

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

694 SCOMM22: ALASKA LANDS FILE 1977-78

IV. Economic Health of Alaska

Interior's proposal will significantly narrow the potential economic base of the State of Alaska. In spite of glowing claims for tourism, past visitor estimates have proved optimistic at best and the reason is understandable. The cost and physical requirements of the "wilderness experience" limits it to the well to do and healthy. Less strenuous visits to other than wilderness areas such as Glacier Bay (cruise ship passengers excepted) would cost a family of four about \$250-300 for one day excluding air fare costs from the lower 48 to Juneau. Given the above, we fail to see increased tourism as a significant economic factor in Alaska for many years to come.

The proposed withdrawals would seriously affect potential mining, logging, energy extraction, transportation; hence reducing employment opportunities in these industries plus the service industries that come into existence with the industrial employment base. Agricultural employment is also probably impacted.

We therefore believe it essential to have some measure of time for an economic impact assessment on the State of Alaska. It is entirely possible that less than major modifications of DOI's proposal would make the difference between economic health and economic dependency for the State.

V. Interference with operation of Alaska Native Claims Settlement Act

Both H.R. 39 and DOI's proposed amendments would abrogate the land selection provisions of the Alaska Native Claims Settlement Act (ANCSA). Under ANCSA, federal, native and State selections of lands are now far advanced. A substantial change now could prove extremely disruptive at all levels.

VI. Impact on On-Going National Oceanic and Atmospheric Administration and Economic Development Administration Programs

The economic health of Alaska (discussed under IV) impacts on the Department's Economic Development Administration (EDA) programs. The more its business and industrial base is narrowed, the greater will be the call on EDA funds and programs.

From the standpoint of the National Oceanic and Atmospheric Administration (NOAA) of the Department, we have a number of questions and concerns over the impact of this proposal on activities and programs that are currently the statutory responsibility of this Department. The



proposed Alaska Marine Resources National Wildlife Refuge. This proposal would divest this Department of its responsibility for managing marine mammals on the Walrus and Otter Islands, Rock--all defined as part of the Pribilof Islands since the April 21, 1910. Under the Fur Seal Act of 1966, which re-legislation on this subject, and the Marine Mammal Act of 1972, the Department has sole responsibility for the seal and seal lion of these islands and we oppose changing the present statute. Furthermore, pursuant to the agreement between this Department and the two Native Corporations of the Pribilof Islands, Sea Lion has been set aside as part of the Reef Rookery of Saint Paul Island. Federal management of the fur seal resource. These same issues involving Federal management of fish and wildlife resources occur in several of the other proposals which would be along the coast of Alaska. The Interior amendments must be revised to preserve our continuing jurisdiction of marine mammals and our authority related to the management of living marine resources, regardless of location on designated lands.

Similarly, we are not certain of the impact that the proposed subsistence hunting and fishing will have on our responsibility for managing the fisheries resources pursuant to the Fishery Conservation and Management Act of 1976. While we understand boundary proposals would stop at the high tide line, several important species of salmon migrate from the spawning beds of the lakes and far out into the ocean. Subsistence fishing activities in the streams would definitely have an impact on the salmon resource. In our opinion, these questions must be addressed.

We must also be assured of continued access to existing facilities and sites where we have on-going activities. For example, a number of small stations throughout the State of Alaska where we conduct fish and marine mammal population surveys and other biological experiments, and weather and other environmental monitoring stations. In some instances these facilities are in the areas to be included in a new park, refuge, or wilderness. A general provision in the proposal to allow for continued, unimpeded access to these facilities.

VII. Use of Available Information and Data

We recognize that hard data on minerals oil and gas is scarce in Alaska. However, our own investigations in Alaska spanning many years indicate that many of our concerns would have been resolved had Interior made systematic and impartial use of the data collected by the Federal-State Land Use Planning Commission, the Department of Alaska and its own Geological Survey and Bureau of Min-

**PLEASE NOTE: THE PRECEDING PAGES WERE TREATED
AS A UNIT IN THE ORIGINAL DOCUMENT.**

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2. **Bureau of Mines Report to Assistant Secretary for Energy and Minerals Davenport, consisting of site-specific assessment of mineral values in proposed (d)(2) withdrawal areas: August 22, 1977**
3. **Memorandum to Assistant Secretary for Energy and Minerals Davenport, from U.S.G.S. Director McKelvey accompanying U.S.G.S. maps of proposed (d)(2) withdrawal areas: August 11, 1977**
4. **Memorandum of Assistant Secretary for Energy and Minerals Davenport to Cynthia Wilson, Assistant to the Secretary for Alaska, covering final E&M recommendations on (d)(2) and final site-specific review: August 25, 1977**
5. **"OPTION PAPERS" before Alaska Policy Group for Final Interior Department Decision: August 28, 1977**
6. **The Department of Interior (d)(2) Briefing Book distributed to other Federal Agencies for comment and input: Briefing Book contains final Department of Interior (d)(2) position and site-specific review of each withdrawal area: September 1, 1977**
7. **Memorandum to Cynthia Wilson from the Acting Assistant Secretary for Energy and Minerals Chuck Eddy correcting the hardrock minerals assessment in the (d)(2) Briefing Book: September 12, 1977**
8. **Recent press releases and news articles**
 - a) **Steering Council Press Release of December 23, 1977**
 - b) **Anchorage Times news story, December 24, 1977**
 - c) **Press Release from Office of the Secretary of Interior, December 29, 1977**

Chronology

8/19 CW and J. Webb met with Stewart Udall re: Alaska Fed. of Natives position

8/14

discussion of first cut on Options on broad issues (minerals, coop mgmt etc.) Alaska Policy Group

8/22 briefing by State officials on their resource maps and selections

8/23 presentation of proposals for specific areas by A/S Herbst

8/24 briefing by staff of Fed-State Land Use Planning Commission on their positions

8/25 comments from various assistant secretaries on proposals and their conflicts with them

these comments analyzed overnight and areas of controversy sorted out.

8/26 Alaska Policy group met to go through area by area and discuss their conflicts

8/27 preparation of an option document on issues of :Subsistence, Coop Management, coastal boundaries, Navigable rivers, wilderness, mineral extraction and each specific area proposal

8/28 review of draft option document by assistant secretaries; revision and finalization of option document.

8/29 discussions among assistant secretaries over conflicts

8/30 Decision meeting with Secretary 10:30 a.m -- 3:30 p.m. (all Asst.

Secretaries and related staff) , following which meeting the Secretary made his final decisions

8/31 staff informed of decisions; redrew boundaries to conform; prepared final documents for presentation to OMB

8/31 Secretary in Alaska -- briefed Governor

9/1 presentation of area by area proposals to OMB and other fed. agencies

9/2 distribution to Omb of draft testimony and amendments

Sept. 9 OWS interagency meeting

Sept. 10 and 11 negotiations with Forest Service

Sept. 12 staff commented on OWS option document

Sept. 13 OWS option document went to President

Sept. 14 we were notified of President's decision

• BUREAU
OF

• MINES

REPORT

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BUREAU OF MINES
P. O. Box 550
Juneau, Alaska 99802

August 22, 1977

MEMORANDUM

To: Will Dare, Chief, Office of Environmental Coordination,
BuMines, Columbia Plaza, Washington, D. C.

From: Chief, Alaska Field Operation Center

Subject: Data regarding H. R.-39, as requested

Enclosed is a Table showing the actual acreage included in H. R.-39 as determined by planimeter on Alaska Map E, and the percentage considered favorable to highly favorable for metallic minerals. Based on favorable acreage, H. R.-39 areas probably contain no less than one-fourth of Alaska's minerals and possibly may contain one-third to one-half.

Some brief answers to section 4 follow:

a. Provision for mineral exploration is useless and a waste of government or private money unless the person doing the exploration has a right of production which cannot be withdrawn at the whim of some administrator. Clearly defined ground rules regarding what conditions must be adhered to during exploration and production would allow the producer to estimate in advance what adherence might cost. This, in turn, would determine whether or not exploration was warranted.

- (1) Impractical - no exploration will take place.
- (2) Private interests unless United States decides to switch to the Soviet system.
- (3) Previous experience shows that a prudent man would not open a mine on a National Park.

b. Areas of known mineralization in Alaska are no indication of the production potential. Instead, areas where geologic conditions are favorable for mineral occurrences should remain open for exploration, but with rules that would assure no serious damage to the other prime values. These rules should be made in advance--not imposed after a great amount of effort and money has been expended to find a mine and get into production.

Page 5:

c. Leasing of metallic minerals has proven to cause more serious problems than the system is designed to solve. Introducing non-mineral oriented administrators and uncertain political considerations into an already very complex gamble produces a situation where graft and pay-offs are the only practical approach for development. Even if run honestly, it is usually only the large companies with abundant resources that have a chance, because government administrators as a group distrust the small active entrepreneurs who may cause them trouble. Despite much bragging by company exploration departments and government agencies, most original discoveries are made by small groups who then sell their finds to major companies for development.

BS Warfield for
John J. Mulligan

Enclosure

TABLE - Areas Included in N.R.-39 and the Amount Considered Favorable to Highly Favorable for Heavy Minerals

	N.R.-39 Acreage	Actual Map Acreage	Areas Considered Favorable for Metallic Minerals	%
1. Arctic National Wildlife Refuge	8,400,000	9,980,000	8,320,000	83
2. Alaska Coastal Wildlife Refuge	300,000	520,000	200,000	38
3. Alaska Peninsula Nat. W. Range	1,200,000	6,160,000	3,840,000	62
4. Copper River Delta N.W. Refuge	900,000	2,000,000	120,000	6
5. Iliamna N.W. Range	2,900,000	7,040,000	1,690,000	24
6. Innoko N.W. Refuge	2,600,000	3,660,000	1,300,000	36
7. Koyukuk N.W. Refuge	5,500,000	4,930,000	2,640,000	54
8. Selawik N.W. Refuge	2,500,000	3,640,000	750,000	21
9. Togiak N.W. Range	3,500,000	5,780,000	3,340,000	58
10. Yukon Delta N.W. Refuge	6,300,000	10,870,000	150,000	1
11. Yukon Flats N.W. Refuge	12,300,000	15,100,000	7,470,000	49
12. Aniakchak Caldera N. M.	400,000	700,000	580,000	83
13. Cape Krusenstern N. M.	900,000	1,200,000	850,000	71
14. Chukchi-Imuruk N. M.	4,500,000	5,690,000	4,300,000	76
15. Gates of the Arctic N. P.	13,600,000	14,270,000	12,600,000	88
16. Glacier Bay N. P.	800,000	750,000	350,000	47
17. Katmai N. P.	2,600,000	2,780,000	1,440,000	52
18. Kenai Fjords N. M.	600,000	1,050,000	300,000	29
19. Kobuk Valley N. M.	1,900,000	2,000,000	2,000,000	100
20. Lake Clark N. P.	7,500,000	9,590,000	6,680,000	70
21. Mt. McKinley N. P.	4,700,000	4,590,000	3,340,000	73
22. Noatak Nat. Preserve	7,600,000	7,920,000	7,920,000	100
23. Wrangells-Kluane Int. Park Complex	15,800,000	17,010,000	8,370,000	49
24. Yukon-Charley Rivers Nat. Park	3,200,000	3,790,000	3,390,000	89
48. Admiralty Island Wild.	1,030,000	1,350,000	900,000	67
49. Misty Fjords Wild.	2,400,000	2,440,000	1,890,000	77
50. Stikine-LeConte Wild.	305,000	370,000	150,000	41
51. West Chichagof-Yakobi Islands	405,000	660,000	650,000	98
52. Yakutat Forelands Wild.	300,000	370,000	0	0
53. Nellie Juan Wild.	600,000	1,870,000	1,100,000	59
Total	125,540,000	148,080,000	86,630,000	59



United States Department of the Interior

BUREAU OF MINES
2401 E STREET, NW.
WASHINGTON, D.C. 20241

August 25, 1977

Memorandum

To: Assistant Secretary--Energy and Minerals
Attention: Mike Sullivan, Room 6643

From: Director, Bureau of Mines

Subject: Issues and Options presented in H.R. 39, additional information

Enclosed is site-specific mineral information from our Juneau office on more of the park and monument areas in H.R. 39 as we promised in our memorandum of August 22, 1977. We are also enclosing a more legible copy of the wild and scenic rivers information.

J. D. Morgan

Acting

Director

Enclosures

cc:

FILES-MMSDA-AD-FO, Rm. 1002, CP

Secretary File

Secretary Reading File (2)

Director's Reading File (2)

MMSDA

S.P. Wimpfen, Rm. 1053-A, CP

~~W.L. Dare, Rm. 1002, CP~~

EBM:BDGoodwin:ab 8/25/77



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF MINES
2401 E STREET, NW.
WASHINGTON, D.C. 20241

August 22, 1977

Memorandum

To: Assistant Secretary--Energy and Minerals
Attention: Mike Sullivan, Room 6643

From: Director, Bureau of Mines

Subject: Issues and Options presented in H.R. 39

In regard to item 4, page 4, we urge that consideration be given to continued exploration on those areas exhibiting medium to high potential for mineral deposits. The lack of opportunity and the congressionally imposed time limitations have made it impossible for either private enterprise or the Federal Government to make decisions based on adequate geologic knowledge.

An incomplete list of site-specific mineral areas recommended for exclusion from H.R. 39 single use purpose, or at least proposed for continued exploration as mentioned above, is attached. We will add to this list as we receive comment from the Alaska Field Operations Center. We hope this partial submission will be useful.

Acting J. D. Morgan
Director

Enclosure

cc:
FILE-MMSDA-AD-FO, Rm. 1002, CP
AS--EM (2)
Director's Reading File (2)
MMSDA
S. P. Wimpfen, Rm. 1053-A, CP

Chief, AFOC
LO, Alaska

✓ W. L. Dare, Rm. 1002, CP
EBM:WLDare:meg 8/22/77



National Wildlife Refuge System

1. Arctic (Additions)

Three-quarters of this unit is highly favorable for occurrence of metallic minerals. Two important copper and copper molybdenum deposits are known and another significant copper prospect found. A small favorable petroleum structure occurs in the northwest part of the northwestern unit. Coal production potential is unknown.

An alternate surface utility corridor and other proposed surface transportation routes cross the area. It includes State and Native land selections.

Exclusive of a small area south of latitude 68° north and west of longitude 148° west would exclude presently known significant mineral deposits. This area is in the southwest corner of the unit.

2. Alaska Coastal (Various)

There are no known significant mineral deposits on the four units. The Cape Lisburne, Point Hope and Namchamik Island units contain Native selection lands. The Point Hope unit would cover surface transportation and access to the Native village of Point Hope.

3. Alaska Peninsula (North and South Units)

The east half of each unit is highly favorable for mineral deposits. Eight significant deposits are known in the south unit containing copper, molybdenum, gold and silver in higher-grade vein and in low-grade porphyry-type deposits. The relatively small Chignik, Herendeen and Unga coalfields are in this unit. The unit has produced gold and silver from the Apollo mines on Unga Island and some coal from the island and the peninsula.

The units are in the favorable Cook Inlet Mesozoic petroleum province. Three important geothermal areas have been identified. Lands included are five Native villages and both Native and State selections. A road from Kanatak to Becharof Lake and a transportation route from the Pacific Ocean to Egegik, on Bristol Bay, is in the south unit.

4. Copper River Delta

No significant mineral deposits are known. The small McKinley Lake gold mining area is in and adjacent to the unit. It also contains the southern part of the Copper River highway and several lesser roads, a number of camps and forest developments, and old railroad grades and rights-of-way. The Bering River coalfield (bituminous and anthracite)

and the Katalla oilfield and refinery site are in the southcentral part of the unit. The eastern part is mostly State and Native selection lands. Most of the area is classed as favorable for petroleum and is in the Gulf of Alaska Tertiary province. Use of certain bays and shores areas may be critical to offshore petroleum development and production on current and future leases. The unit would cover part of the only route believed feasible for surface transportation to the city of Cordova.

5. Iliamna

A large low-grade iron deposit, a significant copper deposit, and several other prospects and known lesser deposits are in the unit. The east quarter is highly favorable for mineral deposits. The west half is in the Nushagak basin and favorable for petroleum and non-marine sedimentary uranium deposits. A transportation corridor has been proposed and studied from Kamishak Bay to Lake Iliamna and across the peninsula to Bristol Bay and the King Salmon-Dillingham area.

The only surface transportation from the coast to the Iliamna basin now is by a road from Iliamna Bay to the north end of Iliamna Lake. There are hydropower sites within the unit. The contained land is mostly Native selections with smaller amounts of 17(d)(2) and National Interest lands. The unit contains at least nine Native villages and parts of the selection areas of about seven others.

6. Inoko (North and South Units)

No significant mineral deposits are known in this unit. Available information indicates about the east fifth of the south unit is favorable geologically. Part of the south unit is in the Inoko Basin and the north unit is in the Galena Basin petroleum province. There are no known significant coalfields. Some of the Galena Basin under the north unit has uranium potential.

The large south unit consists of 17(d)(1) and (d)(2) lands. The north unit contains some of the selection lands for the Native villages of Kaltag and Nulato.

7. Koyukuk (Northeast, Southeast and West Units)

There are no known significant mineral deposits except a gold placer area in the southeast part of the western unit. There is a potential for petroleum and sedimentary uranium deposits in the large west unit, within the Galena Basin petroleum province. The northeast and southeast units may have petroleum potential; they are partly in the Lower Tanana Basin and the Kobuk Cretaceous petroleum provinces, respectively. All units are geologically favorable for

the occurrence of locatable mineral deposits, with about the east half of the northeast unit and northern tenth of the west unit rated as highly favorable. The Kobuk River lies within the western unit for about 200 miles of its course and in the northeastern unit for probably 25 miles. About 30 miles of the Yukon River is in the southeastern unit. These are the chief surface transportation routes to country upriver from these units, summer and winter, and should not be unduly restricted.

The village of Huslia, its entire Native selection area, and some other Doyon Regional deficiency lands lie within the big west unit. The northeast unit contains some Regional lands and parts of the selection areas for the Native villages of Alatna, Allakaket and Bettles. Several townships of Regional land are in the southeast unit.

8. Selawik

The southern fifth of this area is rated highly favorable for minerals but no known significant deposits have been discovered. The western and central parts of the unit are in the Selawik Basin petroleum province and the north half is in the Kobuk Cretaceous province. The Kobuk Cretaceous area has potential for sedimentary uranium. A proposed transportation corridor traverses the southwest part of the unit along Kotzebue Sound, thence inland south of Selawik Lake, then southerly to cross the Seward Peninsula.

The unit contains Regional selection lands and parts of the Kiana, Noorvik, and Buckland selections. The villages of Noorvik and Selawik, and all of the Selawik selections are within the unit.

9. Togiak

Geologic conditions highly favorable for mineral deposits are found in the western quarter and favorable conditions in the central half of the Togiak unit. The Butte Creek area has produced a significant amount of placer gold and platinum. Platinum group metals and gold occur in mafic intrusive rock bodies south and southwest of Goodnews Bay. The supply port, store, fuel storage and part of the road to the Goodnews platinum district are in this unit. The only large identified reserve of placer platinum in the United States and the largest platinum producer is in this district. The deposits, worked since the late 1920's by dredging and various placer methods, lie within the Cape Newenham National Wildlife Refuge, and it is surrounded by the proposed Togiak unit.

Part of the unit has petroleum potential in the Kulukak Bay-Nushagak Bay and the Nushagak Basin petroleum provinces.

The selection lands of the Native villages of Goodnews Bay, Platinum, Togiak, Twin Hills and Manokotak are within this unit. There are several townships of State selections in the northeast corner.

H.R. 39 proposed Wilderness Preservation System status and management for the Togiak unit and the Cape Newenham Refuge.

10. Yukon Delta (Additions)

Potential for occurrence of critical and strategic minerals is generally rated as less favorable to low, based on present geologic knowledge. Ground cover and overburden conditions have prevented comprehensive geologic mapping and sampling. No significant deposits of critical minerals have been discovered. A small part of the Marshall-New Stuyahok gold placer district is in this unit. About four-fifths of the unit is in the favorable Bethel Basin petroleum province and the remainder is in the Yukon-Koyukuk Cretaceous petroleum province. It is also a large potential sedimentary uranium province.

Over 200 miles of the lower part of the Yukon River traverses this addition. This and tributaries are the only surface supply routes to a large area of interior Alaska and the Native villages within the unit.

The addition contains a large amount of village deficiency selection land, the Native villages of Koclik, Bill Moore's, Hamilton, Emmonak, Alakanuk, Sheldon's Point, Mountain Village, Pitkas Point, Andreafsky, St. Mary's, Pilot Station, and the disputed village of Chuloonawik, and their Native selection areas. It also contains Marshall and Ohogamiut and probably all of their Native selection areas.

National Park System

12. Aniakchak Caldera National Monument

No deposits of critical minerals have been located in this unit. The southeast half of the area is considered highly favorable for such deposits, with the northeast half ranging from favorable to less favorable. About four-fifths of the unit is within the Cook Inlet Mesozoic petroleum province. An important geothermal area occurs in the southwest part of the unit (estimated at about one-eighth of the unit). There are no existing roads showing on the Alaska Map E and no proposed transportation corridors that would traverse the unit.

The proposed monument would be made up of 17(d)(2) lands and dual withdrawal lands for (d)(2) and Native regional deficiencies and for (d)(2) and Native village deficiencies.

13. Cape Kruzenstern National Monument

This unit is rated highly favorable for the occurrence of mineral deposits. Several groups of claims were located on lead-zinc-barite prospects in the northeastern part of the unit in September 1975, on lands west of the 17(d)(2) area withdrawn by Secretary of the Interior for the proposed Noatak National Arctic Range. This mineralized area extends easterly into the Noatak Preserve (unit 22) proposed in H.R. 39. It includes the Red Dog Creek deposits in unit 22. The northern tip of the area is in the southern part of the Arctic Foothills petroleum province. Selawik Basin province includes a strip along the southern coast of this unit.

A transportation corridor proposed by the Bureau of Land Management traverse this unit from north to south. Their proposed system map indicates it might accommodate a railroad, coal slurry line and petroleum pipelines to serve the large caking or coking coal deposits and possible oil and gas developments to the north.

The unit would include the Native village of Kivalina, part of its selection lands, and some of the selection lands of Noatak.

14. Chukchi-Imuruk National Monument

The northern coastal area of the unit from north of Cape Prince of Wales to the west end of Goodhope Bay is considered unfavorable for most minerals. Most of the unit ranges from favorable to highly favorable. It contains parts of each of the Teller, Kougarak and Fairhaven gold placer districts. These districts are still productive. The Potato Mountain area has produced tin by dredging and other placer methods and has a high potential for significant additional placer and lode tin. Cape Mountain has significant tin lode and placer resources that are adjacent to the western tip of the unit and may be partly in it. The area has also produced from placer and lode mines. The Ear Mountain district has prospects carrying tin, tungsten and uranium. Copper deposits have been found on the Ward and the Wheeler prospects. The Independence Creek prospect is rated significant for gold, silver, lead and zinc. Indications of hydrocarbon content have been found in the northern tip of the unit, west of Goodhope Bay and south of Kotzebue Sound. This area, about 35 miles wide, is in the southern part of the Selawik Basin petroleum province. Four geothermal areas are listed as moderate to important. The largest of these is between Aurora and Imuruk Lake, and is over 20 miles in diameter.

The northern two-thirds of the highway from Nome to Taylor and the road from the Taylor Highway to the Pilgrim Springs geothermal and resort area are in the unit. There are other local mining roads. A proposed transportation corridor traverses the unit from east to west, below center, and a powerline corridor was also proposed by B.L.M. from the Pilgrim Springs-Imuruk Basin geothermal area to Nome.

Native villages within the unit are the Shishmaref and Mary's Igloo, and a core township for Teller. All of Shishmaref's selection lands are included. Most of the selection areas for Mary's Igloo and Teller, and parts of those for Brevig Mission, Wales, White Mountain and Council. There are also about 20 townships of Native village deficiency and dual 17(d)(2)-village deficiency withdrawals. The largest blocks of land are d(2) and a lesser block of (d)(1).

15. Gates of the Arctic National Park

Only the northern 40 miles of the northernmost extension of the unit ~~is~~ ^{are} rated unfavorable for critical locatable minerals, excepting uranium. The northern part has a potential for sedimentary uranium deposits. The balance of the unit is rated highly favorable to favorable. The high, granitic mountains and divide area in the central part is rated lower than the south and north mountain flanks. The outstandingly important Kobuk-Ambler copper-zinc-lead-silver province extends easterly across the southern part of the unit. Six significant deposit areas have been

located and partially explored. The most important of these, to date, are the Picnic Creek and Giahugus zinc-copper-lead-silver deposits and the Ann-Abo Group lead-zinc-silver deposits. An historic placer district, with some lode claims, was active on Lucky Six Creek and several others in the southern part of the unit were prospected. The significant and currently active Koyukuk gold placer region extends about 60 miles into the southeast corner of the unit.

The northern extension of the unit lies within the Northern and the Southern Sections of the Arctic Foothills petroleum province. There are oil and gas seeps in the Northern Section. There are known coal deposits that have not been evaluated in this northern extension. Two geothermal areas have been identified; they are rated from moderate to important in potential. There is also an unevaluated potential for oil shale.

The Native village of Anaktuvuk Pass and its selection lands lie within the unit. In addition, most of the northern half of the unit is Native regional deficiency withdrawals, dual regional and (d)(2) withdrawals, and the south tip of National Petroleum Reserve-Alaska. Several townships of the Utility Corridor withdrawal are included along the eastern end of the unit. About 100 townships of State selection area lie within the south half of the unit. A considerable area of (d)(2) lands and 3 smaller areas of (d)(1) lands make up the balance.

There has been a winter road to the Prudhoe Bay oilfield through Anaktuvuk Pass. It crossed the proposed park. A proposed rail and utility corridor would run westerly just inside the southwest portion of the unit.

16. Glacier Bay "National Park" (Additions)

The Northwest unit contains the northern part of the Mount Fairweather ultramafic intrusive area. The southern part of the unit is favorable for nickel-copper deposits that might carry values in platinum metals. No known significant prospects or deposits have been located in the area. A narrow coastal strip is in the Gulf of Alaska Tertiary petroleum province. The same area has a uranium potential.

The northern part of the unit crosses the Alsek River. This unit and the proposed Yakutat Forelands Wilderness (Unit 52) would contain the entire section of river from the Gulf of Alaska to the Canadian boundary. This river valley has been discussed as a possible transportation outlet from Canada to the Gulf of Alaska. The unit is all 17 (d)(1) lands.

The east unit is highly favorable for mineral deposits. It contains several minor copper, lead, zinc and radioactive prospects. A uranium prospect between William Henry Bay and the Endicott River is getting new attention by exploration geologists. None of the known prospects are presently classed as significant.

The only highway route into Juneau, generally considered economically feasible, passes through this unit along the west coast of Lynn Canal. The Alaska Department of Highways has completed the route survey, materials and foundation drilling and testing, bridge design and environmental surveys on this route. The Endicott River valley and low divide into Adams Inlet is probably the only feasible highway route to Glacier Bay. This unit and its classification and management status could effectively control both surface transportation routes. The lands in the unit are part of the Tongass National Forest. There are several patented mining claims and some logged areas near William Henry Bay. It cannot be determined from the available H.R. 39 boundaries map whether the claims and logged area are inside the unit or adjacent to it.

17. Katmai "National Park" (Additions)

The southeast half of each unit is highly favorable for mineral deposits. No significant deposits of critical minerals have been discovered in either unit. The easterly halves of the north and south units are in the Cook Inlet Mesozoic petroleum province. About the western fifth of each unit is in the Nushagak Basin province.

There are no existing roads in either unit that show on Map E. A proposed corridor (B.L.M.) for a highway and other utilities from Kamishak Bay to Naknek, Egagik and back to Wide Bay, as plotted, might enter and traverse parts of the north end and west side of the north unit and a part of the west side of the south unit.

The north unit is virtually all 17(d)(2) land, with possibly 2 townships of (d)(1) land and apparently about 1-1/2 townships of selection lands for the Native village of Igiugig. The south unit contains about equal areas of (d)(1) and (d)(2) lands.

18. Kenai Fjords National Monument

The west half of the unit is favorable for mineral deposits. No significant deposits of critical minerals have been discovered. A minor amount of gold has been produced by milling vein deposits from small gold mines at Nuka Bay just inside the southwest corner of the unit.

Most of the land is Native village deficiency withdrawals, with a small amount of (d)(2) and (d)(1) lands.

19. Kobuk Valley National Monument

No significant mineral deposits have been located yet in this unit. The northern portion is considered highly favorable and the southern part favorable geologically. The eastern part of the historic Klery Creek (Kiana) gold placer district extends into the southwestern part of the unit. Gold has been produced in this district by dredging, drift-mining and other placer methods.

The Kobuk River hydropower site, west of Kiana, is in the unit. The Alaska Power Survey (1969) lists potential installed capacity of 120 megawatts at a 50% load factor. The Kobuk River traverses the unit and from 50 to 60 miles of its course are within it. The river provides the only surface transportation route from Kotzebue inland to the nationally-significant copper-lead-zinc-silver deposits being explored and developed in the Ambler-Kobuk district and its eastern extensions. This valley is also the site of a proposed railroad and utility corridor.

The southern half of the unit is in the Kobuk Cretaceous petroleum province.

The unit consists of (d)(2) lands and 3 townships of Native selection lands for the village of Ambler.

20. Lake Clark National Park

Parts of this unit are highly favorable for mineral deposits. Current studies indicate this area is considerably larger than previously known. The southwestern fifth of the area is rated less favorable. A significant copper-molybdenum deposit has been extensively explored by diamond drilling and trenching on Kasma Creek, just south of Lake Kontrashibuna. This property has also had recent metallurgical testing and economic feasibility work performed by the owners. The Tak and other promising partially-explored deposits are nearby. Other known deposits have a potential for resources of copper, molybdenum, lead, zinc, iron, silver, gold and antimony. The best description of the mineral potential of this area is contained in a memorandum to Legislative Counsel from the Director, Bureau of Mines (June 8, 1977, through Assistant Secretary--Energy and Minerals). It concerns H.R. 1454 - To establish the Lake Clark National Park in the State of Alaska, and for other purposes. This memorandum and attached map should be made a part of the comments on unit 20 of H.R. 39.

The only mineral production from the unit has been relatively small amounts of placer gold. There is a current placer operation in the Bonanza Hills, intermittent operations in the Kijik-Portage Creek area just north of Lake Clark, and a reported new discovery with some current exploration near Whitefish Lake. There are reported deposits of high-grade limestone and cement raw materials.

The coastal strip along the east side of the unit is in the Cook Inlet Mesozoic petroleum province. It contains known oil seeps and other evidences of hydrocarbon content. This is also a favorable area for non-marine sedimentary uranium deposits, in addition to its potential for oil and natural gas.

Three geothermal areas have been rated as moderate to important. They are in the northeast corner, east central part, and southeastern corner areas of the unit. The Ingersoll (Lackbuna Lake) hydropower site has a potential installed capacity of 104 megawatts. The Chakachamma, Nondalton and some other hydropower sites could be critically affected by management policies of lands and watersheds within this unit.

A proposed route for a State highway from Cook Inlet to Bristol Bay that would serve the Lake Clark area has been studied by the Alaska Department of Highways.

The entire northwestern part of the unit (about one-third) is land on which State selections are pending under the Statehood Act. There are also several townships of State patented land included within the east boundary. Two noncontiguous lots of (d)(2) land are in the unit. There are larger areas made up of Native village and corporation deficiency withdrawals and dual withdrawals for Native village and (d)(2), and Native region and (d)(2). At least part of the Nondalton village core township and selection lands, and part of the selection area for Pedro Bay village are in this unit.

National Wild and Scenic Rivers System

25. Anaktuvuk National Wild River

The Anaktuvuk River traverses sedimentary rocks considered to have moderate to important potential for the discovery of oil and gas. A wildcat well located about 20 miles northwest of Anaktuvuk Pass on Native selected lands is slated for drilling during the winter of 1977-1978. Oil shale occurrences have been reported nearby. Coal occurrences are known nearby to the village of Anaktuvuk which could serve as alternate fuel for heat and power generation. An upgraded Hicikel Highway from the village to the coal outcrop area could serve as a haul road.

26. Birch Creek National Wild River

The gold-bearing bars along Birch Creek from South Fork Birch Creek to Eagle Creek stimulated the early-day stampedeers to search for the hidden bonanza on the bedrock of side streams. The current market price of gold has renewed interest in the gold potential of Birch Creek proper. The area proposed as a Wild River is entirely within an area considered highly favorable for discovery of lode metallic mineral deposits.

27. Colville National Wild River

All of the Colville River drainage is considered to have potential for discovery of oil and gas, and the Umiat Oil Field borders the Colville in NPR-A. The lower two-thirds of the Colville River area is believed underlain by coal deposits, some of which may have coking characteristics.

Two proposed transportation corridors cross the Colville: one at approximately 69°N., 158°W. and continuing south through Howard Pass; the other, an east-west corridor, at approximately 69°15' N., 152° 30'W.

28. Copper (Iliamna) National Wild River

The entire proposed Wild River is within the proposed Iliamna Wildlife Refuge and also with Native selected lands. Although no mining claims exist along the Copper, the entire drainage is within an area considered highly favorable for the occurrence of metallic mineral deposits.

29. Delta National Scenic River

The upper one-half of the Delta River cuts through a part of the Alaska Range where the occurrence of metallic mineral deposits is considered highly favorable. A great number of mining claims, both lode and placer, have been staked along the river and its tributaries for gold, copper, nickel, lead and antimony. The gravel bars of Delta River contain a small amount of fine gold but not enough to make them of importance commercially. Some of the side streams, however, were worked sporadically for placer gold during the early 1900's; the amount of production is unknown.

On the north slopes of Rainbow Mountain copper and nickel minerals occur in pods up to several feet thick, sparsely distributed in serpentinized peridotite over a distance of more than 1,000 feet. Reported pod values are in the range of 2 percent combined copper and nickel, mainly nickel. A composite grade of approximately 0.3 percent nickel has been obtained over long sections excluding pods. Bureau of Mines beneficiation studies to find an economic method of concentrating the nickel were unsuccessful. The Bee prospect, geologically similar, lies 3 miles west across the Delta River. Traces of nickel, gold, silver, and base metal sulfides are widely distributed in the Rainbow Mountain area. The prospect is covered by unpatented claims.

A small deposit of stibnite, associated with quartz in a lens cutting schist, is located about 1-1/2 miles south of the Rapids Roadhouse nearby the Delta River.

The Jarvis Creek coalfield, a small field about 16 square miles in area with total resources estimated at 77 million tons, is located nearby.

The Trans-Alaska oil pipeline and Richardson Highway closely parallel the Delta along part of its course.

30. Fortymile National Scenic River

The overall geology of the Fortymile River basin is favorable for occurrence of metallic minerals.

Base metal lodes are known to occur in small abundant veins throughout the basin. These contain significant amounts of lead, tungsten, nickel, chromium, copper, zinc, antimony, iron and molybdenum. None have yet been developed but the overall geologic framework of limestone-rich metamorphic rocks intruded by various igneous rocks and other geologic factors can be considered as conducive to the formation of commercial-sized deposits.

The recent commercial development of asbestos along the Tintina Fault zone in the lower Fortymile River basin in Yukon Territory, Canada, has raised considerable interest in the Alaska portion of the Fortymile where similar conditions exist. Asbestos of commercial grade has been found on a ridge separating the drainages of the North Fork from the Middle Fork in the lower Late Creek drainage, and to the south of Champion Creek.

A locally significant deposit of subbituminous coal occurs at Chicken.

It is gold that makes the Fortymile River area prominent and today gold remains the only metallic mineral in production.

In the fall of 1886 gold was first discovered in gravel bars on the Fortymile River at Franklin Creek and from that time on gold production

became a steady, if not spectacular, component of the resource uses in the basin. Nearly all gold in the basin has been taken from placer deposits in the streams or higher ancient stream terraces. Lode deposits of gold have not been found in sufficient quantity to mine except for small deposits in quartz and calcite veins just north of Chicken.

In a few places the high-level terraces have been prospected for gold but because of the difficulty of getting water to them, the only significant mining has been on the terraces of Napoleon Creek. However, the high terraces are one of the most promising sources of placer gold and possibly the only remaining source that might produce significant amounts in the Fortymile area. The gold is spotty in occurrences and would require moving very large amounts of gravel for recovery.

Between 1885 and 1942 an estimated \$8.7 million in gold was recovered in the Fortymile Mining District. Production was for all practical purposes at a standstill during the war years 1943 to 1946. From 1946 to 1962, an additional \$1.5 million in gold was recovered. Increasing cost reduced the number of operating placer mines to five in 1961. This downward trend continued until recently when the price of gold was raised.

31. Gulkana National Scenic River

Approximately the upper one-half of the Gulkana River flows through an area considered highly favorable for the occurrence of metallic mineral deposits. The lower one-half is unfavorable but includes part of the Copper River Basin, which may have some potential for oil and gas.

A number of copper prospects are located in the vicinity of Hogan Hill about 7 miles east of the Gulkana River. An oil and gas lease spans the River about 10 miles north of Gakona Junction; the status of the lease is unknown.

The Richardson Highway and Trans-Alaska Pipeline parallel but are not in sight of the Gulkana over most of its length. The Gulkana flows within the pipeline corridor, Native and State selected lands.

32. Holitna - Hoholitna National Wild River

The upper reaches of both the Holitna and Hoholitna Rivers flow through areas considered favorable to highly favorable for metallic mineral deposits. The lower reaches are included in the Holitna sedimentary basin which may have some potential for oil and gas, and uranium.

Placer gold mining has taken place on tributaries of the Holitna but no active mines are known. The notice of assessment work for a prospect near the headwaters of Shotgun Creek, a tributary of the Holitna, mentions testing for radioactive minerals.

Both the Holitna and Hoholitna, except for one township, flow through Native and State selected lands.

33. Ikpikpuk National Wild River

The Ikpikpuk River and its tributaries are entirely within the National Petroleum Reserve Alaska. Several test wells were drilled in the Ikpikpuk area during exploration of Naval Petroleum Reserve No. 4, 1944-53. None of the tests encountered more than just shows of oil and gas, but each of the tests intersected coal seams. Six exploratory wells are planned for NPR-A next winter, one of which will be located near the mouth of Ikpikpuk River. The Ikpikpuk is within a sedimentary basin that is considered to have some potential for discovery of uranium.

A proposed east-west transportation corridor closely parallels Kigalik River and Maybe Creek which form the headwaters of Ikpikpuk River.

34. Kisaralik National Wild River

Approximately the upper two-thirds of the Kisaralik River flows through an area considered highly favorable for discovery of metallic mineral deposits. The lower one-third flows through a part of the Bethel Basin which is considered to have important potential for discovery of oil and gas, and non-marine horizons of the basin may have some potential for discovery of uranium. No mining claims are recorded along the River itself but gold placer claims with recent recordation of assessment work have been staked along tributaries of Kasigluk River which, in turn, is tributary to Kisaralik River.

Approximately the lower one-quarter of the Kisaralik flows through Native selected lands, the upper three-quarters through (d)(1) lands. A proposed transportation corridor passes nearby the headwaters.

• U.S.G.S.

• MEMO

GEOLOGICAL SURVEY
RESTON, VIRGINIA 20192

19

In Reply Refer To:
ECS-214381
Mail Stop 913

AUG 9 1977

Memorandum

To: Assistant to the Secretary

Through Deputy Assistant Secretary--Energy and Minerals

From: Director, Geological Survey

Subject: Comments on d-2 issues raised in Bohlen's memorandum of
July 29, 1977

1. Site-specific conflicts. Maps prepared by the Geological Survey showing conflicts between areas included in the four systems identified in H.R. 39 and areas having a high potential for containing mineral deposits have been transmitted to and discussed with Chuck Eddy and Buff Bohlen. Only very broad areas with the potential for containing valuable mineral deposits can be identified with the resource information now at hand. The level of knowledge for most of the State is low and industry exploration activity there is in its infancy compared with the conterminous States. To analyze fully the issues raised in Bohlen's memo would require further work, including physical exploration, to determine more specifically where economic mineral deposits are located and their value.

Thus, it is difficult to weigh the mineral values in the areas of conflict with other values or to recommend specific areas for exclusion from wilderness classification. To exclude from wilderness classification all of the areas shown on Geological Survey maps as having mineral potential does not appear to be a viable option. But the fact that these areas may contain deposits of minerals that will be needed in years hence cannot be ignored. We therefore suggest consideration of two options, which are not mutually exclusive. (1) Specify in the legislation that the Geological Survey will continue its systematic mineral resource appraisal program (AMRAP) to better define and evaluate the areas with resource potential. The results of such work will lay the foundation for consideration of future boundary changes or for decisions on mineral activities that might be permitted in these areas. (2) Leave these areas open to mineral development under one of the options discussed in item 4 of Bohlen's memorandum.

2. Wilderness. It has been the Congressional view that areas should be designated as "wilderness" only after mineral surveys have been completed

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in the areas, as called for by the Wilderness Act. Mineral surveys have been made on only Granite Fiords, Tracy-Arm-Fiords Terror, and Glacier Bay.

3. Surface transportation. No comments.

4. Mineral exploration and development. Provisions should be considered for future mineral activities in areas of high mineral potential. We assume that such provisions would include constraints as to when, where, and how such activities are to be undertaken. Such constraints preclude the mineral activities being conducted under the provisions of the 1872 mining law. Thus, a leasing system would have to be developed for these lands. This subject may be moot, however, if the 1872 mining law is replaced by a leasing system as is now being widely discussed.

If exploration is permitted on these lands, development and production should also be permitted, for unless provision is made to exploit the deposits that might be found, there would be no incentive or purpose for the exploration. Inasmuch as prospecting, exploration, development, and production are sequential steps in a single process, it would be better to cover all of them in a single piece of legislation rather than each step being subject to separate Congressional acts.

It would not be wise to limit mineral activities to so-called "critical" commodities. Criticality of commodities is not constant but changes with changes in manufacturing technology and the world supply situation. A commodity that is critical today may be in over-supply tomorrow; or the reverse may be true. Long lead-times are required to discover and develop deposits; thus, deposits must be identified now for commodities that may become "critical" a number of years from now. We believe that areas open to exploration for mineral deposits should be open to exploration for all commodities that they might contain. Metallic ore deposits are often highly complex and contain several different valuable elements. Thus, one may not look for a specific element, but for a particular deposit type that may contain one or more elements but that may not everywhere contain the same suite of elements.

The site-specific exploration should be conducted by private interests. In the United States, mineral exploration has traditionally been the responsibility of the private sector and the expertise in this field rests there. If such activities were to be undertaken by the Federal Government, it would require reorientation of existing agencies (Geological Survey and/or Bureau of Mines) or the establishment of new agencies. If a single agency had the responsibility for exploration, we could lose the advantage of several different viewpoints on where and how to conduct such exploration that is now supplied by many companies evaluating the geologic information as it becomes available.

3

Permitting exploration and production in National Parks could possibly set precedents that could result in strong pressure to allow similar activities in other parks. Resource potential of the land should be determined before inclusion in National Parks. Lands identified as having high mineral potential should then probably be in another classification that would protect surface values but permit continued exploration and production.

5. Fish and Wildlife management. No comment.

6. Other Federal programs. No comment.

U. E. McKelvey
Director

DAVEN-
PORT
MEMO



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

25 August 1977

Memorandum

To: Cynthia Wilson *[Signature]*
From: Joan M. Davenport
Assistant Secretary--Energy and Minerals
Subject: E&M Recommendations on d-2 Proposal

The major Energy and Minerals d-2 proposal was conveyed in a memorandum dated August 15 from the Deputy Assistant Secretary for Energy and Minerals. This remains our primary position on d-2 selections. However, should our recommendations not be acceptable on the overall concepts, we are submitting the following site-specific review.

We have examined each of the areas to be designated and have presented our tentative recommendations. Due to the time frame for submitting these recommendations, they should be considered preliminary, and we may wish to change some of them in the next few days.

We would like to discuss in a general manner the question of whether the Fish and Wildlife Service should control the water surface and water column of navigable rivers running through areas which are refuges or otherwise managed by that Service. We believe such management could raise very serious questions were commercial vessels barred from using navigable rivers.



ENERGY AND MINERALS

Admiralty Island

AS/E&M Position

Although this area has considerable mineral potential, AS/E&M recognizes its high environmental value and does not object to reserve status. We have no preference between Forest Service wilderness or National Wildlife Refuge status.

Energy and Minerals Interest

Hardrock Minerals: The central area of the island shows the highest mineral potential, and the outer parts show a favorable potential. An exception is the area south of Angoon, where there is relatively little apparent mineral potential. The northern part of the island has indications favorable for chromite, titaniferous magnetite, nickel, cobalt, and platinum group elements. The remainder has potential for base-metal sulfide deposits, including copper, lead, and zinc. We believe there are three exploration programs presently underway by industry. A copper discovery is reported within the last six months.

Oil and Gas: No reported potential.

ENERGY AND MINERALS

Aniakchak

AS/E&M Position

AS/E&M believes the Aniakchak Caldera area should be included in the d-2 lands.

Energy and Minerals Interest

Hardrock Minerals: Mineral occurrences have been found along this part of the Alaskan peninsula, but no deposits have been located in the proposed area. The southeastern slope of most of the peninsula has a favorable mineral potential.

Oil and Gas: Both the northwest and the southeast parts of this area have oil and gas potential. The southeast part lies within the Cook Inlet petroleum province, and the northwest part lies within the Nushagak petroleum province. Any of the basin within the volcanic area will have no oil potential.

Comments

To the extent possible, we would recommend allowing petroleum exploration under tight constraints in areas in which such activity might be compatible.

ENERGY AND MINERALS

The Bering Land Bridge

AS/E&M Position

The area north of a line drawn from Cape Prince of Wales in the west to Goodhope Bay in the east should be included in the Preserve. Areas south of that line should be managed in a manner compatible with the northern area but allowing mineral development.

Energy and Minerals Interest

Hardrock Minerals: This area has long been recognized as highly favorable for metallic deposits. The area immediately south of the above-described line has geological characteristics of deposits (tin, gold, lead, and silver) similar to southwest major veins, replacements, and disseminated deposits of tin, beryllium, fluorite, tungsten, and uranium. The area south of Goodhope Bay is prospective for lead, zinc, and silver deposits.

Oil and Gas: The northern third of this area has indications of hydrocarbon occurrences.

Comment

Preferably, the area should be managed to protect its historic and environmental values but not excluding possible future development.



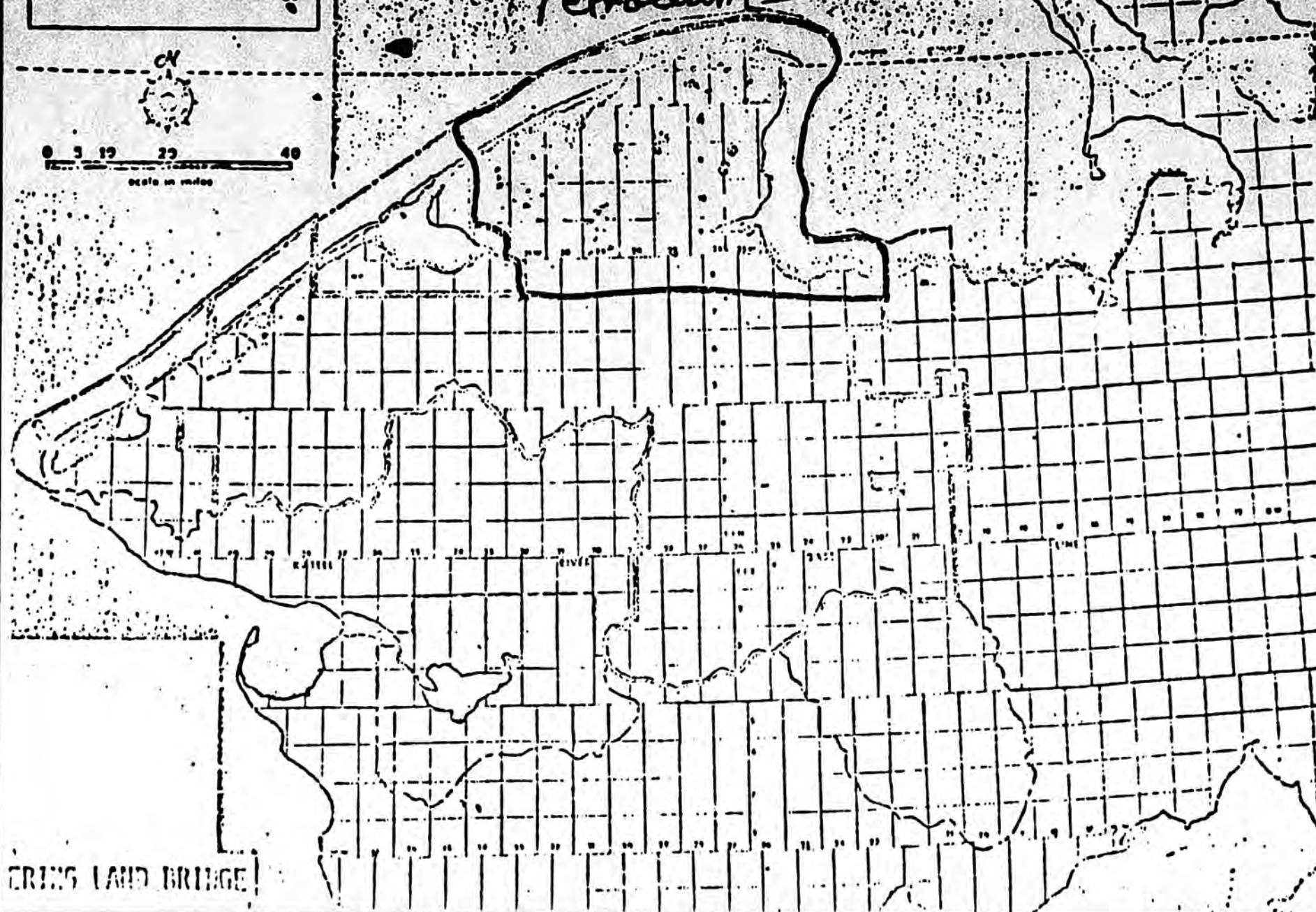
—— National Preserve
--- Area of Environmental Concern

Petroleum



0 5 10 20 40

Scale in miles



CRING LAND BRIDGE

ENERGY AND MINERALS

Cape Kruzenstern

AS/E&M Position

This area should be included as a national monument.

Energy and Minerals Interest

Hardrock Minerals: No identified potential.

Oil and Gas: No evidence of oil and gas.

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ENERGY AND MINERALS

Denali or Mount McKinley National Park

AS/E&M Position

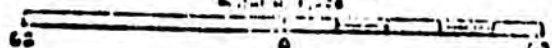
E&M has no objection to the designation.

Energy and Minerals Interests

Hardrock Minerals: There are four sections in the new additions that are highly mineralized. Transportation, however, would be very difficult. The mineralized areas contain lode gold, silver, base-metal deposits, tin, antimony, chromite, copper, and platinum group elements.

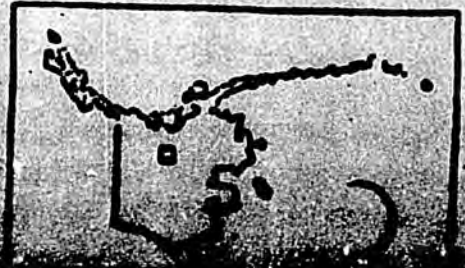
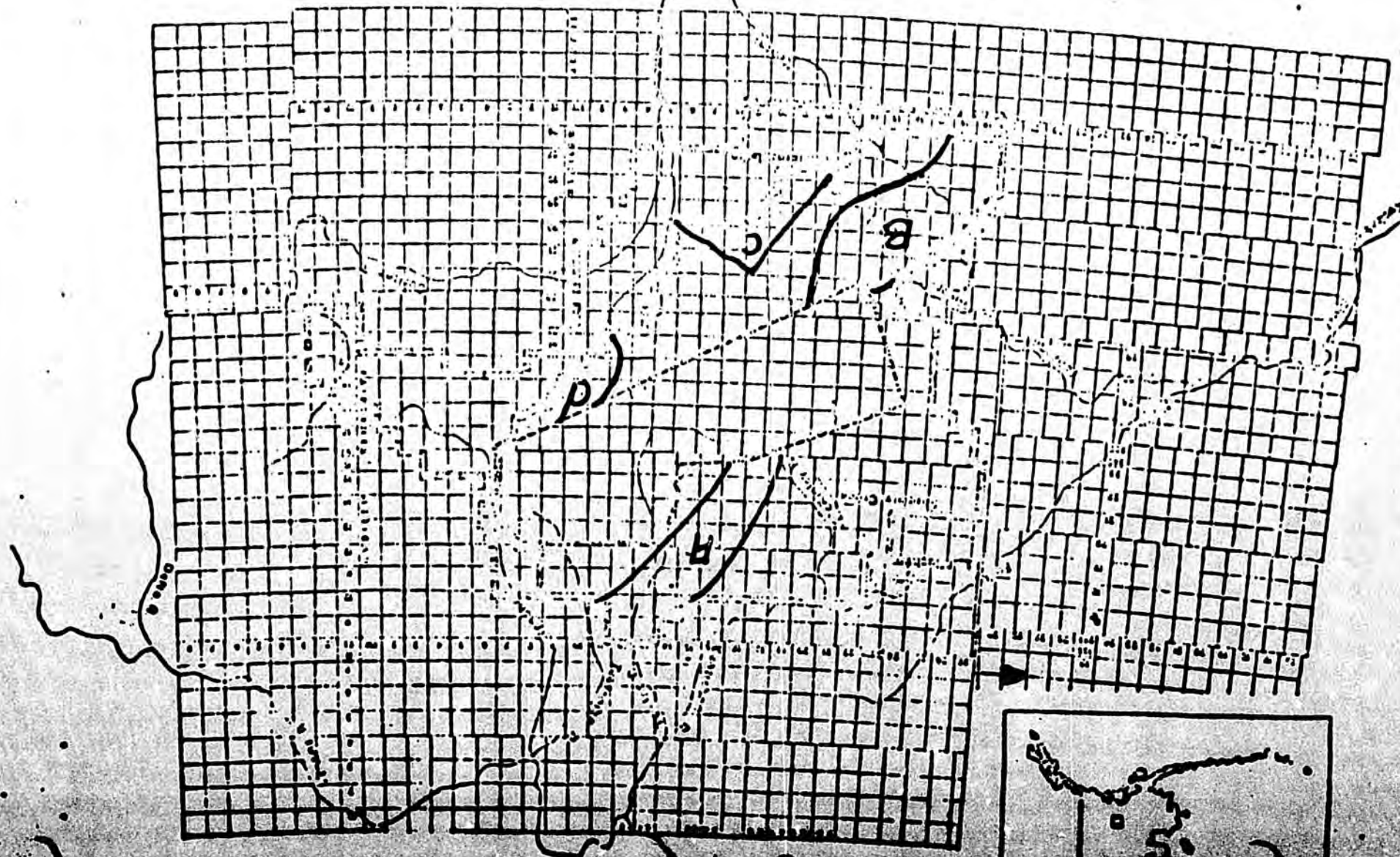
Oil and Gas: The northwestern part of the proposal lies within the Nimchumina basin, but petroleum potential is considered low.

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ENERGY AND MINERALS

Gates of the Arctic Wilderness National Park/Preserve

AS/E&M Position

The Gates of the Arctic Wilderness National Park/Preserve are coincident with one of the highest potential hardrock mineral areas in Alaska in the southern one-third section. E&M recommends that the southern one-third of the park/preserve be managed in such a manner as to allow the Secretary to permit controlled access. In effect, the Secretary could remove this area from mineral location but could allow hardrock mineral leasing after the mining law is revised and if in his judgment mineral development could occur without major damage to the park/preserve.

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ENERGY AND MINERALS

Glacier Bay

AS/E&M Position

E&M does not object to redesignation of the existing monument as a national park, nor to the additions, with one exception. We would request a boundary change in the northwestern addition. That boundary's change is indicated on the accompanying map.

Energy and Minerals Interest

Hardrock Minerals: The area designated as A on the map has stratoform deposits of nickel, cobalt, chromite, and platinum group elements. Other areas to be included (B) have geological terrain containing lode gold, silver, and copper deposits, and geological relations similar to other areas that have volcanogenic and/or stratoform base-metal sulfide deposits.

Oil and Gas: The southwest part of Glacier Bay lies within the Gulf of Alaska petroleum province.

CANADA



GULF
of
ALASKA



Proposal Boundary
Existing Boundary
Area of Environmental Concern

GLACIER BAY

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ENERGY AND MINERALS

Katmai National Park

AS/E&M Position

E&M recommends that the eastern one-third of Katmai be left open for controlled petroleum exploration for a set period of years.

Energy and Minerals Interest

Hardrock Minerals: No significant deposits known.

Oil and Gas: The eastern one-third of this area lies within the Cook Inlet petroleum province.

ENERGY AND MINERALS

Kenai Fjords

AS/E&M Position

E&M supports the designation as a National Park.

Energy and Minerals Interest

Hardrock Minerals: The western half of the unit is favorable for mineral deposits, however, no significant deposits of critical minerals have been discovered. A minor amount of gold has been produced from a small gold mine at Nuka Bay just inside the southwestern corner.

Oil and Gas: No indication of hydrocarbon potential.

ENERGY AND MINERALS

Kenai National Moose Refuge

AS/E&M Position

E&M supports the national moose refuge.

Energy and Minerals Interest

Hardrock Minerals: No known mineral deposits in this area.

Oil and Gas: The northern addition lies on the western margin of the Cook Inlet province.

ENERGY AND MINERALS

Lake Clark National Park/Preservation

AS/E&M Position

While E&M will not object to this designation, we are concerned that it is an area of high mineralization. We would prefer a status which would allow controlled mineral exploration and development if that were to be found compatible with the preservation.

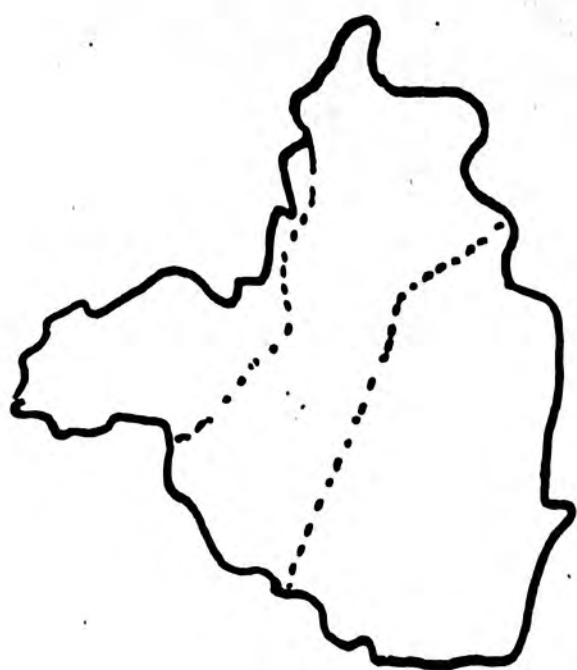
Energy and Minerals Interest

Hardrock Minerals: About one-third of the area running generally north-south through the center is highly mineralized. Potentially significant occurrences of copper, molybdenum, lead, zinc, iron, and antimony are known. Industrial interest has occurred within the last three years.

Oil and Gas: No potential known.

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ENERGY AND MINERALS

Nootak National Ecological Preserve

AS/E&M Position

The Nootak preserve presents some very difficult problems. While it has excellent ecological characteristics, it is also highly valued for its mineral potential. E&M would recommend a more selective approach to management of the preserve. It should be recognized that minerals are a major resource. We would suggest a status which would allow controlled exploration and development for hardrock minerals.

Energy and Minerals Interests

Hardrock Minerals: The area identified on the map as (A) has black chert, shale, and limestone sequences that host important lead-zinc-barite deposits in the western parts. In the remaining areas there are rocks thought to contain significant deposits of chromium, nickel, iron, copper, and platinum group elements. Area (B) is believed to have deposits of chromium, nickel, copper, and platinum group elements. Area designated as (C) contains major stratoform barite and conper-zinc-barite deposits and copper sulfide fractures.

Oil and Gas: There is no evidence of hydrocarbons in this area.



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ENERGY AND MINERALS

Wrangell-St. Elias National Park

AS/E&M Position

E&M would prefer that this area be managed in a way which would allow controlled development. However, if environmental values are such we will not strongly object to its designation as a National Park.

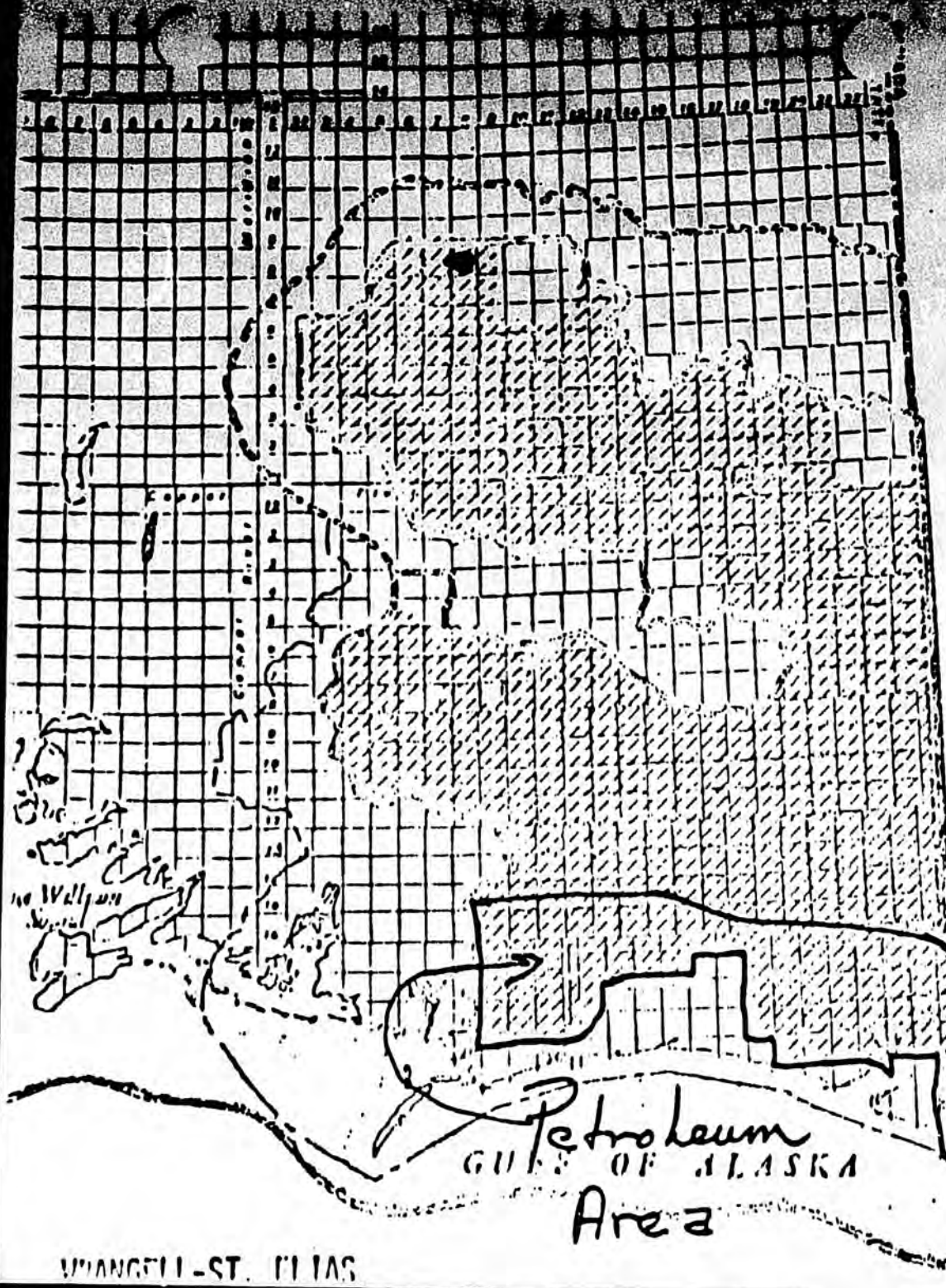
Energy and Minerals Interest

Hardrock Minerals: Much of this area is mineralized. On the attached map, section (b) contains important copper and/or molybdenum deposits, placer and lode gold deposits, and occurrences of chrome and zinc. Areas designated (c) contain copper deposits, molybdenum deposits, lode and placer gold deposits, and lode silver. The area designated (d) has geothermal characteristics similar to those in the Prince William Sound copper belt which is just west of the site.

Oil and Gas: The southern most part of this area is within the Alaska Gulf petroleum province.



Wrangell-St. Elias



- National Park
- - - National Preserve
- - - Area of Environmental Concern

WILDERNESS PROPOSAL

Petroleum
GULF OF ALASKA
Area 2

27

ENERGY AND MINERALS

Yukon Charlie National Park

AS/E&M Position

The Yukon Charlie proposed area is of significance for both hardrock and hydrocarbon potential. For this reason we suggest that it remain under study for a period of 5 years. Further resource assessment work should be performed and controlled petroleum exploration should be allowed if there is industry interest. Such exploration would be constrained to that which would not interfere with the primary purpose of the Park.

ENERGY AND MINERALS

Alaska Peninsula Study Area

AS/E&M Position

E&M supports the proposed study. We question whether tentative control of this area should be changed until the results of that study are known.

Energy and Minerals Interest

Hardrock Minerals: The southeastern ridge of the peninsula has high potential for many kinds of minerals. Eight significant deposits are known in the southern most unit. These contain copper, molybdenum, gold, and silver. Geothermal resources have also been identified.

Oil and Gas: The southern part of the study area is in the Cook Inlet petroleum province. The northwestern part is in the Nusagah Basin. Hydrocarbon potential is unknown.

ENERGY AND MINERALS

Alaska Peninsula Study Area

AS/E&M Position

E&M supports the proposed study. We question whether tentative control of this area should be changed until the results of that study are known.

Energy and Minerals Interest

The southeastern ridge of the peninsula has high potential for many kinds of minerals. Eight significant deposits are known in the southern most unit. These contain copper, molybdenum, gold, and silver. Geothermal resources have also been identified.

Oil and Gas: The southern part of the study area is in the Cook Inlet petroleum province. The northwestern part is in the Nusagak Basin. Hydrocarbon potential is unknown.

ENERGY AND MINERALS

Kobuk Valley National Park

AS/E&M Position

E&M does not object to the establishment of the Kobuk Valley National Park. However, we do point out that the southern most part of the proposed area is in the Kobuk cretaceous province and is favorable for hydrocarbons.

Energy and Minerals Interest

Hardrock Minerals: Few deposits have been found, but much of this area has a very favorable geology. To the east there are stratiform copper and zinc deposits with significant lead, silver, and gold value.

Oil and Gas: Considered productive in the area of Kobuk province.

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ENERGY AND MINERALS

Alaska Marine Resources National Wildlife Refuge

AS/E&M Position

We find no major conflicts with these designations.

Comment

We question whether a 6-mile buffer is necessary.

ENERGY AND MINERALS

Arctic National Wildlife Refuge

AS/E&M Position

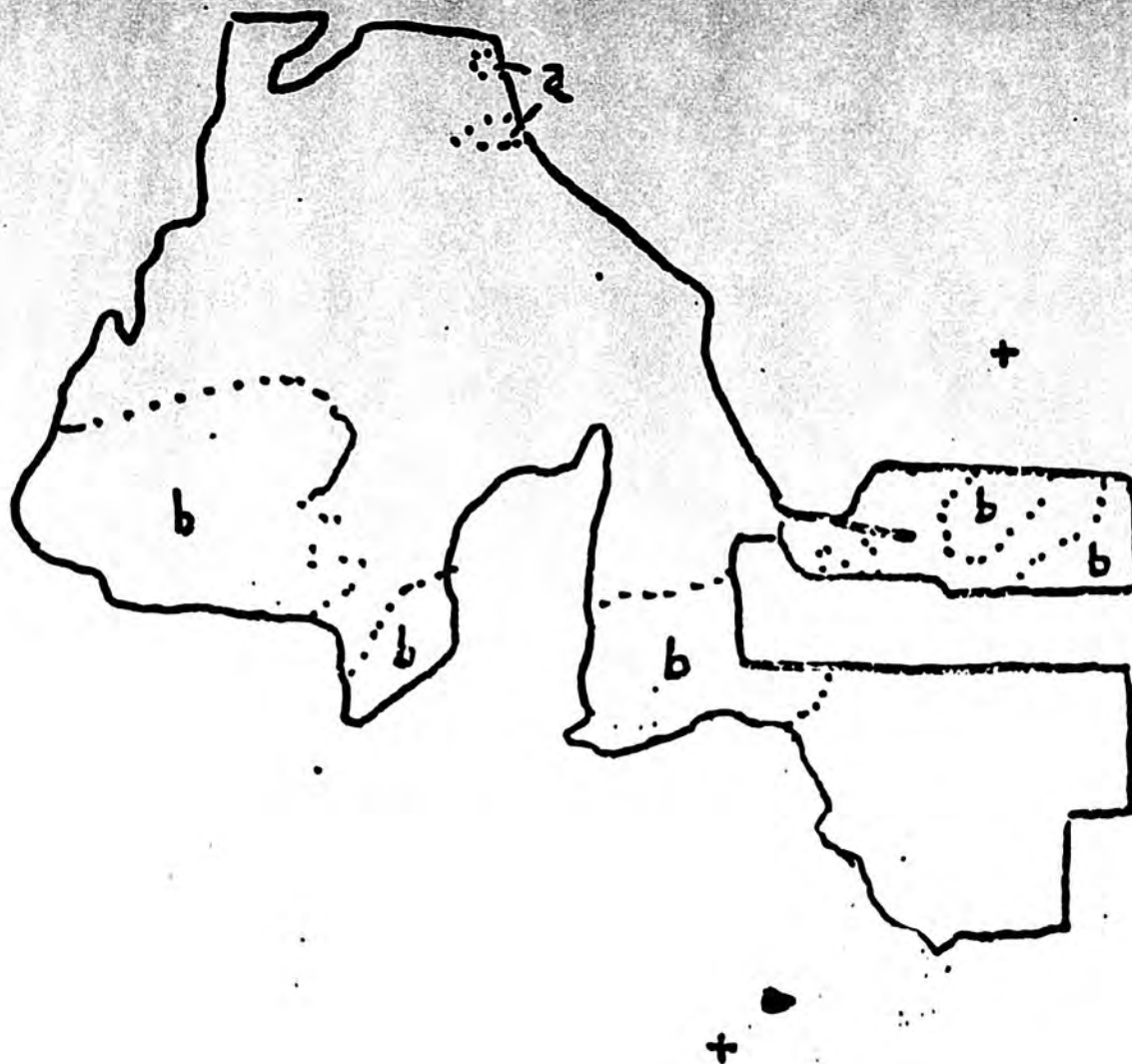
E&M recommends that the additions suggested be designated for study to further identify the mineral potential. The decision date of the study should be 5 years.

Energy and Minerals Interest

Hardrock Minerals: The area identified as (a) may contain base metal sulfite deposits. There are some local copper sulfite deposits. There are some local copper sulfite deposits in sedimentary and volcanic rocks. Areas designated (b) contain rock types and formations that are continuous to the west. They contain important mineral deposits, particularly base metal sulfite deposits, copper, lead, zinc, antimony, and silver. It also may contain occurrences of thorium and uranium.

Oil and Gas: The northwestern tip lies within the Arctic foothills province.

Wildlife Refuge



ENERGY AND MINERALS

Becharof Lake

AS/E&M Position

E&M recommends that this area be designated for study rather than immediate wildlife refuge status. A 5-year decision date should be established.

Energy and Minerals Interest

Hardrock Minerals: This area potentially contains significant mineral deposits. However, very little information is available.

Oil and Gas: The southeastern section is a part of the Cook Inlet petroleum province; the northwestern section lies within Nushagak petroleum province. Hydrocarbon potential is unknown.



Becharof National
wild life refuge

ENERGY AND MINERALS

Copper River Wildlife Refuge
and additions to the
Chugach National Forest-Wilderness

AS/E&M Position

E&M concurs with the proposal.

Energy and Minerals Interest

Hardrock Minerals: The northern most tip includes a few copper lode deposits in widely scattered veins of gold.

Oil and Gas: The southeastern one-third lies within the Gulf of Alaska petroleum province.

3

ENERGY AND MINERALS

Iliamna National Wildlife Refuge

AS/E&M Position

The Iliamna proposal area is highly mineralized. We believe the western half should remain open to oil and gas exploration.

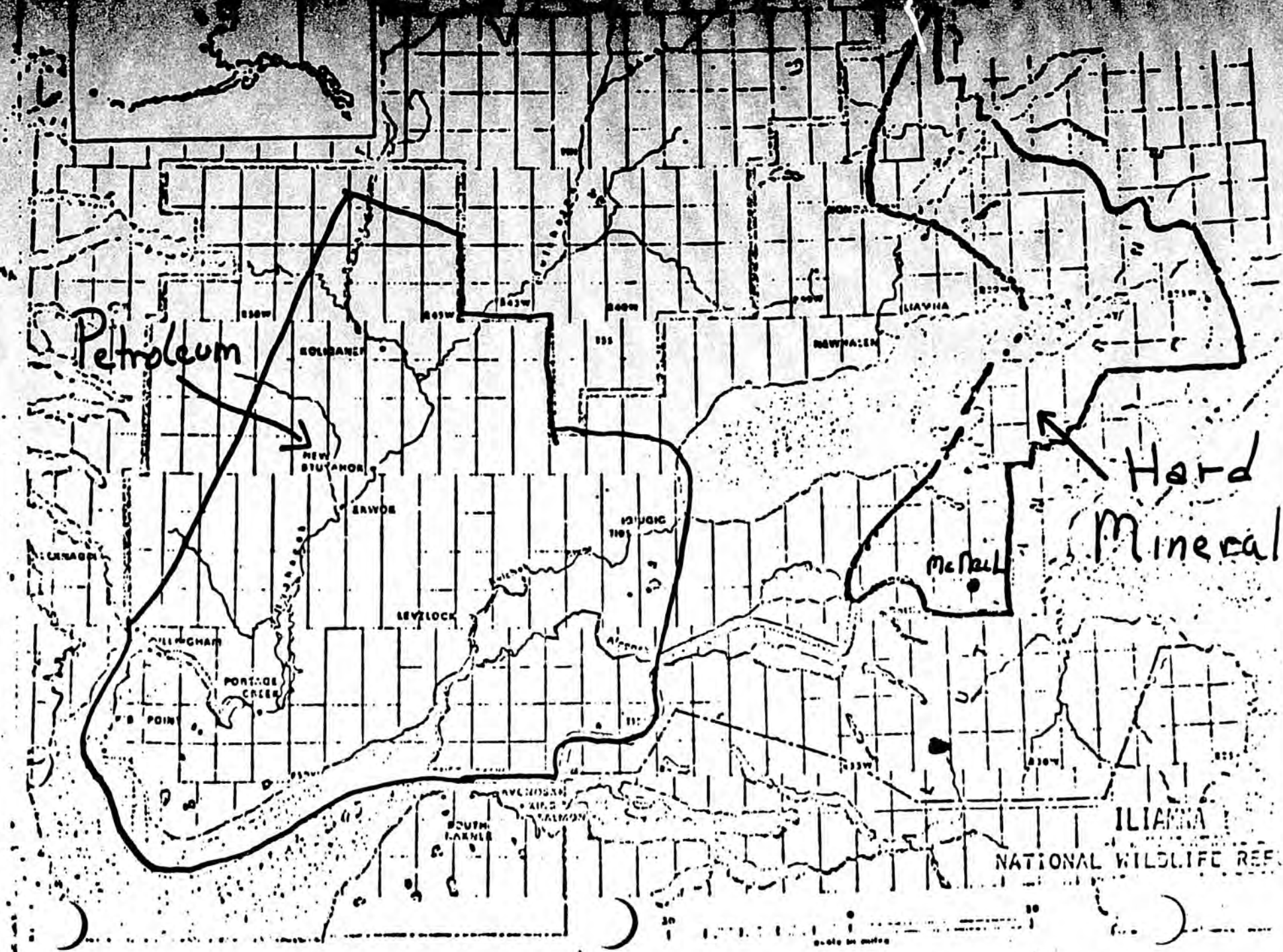
Energy and Minerals Interest

Hardrock Minerals: East of Iliamna Lake is considered highly favorable for mineral deposits. There is evidence of contact in metamorphic copper deposits, molybdenum and copper deposits, submarine volcanogenic sulfite deposits and a few low-grade uranium occurrences.

Oil and Gas: Lake Iliamna westward, except for the northwestern section of the proposed area is the major part of the Nushaka Basin.

Petroleum

Hard Mineral



ILIAPPA
NATIONAL WILDLIFE REF

ENERGY AND MINERALS

Innoko Wildlife Refuge

AS/E&M Position

E&M supports the proposal as described.

Energy and Minerals Interest

Hardrock Minerals: No significant deposits known.

Oil and Gas: Although there is a sedimentary basin through the central part of this area, petroleum potential is considered to be low.

ENERGY AND MINERALS

Kanuti National Wildlife Refuge

AS/E&M Position

E&M has no objection to designation as a wildlife refuge.

Energy and Minerals Interest

Hardrock Minerals: No significant deposits known.

Oil and Gas: While the northwest half lies in the Kobuk basin, the petroleum potential is considered low.

ENERGY AND MINERALS

Koyukuk National Wildlife Refuge

AS/E&M Position

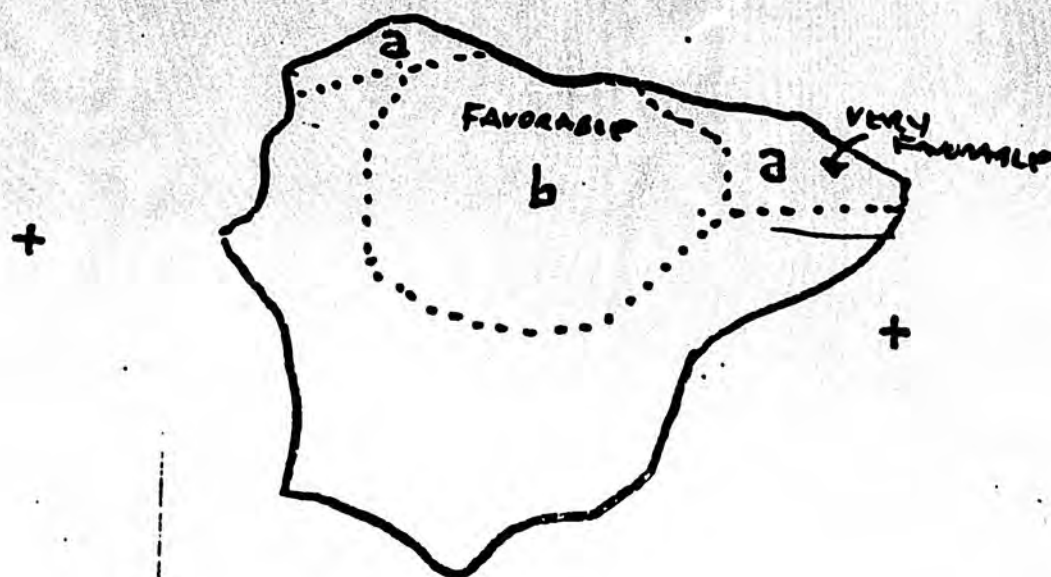
E&M would prefer the northern one-half of this area to be designated for study. The decision deadline should be in five years.

Energy and Minerals Interest

Hardrock Minerals: The northern one-half of the area contains placer deposits of uranium-thorium-bearing minerals, gold and platinum. Study of this area is needed to more clearly define the extent of these deposits. Uranium, thorium, and platinum are minerals of extreme national interest.

Oil and Gas: The southwest segment lies within the Yukon Koyukuk province and is considered to have petroleum potential. The central portion is in the Galena basin but oil potential is considered low.

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Koyukuk Wildlife
Refuge

ENERGY AND MINERALS

Nowitna Wildlife Refuge

AS/E&M Position

There is no objection from the Energy and Minerals viewpoint to the national wildlife refuge designation.

Energy and Minerals Interest

Hardrock Minerals: No known significant deposits.

Oil and Gas: Although the northern one-third is within the Tanana basin, the potential is considered low.

ENERGY AND MINERALS

Quagagniaq Wildlife Refuge

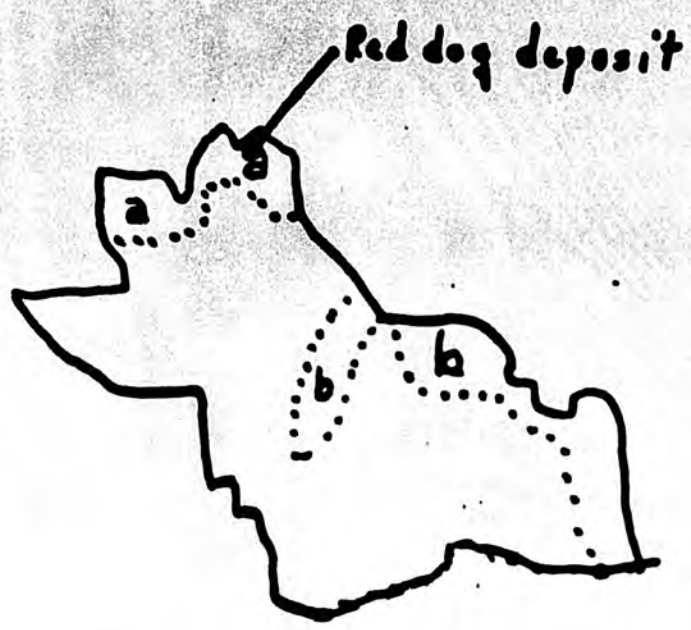
AS/E&M Position

E&M recommends two boundary changes, one along the northwest border, the second along the northeast border (see map, areas designated (a) and (b)).

Energy and Minerals Position

Hardrock Minerals: A famous deposit (Red Dog) is in the area designated (a). It contains stratiform lead and zinc barite. This is an area of high mineral interest and potential. The area designated (b) is of interest for chromium, nickel, iron, copper, and platinum. At the least, the second area should be subjected to further study.

Oil and Gas: No evidence of hydrocarbon potential.



Quagagniaq
Wildlife refuge

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ENERGY AND MINERALS

Selawik National Wildlife Refuge

AS/E&M Position

E&M recommends that this area be subjected to further study before designation as a wildlife refuge. It contains uranium-thorium-bearing minerals and platinum. Suggest a five-year deadline for the decision.

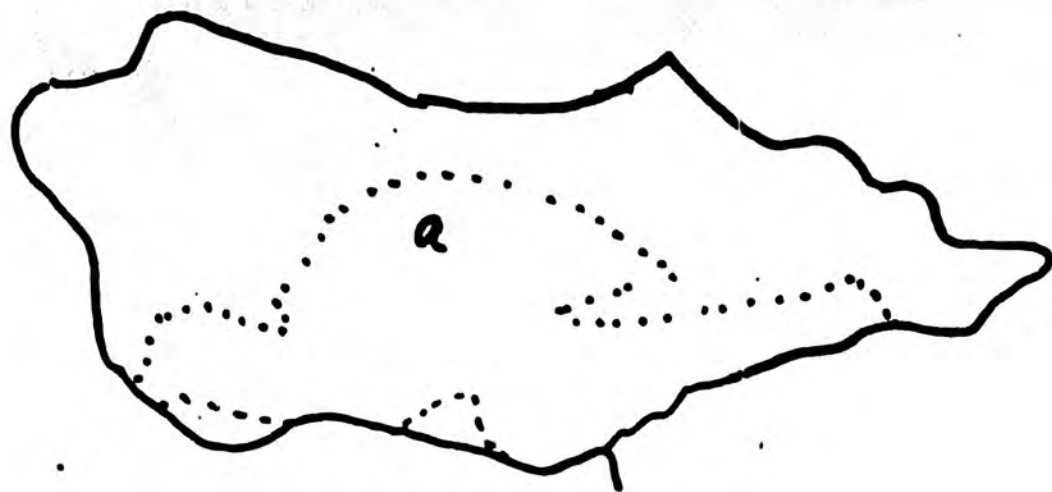
Energy and Minerals Interest

Hardrock Minerals: The area contains placer deposits of uranium-thorium-bearing minerals, gold and platinum. It contains some disseminated lode deposits of uranium-thorium deposits.

Oil and Gas: The western portion of the Selawik refuge is considered of high petroleum potential.

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Selawik Wildlife
Refuge

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ENERGY AND MINERALS

Tetlin National Wildlife Refuge

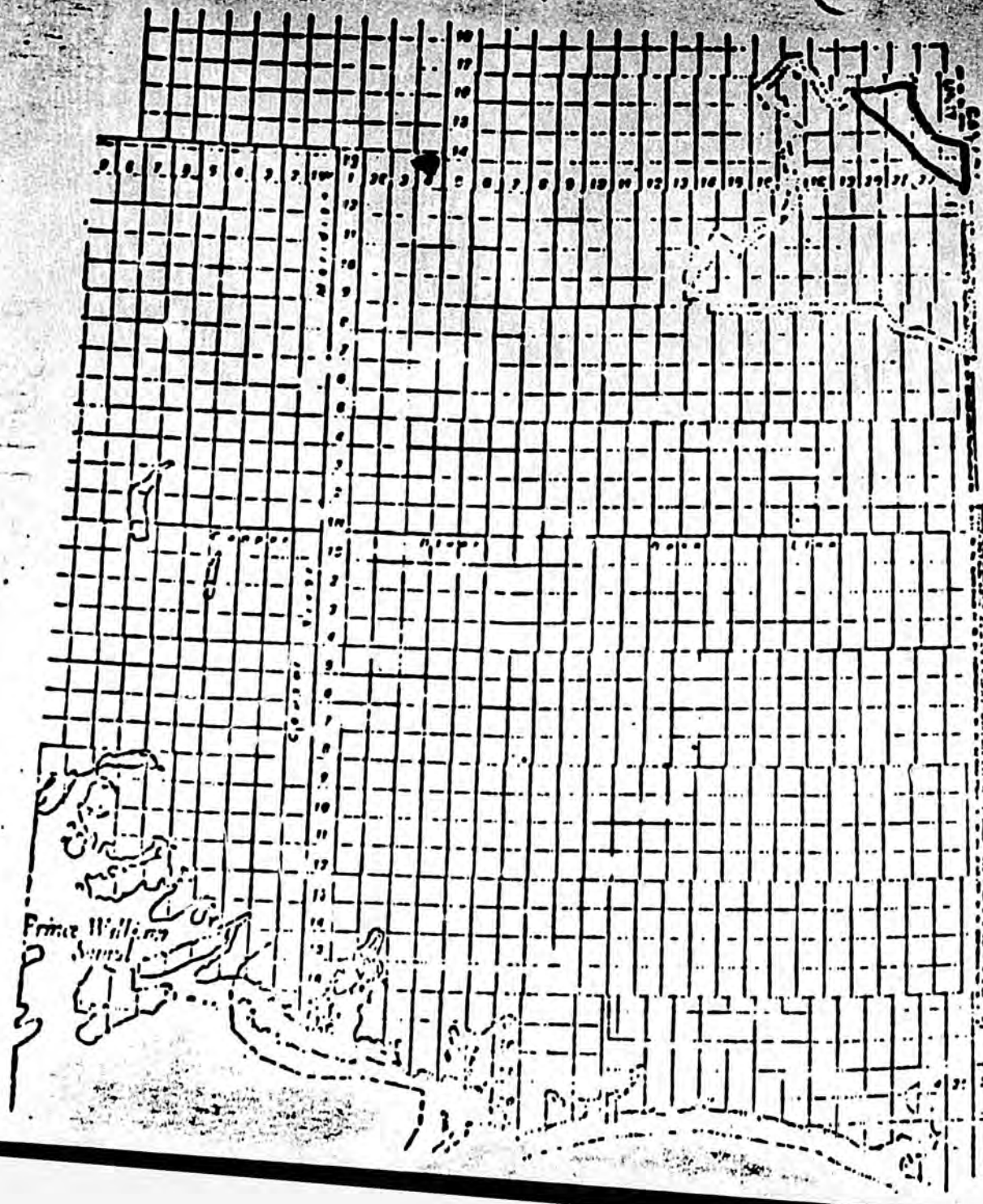
AS/E&M Position

E&M supports the proposal.

Energy and Mineral Interests

Hardrock Minerals: There are a few copper and molybdenum deposits in the northeast corner, and lode gold deposits are known to exist.

Oil and Gas: The central portion is in the upper Tanana basin; however, petroleum potential is considered low.



Proposed boundary

TETLIN NATIONAL WILDLIFE REFUGE



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ENERGY AND MINERALS

Togiak National Fish and Wildlife Refuge

AS/E&M Position

E&M concurs with the designation of this Fish and Wildlife Refuge as long as exploration and development are allowed under restraints necessary to protect the preserve.

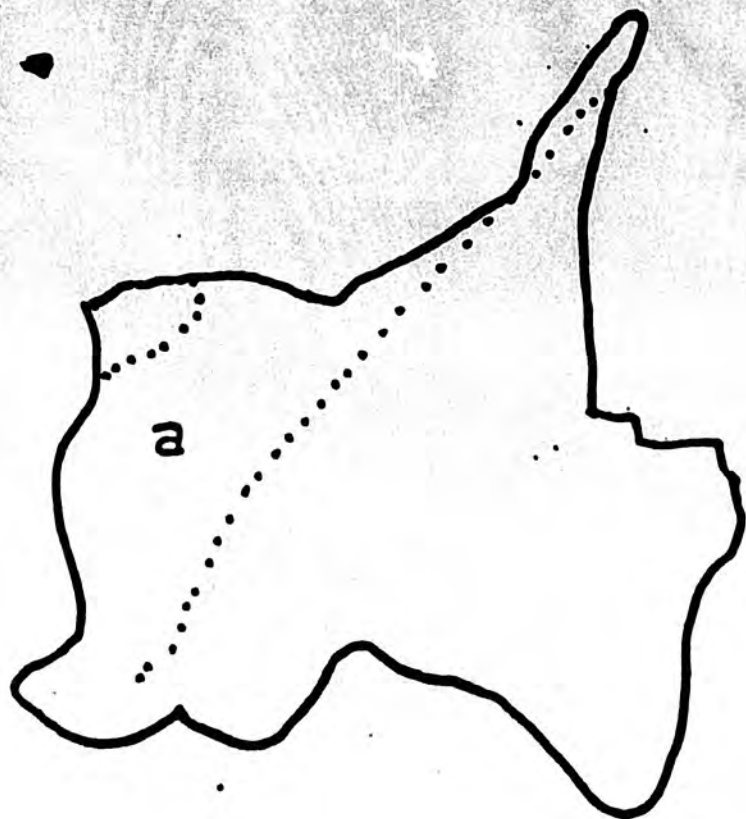
Energy and Minerals Interest

Hardrock Minerals: Well over 500,000 ounces of platinum group metals and subordinate gold were produced from this area from 1927 through 1975. The Good News Bay platinum district provided the Nation's only platinum mine. To the northeast more than two dozen non-lode deposits of mercury and antimony have been worked periodically. Gold placers in the area produced about 600,000 ounces of gold from 1880 through 1960.

Oil and Gas: The Nushagak Peninsula is part of the Nushagak Basin and is considered to have a favorable petroleum potential.

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Togiak National Fish
and Wildlife Refuge

ENERGY AND MINERALSYukon Delta National Wildlife RefugeAS/E&M Position

E&M recommends that this area remain open for limited petroleum exploration under constraints compatible with its wildlife status. We suggest this be done by allowing lands not currently designated as wildlife refuges to remain open either through Government exploration or, preferably, controlled private exploration.

Energy and Minerals Interests

Hardrock Minerals: No known deposits.

Oil and Gas: Entire area is within the Bethel basin and is considered a favorable petroleum potential.

ENERGY AND MINERALSYukon Flats National Wildlife RefugeAS/E&M Position

E&M has no objection to the designation of the Yukon Flats National Wildlife Refuge.

Energy and Minerals Interests

Hardrock Minerals: No known significant deposits.

Oil and Gas: A portion of the proposed area is considered to have favorable petroleum potential.

