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CHRONICLE OF ALASKA COAL-MINING HISTORY

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Although there has recently been an increase in interest in Alaska's coal, it has in fact been explored and mined for over a century. Exploration by prospectors and geologists during this time has led to the definition of several major coal fields and the location of many other scattered coal occurrences (Figure 1). Since the first coal mine in Alaska was opened by the Russian-American Company in 1855 near Port Graham on the Kenai Peninsula, coal has had a rich and uniquely colorful history in the Alaskan Territory and later on after statehood.

Figure 1---NEAR HERE

Mining of Alaska coal did not begin on a significant scale until 1917 after construction of the Alaska Railroad had begun (Figure 2). Early coal production (pre-World War II) in Alaska was dominated by underground mining. An era of combined underground and surface mining followed from around 1943 till the early 1960's. Recent production has been entirely by surface mining at the Usibelli Coal Mine near Healy.

Figure 2---NEAR HERE

During the period beginning with World War I and extending up to the present time, coal has been mined mainly in the Nenana and Matanuska coal fields. About one-third of Alaska's 32-million-ton total coal production is estimated to have been mined in the Healy Creek field of the Nenana basin. Another third has been produced in the Lignite Creek field, mainly at Poker Flats. The re-

maining third was produced in the Matanuska Valley (7.5 million tons) and elsewhere in Alaska.

Annual coal production reached its first major peak in 1966 at over 927,000 short tons. Alaska's 1985 coal production set a new all-time record at nearly 1.4 million short tons (Figure 2). The International Energy Agency in 1985 projected that Alaska's total coal production in the year 2000 will be over 28 million short tons. Indeed, Alaska promises to be an important coal mining and export center of the 21st century.

Alaska's coal resources constitute half of the U.S. geological coal-resource base, and they are destined to play an increasingly important role in Alaska's energy future. As a result, it is especially pertinent and timely now to take a look back at Alaska's coal development, and to chronicle its history from coal's initial discovery on the Kenai Peninsula until today when Alaska coal is poised on the brink, ready to burst into the world arena.

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1786...Captain Nathaniel Portlock, an English trader, finds coal at Coal Cove (presently Port Graham) on the Kenai Peninsula.

1798...Alexander Baranov of the Shelikov-Golikov Company experiments with Coal Cove coal from Kenai Peninsula in smelting iron.

1826-
27....First written reports of coal in Alaska by A. Collie, who accompanied Captain Beechey on an expedition to the Arctic Ocean.

1850...Peter Doroshin, a mining engineer, explores the coals at Coal Cove, Kenai Peninsula for the Russian Trading Company.

1851...Coal on Unga Island, Alaska Peninsula is also explored by Doroshin of the Russian Trading Company.

1855...First commercial coal mine in Alaska is opened by the Russian-American Company at Coal Cove near Port Graham on the Kenai Peninsula.

- 1856...A shipment of 88 tons of Coal Cove coal is made to San Francisco, California.
- 1862...First coal mined in southeast Alaska at Sepphagen Mine, Kootznahoo Inlet, Admiralty Island.
- 1865...W.H. Dall, as a member of the Scientific Corps of the Western Union Telegraph Expedition, visits Unga Island.
- 1867...Coal mine at Port Graham is closed when the United States assumes possession of Alaska.
- 1869...U.S.S. Saginaw uses coal from Kootznahoo Inlet of southeast Alaska for fuel.
- 1871...Mining of the low-grade coals from the west side of Zachary Bay on Unga Island begins.
- 1872...Dall and a party of workers dig about 13 metric tons of coal at Coal Harbor, Unga Island for use in the stove and galley on the U.S.S. Humboldt. The coal test proved unfavorable because of the large amount of sulfur in the coal, which reportedly gave off offensive fumes while burning and produced an extraordinary quantity of ashes.
- 1873...Federal Coal Land Act ratified by the U.S. Congress.
- 1879...Whaling ships and U.S. Revenue cutters start using coal from the Corwin Bluff mines and Cape Beaufort area along the Arctic coast.
- 1881...Captain C.L. Hooper takes on 20 tons of coal along Corwin Bluff for his ship, the Corwin.
- 1882...The Alaska Coal Company, a San Francisco-based corporation, was formed to work the Coal Harbor, Unga Island seams. This was the first significant coal mining undertaken by Americans on the Alaska Peninsula. As many as 20 men were employed by the company to supply fuel to small steamers engaged in seal hunting.
- 1883...Two cargoes of coal (about 700 tons) from Coal Harbor, Unga Island are shipped to San Francisco.
- 1885...Coal is discovered along the banks of the Chignik River on the Alaska Peninsula. At least three coal mines operated in Alaska Peninsula coal fields in the late 1880's---at Herendeen Bay, Chignik River, and on Unga Island.

1888...The Alaska Coal Company begins coal mining operations near Port Graham at Kachemak Bay (Wharf Mine) and opens a mine tunnel at Fritz Creek on the Kenai Peninsula.

1888-
89....Bituminous coal from the Thetis Mine near Corwin Bluff is supplied to the U.S. Revenue cutter, Thetis.

1889...Coal is mined at the Wainwright and Kuk River area for ships and native schools of the U.S. Bureau of Education.

Figure 3---HERE

1891...U.S. Navy mines 200 tons of coal in McNeil Canyon west of Coal Point (Homer Spit) for testing in San Francisco.

1893...Alaska Mining and Development Company opens a coal mine on Anchorage Bay near Chignik Lagoon. The Alaska Packers Association opens the Chignik River Mine to produce coal for their cannery and steamer. The mine operates for over 12 years.

1894...Early prospectors and traders learn of coal deposits in the Matanuska Valley from the Indians. The North Pacific Mining and Transportation Company opens a coal mine north of Homer.

1894-
97....The North Pacific Mining and Transportation Company mines 650 tons of coal from an area 14 miles northwest of Homer.

1895...Preliminary investigations of the coals along the Pacific seaboard of Alaska take place. The Admiralty Island Coal and Fuel Company opens the Datewell Mine about 1.5 miles from Murder Cove in southeast Alaska. Small-scale mining for local use is renewed on Unga Island and continues intermittently for the next 20 years.

1896...Coal is discovered in the area of the Bering River coal field. W.H. Dall's report on the coals and lignites of Alaska is published.

1897...Mining begins along the Yukon River. The Drew Mine is opened at a site 25 miles above Rampart on the north bank of the Yukon River opposite the mouth of Hess Creek.

The Alaska Commercial Company opens a coal mine on the Nation River about 1.5 miles from the Yukon River and extracts about 2,000 tons of coal.

1898...Yukon River sternwheelers use coal as a fuel to transport gold seekers to the 'gold fields.' The Pickart Mine is opened on the south bank of the Yukon River about 10 miles above Nulato. The discovery of gold at Nome increases interest in the Cape Lisburne region coal fields. The Alaska Commercial Company opens Mine No. 1 on the lower Yukon River.

1898-
99....Geologist W.C. Mendenhall accompanies Army exploration parties into the Matanuska Valley.

1898-
02....Coal occurrences between Ruby and Blackburn along the Yukon River are mined for steamboat fuel.

1899...Cook Inlet Coal Fields Company opens a second mine near Homer.

1900...Coal laws of the U.S. are extended to the Territory of Alaska. One to two thousand tons of coal are mined along the Yukon River by more than 100 steamers carrying gold prospectors to the Klondike. The Thien Mine, located 90 miles below Nulato on the Yukon River, opens. Coal deposits on the Seward Peninsula are discovered by gold prospectors.

1900-
01....Over 1,000 tons of coal extracted from the Corwin Mines are shipped to Nome. Other small-scale mines (Alaska Development Company, Arctic Development Company, and Corwin Trading Company) along the Corwin Bluff seacliffs extract coal for shipboard use.

1902...The Williams Mine (formerly Thien Mine) produces 1,700 tons of coal. St. Michael serves as a coaling station for steamers plying the Yukon River. Steamers begin to convert coal and wood burners to petroleum engines. A railroad is built to the end of Homer Spit.

Figure 4---HERE

- 1902-
08....Some 100,000 tons of coal are mined at Chicago Creek, Seward Peninsula to provide coal for local placer-mining operations.
- 1904...Coal Claims Act is ratified allowing coal claim locations without prior surveys. Coal claims in the Bering River field are refiled under the act. Coal bunkers are constructed at Coal Harbor on Unga Island.
- 1906...Johnson Tunnel(s) driven hundreds of feet at slope mine in the Herendeen Bay field. President Theodore Roosevelt closes Alaska public land to entry under coal laws due to the Ballinger-Pinchot feud over the Bering River field coal claims.
- 1906-
12....U.S. Bureau of Mines, Forest Service, and Geological Survey conduct extensive studies on the Bering River coals for the Navy. Six major tunnels are driven in the Carbon Creek area, and over 150 prospects are opened. Six railroads are surveyed to develop the Bering River coal field.
- 1907...Six hundred tons of coal are mined from the McDonald Property on Bering Lake and used in Cordova.
- 1908...Alaska Peninsula Mining and Trading Company opens the Hook Bay Mine. Captain Theielen opens the 'Haralan Mine' on the Kobuk River about a mile below the Kallarichuk River. Named for Alexander Haralan who renewed mining at this site in 1929. The mine is now located in Kobuk Valley National Park. The Chicago Creek Coal Mine on the Seward Peninsula is the largest producer in Alaska.
- 1910...Alaska Coal and Petroleum Company drives a 1,000-ft tunnel at the Davis Mine on the A.B. Hunt Claim, Bering River field.
- 1911...Cordova 'Coal Party' held in which imported coal is shoveled into the harbor by angry residents in protest of federal coal policies; Pinchot is burned in effigy at Kataalla. The Chignik River Mine closes after almost two decades of operation providing coal for the Alaska Packers Association Cannery on the south side of Chignik Lagoon. The Dunkle Mine on Costello Creek opens for railroad use.

1912...The U.S. Navy begins coal investigations in the Bering River field. Coal is discovered on Eek River of the Lower Kuskokwim region by placer miners. Capps delineates the coal fields of the Nenana basin in near their currently known configuration. Coal mining on Unga Island ceases.

1912-

14....The U.S. Navy tests Matanuska Valley and Bering River coal for naval use.

1913...Capps describes coal occurrences in the Fairview Mountain region of the northwest Susitna lowland. Over 1,000 tons of coal are extracted by the U.S. Bureau of Mines in the Chickaloon area. About 100 tons of coal per day (seasonal) are produced at Bluff Point near Homer for use by the fish canneries of Cook Inlet; in total over 10,000 tons of coal are produced here during the early 1900's.

1914...The Alaska Coal Leasing Act is passed by the U.S. Congress. About 600 tons of Chickaloon coal are used in a steaming test aboard the U.S.S. Maryland. President Woodrow Wilson and the U.S. Congress pass the Alaska Railroad Act authorizing the construction of the Alaska Railroad to pass through the Matanuska, Little Susitna, Broad Pass, and Nenana coal fields.

1914-

16....The Iditarod Mine operates producing coal from two shallow shafts and transporting it on a tramway between Flat and Iditarod.

1916...The U.S. Department of the Interior issues regulations implementing the Coal Leasing Law of 1914. The Alaska Railroad is built to the Matanuska coal field. The first load of coal hauled by the railroad arrives in Anchorage and is sold at \$0.25 per ton. Mining begins in the Moose Creek district in lower Matanuska Valley. The Cache Creek Dredging Company operates the Short Creek Mine on a small tributary of the Yentna River to supply power for its dredge.

1916-

17....U.S. Navy colliers anchor near the present city of Anchorage to take on coal.

1916-

18....The Doherty Mine of the Matanuska field produces some 50,000 tons of coal.

1917...The Eska Mine is opened and a railroad spur is constructed. The Alaska Railroad is extended to Chickaloon. The Cache Creek Mining Company extracts 100 tons of coal at its mine in the northern Susitna lowland for use in a gold dredge.

1918...Coal from the Coal Creek Mine near Unalakleet is mined for use at St. Michael and Nome.

1919...The Alaska Railroad reaches the Nenana coal field and purchases the Eska Mine of the Matanuska Valley. Two coal mines are operated by the U.S. government at Eska and Chickaloon. Thirty-five men work at the Chickaloon Mine and over 4,000 tons of coal are mined incidental to development.

1920...Sixty percent of the coal consumed in Alaska is imported. The underground operations of the Evan Jones Mine of the Matanuska field begin. The U.S. Navy constructs a coal-mining town at Chickaloon.

Figure 5---HERE

1920-

21....The U.S. Navy drives two exploratory tunnels at a site 8 miles above the mouth of the Kings River of the Matanuska Valley.

1920-

22....The Naval Alaskan Coal Commission performs exploratory work on coal beds at Chickaloon. Over 30,000 tons of coal are produced at the Peterson Mine by the Healy River Coal Corporation on the west bank of the Nenana River opposite the mouth of Healy Creek.

1921...A rail spur is completed to the Evan Jones Mine from the Eska branch of the Alaska Railroad.

1921-

22....The Sutton Coal Washery is constructed by the U.S. Navy Alaskan Coal Commission and Alaska Engineering Commission. Only about 5,000 tons of coal are washed before it is

closed and dismantled. The Navy prospects for coal on Coal Creek (south side of Matanuska River) and completes eight diamond-drill holes on the bench east of the creek.

1922...The Alaska Railroad is completed between Seward and Nenana after the construction of the Riley Creek Bridge at McKinley Park. A 4.4 mile railroad spur up Healy Creek is completed and the Suntrana Mine is established. The Chickaloon Coal Mine and townsite are prepared for abandonment after a determination is made that the coal in the area cannot be mined economically.

1923-

24....The Mount McKinley Bituminous Coal Company operates the Yanert Mine.

1924...The U.S. Navy begins converting its coal-burning ships to oil.

1925...The Premier Mine is opened by the Alaska Matanuska Coal Company. Ross S. Hecky opens the Hecky (or Coal Creek) Mine on the west side of Coal Creek opposite the mouth of the Chickaloon River, Matanuska Valley.

1928...The Suntrana Mine produces nearly half of the total coal mined in Alaska. The Harkrader Mine is opened in Kootzna-hoo Inlet and coal is extracted throughout the next year but is closed thereafter due to financial problems.

Figure 6---HERE

1931...A detailed topographic and geologic survey is made of the Matanuska Valley by R.W. Richards and L.O. Newsome.

1932...The Wishbone Hill Coal Company produces a small quantity of coal from the Rawson Mine. Eight diamond-drill holes are completed south of Anthracite Ridge in the upper Matanuska Valley; over 8,000 feet are core-drilled but significant resources on the tract are not proven even though the deepest hole extended to 1,820 feet.

1937...A coal mine explosion at the Evan Jones Mine kills 14 men and curtails production.

1940...Eleven percent of the coal consumed in Alaska is imported from outside. The Suntrana Mine is the largest coal mine in the Alaskan Territory. Coal is used to power the dredges and large placer-mining operations near Fairbanks. Coal for local use is extracted from a mine located about 0.25 mile west of Chicken Creek, east-central Alaska.

1940-

54....Over 60,000 tons of subbituminous coal are produced from the Dunkle Mine on Costello Creek west of Broad Pass for use by the Alaska Railroad.

1941...A series of U.S. Department of Defense orders opens northern Alaska to coal development. These edicts result in the opening of mines at Kuk River, Atkasuk (Meade River), Peard Bay and several other sites in subsequent years.

1942...The Alaska Railroad reopens the Eska Mine. Coal is needed for the new army posts and military airfields. Drilling begins on the Buffalo Property of the Wishbone Hill district, Matanuska coal field.

Figure 7---HERE

1943...Traditional underground coal mining in Alaska gives way to surface-mining methods with the opening of two strip mines in the Nenana coal field, one of which is the Diamond Coal Company Mine. A military coal commission is sent to Alaska and headquartered at Fort Richardson to investigate the coal resources of the Territory and to stimulate additional production in favorable areas. G.O. Gates of the U.S. Geological Survey completes a geological map of the Wishbone Hill area of the Matanuska Valley.

1943-

44....Over 10,500 tons of Alaska coal are exported. The U.S. Bureau of Education's Alaska Native Services initiates opening of the Meade River Mine to supply coal to the school and hospital at Barrow.

Figure 8---HERE

- 1944...Emile Usibelli and T.E. Sanford open a strip mine on Healy Creek east of the Suntrana Mine under a U.S. Army license; this mine is a forerunner of the Usibelli Coal Company of today.
- 1945...The Eska Coal Mine of the Matanuska field is closed.
- 1946...The Alaska Railroad begins conversion of its coal-burning engines to diesel fuel and the military posts convert to natural gas.
- 1949-
- 52....Over 65,000 tons of coal are mined at Houston and washed in a Forester jig.
- 1950...Alaska's annual coal imports decline to less than 1 percent of the annual consumption of the Territory.
- 1953...Maximum underground production in the Matanuska field reaches over 285,000 tons. The Meade River Mine is closed.
- 1954...Morgan Coal Company explores the coking coal on the Kukpowruk River.
- 1955...The Gold Run Pass Mine on upper Lignite Creek is opened.
- 1958...Several hundred tons of coal are produced at a small operation in the Jarvis Creek field.
- 1958-
- 59....The Jewel Ridge Coal Company of Tazewell, Virginia reopens the old underground workings on Carbon and Trout Creeks in the Bering River field.
- 1958-
- 1960...Two strip pits are excavated at the Castle Mountain Mine in the Matanuska Valley removing less than 30,000 tons of coal.
- 1959...Underground coal mining at the Evan Jones Mine ceases.
- 1959-
- 64....Small strip pits operate on the slopes above Homer on the Kenai Peninsula.
- 1960...Surface mines account for over 90 percent of Alaska's total coal output. Emile Usibelli purchases the Suntrana Mine. Paul Omlin acquires the Premier Coal Mine in the Matanuska Valley.
- 1961-
- 63....Union Carbide investigates Kukpowruk River coking coal.
- 1962...The Suntrana Mine is closed because of serious fires.

- 1966...Alaska's coal production peaks at about 927,000 short tons.
- 1967...Cook Inlet natural gas from the Swanson River field begins to supplant Matanuska coal.
- 1968...On orders from the U.S. Congress, Fort Richardson and Elmendorf Air Force Base convert coal-fired steam-power plants to natural gas. Matanuska field coal mining shuts down except for small mines filling local needs.
- 1969...Private industry begins extensive exploration for coal in the Beluga and Yentna coal fields of the Susitna lowland. A mine-mouth power plant is built at Healy that supplies electricity to the Golden Valley Electric Association of Fairbanks.
- 1969-
- 70....A small mine operates in the Jarvis Creek field to produce coal for all the schools in the Fairbanks North Star Borough that uses coal for heating.
- 1971...A flood closes the Premier Coal Mine. The Usibelli Coal Mine becomes the only significant operating coal mine in the state.
- 1972...The Usibelli Coal Company's Poker Flats mine pit on Lignite Creek is opened.
- 1973...The OPEC oil embargo and severe winter result in oil and gas shortages. The Alaska Department of Natural Resources receives requests for coal prospecting permits under Cook Inlet near producing oil wells because of interest for in-situ or solution mining.
- 1975...First University of Alaska Mineral Industry Research Laboratory conference focusing on Alaska's coal is co-sponsored by the Federal Energy Administration.
- 1977...President Carter's energy policy includes conversion of utilities and industry to coal prompting renewed interest in Alaska coal fields. The Federal Surface Mining Control and Reclamation Act is passed. The Alaska Regional Energy Resources Planning Project report estimates Alaska's coal resources between 1.7 and 4.9 trillion short tons.
- 1978...The Usibelli Coal Mine assembles the Bucyrus Erie 'Ace-in-the-Hole' dragline at its Poker Shop warehouse, and begins overburden stripping operations. The 4.3 million pound machine has a 33-yd³ bucket capacity.

Figure 9---HERE

1979...State coal leases in the Yentna field (Canyon Creek and Johnson Creek areas) are issued to Mobil Oil Corporation.

1980...The second University of Alaska Mineral Industry Research Laboratory conference focusing on Alaska's coal is co-sponsored by the State Divisions of Minerals and Energy Management and Energy and Power Development, and by the Mining and Mineral Resources Research Institute. Doyon Native Corporation and Canadian Superior (McIntyre Mines) investigate the coal deposits at Little Tonzona River.

1981...Usibelli Coal Mine constructs a new coal preparation and loading facility (or tipple) near its Poker Flats mine site and signs a contract with a Korean consortium to provide 880,000 short tons of Alaska coal annually for export to that Far-East country. Diamond Alaska Coal Company initiates a drilling program to determine the coal reserves of the Bass-Hunt-Wilson coal leases in the Chuitna River area of the Beluga coal field, proves up measured reserves of 1.2 billion tons within 12 miles of tidewater, and designs a 4-15 million ton per year mine.

Figure 10---HERE

1981-

84....The Northwest Alaska Coal Investigation, including drilling, coring, and geophysical exploration at several sites is conducted by the State of Alaska Division of Geological and Geophysical Surveys. The chief exploration target selected is at Cape Beaufort north of the DeLong Mountains and on the Chukchi Sea. Placer U.S. investigates reopening the Evan Jones Mine as an underground operation.

Figure 11---HERE

1982...Alaska's Coal Marketing Conference, coordinated by the Resource Development Council for Alaska, Inc., is held in Anchorage. The Premier Coal Mine reports its coal production at 1,000 tons.

1983...Delta Coal Company receives the last preference right lease granted by the U.S. Bureau of Land Management. The Alaska Department of Natural Resources assumes primacy for the regulation of surface mining and reclamation in Alaska from the U.S. Department of Interior's Office of Surface Mining. An international conference on coal, minerals, and petroleum, sponsored by the Resource Development Council for Alaska, Inc. in cooperation with the Office of Mineral Development, Alaska Department of Commerce and Economic Development, is held in Anchorage. Diamond Alaska Coal Company completes bulk-coal sampling and testing programs on its Beluga leases. Rocky Mountain Energy (a Wyoming-based subsidiary of Union Pacific Railroad) and Hawley Resource Properties, Inc. enter an exploration agreement to determine the economic and technical feasibility of developing a coal mine on four State coal leases located in the western half of the Wishbone Hill district of the Matanuska coal field.

Figure 12---HERE

1983-
84....A deep-water coal port is developed at Seward.

Figure 13---HERE

1984...The first shipment of Usibelli Coal Company coal to Korea is made under the Sun Eel contract. The Western Arctic Coal Development Project (WACDP) conducts a reconnaissance drilling program and performs a preliminary economic evaluation of the Cape Beaufort and Deadfall Syncline areas of the Western Arctic. The Federal Defense Agency announces its plan to convert the Fort Greely power facility from oil to coal generation. Beluga Coal Company establishes routing plans for haul roads and identifies borrow pits for its proposed Center Ridge Mine; construction of a haul-road

extension to connect the mine site with an existing 15-mile section of logging road begins. Diamond Alaska Coal Company and Japan's Electric Power Development Corporation (EPDC) enter a joint feasibility study to test Beluga coal in Japanese power plants. Rocky Mountain Energy, through Competitive State Coal Lease Sale No. 6, acquires three new lease tracts in the Wishbone Hill area located around the periphery of their original four lease tracts. Bering Development Corporation drills about 15,000 ft in the Monument Mountain and Cochrane Creek areas of Bering River field; the corporation is investigating the feasibility for the development of a coal mine in the field to ultimately provide up to 1.5 million tons of coal annually for export to Korea.

1985...Alaska's coal production of nearly 1.4 million short tons sets a new all-time record. A serious fire at the Usibelli Coal Mine destroys the cam span that carries coal across the Nenana River between the east and west tipple facilities and temporarily curtails production. The Alaska Railroad is purchased by the State of Alaska from the Federal government; the Alaska Railroad Transfer Act is finalized at a \$22 million purchase price. The Arctic Slope Regional Corporation conducts a pre-development drilling and geophysical program at the Deadfall Syncline area. Hawley Resource Group, under contract to the State of Alaska Division of Geological and Geophysical Surveys, continues a geological mapping, drilling, and geophysical exploration program at Chicago Creek, Seward Peninsula, where a demonstrated resource of at least 4.5 million tons of lignite is proven. A study by Ebasco Services and Georgetown University recommends the construction of a combination coal gasification fuel cell power plant facility to supply electricity to the Fort Greely and Big Delta areas. An association consisting of Signal Energy Systems, Rocky Mountain Energy, Hawley Resource Group, and Cook Inlet Region, Inc. conduct a preliminary feasibility study for an on-site mine-mouth power plant to be located on Rocky Mountain Energy's Wishbone Hill lease tracts. Diamond

Alaska Coal Company submits its Beluga coal mine permit application to the State Division of Mining for review. Beluga Coal Company completes compilation of its environmental data, obtains right-of-way, stream crossing, and wetland permits for its proposed Center Ridge Mine. The Kenai Peninsula Borough announces that it will provide easement at Granite Point on the west side of Cook Inlet for the development of a multi-use public port facility.

Figure 14---HERE

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The potential for future coal development in Alaska is unlimited. Alaska's strategic location on the northern Pacific Rim places it in the center of projected expanding coal-trade routes for the next decade and for the 21st century, which indeed promises to be the 'Age of the Pacific.' If the long history of coal development in Alaska proves one thing, it proves that coal mining can exist in harmony with the unique Alaskan environment. Alaska coal mines have shown this to be true for 130 years. And considering Alaska's vast resources of coal, it is unlikely that the final chapter of this historical chronicle will be written for many years to come.

FIGURE CAPTIONS

- Figure 1....Locations of Alaska's major coal fields and isolated coal occurrences.
- 2....Coal production in Alaska, 1915-1985.
- 3....Natives mining and sacking coal on Kuk River, Northern Alaska coal field (from U.S.G.S. Bulletin 218, 1903).
- 4....Barge loading coal at the Williams Mine, Yukon River (from U.S.G.S. Bulletin 218, 1903).
- 5....Coal mine village at Chickaloon, Matanuska coal field (University of Alaska Archives).
- 6....Suntrana Coal Mine on Healy Creek, Nenana coal field (University of Alaska Archives).
- 7....Coal cleaning plant at the Eska Mine, Matanuska coal field (University of Alaska Archives).
- 8....Meade River Mine near the village of Atkasuk, northwest Alaska (courtesy J. Callahan).
- 9....'Ace-in-the-Hole' dragline at the Poker Flats pit, Usibelli Coal Mine (July 1982).
- 10....Modern coal tipple of the Usibelli Coal Mine on the Nenana River near Healy, Alaska (July 1983).
- 11....Helicopter moving in drilling equipment to a coal exploration site at Cape Beaufort, northwest Alaska (courtesy A. Banet).
- 12....Blue Pit bulk-coal sampling site of Diamond Alaska Coal Company, Beluga field, southern Susitna lowland (July 1983).
- 13....The loading of the collier Vigan at the Seward Coal Terminal (September 1985).
- 14....Contractor drill-rig setup on DGGS coal exploration site at Chicago Creek, Seward Peninsula (courtesy J.G. Clough, July 1983).

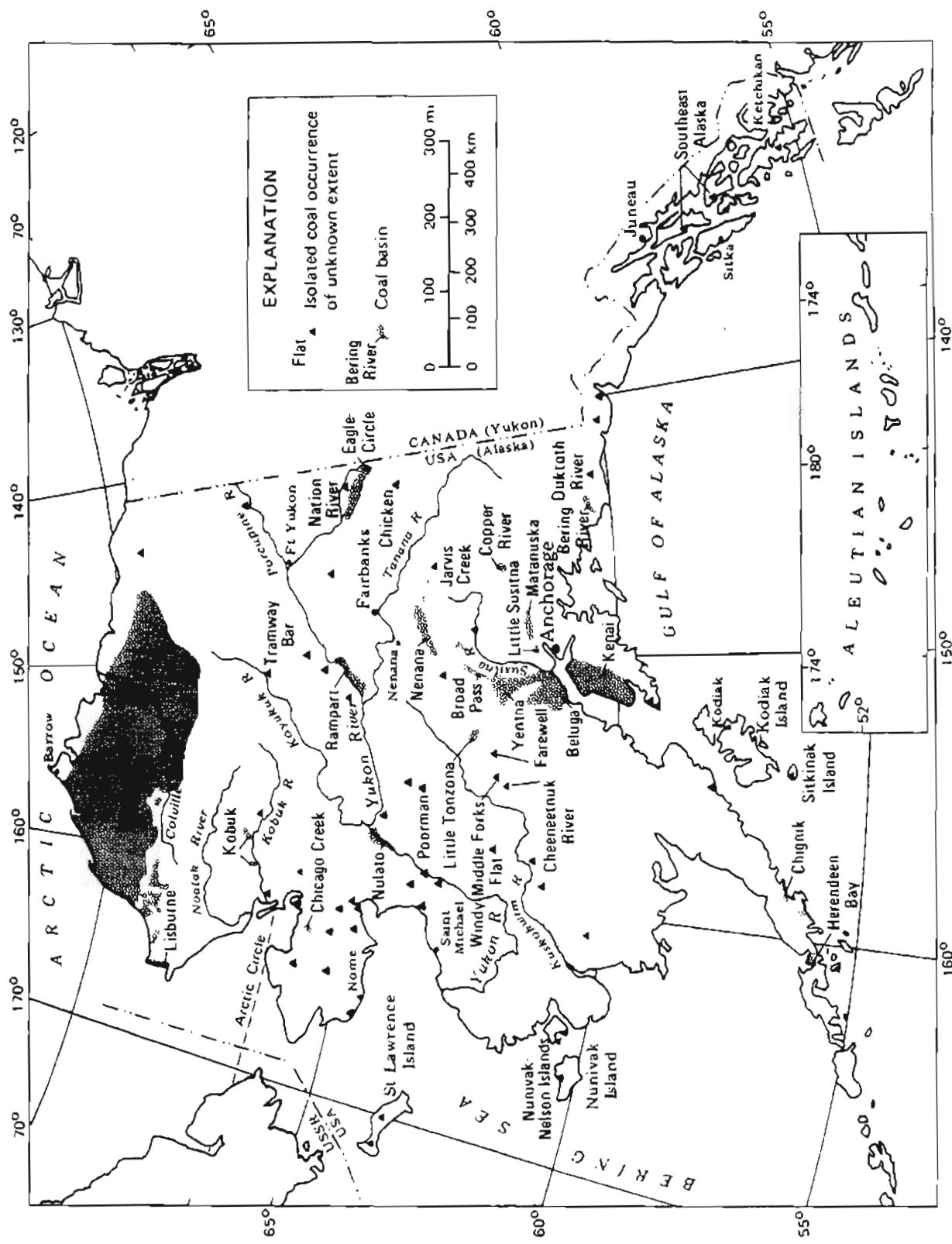


Figure 1.

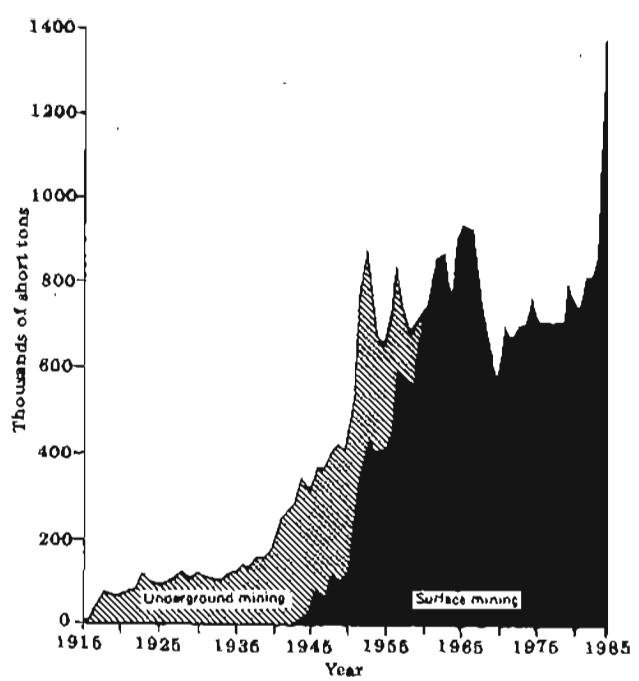


Figure 2



Figure 3

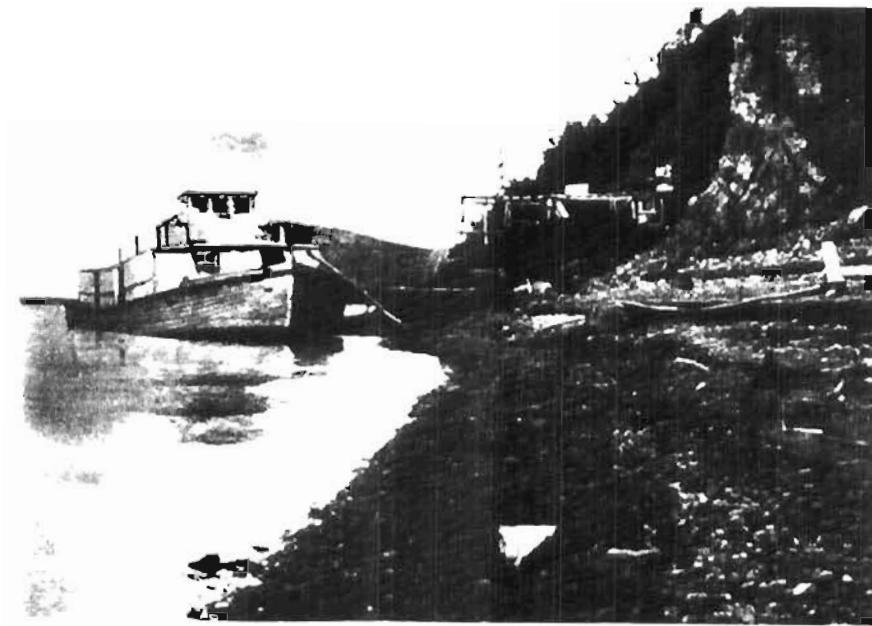


Figure 4



Figure 5



Figure 6

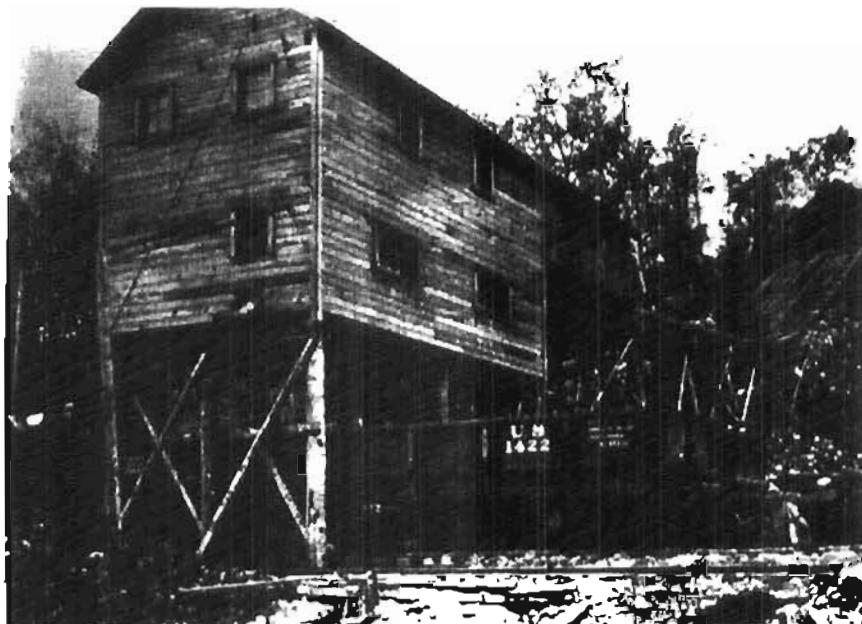


Figure 7

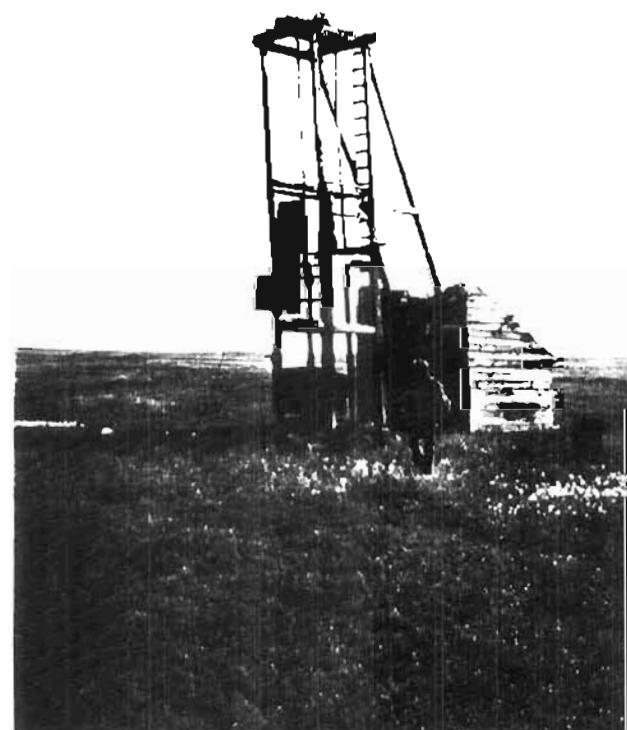


Figure 8

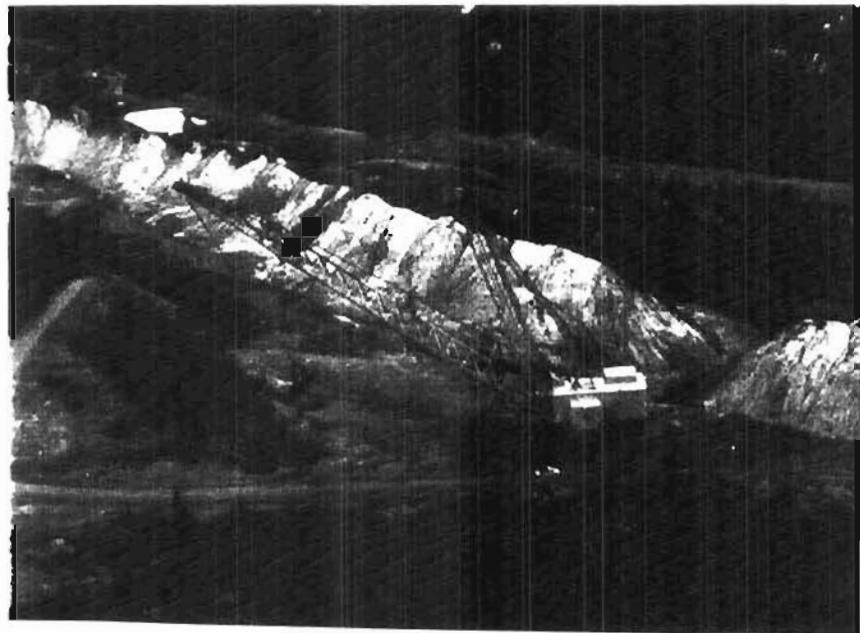


Figure 9

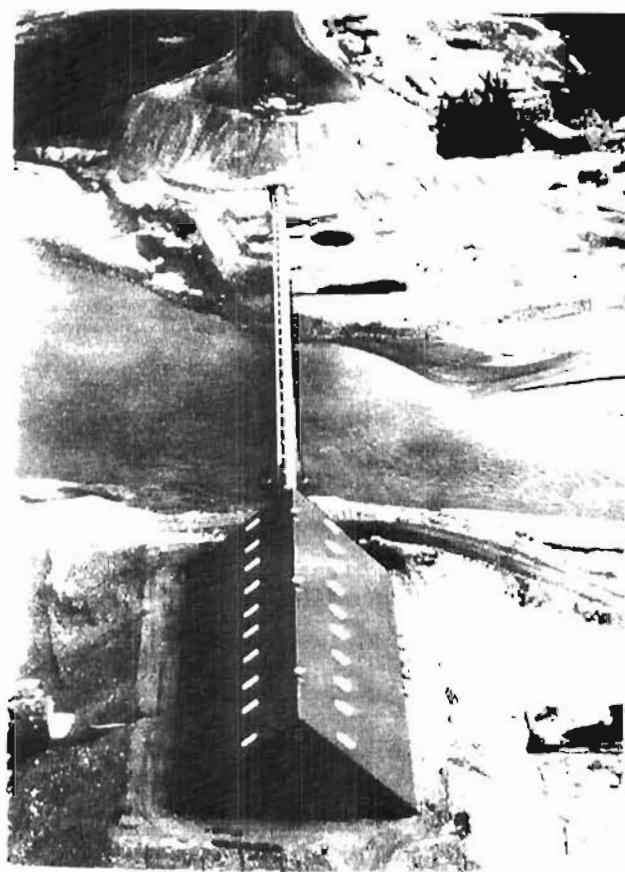


Figure 10



Figure 11

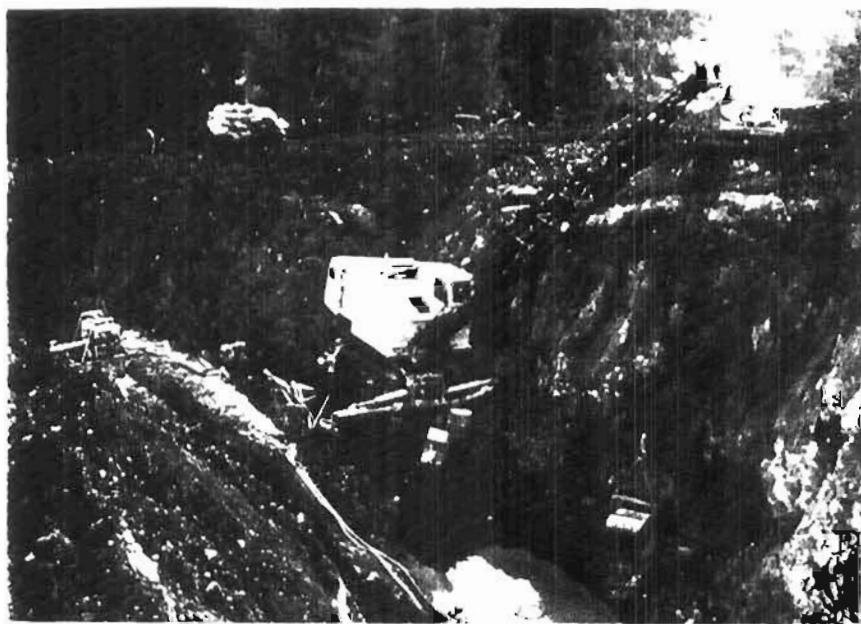


Figure 12

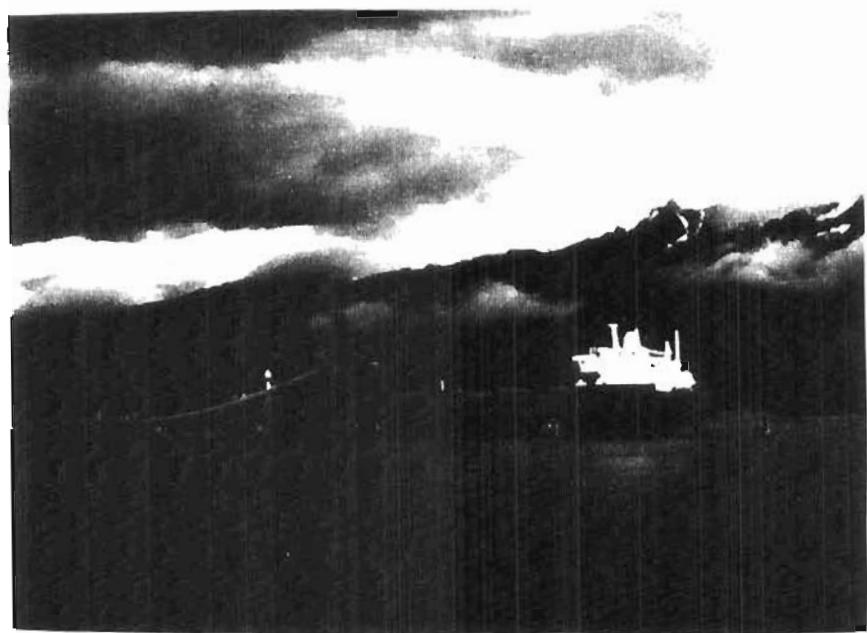


Figure 13

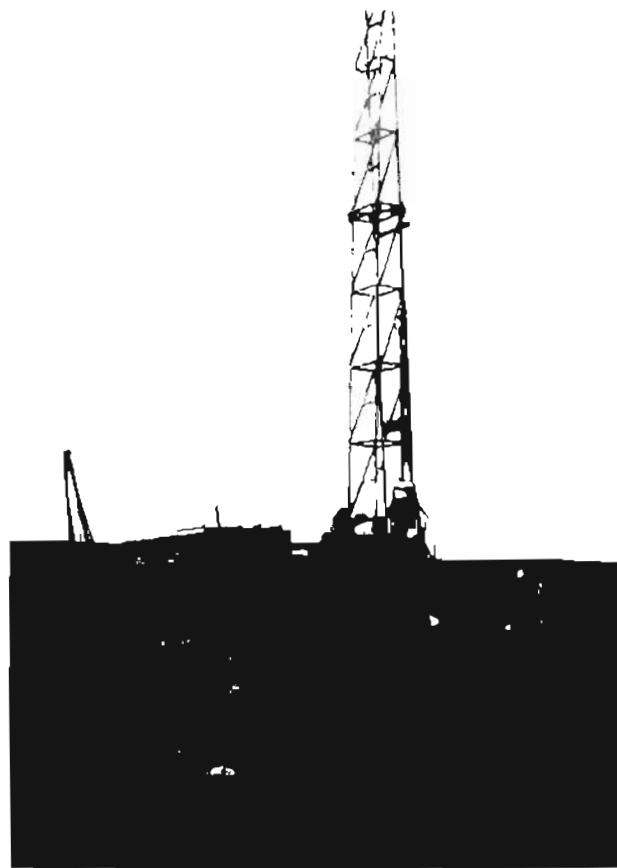


Figure 14