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EXPLANATORY NOTE

INTRODUCTION AND METHODOLOGY

This table provides brief summaries and objective descriptions of the known coal fields in the western part of southern Alaska. The table and accompanying map are part of the Regional Mineral Resource Assessment Program for southern Alaska. A companion publication (Holloway, 1977) describes the coal fields in the eastern part of southern Alaska. Together, they represent the results of a literature search by the author, utilizing publications from Federal, State, and other sources. By far the most comprehensive of these is the summary by Barnes (1967) of the coal resources of Alaska.

A deliberate attempt was made to avoid interpretative or subjective statements in the compilation of the table. In many instances, however, discrepancies exist between the various reports. In these cases, the most recent or best-documented figures, or those which appeared to have been derived according to a methodology commensurate with U.S. Geological Survey guidelines were chosen. Avertit (1961) and Barnes (1967) discuss these guidelines in detail.

EXPLANATION OF TABLE HEADINGS

COAL FIELD -- Names used to designate coal fields are those which are most commonly used in the literature. Where an alternate name is given, it is enclosed in parentheses.

GEOLOGIC AGE OF COAL-BEARING ROCKS -- The more economically important coal deposits in the western part of southern Alaska are bituminous and subbituminous coals in rocks of Cretaceous age. Minor lignite deposits, of lesser economic importance, are found in Tertiary-age rocks.

AREA UNDERLAIN BY COAL-BEARING ROCKS -- Detailed explanations of the criteria used in U.S. Geological Survey resource estimates to calculate the areal extent of coal beds are given by Avertit (1961). Briefly, the areal extent of coal-bearing rocks is inferred from information from outcrops, mines, prospects, and drill holes.

OVERBURDEN -- Coal-bearing rocks in western southern Alaska may be mantled by a cover of younger rocks or surficial sediments ranging from a few tens of feet to several thousand feet in thickness. It is standard practice in coal resource estimates of the U.S. Geological Survey to report the resource data in the following three categories, according to the thickness of overburden in feet: 0-1,000; 1,000-2,000; 2,000-3,000. It was decided not to convert these intervals to their metric equivalents. The footnote at the end of the table gives further information and factors for conversion to the metric system.

ESTIMATED ORIGINAL RESOURCES -- "Original resources" refers to coal in the ground prior to the beginning of mining operations; this figure is essentially a constant and provides a base figure from which resources remaining at any given time can be calculated. Under this heading, resources for each coal field have been classified according to the relative abundance of information and the reliability of data concerning the amount of coal within each of the overburden categories. U.S. Geological Survey usage defines these subdivisions as follows: "measured resources" are those for which tonnage is computed from dimensions revealed at closely spaced points of observation and measurement, such as outcrops, trenches, mine workings, and drill holes; "indicated resources" are those for which tonnage is computed partly from specific measurements and partly from projection based on geologic evidence; "inferred resources" are based on broad knowledge of the geologic character of the bed or region, with only a few measurements of bed thickness.

RANK -- The standard classification of coals by rank in the series from lignite to anthracite is that established by the American Society for Testing and Materials (1965), and is based upon limits of fixed carbon, volatile matter, and calorific value. These in turn are related to the degree of metamorphism, or progressive alteration, of the deposit.

COMMENTS -- Additional information, including geologic setting, number and thickness of coal beds, and production.

REFERENCES -- Cites sources of information for the table and map. A list of references cited in the table and used in the compilation of the map is given below.

REFERENCES CITED

American Society for Testing and Materials, 1965, Specifications for classification of coals by rank (tentative), ASTM designation D388-64T, Pt. 19, Gaseous fuels; coal and coke; 1965 Book of ASTM Standards, p. 73-78.

Atwood, W. M., 1891, Geology and mineral resources of the Alaska Peninsula; U.S. Geol. Survey Bull. 467, 137 p.

Avertit, Paul, 1961, Coal reserves of the United States -- A progress report, January 1, 1960; U.S. Geol. Survey Bull. 1136, 116 p.

Barnes, F. F., 1967, Coal resources of Alaska; U.S. Geol. Survey Bull. 1242-B, 36 p.

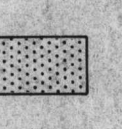
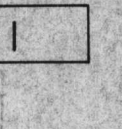

Gates, G. O., 1944, Part of the Herendeen Bay coal field; U.S. Geol. Survey Open-File Rept.


Holloway, C. D., 1977, Map showing coal fields and distribution of coal-bearing rocks in the eastern part of southern Alaska; U.S. Geol. Survey Open-File Map OF 77-169-D, 1 sheet, scale 1:1,000,000.

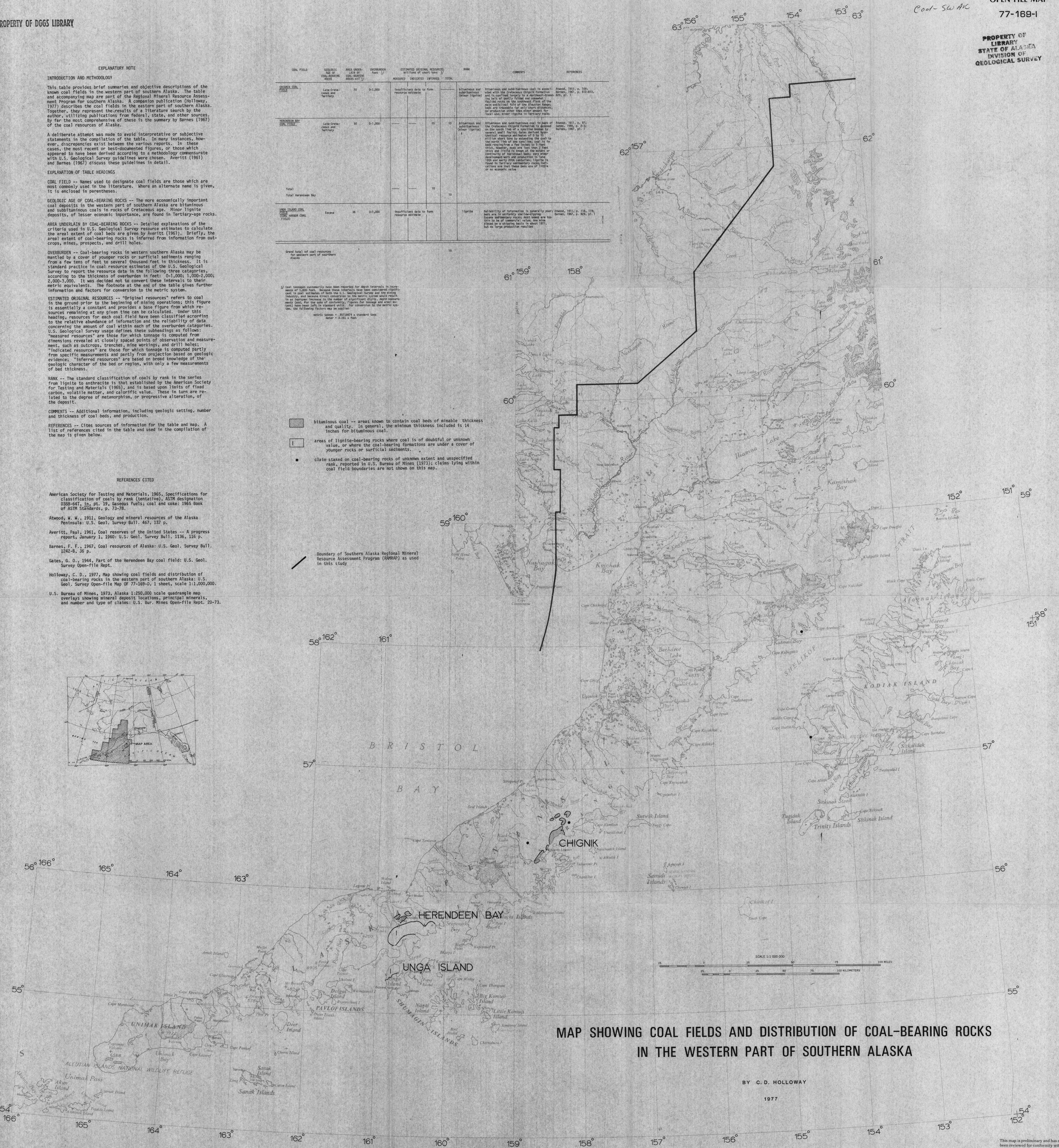
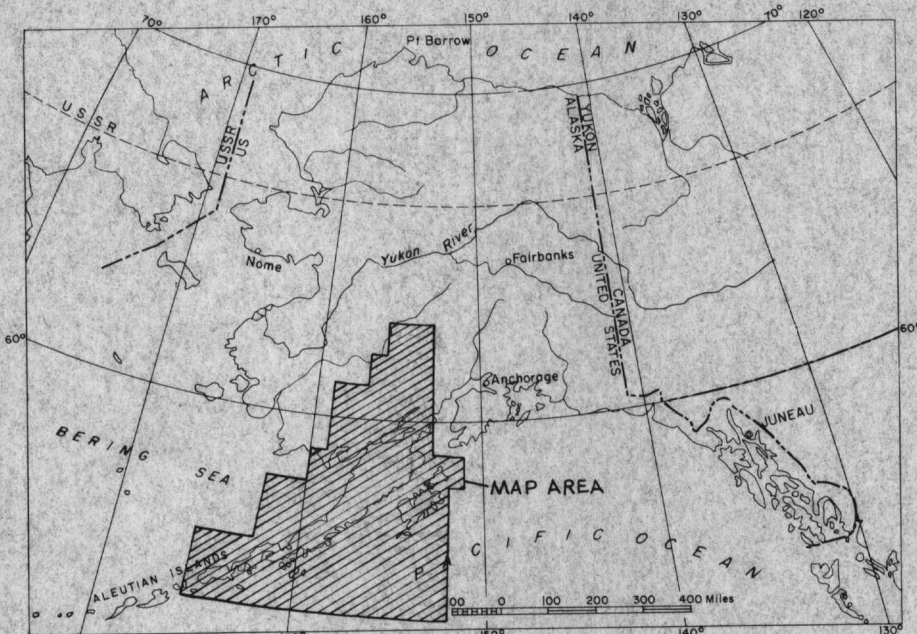
U.S. Bureau of Mines, 1973, Alaska 1:250,000 scale quadrangle map overlays showing mineral deposit locations, principal minerals, and number and type of claims; U.S. Bur. Mines Open-File Rept. 20-73.

COAL FIELD	GEOLOGIC AGE OF COAL-BEARING ROCKS	AREA UNDERLAIN BY COAL-BEARING ROCKS (sq. mi.)	OVERBURDEN (feet)	ESTIMATED ORIGINAL RESOURCES (billions of short tons)			RANK	COMMENTS	REFERENCES
				MEASURED	INDICATED	INFERRED			
HERENDEEN BAY	Late Cretaceous and Tertiary	70	0-1,000	10	10	10	bituminous and subbituminous (minor lignite)	Atwood, 1901, p. 109; Barnes, 1967, p. 11-14; Gates, 1944, p. 1	
UNIMAK ISLAND	Late Cretaceous and Tertiary	30	0-1,000	10	10	10	bituminous and subbituminous (minor lignite)	Atwood, 1901, p. 97; Barnes, 1967, p. 11-14; Gates, 1944, p. 1	
UNIMAK ISLAND (Pavlov)	Eocene	36	0-1,000	10	10	10	lignite	Reliability of information is generally poor; (Atwood, 1901, p. 111, 119; Barnes, 1967, p. 11-14; Gates, 1944, p. 1)	
Grand total of coal resources for western part of southern Alaska				10	10	10			

1/ Coal tonnage estimates have been reported for most intervals in thicknesses of 1,000 feet. Because these intervals have been considered significant in coal thicknesses of less than 1,000 feet, the metric system would result in a higher estimate to the number of significant digits, and therefore would not be the best of estimates. Figures for thickness and coal tonnage were converted to the metric system using the following factors: 1 meter = 3.281 feet.

-  bituminous coal -- areas known to contain coal beds of minable thickness and quality. In general, the minimum thickness included is 14 inches for bituminous coal.
-  areas of lignite-bearing rocks where coal is of doubtful or unknown value, or where the coal-bearing formations are under a cover of younger rocks or surficial sediments.
-  claim staked on coal-bearing rocks of unknown extent and unspecified rank, reported in U.S. Bureau of Mines (1973); claims lying within coal field boundaries are not shown on this map.

 Boundary of Southern Alaska Regional Mineral Resource Assessment Program (RAMRAP) as used in this study



MAP SHOWING COAL FIELDS AND DISTRIBUTION OF COAL-BEARING ROCKS IN THE WESTERN PART OF SOUTHERN ALASKA

BY C. D. HOLLOWAY

1977