4.

Sec. 13 NW1/4NW1/4.

Sec. 14 N1/2, NW1/4SW1/4, N1/2SW1/4SW1/4, N1/2S1/2SW1/4SW1/4.

Sec. 15 N1/2, N1/2S1/2, N1/2S1/2S1/2, N1/2S1/2S1/2S1/2.

Sec. 16 N1/2, SW1/4, N1/2SE1/4, N1/2S1/2SE1/4, N1/2S1/2S1/2SE1/4.

Sec. 21 N1/2NW1/4, N1/2S1/2NW1/4, SW1/4SE1/4NW1/4,  
W1/2SE1/4SE1/4NW1/4

- b. Mental Health Trust Lands. All mental health land is presently closed to mineral entry by order of the Supreme Court and the DNR Department Order 121 -- Mental Health Interim Management (see Map 1 on page 11). Competitive oil and gas or coal lease sales may continue.
- c. Removal of Chickaloon Bench Mineral Closing Order. The state will remove the mineral closing order (MCO) within Secs. 4, 8, 9, 10, 16 and 17, T20N, R6E, S.M. The state placed the mineral closing order on this land to allow for the Chickaloon Bench Subdivision land sale. Since this sale will not take place, the mineral closing order will be removed to allow for potential mineral entry.
- d. Mineral Licks. There are several known mineral licks in the Middle and Eastern Subunits. (See Map 3 on page 23 for the general location of the licks.) The northernmost three of these licks are currently restricted to mining leasing as required by the Susitna Area Plan. Based on information available at this time, these mineral licks

appear to be important to the wildlife using them, and this use is incompatible with mineral development. The mineral value of these licks is currently unknown. Therefore, all lands within approximately a one-half mile radius of each of the three northern licks will be closed to new mining locations for one year. The mineral closure will affect only locatable minerals and will be initiated following or concurrent with the Commissioner's approval of this plan. During this one-year period, DNR will approve no permits for exploration or development of leasable minerals in the lick areas. The purpose of the one-year closure is to allow field verification of the importance of each of the licks and to develop criteria by which to evaluate the importance of individual licks (both their value to wildlife and their mineral value). During the one-year period following the mineral closure, ADF&G and DNR will devote adequate staff and resources to determine if a permanent mineral closing order is justified. In order for a permanent mineral closing order to be issued the following steps must occur:

(1) Data ADF&G Will Provide

- (a) Species using lick.
- (b) Season of use.
- (c) Approximate extent of use as determined by photo interpretation and on-site examination.
- (d) Chemical content of lick and feasibility of introducing new mineralized material as a substitute.
- (e) The importance of the lick (see criteria below).

Additional data which could help make a decision, but which may not be required:

- (f) Sex and age of animals using the licks.
- (g) Animal behavior at the lick.
- (h) Access routes used by wildlife to the lick.
- (i) Literature which describes how mineral licks contribute to the behavioral and physiological well-being of wildlife.

(2) Data DNR Will Provide. Geologic evaluation of the lick to determine if the lick may host an important mineral deposit.

(3) Criteria to Evaluate Importance. During the one-year closure, ADF&G and DNR will develop criteria that will be the basis for deciding whether a mineral lick is sufficiently important to close to mineral entry or to restrict to mineral leasing. The basis for the criteria will include, but not necessarily be limited to, the following:

- (a) Items (1)(a) through (e) above.
- (b) Importance of the lick to the health and productivity of the animals using it.

## SUBSURFACE RESOURCES

- (c) Extent to which the lick is meeting the needs of the animals that use it; whether the animals using this lick may also use other licks for the same purpose; availability of alternate licks within a reasonable distance (at least 1 mile).
  - (d) Relationship of animals using this lick to animal populations within the Moose Range, e.g., percent of population using this lick, importance of those animals to the Moose Range population.
  - (e) Potential damage done to the lick or animals if mineral development were to occur.
  - (f) Potential for mineral development
- (4) Procedure for Closure. Following development of criteria by DNR and ADF&G, an evaluation of the relative importance of each lick will occur. DNR will process the mineral closing or leasing requests under existing procedures including public and agency notice and review. The existing three mineral leasehold location orders on the three northern most mineral licks will be lifted on the balance of the nine sections following a permanent mineral closure of the immediate areas around the licks. Only important mineral licks will be protected. Those licks determined not to merit a closure or leasing restriction will be open to mining claims.
- (5) Additional Licks. Mineral licks discovered in the future will be evaluated on a case-by-case basis as outlined in steps 1 through 4 above.

## 4. RELATIONSHIP OF MINERALS TO OTHER RESOURCE VALUES

- a. Recreational Values. Mining operations should attempt to minimize the impact on the recreational use and values of an area. DOPOR will be consulted during the review of mining plans of operation and miscellaneous land use permits for suggestions for stipulations that will mitigate the impacts of mining on recreation. Recreational trails may be relocated if necessary to maintain safe public access around active mining operations. DOPOR and ADF&G will be consulted regarding trail relocation.
- b. Scenic Value. Stipulations will be included in miscellaneous land use permits, plans of operations or mining leases that are designed to minimize adverse impacts on important scenic values. (See Map 10 on page 199 for areas with high scenic values. Also reference the Recreation guidelines, C7, page 91.)
- c. Cultural Resources
  - (1) Resource Surveys. DNR should perform heritage resource surveys, as funding permits, in order to identify the location of important cultural resources prior to actual mining operations.

- (2) Future Discoveries. Mining will be managed to minimize the impact on and, to the extent possible, avoid areas with cultural resources. If artifacts are discovered while mining, the discovery must be reported immediately to the Office of History and Archeology, DOPOR; work which would disturb the artifacts must be stopped until the State Historic Preservation Officer has given directions as to the preservation of the artifacts in accordance with AS 41.35.010.

d. Public Access Across Mining Sites

- (1) Possible Restrictions. Public access within an operating mine area may be restricted only if authorized under an approved plan of operations, or land use permit, in order to protect public safety, or to prevent unreasonable interference with the rights of the miner to operate.
- (2) Signs. "No trespass" signs may only be posted in the immediate working area or on storage buildings only after access restrictions have been authorized. They must not be used to block or intimidate the public's use of legal access. Posting of signs requires written approval by the Division of Mining and Geology as outlined in d.(1) above.

5. MINING RECLAMATION RESEARCH

The state encourages research efforts to develop techniques for enhancing moose browse on lands mined for coal.