

The PAYSTREAK

VOLUME 6, NO. 1, MARCH 2004

The Newsletter of the Alaska Mining Hall of Fame Foundation (AMHF)

In this issue:

AMHF New Inductees	Page 1
Induction Ceremony Program	Page 2
Previous Inductees	Page 3
New Inductees Biographies	Page 4
Distinguished Alaskans Aid Foundation	Page 24
Alaska Mining Hall of Fame Directors and Officers	Page 24

Alaska Mining Hall of Fame Foundation to Induct Five Mining Pioneers



Roy B. Earling—The Wisconsin-born son of a prominent railroader worked in the underground copper industry until World War I. In 1919, Roy joined the USSR&M in Boston, and helped plan the acquisition of major gold dredge fields in Alaska. In 1924, Earling moved to Nome, Alaska, with a team dedicated to solving the problems of cold-water thawing. In 1927, he was transferred to Fairbanks. From 1930 to 1952, Earling oversaw developments in Fairbanks and later in Nome. He led the management team that built the FE Company into arguably the most efficient gold dredgers in the world.



Genevieve Parker Metcalfe—Gen was the daughter of gold rush parents that arrived in the Fairbanks district shortly after the discovery of gold by Felix Pedro. The multi-talented student and athlete was the first woman to graduate from the School of Mines with a degree in Mining and Geology. In 1929 she was hired by the USSR&M Company as the only practicing woman mining engineer in the United States and its territories. Her thesis, *The Evolution of Placer Mining Methods in Alaska* is a classic summary of the mine techniques used by placer miners during the early years of the 20th Century.



James D. Crawford—When he arrived in Alaska in 1928, Jim Crawford had little practical experience in the mining field. In 1929, he accepted a job with USSR&M in Fairbanks, which became a life-long career. Crawford played an important role in acquiring new properties including the important placer deposits at Hog River and Chicken Creek. As Fairbanks Dredge Superintendent, Jim was in day-to-day charge of the dredge fleet. He succeeded Earling as Vice-President and General Manager in 1952, and many credit Crawford's efficient management with extending the life of the FE dredge fleet into the 1960s, well after the demise of the gold industry.



Earl R. Pilgrim—Born in Durango, Colorado, Pilgrim first arrived in Alaska in 1915, where he worked as a miner in the Treadwell Mines near Juneau. In 1922, he became the first professor of mining engineering at the Alaska Agricultural College and School of Mines in Fairbanks (later University of Alaska). Earl is best known for his operation of the Stampede mine in the Kantishna district, which was once the largest producer of antimony in the United States. In later years, he consulted for USSR&M and worked on solving technological problems associate with their dredge fleet. Known for his honesty, hospitality, and wit, Pilgrim Peak in the central Kantishna Hills bears his name.



Jack C. Boswell—In 1926, the Oregonian arrived nearly broke in Fairbanks and soon enrolled in the School of Mines. His career with USSR&M began as a ground preparation engineer, solving thawing and stripping problems in advance of mining operation. Jack worked on the erection of the huge dragline at the deep Cripple project and on some of the most complex overland moves of the giant dredges. In 1955, Boswell served as a delegate to the Alaska Constitutional Convention in Fairbanks and was active in several civic organizations. Jack authored the *History of Alaskan Operations of United States Smelting, Refining, and Mining Company*, a definitive study of USSR&M activities in Alaska.

Alaska Mining Hall of Fame Foundation

Induction Ceremony, March 16th, 2004

East Gold Room

Westmark - Fairbanks Hotel, Fairbanks, Alaska

Program

The General Public is invited to the Alaska Mining Hall of fame Foundation (AMHF) induction ceremony from 7:00 to 9:00 PM, on March 16th. There is no charge for admission. Coffee will be served. Prior to the AMHF induction Alaskan authors Charles C. Hawley and Audrey E. Parker will participate in a book signing.

Book Signing.....6:00-7:00 PM
Wesley Earl Dunkle, Alaska's Flying Miner, author C.C. Hawley
Livengood—the Last Stampede, author Audrey E. Parker

Introduction and Purpose of the AMHF
President Mary Nordale.....7:00-7:10 PM

Presentation of Inductees
Roy B. Earling, by Chuck Hawley.....7:10-7:25 PM
Genevieve Parker Metcalfe, by Tom Bundtzen.....7:25-7:40 PM
James D. Crawford, by Chuck Hawley..... 7:40-7:55 PM

Coffee Break.....7:55-8:10 PM

Presentations of Inductees
Earl R. Pilgrim, by Tom Bundtzen.....8:10-8:25PM
Jack C. Boswell, by Curt Freeman..... 8:25-8:40 PM

Additional Comments from the Audience.....8:40-9:00 PM

Acknowledgements

The March 16, 2004 induction ceremony of the Alaska Mining Hall of Fame Foundation (AMHF) will feature five pioneers associated with the early history of the Alaska Agricultural College and School of Mines (now University of Alaska) and the 20th century gold dredging activities of the USSR&M Company. Three years ago, the AMHF inducted three men who initiated the large scale dredging in Alaska: Wendell Hammon, Norman Stines, and James Davidson. These men designed the water systems, brought in the first dredges, and convinced financiers to make the huge investments totaling \$28 million by 1930. A new group of operating engineers then took over. Roy Earling, James Crafford, and Jack Boswell successively, were the field managers of the operations which became the lifeblood of Fairbanks. By hiring one of them, Genevieve Parker, the USSR&M broke through a gender barrier that would take other U.S mining firms decades to cross. Pilgrim became the first professor of Mining Engineering at the School of Mines and later operated the Stampede antimony mine in the Kantishna.

The biographies of James Crawford and Roy Earling were written by Honors Chair Chuck Hawley, Sarah Isto, Mandy Lineberg, and Nancy Earling Allen. The biography of Genevieve Parker Metcalfe was written by Vieve Metcalfe, Tom Bundtzen and Earl Beistline. Earl Pilgrim's biography was compiled by Tom Bundtzen, Gordon Harrison, and George Lounsbury. Curt Freeman and Robert Boswell wrote the biography of Jack Boswell. Nori Bowman, Tom Bundtzen, and Landon Kelly of Pacific Rim Geological Consulting, Inc. prepared the newsletter.

Previous Inductees, Alaska Mining Hall of Fame

National Mining Hall of Fame Inductees

Six charter members of the Alaska Mining Hall of Fame Foundation were previously elected into the National Mining Hall of Fame in Leadville, Colorado.

Stephen Birch: Founder and developer of Kennecott Copper Mines.

Frederick Bradley: Successful manager of Treadwell and A-J Mines, Juneau.

John Treadwell: Founder of Treadwell Mines, Juneau.

Alfred H. Brooks: Chief Geologist of U.S. Geological Survey in Alaska.

Earnest Patty: University of Alaska, and manager of Placer Dredging Venture.

Clarence Berry: Prominent Klondike and Interior Alaska miner.

Alaska Mining Hall of Fame Foundation Inductees

Fairbanks Spring 1998

Induction Ceremony Honoring Early Yukon Basin Traders and Prospectors

Alfred Mayo: “Captain Al” well-known Yukon River trader, prospector.

Jack McQuesten: Known as the “Father of the Yukon” grubstaker for prospectors.

Arthur Harper: Well known and respected trader and prospector and promoter of the Yukon.

Howard Franklin: Fortymile prospector, discovered first “bedrock” placer gold in Alaska.

John Minook: Creole-Athabaskan prospector who discovered Rampart district.

Felix Pedro: Discoverer of Fairbanks district in 1902.

Nome Summer 1998

Induction Ceremony Honoring Pioneers of Nome Gold Rush

John Brynteson: A ‘Lucky Swede’; an experienced hard-rock miner, discoverer of the Cape Nome district.

Erik Lindblom: The eldest of the “Lucky Swedes”, a tailor.

Jafet Lindeberg: The Norwegian of the ‘Lucky Swedes’, president and manager of the very successful Pioneer Mining Company.

Charles D. Lane: Tough, honest, and wealthy miner who helped the Luck Swedes in their legal battles.

Juneau Spring 1999

Induction Ceremony Honoring Discovery of Juneau District

Joe Juneau: Native of Quebec, a California 49er, co-discoverer of gold in Juneau district.

Richard Harris: Irish immigrant, co-discoverer of gold in Juneau district.

George Pilz: German immigrant who sent Juneau and Harris into the Juneau area.

Kawa/ee: Tlingit leader who brought rich gold samples from Gastineau Channel area to George Pilz.

Livingston Wernecke: Geologist-engineer for the Bradley companies of Juneau.

Bartlett Thane: Promoter-founder of the world’s largest gold mine, the Gastineau at Juneau.

Anchorage Fall 1999

Induction Ceremony Honoring Mining Pioneers of Southern/Southwest Alaska

Andrew Olson: Swedish immigrant, innovator at Flat; long-time miner of platinum.

Evan Jones: Welsh immigrant; father of Alaska coal mining.

Wesley Earl Dunkle: Kennecott engineer and innovative geologist, co-founder of Star Air Service, predecessor of Alaska Airlines.

Fairbanks Spring 2000

Induction Ceremony Honoring Early 20th Century Interior Pioneers

Emil Usibelli: Founder of Usibelli Coal Mine, Inc., civic benefactor at Fairbanks.

John B. Mertie Jr.: Leading U.S. Geological Survey geologist; world expert on platinum.

Fannie Quigley: Prospector, renowned for her bush skills, legendary Kantishna character.

Juneau Spring 2001

Induction Ceremony Honoring Early Government Role in Mining

Benjamin D. Stewart: State and Federal mining administrator, Alaska constitutional delegate.

Fairbanks Summer, 2001

Induction Ceremony Honoring the Pioneers of the Large Scale Gold Dredging Industry of Nome and Fairbanks Districts

Norman C. Stines: Planned and supervised USSR&M activities in Fairbanks district.

Wendell P. Hammon: Installed the first three dredges in Cape Nome district.

James K. Davidson: Designed and built Miocene and Davidson ditch system.

Anchorage Fall 2001

Induction Ceremony Honoring Discovery of Flat District

John Beaton: Co-discovered Iditarod district with William Dikeman.

Fairbanks Spring 2002

Induction Ceremony Honoring Successful Miners and Engineers of Early 20th Century

Frank G. Manley: Highly successful miner in Fairbanks, Hot Springs District, and Flat. Founder of the First National Bank, Fairbanks

Herman Tofty: Norwegian immigrant who worked prospects near Manley Hot Springs.

Chester Purington: Acclaimed international mining engineer; wrote treatise on Alaskan placer fields.

Thomas P. Aitken: Arguably the most successful small scale mine developer during the Alaska-Yukon Gold Rush; worked both lodes and placers in Alaska and Yukon.

Anchorage Fall 2002

Induction Ceremony Honoring Immigrant Pioneers

Peter Miscovich: Croatian immigrant who settled in Flat, Alaska 1910. Pioneered the use of hydraulic mining techniques.

David Strandberg: Swedish immigrant who joined the Klondike gold rush in 1898 and the Iditarod rush of 1910. Built placer mining dynasty Strandberg & Sons, Inc.

Lars Ostnes: Norwegian immigrant who mined in the Iditarod district and developed placer mines in remote western Alaska for over 50 years.

Fairbanks Summer 2003

Golden Days Induction Ceremony (also recognized during Fall AMA convention)

Kyosuke “Frank” Yasuda and Nevelo Yasuda: Japanese immigrant and his Eskimo wife, discovered Chandalar gold and founded the community of Beaver.

Anchorage Fall 2003

Induction Ceremony Honoring Early and Mid-20th Century Placer Miners

John Gustavus (Gus) Uotila: By 1915, Gus Uotila was known as a tough Iditarod teamster. He mentored placer mining operations throughout Alaska and became a respected overland freighter.

Simon Wible: He mined gold, built water canals, and became a wealthy man in California. When the time the gold rush came along, he pioneered hydraulic mine technology on the Kenai Peninsula.



Roy B. Earling
(1887-1964)

*Written by Charles C. Hawley, Mandy Lindeberg,
and Nancy Earling Allen*

Roy Brown Earling's heritage on his father's side was recent German immigrant on his mother's it was many generation American. Roy's father, Herman B. Earling, was one of a family of fifteen boys who grew up in the Milwaukee area of Wisconsin. The Earlings were railroaders near the heyday of the American Railroad. In their case, the railroad was the Chicago, Milwaukee, and St. Paul, often called the Milwaukee Road. Roy Earling's father was a vice-president. One of his uncles was president. Perhaps Roy Earling's precision engineer side was influenced by these men: men who were proud of their engineering feats and timely schedules, monitored by the round gold watches that all railroaders carried. Roy's mother, Edna Brown, descended from an old politically connected American family that was proud of its pre-revolutionary war status. Symbolically Edna's father was named George Washington Brown.

Roy Earling was born in a suburb of Milwaukee, Wisconsin, on May 29, 1887, the first of two Earling sons. Because of his father's position with the Milwaukee Road, he grew up under comfortable circumstances. The circumstances may, however, have

declined to some extent in Roy's early childhood. In 1893, the price of silver—the hope of the Populist west—crashed and America was thrown into a depression. Western railroads, with a direct connection to western farms and ranches, suffered also. The depression was, however, short lived, in part because of new gold discoveries in the far north. Gold was struck on the Klondike in 1896 and at Nome in 1898. These discoveries and the related publicity, which reached every corner of the world, could well have stimulated Roy's desires to study mining. In about 1904, Roy enrolled in the excellent mining school at Houghton, Michigan. He graduated with B.S. and E. M. degrees from Michigan School of Mines in 1908.

Michigan copper had at last been displaced by Butte copper, but the great Michigan copper mines, some more than two miles deep down their shallow dip, were still in production. With this copper-rich background it was perhaps inevitable that Roy's first post college jobs were in the copper industry. His first job was as a sampler in the Great Falls (Montana) Reduction Works of Anaconda Copper Mining Company. From Montana, Roy worked successively as an engineer for the Superior and Boston Copper Co., and as geologist for the properties of the Ray Central Company in Arizona. While at the Ray mines Roy and an associate found an important new ore body. The ore body was so good that it enabled the company to sell the mine, and Roy found himself without a job—the cost of success. Loss of employment was only temporary as Earling then joined Arizona Copper Co. Ltd where he was first chief engineer for a new smelter, then mine superintendent.

World War I intervened in Earling's mining career. Roy was drafted in 1917 and assigned to the field artillery. He never left the states but served in Kentucky, Oklahoma, and Ft. Lewis, Washington, where he was discharged with the rank of captain. The Washington location was significant in another way. On New Years Eve 1918, Earling attended a dance at the Rainier Club in Seattle where he met Mary Louise Gazzam, a lively local girl who had grown up on a family homestead on Bainbridge Island. Mary was well educated and had her own scientific interests—she had graduated from Smith College with a degree in botany. A gap in age, Mary was ten years younger, proved no barrier to romance, and Roy and Mary were wed in 1919.

Roy returned briefly to Arizona, but late in 1919 he accepted a headquarters position with U.S. Smelting, Refining, and Mining Company (USSR&M) and the Earlings moved to company headquarters south of Boston, Massachusetts. The Earling's two oldest daughters, Mary Lou (born in 1921) and Nancy (1923) were born there. At Boston, Earling helped plan the

acquisition of Alaska claims which had been stripped of their high grade ore by the underground drift miners, but left with abundant dredge gold. Roy's next few years were devoted to the solution of problems associated with dredging of frozen ground, in the footsteps of Wendell P. Hammon and Norman C. Stines.

Wendell P. Hammon took the first giant steps in recovery of "frozen" gold in Alaska. His engineering company experimented with thawing beginning in 1919. In 1923 Hammon bought the Alaska rights to the cold-water-thaw process invented by John Miles. Hammon also bought claims and water rights and prefabricated two large dredges at his shops in California. Hammon opened the first large thaw fields and shipped the boats to Nome. But the thawing was incomplete and the operations faltered. Hammon was a great miner, but he was overextended. He was forced to sell a controlling interest in the Nome operations to USSR&M whose management believed that the problems that had deterred Hammon could be solved.

Roy Earling, followed quickly by his young family, went to Nome in 1924 as part of a five man USSR&M team led by Fred Mulock. The team's assignment was to solve thawing and other problems of the dredge fields. About two years later with technical solutions well advanced, Roy was moved to the new operations at Fairbanks, initially as assistant manager of ground preparation. In 1928, shortly after the birth of his youngest daughter Barbara in 1927, Roy was named Manager of the Fairbanks Exploration Company (FE Company) operation under General Manager O. J. Egleston who had general supervision over both Nome and Fairbanks.

Roy's tasks at Fairbanks were daunting. Norman C. Stines, associate of Hammon, had put the Fairbanks project together and had calculated the capital cost to construct the Fairbanks project at more than \$10,000,000, then a very large investment. Stines ultimately was proved to be half right, costs were about \$28,000,000—an enormous high-risk investment in its day. World-renowned placer experts such as Charles Janin were still convinced that the Alaska frozen ground placer operations envisaged by Stines would fail. But under Earling the technical problems were solved and by the early thirties it was clear that the mines would be profitable. Profitability was enhanced in late 1934 when the gold price was advanced to \$35 per ounce. In 1935, Earling was named General Manager of all their Alaskan operations—at Nome carried out by USSR&M-owned Hammon Consolidated and at Fairbanks by FE Company.

The dredge fleet expanded under Earling. When he took over in Fairbanks there were three dredges in operation; by 1930 there were five, a total that held until 1936. From 1940-1942 eight dredges were in operation in Fairbanks and after 1935, Roy also had the responsibility for the three boats at Nome. It was widely

held in the mining industry that the pre-World War II operations of USSR&M in Alaska were the best and most efficient placer operations in the world and Earling could take much of the credit for their efficiency.

The development of the deep Cripple placer deposit near Ester, Alaska, took place under Earling's general planning and supervision. It was the most complex operation attempted at Fairbanks and ranks with the great operations of the dredging world. The project developed a channel related to an ancestral Ester Creek, possibly an alluvial fan formed below ancestral Ester, Ready Bullion, and Eva Creeks. The deposit was discovered in 1933 during a deep drill campaign near Ester. Drilling found that the gold-bearing gravel section was thick, as much as 167 feet, and that it was overlain by muck, some thawed, some frozen, at least 100 feet thick. To further complicate the picture, the deposit was old enough, geologically, to have been deformed by folding and faulting.

The development of the deposit finally involved hydraulic removal of the muck, dragline removal of the upper and lower-grade part of the gravel section, freezing of potentially unstable high walls of the stripped section, and construction of a new dredge at Cripple. For mechanical stripping, the FE Company purchased a huge Bucyrus-Mangham dragline, the largest in the America at that time, which alternately dug with 12- and 20-cubic yard buckets and 150- and 200-foot booms. The machine weighed more than 750 tons; its electrical motors generated about 1,000 horsepower. Earling oversaw this project from its inception in 1933 into a period of successful mining that began in August 1940.

The complexity and infrastructure needs of the entire project are rather difficult to conceive of today. FE generated its own electricity in a plant that subsequently was sold to Golden Valley Electric Cooperative, annually maintained the Davidson ditch, and pumped hundreds of millions of gallons of water, some from an extensive facility on Chena Pump Road.

The pace of Alaskan gold operations increased throughout the 1930s—the period of Earling's management at Fairbanks and Nome. By World War II, Alaska was producing almost 750,000 ounces of gold per year, or approaching the maximum produced in the early 1900s from high-grade, virgin fields. The dollar total was greater, however, because of the increased gold price. The mining industry was a substantial part of Alaska's economy and was the lifeblood of Alaska's two largest cities, Fairbanks and Juneau. It supported Nome and was a surprisingly large part of the economy in Anchorage.

During this period Earling's dredge fleet was a significant factor in insulating Alaska from the worst of the Great Depression. As described by Alaska pioneer author Robert H. Redding most of the jobs available in Alaska were seasonal beginning with breakup in April and lasting until freeze up in the fall. Roy and his senior

engineer's jobs were permanent but the companies' seasonal jobs were attractive and sought after. According to Redding, "The F. E. Company had great bunkhouses and mess halls. Those who hired on with F. E. counted themselves lucky." Even today the number of workers employed at that time in Fairbanks would appear significant. During 1935 the company employed 355 men on an average basis and had a peak of 903 during the active mining pre-season. By 1940, the average was up to 500 and peak was 1163. Additional hundreds of USSR&M employees worked the Nome operation.

World War II caused drastic changes. In the fall of 1942 most gold mines were deemed non-essential to the war and were closed by order L-208. During the war, the FE Company furnished valuable material support to the war effort: tractors, shovels and draglines were taken over by Army or Air Force as were the big shops in Fairbanks and Nome. Sometimes knowledge of local conditions was as important as material objects. Earling and N. W. Rice, who had been with USSR&M longer than most, picked out locations for the runways at newly constructed Eielson Air Base after a quick walk around.

As the war's end neared, Earling realized that the economy would never return to pre-war conditions. Men, in the hundreds, who had been glad to drive thaw points during the depression would likely find more gainful employment. Less labor-intensive mechanically assisted point driving had long been considered, but the impetus of war's end and an anticipated labor shortage in the post war period triggered new work on the project. Earling worked closely with Jack (John C.) Boswell on the development of mechanical thaw point driving.

After the war, James D. Crawford picked up much of the direct responsibility for dredge management, with Roy remaining as General Manager and Vice-President of USSR&M for Alaska operations. Earling retired in June, 1952. On June 16th, Roy was honored at a banquet attended by FE Company employees and Fairbanks civic leaders. At the banquet, James Crawford told of Roy's technical career. Other speakers from the broader Fairbanks community, including Dr. Paul Haggland and Leslie Nerland, sometime chair of the Board of Regents of the University of Alaska, lauded Earling's community involvement, an involvement that also included Mary. Roy was active in three Masonic organizations, and also in the Miners Association, and AIME. Mary was a charter member of the Fairbanks Branch of the American Association of University Women and offered much of her time to American Women's Voluntary Services.

During Roy's operational tenure in Fairbanks, he was interested in and encouraged the recovery of Pleistocene vertebrate fossils from the muck that overlay the gold placers. Otto Geist of the University of Alaska and his associates became very familiar figures to the miners as they extracted fossils from the muck. A baby mammoth

in almost perfect condition was given, at Roy's request, to the American Museum of Natural History in New York. Hundreds of specimens graced the museum at the University of Alaska.



Roy Earling with Dwight Eisenhower during the generals visit to the Fairbanks district in 1947. Photo from Boswell (1979).

After his retirement from USSR&M, Roy and Mary Earling moved into a long owned second home on Bainbridge Island and Roy opened a consulting business in Seattle. His involvement with Alaska was, however, not over. In April 1954, Secretary of Interior McKay appointed a four-man committee, three from outside the agency, to study all the Department of Interior operations in Alaska and to make recommendations that would improve the agencies' economy and efficiency. Earling was elected chairman of the group by its members. Roy maintained his Seattle consultancy until 1959 when age began to take its toll. Both Roy and Mary continued to enjoy life in their retirement years near Mary's girlhood home. Roy Brown Earling died on Bainbridge Island, Washington, on December 14, 1964.

Earling is sometimes remembered by his nickname, Little Napoleon, inspired by his compact stature and quick and incisive command. Roy's co-directors at USSR&M remembered his "detailed and imaginative engineering, his meticulous planning of operations and his untiring efforts" all of which contributed to the companies success in Alaska. His friends and family knew a different person who was fascinated by photography, painting, and family genealogy as well as geology. He had a wry sense of humor that was appreciated by Mary and his daughters. When Barbara was away at school her dad sent dead mosquitoes by mail to remind her of the joys of summer

solstice in Fairbanks; earlier he once promised her that she could keep a gold bar from the furnace room if she could lift it and put it in her pocket. Roy's son-in-law Jim Ellis, who married Mary Lou, Roy and Mary's oldest daughter, characterized Roy as an able, loyal and honorable man.

SOURCES

Nancy Earling Allen, oral and written communications, 2004

John C. Boswell, 1979, *History of Alaskan Operations of the United States Smelting, Refining, and Mining Company* Fairbanks: Minerals Industry Research Laboratory

James D. Crawford, 1965, "Roy B. Earling, An Appreciation [obituary]" *Mining Engineering*, March p 99.

James Ellis, *Ellis-Earling Family*. A family genealogy, particularly notes and narrative text

abstracted by Mandy Lindeberg, daughter of Barbara Earling Lindeberg.

Fairbanks Daily News-Miner "Earling to Head Study." *Fairbanks Daily News-Miner* 3 April 1954.

_____, "Farewell Dinner Honors Roy Earling, Retiring Engineer." *Fairbanks Daily News-Miner* 18 June 1952

Robert H. Redding, "Depression Left its Mark on Alaska" *Fairbanks Daily News-Miner* 1992 May 3.

Clark C. Spence, 1996, *The Northern Gold Fleet: Twentieth-Century Gold Dredging in Alaska* Urbana: University of Illinois Press

_____, "Fairbanks Exploration Goes to War" *Alaska History* V10, 1995, no 1(spring)

USSR&M. "Resolution of the Board of Directors" 11 June, 1952



**Genevieve Alice Parker Metcalfe
(1907-1995)**

*Written by Vieve Metcalfe, Thomas.K. Bundtzen,
and Earl H. Beistline*

Genevieve Alice Parker was the daughter of gold-rush participants. Her parents, Fred and Genevieve Parker had each come to Fairbanks by way of Dawson and other camps, following successive stampedes. They met in Fairbanks, where they were married on June 13, 1905, three years after the town was started. Genevieve Alice was born on May 27, 1907, in Seattle, her mother having gone "outside" for the birth. Mother and child returned to Fairbanks when baby Gen was two months

old. With the arrival of this first child, the Parkers began a pioneer family in Fairbanks.

Around the time little Genevieve was born, her dad, Frederick Benjamin Parker, was contemplating a career change. Having grown up in mill towns in Washington, he had followed in his dad's footsteps as a sawyer. He, along with his dad and younger brother, brought sawmill equipment over the Chilkoot Pass in 1897 and set up sawmills in Dawson and other areas of the Klondike to provide lumber for miners, businesses and residents. Later, Fred and his partner Charles Carroll set up the first sawmill in Fairbanks. They did this in the spring of 1903, and they were ready and waiting for the influx of miners that came in 1904. Although the sawmill business was successful, Fred always yearned to be a miner. In fact, even during the sawmill years, he did stampeding and prospecting on the side and staked some claims.

In about 1907, Fred and his partner sold their sawmill operation to the Tanana Mill Co. and became, respectively, the Vice-President and Secretary of that company. Fred worked for another year and then began prospecting and placer-mining fulltime. Unlike the majority of stampedes, who left the north country disappointed, Fred Parker decided to stay and to keep on searching for gold.

Little Genevieve's mother, the former Genevieve Rebecca Boas, was a strong-willed, independent woman. Orphaned at an early age, she went to Dawson in 1899 when she was 18. After working in a Dawson bakery for several years, she moved to Valdez, Alaska, where she purchased and operated a "candy kitchen". Then, in 1904, she moved to the Fairbanks area. The story as passed down by the family is that Gen met Fred when

she walked into the Carroll & Parker Lumber Co. to buy materials for building a candy store in Cleary City.

The Parker family early on bought a house at 10th and Cushman in Fairbanks. For the first seven years of young Gen's life, however, they lived alternately in Fairbanks and in various mining camps. When the family was living at Ester in 1911, Gen's mother made a trip to the hospital in Fairbanks for the birth of another daughter. Her name was Hortense, known later as Jackie. The camp where the Parkers stayed the longest was Crane Gulch on Fairbanks Creek. They moved there in 1914 and lived there year-around for the next seven years while Fred worked his claim at 3-Above. While the family was living at Crane Gulch, Gen's mother made several more trips to the hospital – first, for the birth of Gen's brother Fred in 1914 and later, Carl in 1916.

Camp life was rough-and-ready and filled with comradery and sharing between the owners, mine workers, and their families. It was a wonderful environment for growing kids. There was the outdoors to explore, and the sound and sight of earth-moving equipment and machinery to provide endless fascination. This is where Gen developed a lifelong love of the outdoors and a preference for casual living. It is also where she first learned about mining. Without any urban distractions or schoolwork, she was fully occupied with watching the mining operation, asking questions, and making herself useful around camp. As she wrote in 1991 when she was 84:

“I began running errands, taking small tools and messages to outlying areas. Mid-afternoon, I shouldered a yoke to take hot coffee or iced tea plus cookies, cake and pie to the men working at hard twelve-hour shifts. I soon qualified as able to control pressure of the wood-burning boiler, the source of energy. When an emergency occurred like a broken cable or when the scraper was changed to a new digging area, it required all hands on the job. But I stayed with the boiler. I also panned the mine's fringe areas that a scraper couldn't get. One of the men would help move the six-foot Long Tom rocker to the richest left-over area. That way I could clean up my own mine!”

As Gen also reminisced in later years, she had an opportunity to watch several different types of mining on Fairbanks Creek:

“At the head of the creek the McCartys and, just below them, Tom Gilmore, tunneled hard rock. His ore was processed by a stamp mill. Well below, a very small dredge was owned and operated by an English company.

Next came the Parker's open-cut scraper mine at the mouth of Crane Gulch. At the lower end of the creek, underground mines were needed to reach gold bearing gravel lying under deep gravel and muck. In winter many prospecting shafts were dug. All these mines and shafts were thawed by wood fires at night and were supported by cribbing”.

Life changed dramatically for Genevieve in 1921, when she was 14. Her dad shut down his mine, and the Parkers moved to their house in Fairbanks. There, Gen discovered a new world full of opportunity. Her first formal schooling started when she enrolled as a freshman at Fairbanks High School. She began playing basketball, and she and Hortense started dogsled racing. Gen managed to be an “A” student, graduating in June, 1924.

The 1920s was an exciting time to come of age in Fairbanks. Airplanes had come to interior Alaska, a place where roads were few and far between. The Alaska Railroad was completed from Fairbanks to the coast in 1922. The mining industry was reinvigorated by large-scale dredging and water conveyance on the part of the United States Smelting, Refining, and Manufacturing Company (USSR&M), known to local Fairbanksans as the Fairbanks Exploration or FE Company. The Alaska Agricultural College and School of Mines, later to become the University of Alaska Fairbanks, was started and opened its doors to students in 1922. These events reinforced each other and promised a bright future for interior Alaska.

As the attractive daughter of a well-known Fairbanks family, Gen was asked in 1926 to participate in the christening of the *Alaskan*. This was a Fokker monoplane used to transport fuel to Point Barrow in support of the Australian aviator Captain George Wilkins' arctic expeditionary flight over the polar cap to Spitsbergen. Gen knew Carl Ben Eielson, who was a science teacher at Fairbanks High School, but better known as a daring arctic airplane pilot. Gen became the women's dog team racing champion in 1926 and again in 1929 when she won the prestigious Fromm Cup, driving the team of Judge Cecil Clegg. She also placed fourth in the Endicott Sweepstakes Race, this time in competition with male drivers. Through her dog team racing, she became acquainted with Leonard Seppala, the hero of the Nome Serum Run and the unquestioned king of dog mushing of his day. After the Empress Theatre opened in 1927, Gen worked at the box office selling tickets to silent movies.



Fred B. Parker and Genevieve (Boas) Parker with 2-year old Gen in Fairbanks, circa 1909. Photo from Vieve Metcalfe Collection

Encouraged by her parents, who built a study-room addition to their house, Gen enrolled in the Alaska Agricultural College and School of Mines. She took a General Science curriculum, graduating with a B.S. degree in 1928. Five other classmates also graduated from the new college in 1928. While at the college, Gen continued her basketball career and played center for the girl's team. Records would indicate the College girl's basketball team had a winning record all the years that she played. Genevieve was also editor of the *Collegian*, the school's newspaper, as well as a dedicated thespian who acted in several College plays. During her first four years of college, Gen took a number of elective courses in the School of Mines. By taking these electives, she met so many course requirements that she was able to stay in school only one more year to earn a second B.S. degree, this time in Geology and Mining.

Gen changed the way things operated at the School of Mines. According to the October 12, 1928 edition to the Fairbanks Daily News Miner:

"The boys of the Mining Society were confounded this year with the appearance of Miss Genevieve Parker, a student of the school of mines and possible candidate for admittance into the organization. After many wordy conferences, it was decided that the Mining Society initiation had not been designed for the gentler sex".

The Mining Society only granted Parker 'honorary' membership, even though she had proven herself as someone capable of outdoor activities. Indeed she was a champion dog musher and basketball player, and spent her formulative years working around mining camps in the Fairbanks district. Yet this rebuke did not irritate Genevieve, and she diligently completed her course work. Gen graduated from the College for a second time

with three other students in 1929. With her second degree, she became the first woman to graduate from the School of Mines.

It was unusual for a woman in the 1920s to be keen about mining. Gen, however, had spent her formative years in mining camps with people whose main interest was mining, and she felt comfortable with the subject. Viewed in this light, it is understandable that she pursued courses in geology and mining. What makes Gen's story truly exceptional is the outstanding quality of the thesis she prepared while in the School of Mines.

Gen chose early mining methods in Alaska as a subject for her thesis. By the 1920s, most of the early claims were mined out and many individual operators were closing down or selling out to major operators with dredges that made recovery of low-grade deposits economically feasible. Gen realized that mining methods were changing and that no one had yet written a description of early mining and the subsequent changes. Fortunately, some of the early miners were still living, and she and her parents knew many of them. Her thesis, *The Evolution of Placer Mining Methods in Alaska*, was partly based on interviews with miners, including Tom Gilmore, the partner of Felix Pedro, who discovered gold in the Fairbanks District in the summer of 1902. Parker also reviewed carefully the water and mine technologies used at the time, some of which were invented in Fairbanks. Many of those technologies are no longer used, but her documentation of those uses in Alaska is historically significant. Gen wrote a thoroughly researched and carefully documented paper that far surpassed the minimum thesis requirement for a B. S. degree. Even now, 75 years later, her thesis is considered an important reference on Alaskan placer-mining history.

Upon graduation, Gen accepted a job in Fairbanks with the Fairbanks Exploration Company (FE Company), which operated a fleet of gold-mining dredges in the Fairbanks District. She was hired by Mr. O.J. Egleston as Assistant Office Engineer in Fairbanks. Her work soon caught the attention of the FE's parent company, USSR&M's Boston office. USSR&M was mainly a producer of hard rock ores in the lower forty-eight states. Their only large scale placer gold operations were those in the Fairbanks and Nome districts of Alaska. The Boston head office needed placer mine expertise and decided to consider Gen as their Boston-based expert on Alaskan placer mining.

One day Gen was drafting a new district map, which showed the locations of the exploratory drills with their values. A gentleman unknown to her walked into her office and quizzed her about the district. Gen, thinking that the gentleman might be from a rival company, talked about the district, but concealed the drill results. Later the man returned and quizzed her about Alaskan hard rock mines, especially the rich copper deposits at Kennicott, where Gen had led a college field trip. In the

meantime, Parker had found out that the gentleman was a USSR&M vice president from the company headquarters in Boston.

Gen accepted the job offer and left in early 1930 for Boston to start work at the headquarters of the United States Smelting, Refining, and Mining Company. That year, she also became a junior member of the American Institute of Mining and Metallurgical Engineers. Being a woman mining engineer, Genevieve became a celebrity of the day. She made the June 29, 1929 issue of the Engineering and Mining Journal, at the time, the number one trade magazine for the mining engineering field. The article, which is titled: “*Mining Engineers and Dog Racers of Note—Miss Genevieve Parker*”, also features a picture of Gen driving a team of nine dogs. As related in an address given by Earnest Patty, the Dean of the School of Mines, Genevieve Parker met President Herbert Hoover in early February of 1930. President Hoover congratulated her “upon being the only woman he knew of that made mining engineering a profession and a means of livelihood”. Indeed Gen was the only practicing female professional mining engineer in the United States and its Territories.



Genevieve Parker with champion dog musher Leonhard Seppala, circa 1927. Photo from Vieve Metcalfe collection.

Gen’s duties at the USSR&M head office in Boston included coordination and engineering over site of some of the most important beginning parts of the FE Company programs in the Fairbanks district. The projects she was involved in included: 1) the drill appraisal of the Fairbanks Creek basin, which was

eventually dredged by the company in the 1950s and 1960s; 2) the exploration and engineering assessment of the Ester Creek basin which also included the initial work on the rich Cripple pay streak developed for Dredge #10 in the 1940s; and 3) infrastructure planning throughout the district. Importantly, Gen served as a valuable interface between the Boston-based engineering and management staff, some of whom had never worked in Alaska, and the many people working for the company in Alaska that she knew so well.

Her mining engineering career with USSR&M would last 5 years. While working at USSR&M, she met and married John Brownlow Metcalfe. John was a geologist and mining engineer who stayed with USSR&M for 34 years, retiring in 1969 as Vice President and Director of Smelting. Gen worked until late 1934 before retiring to start a family. Regrettably, she worked at a time when women were generally expected to make a choice between career and family rather than balancing both.

One of John Metcalfe’s early job assignments with USSR&M was in Salt Lake City, where John, Gen and two-year-old daughter Vieve moved in 1936. After the birth of their second daughter, Nancy, and three years of doing field engineering in Utah, John was assigned to Fairbanks in 1939.

After a year, the family moved from Fairbanks to Nome, where son John was born. Gen and family were living in Nome when the attack on Pearl Harbor occurred on December 7, 1941. In a letter to her in-laws dated December 11, 1941, Gen wrote:

“News of the declaration of war came through Sunday....Sunday night saw Home Defense going into action and everyone has been working like mad since then. Monday night about six-thirty the siren blew for ‘lights out’ upon receipt of an Army wire ordering a complete blackout, and since then it has been continuous....Fifteen minutes after the siren blew on Monday, the town was in total darkness”.

During 1941, all non-native civilians were told to leave Nome as soon as possible. In February, 1942, the family finally returned Massachusetts.

Gen spent most of the rest of her life in Marblehead, a suburb of Boston. Gen competed in sailing events, and enjoyed reporting small boat races to several weekly newspapers. She made sure her children were exposed to the cultural offerings of Boston, taking them to libraries, museums, concerts, and plays. Gen continued to provide support to her husband in his job since she knew the mining business and the USSR&M managers and their families. The Metcalfe family always gave company employees from Fairbanks a warm welcome when they visited the East Coast. These visitors were often invited to dinner in Marblehead and an evening of talk about the past and present Alaska.

In 1949, John was working in Alaska for most of the summer, so Gen decided to drive her family from Marblehead to Fairbanks on the Alaska-Canada (Alcan) Highway. The Alcan Highway had been built for the military during WWII, but was not paved, and was poorly maintained. Gen was undaunted by driving the Alcan, as it was reminiscent of her Fairbanks mining-camp days.

John Metcalfe lost a long battle with cancer in 1970 when he was 65, bringing an end to John and Gen's retirement dreams. Gen spent no time feeling sorry for herself, and remained fiercely independent for the rest of her life. Gen became a very competent professional-level photographer, and entered her photographs in competitions and won prizes. By choice, she lived alone in her historic home next to Marblehead harbor. She died peacefully on November 19, 1995, at age eighty-eight.

Genevieve Parker Metcalfe was a congenial and warm, yet strong person who was not afraid to pursue a profession that was not, at the time, considered for women. Gen broke through a gender barrier now considered practically routine, but did so without fanfare. Her contribution to the understanding of early placer mining technologies and to the history of the Fairbanks mining district will always be considered primary references for those subjects. Instilled with the frontier Alaskan pioneering spirit, she earned the enthusiastic respect of all who knew her and became familiar with her accomplishments. In 1996, during the 15th Biennial Conference on Alaska Mining held in Fairbanks, Genevieve Parker Metcalfe was one of the nine distinguished mining pioneers to have her profile carved in ice for the 'Ice Art 96' World Ice Sculpting Championships.

SOURCES

Books

Leslie M Noyes, 2001, "First Woman Graduates From the School of Mines," in *From Rock Poker to Pay Dirt* Fairbanks: University of Alaska Foundation, p. 118-125, see also p. 73 and 493.

Genevieve Alice Parker, 1929, *The Evolution of Placer Mining Methods in Alaska*: Thesis B.S. in

Geology and Mining. Fairbanks: Alaska Agricultural College and School of Mines, 64 pages.

R.W. Stevens, 1985, "The Detroit Arctic Expedition," in *Alaskan Aviation History*, Des Moines, WA: Polynyas Press, p. 278-302.

George H. Wilkins, 1928 *Flying the Arctic* New York-London: G.P. Putnam's Sons

Newspapers

"1926 Basketball Schedule Given; Games October 29.th" *Fairbanks Daily News-Miner* October 26, 1926, p. 4

"Miss Parker is Winner of Women's Dog Race." *Fairbanks Alaska Daily News-Miner*, March 9, 1926, p. 5

"Wilkins Aircraft Christened in State." *New York Times*, March 13, 1926 p.2

"Alaska College Bestows Degrees on 6 Students." *Fairbanks Daily News-Miner*, vol. 26, no. 3, June 6, 1928, p. 1

"Mining Society Initiation Today." *Fairbanks Daily News-Miner*, October 12, 1928, p. 3

"Mines Graduate to Soon Transfer to Boston Office." *The Far North Collegian*: November 30, 1929, p. 8

"Fair Mining Engineer is Hardy Type." *Seattle Post Intelligencer*, January 9, 1930, p. 1

"Dean Patty Speaks." *Fairbanks Daily News-Miner*, February 12, 1930, p. 1

"Avid Sailor: Obituary of Genevieve Metcalfe" *Marblehead Reporter*, November 30, 1995.

Periodical

"Mining Engineers and Dog Racers of Note—Miss Genevieve Parker." *Engineering and Mining Journal*, June 8, 1929, p. 31.



James D. Crawford
(1904-1994)

*Written by Charles. C. Hawley, and Sarah
Crawford Isto*

James (Jim) Crawford came to Alaska in 1928 with a mining degree but with scant experience in his chosen field. After his graduation from college in 1926, Jim gained some experience in the “oil industry” by installing oil tanks and burners, the only job that he could find. Two years later, he was promised a job in a gold mine at Chisana, Alaska, but the job evaporated as Crawford was in transit. On his arrival in Seattle Jim found a part time position with Kristofferson’s Dairy and visited mining company offices during his off hours. Finally the Seattle representative of the Chisana mining company, perhaps feeling some responsibility, found Jim a job at the hard rock copper mines at Kennicott. Arriving in Alaska in 1928, the young engineer planned to stay for only a short time, perhaps two years, to gain practical experience that he could use elsewhere. He left thirty-eight years later, sometimes jokingly saying that he was a “slow learner.”

James Donald Crawford was born on April 11, 1904 in Houston, Texas to James M. and Pearle Crawford. He grew up in St. Louis, Missouri, where his father was a station agent for the Wells Fargo Company. Crawford’s interests in the fields of geology and mining had been triggered early in life. Young Jimmy Crawford, slightly built and short for his age, was fascinated by the rare and valuable rocks that are known as ore. He learned that such rocks yielded the lead that made Missouri a major mining state and the gold that was still being minted into \$10 gold pieces as he grew up. By his high school years,

Crawford knew that he would seek and develop metals, but not as an unschooled prospector. James planned to attend college to learn geology and the technology of mining. It was a step forward for the Crawford family. Except for a distant great aunt, who later was a teacher and author, Jim was the first child in the extended Crawford family to attend college. He inspired his younger brother, Earnest Augustus, and his own daughters to do the same.

Perhaps fortuitously for Crawford an appropriate college was close at hand. Missouri had been mining territory since the early 1700s when French traders and their Indian partners began to exploit rich deposits of lead. The lead industry flourished and, in part to support it, the Missouri School of Mines was founded at Rolla, a site about 100 miles from Jim’s home in St. Louis. By the 1920s, the school was the Missouri School of Mines and Metallurgy. Crawford graduated from Rolla in 1926 with a Metal Mine Engineering degree in a less than propitious time.

Although some segments of the economy flourished in Crawford’s college years mining did not. The copper industry had barely recovered from the great production years during World War I and the copper price was not stable. Gold was little better. The price of the yellow metal had been pegged at \$20.67 an ounce nearly a hundred years before. Costs had risen sharply in the same period and there was little incentive for gold miners. Nonetheless, James Crawford followed his boyhood ambition and became a mining engineer and a geologist. Alaska afforded him the opportunity to follow his dream.

Jim’s first mining job as a mucker and trammer in the underground copper mine at Kennicott, Alaska, paid \$4.50 per day less \$1.45 for board and \$0.08 for hospital insurance. As Jim’s daughter Sarah Isto writes, “Jim had never worked as a miner, but he felt he would be closer to professional opportunities in a tunnel near McCarthy, Alaska,.” than he had been greasing trucks at a dairy in Seattle. Within a few weeks, his first professional opportunities appeared when a company surveyor and then an assayer quit. His quite junior professional position as assayer paid \$175 per month and included a small private attic room in the staff house at Kennicott.

Although the gold price was fixed and relatively deflated at the time, Crawford trusted it more than the fluctuating price of copper, and he sought gold mine opportunities in the territory. In May 1929, he accepted a job with U.S. Smelting, Refining, and Mining Co. (USSR&M) in the gold mines at Fairbanks, Alaska. After that Crawford’s entire career was with USSR&M.

Crawford’s first assignment for the USSR&M’s Fairbanks division, the Fairbanks Exploration (FE) Company, was in the Chatanika deep placer where he worked to develop techniques and equipment for stripping and thawing of overburden and gravel.

Although cold-water thawing had been in use for nearly ten years at Nome, Alaska, the technology was still not perfected. Spacing and pattern of the points driven to thaw the gold-bearing gravel still had to be optimized for Chatanika and the rest of the Fairbanks district. Furthermore there was sixty or so feet of frozen muck and silt to strip before the gold-bearing gravel—the section to be thawed and mined—was encountered.



James Crawford at the Walker Fork, 40 Mile mining district, 1933. From Sarah Isto collection.

Shortly after Jim arrived in Fairbanks he met Alta Tanner. Like Jim, Alta had come to Alaska in 1928 for a short time—in her case a one-month visit with her cousins Audrey and Claire Stanfield. Within twenty-four hours, however, Alta had found a job with the Alaska Road Commission that paid about three times as well as her job in Oregon and she decided to stay, a decision which Jim evidently approved. Jim also earned Alta's approval. Alta's father had lost their family ranch by ill-founded speculations on wheat futures, and his instability led to her parent's divorce. In Crawford Alta saw a contrast, a professional man of good character who was careful if not frugal with money. Moreover, Jim was gallant and had a wry, self-deprecating sense of humor that was appealing. On March 27, 1930, after a four-month courtship, Jim married Alta Tanner at St. Mathew's Church in Fairbanks. The newlyweds moved into a three-room cottage about three-quarters of a mile from the F E Company office. In the meantime Alta's

Stanfield cousins had married two of the Loftus brothers, engineers who had attended the Alaska College of Mines and Agriculture. In 1931, Jim and Alta Crawford visited in-laws in Oregon and found the Great Depression in full control of the economy. The sharp reality of the visit ended any thought of what they assumed earlier was a short apprenticeship in Alaska.



James Crawford at Jack Pot Gulch, Chistochina District, July 1936. From Sarah Isto collection.

In 1932, Crawford left field and research work on stripping and thaw fields to take charge of a two-man, Mineral Exploration department for F E Company. Although he had other assignments with the company during the next few years Jim was involved in exploration and early stage development of properties from 1932 to 1941. Jim examined hard-rock and placer properties in the Chulitna, Circle, and Kantishna districts, the Ebner mine at Juneau, and prospects at many other localities. During this time, the F E Company created a rarely equaled series of maps and reports on both placer and hard rock deposits in Alaska and the adjacent Yukon Territory. Crawford played a major role in this effort. In 1934, Jim was transferred to the Engineering Section where he was in charge of surveying and mapping as Chief Office Engineer, F E Company. In that position, he gained a detailed knowledge of the mining properties of the company, knowledge fully used after World War II.

In 1936 prospect drilling was added to Crawford's portfolio. Prospecting work was expanded in 1937 and, under Crawford, the company evaluated prospects at

many localities including the Circle and Iditarod districts in Alaska and Mayo and Clear Creek districts in Yukon Territory, Canada. The work identified two properties, Chicken in the Fortymile of East-Central Alaska and Hog River (Hogatza) in the Koyukuk River basin of northwest Alaska; both would become FE Company mines. It can be argued that if World War II had not changed domestic mining forever, Crawford's work on both placer and hard rock deposits would have allowed company expansion instead of the attrition that it suffered after the war.

Hogatza ultimately proved to be one of the longest lasting of any of the F E dredge operations, staying in production from 1957 until 1975 or for 18 consecutive years. The new Alaska Gold Company, successor to the FE Company, would again operate the Hog River dredge from 1980 to 1983. After purchase by Taiga Mining Company of Anchorage, the dredge would again operate from 1990 to 1996. The detailed work at Hogatza began in August 1939 when Crawford met prospector-frontiersman Jimmy Huntington at the mouth of the Hogatza and together they visited Bear Creek and other tributaries of the Hogatza. The preliminary results were sufficient to justify an exploration drilling campaign under difficult winter conditions. Drilling began in October 1939 and continued into the summer of 1942 when most gold operations were stopped by War Production Board Order L-208.

During World War II, the Crawford family left Alaska for company headquarters in Salt Lake City, Utah where Jim became assistant geologist to the USSR&M mines that produced copper, lead, and zinc, then deemed of major strategic importance to the war effort. Although nominally working for the parent USSR&M, the moving expenses and salaries of Jim and about fifteen key Alaska employees were paid by the F E Company. As noted by Jim's daughter Sarah Isto, "The Fairbanks subsidiary wanted assurance that a professional workforce would be available to return to Fairbanks on a few weeks notice as soon as L-208 was revoked." Some restrictions in the order were lifted in the spring of 1945 and in March 1945 Crawford returned to Fairbanks to a new assignment.

On his return to Alaska, Jim Crawford was named Fairbanks Dredge Superintendent, effectively in charge of the mines under the general supervision of Roy Earling. Crawford put the big boats back in production. Between 1945 and 1958 several of the Fairbanks dredges, each weighing about 1000 tons, were shuffled in a dramatic fashion so they could operate in the richest or most favorable creeks: In 1947 Dredge No. 5 was moved from Upper Cleary Creek to Eldorado, then in 1955 to Dome Creek. In 1949, Dredge No. 2 was moved from Lower Goldstream to Fairbanks Creek, and in 1952, Dredge No. 6 was moved from Ester Creek Gold Hill; and finally in 1958 from Gold Hill to Sheep Creek..

Crawford himself moved quickly and decisively. As a manager of men he respected the skilled men, the electricians, dredge masters, mechanics, pattern and die makers, miners and the other men who implemented the work, but he was not a back-slapping type. In Crawford's era, good relations between management and labor were purposeful and respectful. His role model may have been Roy Brown Earling, likewise a man small in stature, but with abundant self-assurance.

In 1950, Crawford became Manager of the Fairbanks district. In 1952 long time general manager Earling retired. Crawford was then named Vice President and General Manager of all Alaska operations including the USSR&M operations at Nome. Although the big dredge operations were feeling the pinch of the fixed gold price and post World War II inflation, Crawford believed that new fields of sufficient grade could still be opened.

The pre-war drilling at Hogatza north of the Yukon had identified a relatively small but good grade deposit in Bear Creek. In 1954, Crawford pushed for the development of a dredge operation there. In anticipation of an operation, the F E Company bought the government Reconstruction Finance Corporation (RFC)-owned equipment at Livingood, which included a diesel-electric dredge that would be ideal for Hogatza. In April 1955, Crawford accompanied by Jack Boswell and Carl Johnson, returned to the Hogatza district where they located mining claims and water rights. The Livengood dredge was disassembled and the move to Hogatza began in the summer of 1955. Jim was on hand for the first clean up from the operation in 1957. About at the same time, Crawford also advocated a dredge operation in some good ground at Chicken in the Fortymile district. The installation at Chicken needed another dredge move; Fairbanks No. 4 was moved from Pedro Creek to Chicken where it operated until 1967.

During the post-war years Jim and Alta Crawford expanded their interest and support of civic and mining affairs, especially at the University of Alaska. Jim was active in the Alaska Miners Association and both Jim and Alta participated in AIME programs. A more social life was necessary with Jim's promotion, and Alta graciously housed and fed a stream of visitors to the Alaska operations at the manager's house on Illinois Street in Fairbanks. It was a far cry from the little company house that Jim and Alta shared during the summer months during their earlier years with the company. The earlier house was built on a tailings pile and was equipped with cold running water and "outside plumbing."

Although the Chicken and Hogatza dredges remained in production for a few more years, the post-war economy and the \$35 dollar/ounce price for gold at last caught up with the major dredging operations. The company made every effort to continue the operations cost-effectively but finally the big boats shut down. From a post-war high of seven dredges in 1957 and

1958, only two boats operated from 1961-63 and dredging at Fairbanks ceremonially ended aboard Dredge 10 on July 10, 1965. Crawford and his efficient staff had extended mining of \$35/ounce dollar gold as far as possible.

In 1966, Jim retired and the Crawfords moved to Des Moines, Washington. Jim returned to Alaska as a consultant for a couple of years but 1966 marked the end of his Alaska managerial life. Jim's knowledge of gold placer mining, however, was still of value in some low cost areas of the world. Jim, accompanied by Alta, took his knowledge to placer mines in Brazil and Columbia. In 1979 Jim returned to Alaska where he was honored by a Distinguished Service Award from the Alaska School of Mineral Industry.

Jim Crawford died in Des Moines, Washington, on May 19, 1994. During his last years Crawford abandoned consulting to devote himself to Alta's care. Jim was followed by his beloved wife in January 2001.

Jim Crawford was not a large man, but he was strong and wiry. At Kennecott in 1928, tough hard rock miners learned that Crawford, strengthened by competitive wrestling, could muck along with them. In the succeeding thirty-eight years, many Alaskans learned to

respect the quiet humor, intelligence, and inner strength of Crawford.

SOURCES

John C. Boswell, 1979, *History of Alaskan Operations of United States Smelting, Refining, and Mining Company*. Fairbanks: Mineral Industries Research Laboratory, University of Alaska

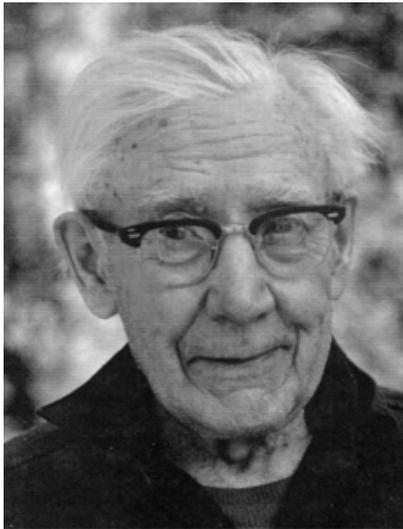
Earl H. Beistline, 1979, "Citation." On granting a Distinguished Service Award, School of Mineral Industry. Fairbanks, University of Alaska

James D. Crawford, 1979, "Dope Sheet." Notes supplied to the School of Mineral Industry, University of Alaska

Sarah Crawford Isto, undated, Manuscript material on James D. and Alta Crawford

Leslie M. Noyes, 2001, *Rock Poker to Pay Dirt: The History of Alaska's School of Mines and its Successors*. Fairbanks: University of Alaska Foundation

Clark C. Spence, 1996, *The Northern Gold Fleet: Twentieth-Century Gold Dredging in Alaska*. Urbana and Chicago: University of Illinois Press



Earl Richard Pilgrim
(1892-1987)

Written by Tom Bundtzen, Gordon S. Harrison, and George Lounsbury

Earl Richard Pilgrim was born on September 11, 1892, in the mining town of Durango, Colorado. His father, Harvey A. Pilgrim, was an underground shift boss at a Durango gold mine and an accomplished mechanic. His mother, Emma Jane, wanted her son to be better educated than she was. Earl attended grammar

school in Minneapolis, Minnesota before finishing his high school education at Broadway High School in Seattle, Washington. In 1911, Earl entered the University of Washington (UAW) College of Mines, where he graduated with a Bachelors degree in Mining Engineering in 1916. During his college years, the innovative engineering student developed a method to extract silver from silver bromide solutions used in photography, and managed to pay for most of his college tuition and other educational expenses by selling the recycled silver. He later sold the patented process to the George Eastman-Kodak Company, and received a small royalty for many years afterwards. During his freshman and sophomore years at UAW, Pilgrim worked during the summers as a general laborer in the Coeur d'Alene silver mines in northern Idaho.

During his third year at UAW, Earl Pilgrim journeyed north aboard the Alaska Steamship Company steamer *Alameda* to seek summer employment with the Alaska-Treadwell Gold Mining Company (Alaska-Treadwell) in Juneau, Alaska, which was mining one of the largest gold deposits in the world. There were actually four mines: Treadwell, 700 Foot, Mexican, and Ready Bullion that were known collectively as the "Treadwell Mines". When Earl signed up at the Employment Office, no one asked about previous experience, martial status, or age. About 95 percent of the Treadwell employees were single, a deliberate policy adopted by Alaska-Treadwell because if there was an accident or death, company liability was minimized. Because of training received at UAW, Earl was appointed Captain

of the Mexican Mine first aid team, which took first place in the annual safety competition held during the 1915 4th of July celebration. On the same day, he also won a 22 lap, two-mile-long distance race, despite competition from the company favorite, James Dermody. Unknown to the surprised race officials, Pilgrim was ranked as the second fastest, long distance runner in the Pacific Coast Conference. At the Treadwell races, he received \$100 in gold coins for both events, a good sum of money at the time—especially for a student. *“There was a friendly atmosphere (at Treadwell), quite different from the miners attitudes toward ‘college kids’ I encountered in the Coeur d’Alene mines of Idaho”*, he would relate in the *Alaska Journal*.

After graduating from UAW, Earl worked mines in Idaho and British Columbia. In 1918, he resigned from his position as chief mining engineer with the Silver Hoard mine in Ainsworth, British Columbia, and enlisted in the Special Volunteers, 27th Mining Regiment of the U.S. Engineers. This unique U.S. Army unit was assembled to drive tunnels in the Alps. He was sent to France, but the unit was recalled at the end of the WWI without seeing military action. Upon his honorable discharge, he resumed his profession as a mining engineer in Idaho, Nevada, and British Columbia mines. In 1922, Pilgrim was superintendent of a zinc oxide smelter of the National Lead Company in Harbor City, California. It was at this time that Earl made a lasting friendship with Morris P. Kirk, of Morris P. Kirk and Sons, a subsidiary of National Lead.

In the fall of 1922, Dr. Charles E. Bunnell, President of the Alaska Agricultural and School of Mines (pre-University of Alaska) in Fairbanks, offered Earl Pilgrim a teaching position, and he was one of the first six professors hired by the institution. Bunnell was acting on a strong recommendation made by Milnor Roberts, Dean of the School of Mines at the University of Washington. Under those pioneering conditions, Pilgrim initiated, designed, and conducted offerings in the mine engineering curriculum, and coached the first University of Alaska basketball team. He remained at the University of Alaska for four years, but quit after having a falling out with President Bunnell.

For the rest of the 1920s, Pilgrim worked mines in the Fairbanks area. He joint-ventured with O.M. Grant at the Grant hardrock gold mine on Ester Dome. Ultimately, the partnership was not a success and the mine would eventually end up in litigation. In 1928, Pilgrim picked up an option on the Newsboy underground gold mine near Cleary Summit, and mined the property on a small scale for three years, even making a small profit for his hard work there. During this time, Earl was also a consulting mining engineer and many of his clients were small Fairbanks area companies. The USSR&M Company was busy acquiring and consolidating hundreds of placer mining claims throughout the Fairbanks district for its dredge

fleet. Pilgrim advised smaller claim holders on how to deal with the large Boston-based corporation. At times his recommended actions for his clients were not always appreciated by USSR&M, but his qualifications as a good mining engineer were never questioned.

In 1931, Acting Territorial Mine Engineer Benjamin D. Stewart appointed Earl Pilgrim a member of his staff in charge of hardrock (lode) examinations for the Alaskan Territory. At the same time, Stewart hired Irving McK. Reed, who was placed in charge of placer mine evaluations. Although Pilgrim’s employment was to last for only four years, the job as a territorial mine inspector gave Earl the chance to see many places in Alaska. During his first year, he visited prospects and mines in the Kantishna district of the Mount McKinley Region, the Nuka Bay district of Prince William Sound, the Bremner River district in the Copper River valley, and prospects on Kodiak Island and the Alaska Peninsula.

In 1936, Earl Pilgrim formed a mining project that would consume much of the remainder of his life. The Stampede antimony deposit in the Kantishna mining district west of then Mount McKinley National Park was first developed in 1916 and again in 1926, when high antimony prices sparked interest. The original Stampede discovery consisted of a spectacular surface vein exposure of nearly pure stibnite (antimony sulfide) 26 feet wide. Although significant amounts of antimony had previously been mined in the Fairbanks and Nome districts improved mechanized surface access and the use of aircraft allowed for more remote sites like Stampede to be developed.

Pilgrim bought out the Kantishna old-timers Taylor, Trundy, and Drayton, and shipped out a small amount of high-grade stibnite ore with tractors during the winter of 1936. Because of capital needs that were beyond his means, Pilgrim sought the financial support of Morris Kirk of Morris P. Kirk and Sons, Inc., whom he met in California years earlier. Kirk was initially skeptical because of its remote location, but agreed to consider financing the Stampede project only after he personally inspected the property. In 1937, Kirk and Pilgrim rode in on horses from the Alaska Railroad near Healy to Stampede, a trip that took about four days, due to problems with river crossings and wetlands. However, after inspecting the site and workings, Kirk gave Pilgrim an initial go-ahead. He insisted, however, that Earl ship out 500 tons of stibnite ore to railhead by December 31 of 1937, if he was to provide further capital for the project. On December 20th, Earl wired Kirk: *“550 tons of ore are waiting at the Lignite railhead—more to arrive. Please advise”*. Kirk agreed to finance the operation. Pilgrim and his crews handpicked high-grade ore that was easily recovered and shipped it to railhead at Lignite. Earl began construction of a simple but effective gravity mill in 1938 and by 1939, could mill lower grade ores to produce a high grade stibnite

concentrate suitable for overland shipment. Until the late 1940s, most of the stibnite concentrates were hauled to railhead during winter 'cat train' runs.



The Mexican Mine first aid team in the 4th of July contest, 1915. Pilgrim is pictured at lower left. From Pilgrim (1975).

The summer of 1938 found Earl managing the Stampede operation, and frequently traveling to Fairbanks for supplies. Because he was not able to contact a plane to fly him out, Earl decided to walk the 60-70 miles from Stampede to Mount McKinley Park station and catch a train to Fairbanks. It was on this journey where he met his future wife Mariette Shaw, who was working at Park Headquarters as a waitress. She recalled: "I thought he (Earl) was kind of nice—he gave me a wonderful tip!" Mariette had planned on moving to Fairbanks to finish up a business degree, but her life changed when Earl decided to come to Fairbanks with her. Later that year, Earl and Mariette were married on Thanksgiving Day in Anchorage. Mariette, like Earl, was a free spirit and pioneer of the times. Raised on a homestead in Idaho, she became educated as a teacher and taught school in Bear Creek and Silver City Idaho, and in Bend Oregon. From there, she jumped a ship to Juneau, where she began to research that led her to eventually publish the first history and geography textbook used in the Alaska School System. Mariette Shaw Pilgrim's textbook *Alaska: It's History, Resources, Geography, and Government*, which was finally published in 1954, is still available for purchase on some bookstore websites. In the mid-1930s, Mariette moved on from Juneau and got work in a cannery in Cordova, spent time in Circle and in several villages along the lower Yukon River, and finally ended up at McKinley Park headquarters where she met Earl.

Despite the initial successes at producing antimony, the Stampede mine was not a long-term financial success for its backer, Morris P. Kirk and Sons, Inc., (Morris Kirk) and the mine closed down in late 1941. Morris Kirk lost interest in the property and negotiated a sale with Earl Pilgrim, and permanently withdrew from

Alaska in 1943. For most of the 20th century, antimony was considered a 'strategic mineral' due to its uses in war industries and the large offshore dependence by US industry. The antimony price, however, has always fluctuated widely due to supply shortages and subsequent gluts caused by rapidly changing market and supply conditions. Earl Pilgrim's role expanded as the eventual property owner, and Mariette became camp cook, dishwasher, clothes washer, postmaster, and sometimes place gold mine operator on Stampede Creek.

In 1941-42, the Pilgrims mined placer gold in Moose Creek, which is just 'over-the-hill' from Stampede. But because of the WWII manpower shortages, Mariette and Earl moved to Anchorage in 1944. He worked as an engineer for the Federal Government, and Mariette worked at Fort Richardson as an information officer. After the cessation of WWII hostilities, Earl was back at Stampede, but Mariette wasn't going with him. Suffering from arthritis, she did not want to return to the hard life at Stampede. Instead, she lived alone first in Anchorage and later in Fairbanks, while Earl still was trying to make Stampede a success. After working for two years as a school principal, she became the first woman district superintendent in Alaska, and provided oversight for Fairbanks area schools from 1948-1951. In 1952, she retired from the school district and Earl closed down the Stampede mine, and both headed south to Seattle. But Earl couldn't stay away from Stampede and soon returned to the mine.



Shipment of stibnite ores arriving at Railhead, near Rex, circa 1938. Photo from Bundtzen (1978).

Mariette and Earl finally divorced in the mid-1950s. He briefly remarried in December, 1958 to Marian Pilgrim of Alexandria, Virginia, whose first name was very similar to and often mistaken for his previous wife, much to Mariette's chagrin. But Earl's last marriage didn't last for long, and Earl was single again by the early years of Statehood.

After WWII, while Mariette was living in Anchorage and Fairbanks, Earl was busy at Stampede. In 1947, Earl obtained a lease from the U.S. Bureau of Land Management to build a 4,000-foot-long runway on the floodplain of the Clearwater Fork of the Toklat River, about two miles from the Stampede mine camp. Although single engine *Noresman* aircraft were used to haul out small lots of stibnite, Earl finished construction of the lengthened runway in 1949, and ore shipments using C-46 aircraft from Nenana commenced. This effectively ended the need to transport stibnite ores with winter 'cat trains'. Pilgrim managed to make intermittent shipments of high-grade stibnite ores and concentrates from the late 1940s to 1970, which was Stampede's last year of production. The more-or-less biannual production of ore and concentrates ranged from 26-120 tonnes, which would be considered modest under most measures in the mining industry. Never-the-less Stampede was the only steady, US source of antimony during its productive years. In fact, until antimony production was initiated during the 1980s at a larger scale Nevada operation, Stampede was the largest US supplier of the strategic metal. Buyers from Texas, Illinois, Florida, Oregon, and Maryland, and from such international locations as Belgium, Germany, India, Japan, and South Korea knew that they could obtain a small but reliable supply of 'low arsenic' stibnite concentrate from a steady Alaskan producer—Earl Pilgrim at Stampede. Because of his honesty and dependability, Earl held the position of Vice President of the American Antimony Association for many years.

Over the years, Pilgrim's relationship with the nearby Mount McKinley National Park was cordial. Earl was a friend to Park Superintendent Grant Pearson, who helped Pilgrim obtain necessary leases and needed right-of-way permission whenever requested. Pearson even unsuccessfully attempted to convince his superiors in Washington DC to support surface access from the park road to Stampede by a route down the Toklat River. Park Rangers would often stop by Stampede and Earl became acquainted with many students conducting field biological research studies from the University of Alaska.

During the exciting year of Statehood, Earl ran as a Republican for Senate Seat J of the new Alaska Legislature. Earl's 1960 election platform reflected the optimism of the day:

"If we are extravagant in anything, it should be for better schools and roads, which are needed almost

everywhere. We need to aid in the development of industry which will make for employment whether it is agriculture, mining, or manufacturing."

Although he won many races in his life, he lost the Senate seat to his Democratic rival. During the 1950s-1960s, Pilgrim continued to actively consult as an experienced mining engineer. One of his assignments from the Fairbanks Exploration Company (USSR&M) was to travel to Nome and determine how gold was being pilfered from sluice tables aboard the dredge fleet, and design a system that prevented such abuses. Earl was also hired by USSR&M to work on better recovery methods on board their bucket-line stacker dredge at Hogatza, which encountered gold recovery problems due to the clay rich pay streak there.

During most of the 1970s, Earl was an octogenarian living alone at Stampede. Although his first love was mining, he became enormously attached to the wildlife of the Kantishna area, and became somewhat protective of the area's furbearer and game populations. Earl had always enjoyed animals and reminisced about Kobuk, his Siberian husky that lived with him and Mariette at Stampede during the 1930s and early 1940s. Pilgrim was furious when a hunter flew in and killed an albino moose that was frequenting the mine area during the 1960s. He did, however, state in his sign at the airport: "No Moose or Caribou Hunting: Bear Hunters—Check in at the Camp". From 1963 to 1974, Pilgrim befriended an American pine marten. "Mr. Grunt" as the marten would be called, would come by his cabin for 11 consecutive years, usually two of three times in late winter. In his last notation about Mr. Grunt, Earl wrote:

"February 11, 1974—Mr. Grunt working on roast that I left outside. Grunt appears to be thin and was real hungry. Worried about him"

After 1974, Earl never saw Mr. Grunt again, but many of Mr. Grunt's 'relatives' continued to entertain human guests at Stampede. Earl Pilgrim was caught up in the controversy concerning the 1980 passage of the Alaska National Interest Lands Conservation Act (ANILCA) because Stampede and the entire Kantishna Mining district was absorbed into the greatly expanded Denali Park and Preserve. About 20 small placer and lode mines in the Kantishna district were eventually forced to close as a result of this legislation. In the fall of 1977, Earl provided colorful testimony about his life and mining operation at Stampede to members of the Udall-Siberling "D-2" hearings held in Fairbanks. In 1978, Pilgrim deeded the mine to Edwin K. Dole, a businessman from Palo Alto, California. In 1979, Dole donated the property to the University of Alaska, which subsequently entered into a joint management agreement with the U.S. National Park Service. The Stampede property became the Earl R. Pilgrim Mining Research

Field laboratory for university mineral research in Denali National Park and Preserve. Earl Pilgrim took great exception to this unexpected change in his dreams for the mine, and seeing the Stampede property turned into a research facility was not what he had in mind, so wrote Leslie Noyes, who published the treatise on the history of the UAF School of Mines. Dean Beistline also had reservations, but eventually supported the arrangement.

In 1981, at the age of 88, Pilgrim made one last stab at mining. He revisited the Newsboy gold mine in Fairbanks, the same property that he had mined 52 years before. After staking the Newsboy Mine with the help of Fred Heflinger, which incredibly, was on open ground, Pilgrim was lowered nearly 75 feet down the old shaft on a rope by his young friend Jim Lounsbury. Earl went off into the caved adit and returned about 30 minutes later with a channel sample and was hoisted back to the surface.

Pilgrim moved from Stampede to Fairbanks in the summer of 1981. In 1978, Earl attended the commencement exercises of the University of Alaska, and was honored for his distinguished career as an Alaskan miner. In 1982, he was the Grand Marshal of the Golden Days Parade in Fairbanks.

In 1987, an unfortunate event led to the destruction of Pilgrim's antimony mill at Stampede. The Park Service, upon finding large amounts of nitro-carbide (old explosives) at the mine site, requested the assistance of the US Army to remove the explosives at Stampede to make the mine site safe. At the recommendation of the US Army Explosive Ordinance Detachment at Fort Richardson, Alaska, the old nitro-carbide was detonated, which resulted in a huge explosion that essentially destroyed the mill and caused significant damage to other mine structures.

Earl Pilgrim died in the Fairbanks Pioneers Home four months later on August 26, 1987, without knowledge of the explosion at the Stampede Mine. Shortly afterwards, at the special request of Mariette Shaw Pilgrim, Jim and George Lounsbury took the cremated remains of Earl Pilgrim and spread them over the Stampede mine area.

Earl Richard Pilgrim was a memorable person. He embodied the virtues of a pioneer Alaskan: impeccable honesty, hard work, patience, temperance, and self-sacrifice. Visitors at Stampede were always graciously received and those that enjoyed Earl's hospitality for the first time were frequently surprised to encounter an educated and worldly gentlemen in the wilderness setting of the Stampede mine. He read voraciously and kept abreast of national and international events—sometimes sleeping for only four hours a night. Earl had a quick and charming wit and could entertain guests with wonderful stories about people, events, and places of the Kantishna region. Pilgrim was also a dedicated American patriot, but was remarkably tolerant and respectful of points of view other than his own.

In 1990, Earl Richard Pilgrim was immortalized in Alaska with the naming of Pilgrim Peak in the Kantishna Hills.

SOURCES

Books

T.K. Bundtzen, 1981, *Geology and Mineral Deposits of the Kantishna Hills, Mt. McKinley Quadrangle, Alaska*: University of Alaska Masters of Science Thesis, 237 pages.

Leslie M. Noyes, 2001, *From Rock Poker to Pay Dirt*, Fairbanks, University of Alaska Foundation, 707 pages.

Grant Pearson and Phillip Newhill, 1962, *My Life of High Adventure*: Prentice Hall Publishers, 274 pages.

Mariette Shaw Pilgrim, 1954, *Alaska: Its History, Resources, Geography, and Government*: Caxton Printers 355 pages

Periodicals

T.K. Bundtzen, 1978, A history of Mining in the Kantishna Hills: *The Alaska Journal*, vol. 5, no. 2, p. 151-160.

Brian Donohue, 1988, Blowup at Stampede Mine: *Heartland Magazine*, Vol. 5, No. 39, H10-H11.

Alasdair McCondochie, 1994, Mining the Stampede—the Story of Mariette and Earl Pilgrim: *Heartland Magazine*, H-8-H12.

Earl R. Pilgrim, 1978, The Treadwell Mine in 1915: *The Alaska Journal*, vol. 5, no. 4, p. 194-204

Newspapers and Other Sources

Dermot Cole, 1982, “Earl Pilgrim a Miner Plain and Simple”: *Fairbanks Daily News Miner*, July 8, p. 8

Gordon S. Harrison, 1987, “Petition to Name a Peak in the Kantishna Hills Alaska in Honor of Earl R. Pilgrim”, unpublished 6 page manuscript.

“Obituary of Earl Richard Pilgrim”, *Fairbanks Daily News Miner*, August 27, 1987.

Interior Scrapbook—“The Gentleman of the Mine”: *Heartland Magazine*, vol. 4, no. 42, page 8-9.

“1925 Basketball Team” *The Farthest North Collegian*, July 31, 1930, Vol. VII, No. 11, page 5.

“Earl Pilgrim to Examine Mines”: *Fairbanks Daily News Miner*, June 20th, p. 4.

“Mrs. Edna C. Pilgrim Wins in Court”: *The Alaska Miner*, March, 29, 1938, page 3.

“Pilgrim Case Judgment is Received”: *Fairbanks Daily News Miner*, March 28, 1938, page 5.



John Calvin "Jack" Boswell
(1905-1978)

Compiled by Curt Freeman and Robert Boswell

John C. "Jack" Boswell was born in Vale, Oregon on August 19, 1905, the son of John Boswell and C'Ceal Johnston. He spent his formative years working on the family's placer gold mine in Mormon Basin County in eastern Oregon, on-the-job training that would be put to good use in Jack's adult life. . He attended the University of Oregon for two years and, after selling the gold extracted from a cut designated for that purpose at his father's placer mine, he used the funds to book passage to Seward, Alaska. By June 1926 he had taken the train to Fairbanks, arriving in as most did in those days, nearly broke. Through the only two family friends that Jack knew in Alaska, Jack got a summer job with the Fairbanks Exploration Company (FE), owned by mining giant United States Smelting Refining and Mining Co. (USSR&M).

Jack's first job began at McPike's camp at the confluence of Gilmore and Pedro Creeks near the site of the first discovery of gold in the Fairbanks District. When Jack's seasonal job ended, he enrolled as the 119th student at the then-new Alaska Agricultural College and School of Mines (now the University of Alaska). Jack's college career was a full one as he was a star member of the college basketball team, Business Manager of the Collegian, the college's publication, and he spent many nights cleaning the facilities of the new school as part of his work – study program. On one memorable field trip to Healy in 1928, Boswell proved to be an able if not inspired cook assisting Dean Patty with the course of ham (there were no vegetables on that trip). Jack received his Bachelor's degree in Mining Engineering in

1929. Jack's sisters, Marion and Katherine followed him to Alaska and also attended the University of Alaska.

Jack's involvement with the fledgling college in Fairbanks did not stop at his graduation.. He remained an active supporter of the college's alumni association and was the president of the Alumni Association when it instituted the drive in January 1935 to change the college's name to its present name, the University of Alaska. Jack authored two letters to the college's trustees, one of whom, George Lingo, also served in the Territorial House of Representatives. Mr. Lingo introduced House Bill 97 that same year providing for the name change. The bill passed both houses easily and on July 1, 1935 the name was officially changed to the University of Alaska. Jack continued to attend and take courses despite the ever-increasing demands of work. Jack eventually completed his formal education by taking a professional degree of Engineer of Mines in 1942.

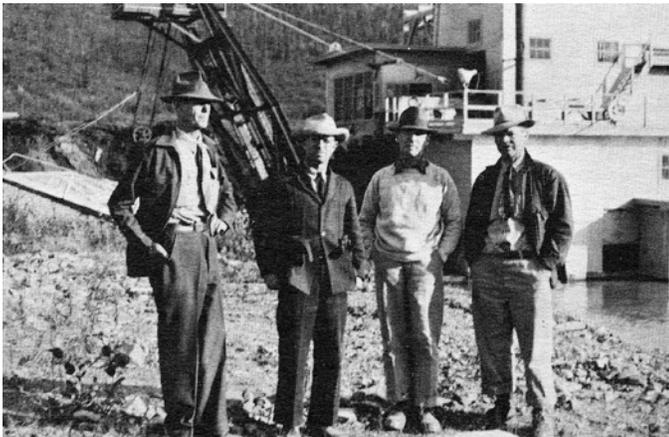
Jack's professional career spanned a period of rapid technological growth in Alaska's mining history and his career with USSR&M spanned virtually the entire operating history of the Fairbanks Exploration Company. During almost forty years with the company, Jack rose from laborer to Fairbanks district manager—only the post of General Manager eluded him, essentially because the position was phased out with the retirement of Jim Crawford in 1965 and the shutdown of the major dredge operations in Fairbanks.

Jack continued to work as a general laborer for "Aunt Effie" (the FE Company) in the summers of 1927 and 1928 while he finished his college degree. He went to work full time for the FE Company after graduating in 1929. His first permanent position was Thawing Assistant at the Chatanika operations on lower Cleary Creek. He held the entry-level rank of Junior Engineer. A year later, his talents already apparent, he moved up to Hydraulic Superintendent at Chatanika.

A seminal moment in Jack's life came when he was promoted to Superintendent of Hydraulics for the new Ester District operations in 1934. The Ester operations were a new start-up for the company and presented numerous engineering and management challenges for Jack and his co-workers. The same era initiated a change in Jack's personal status. On May 19, 1934, Jack married Jewell Gladys Booth and moved into what was known as the McQuarrie cabin on Ester Creek. While they lived in the McQuarrie cabin Jack and Jewell became first-time parents, a set of twins named Marion L. and John W. who were born on May 26, 1935. In 1937 the McQuarrie cabin was razed to make way for the dredge. Jack helped the FE Company move the old Ester schoolhouse, which the Boswells renovated, and where they lived for much of Jack's career. It was while living at the old school that their third child, Robert B., was born on May 26, 1938. Jack always attributed the

coincidence of birth dates for his children as a function of good engineering!

Jack's time at Ester (1934 – 1946) introduced him to nearly every aspect of sub-arctic dredging and prepared him well for the years ahead. On the deep Cripple pay channel Jack had to deal with muck up to 187 feet thick overlying gravel as much as 167 feet thick. (Jack was instrumental in helping the University of Alaska's legendary Otto Geist collect voluminous Pleistocene mammal bones from the thick frozen muck which rested on the pay gravels in Ester.) Under the general leadership of Roy Earling, Jack was in day-to-day charge in 1938 when the giant Bucyrus – Moningham walking dragline was installed to strip the upper low-grade Cripple gravels. The dragline, a veritable behemoth, weighed 1.5 million pounds and swung a 12 cubic yard bucket on a 165-foot [the booms used on the large machine are sometimes stated as 150- and 200-feet]. The bucket weighed 10 tons empty and carried up to 30 tons fully loaded. It was the largest dragline in North America when it began operations at Ester.



USSR&M pioneers R.H. Ogburn, James Crawford, Southal Pfund, and John Boswell in the Fairbanks district, date unknown. Photo from Boswell (1979).

By 1940 Jack and his fellow employees at FE Company had increased their presence in the Fairbanks District to what was to be its all-time high. The FE Company was operating 8 dredges which in aggregate were processing an amazing 75,000 tons of gravel per day while stripping operations were removing frozen muck at a rate of 175,000 tons per day. This peak level of production was maintained until October of 1942 when the War Production Board banned all non-essential mining, including the dredging operations of the FE Company. Although the dredges went silent, Jack continued to advance the science of cold regions dredging during the hiatus in operations which lasted from October 1942 to the end of 1945. Jack and Roy B. Earling, then Vice President and General Manager of Alaskan Operations for USSR&M, conducted a series of tests in an effort to build a mechanical point-driving machine. Hand point driving was laborious and slow

averaging only 10 feet of advance per day in the permanently frozen overburden covering gravels in Fairbanks and the company's other operations at Nome. The result of these tests was a simple, robust combination rotary and percussion drill capable of driving points to a pre-determined depth. The point-driving machine was one of Jack's proudest achievements and helped the company resume profitable dredging after the war when manpower was scarce.

Partly as a result of Jack's efforts during the war years, he was promoted in 1946 to Superintendent of Stripping and Thawing and then in 1951 to Assistant Manager of Fairbanks Operations. This position lasted only one year after which Jack became the Manager of Fairbanks Operations, a position he held from 1952 until his retirement in 1965. Within five years of assuming the top operating position at Fairbanks, Jack working closely with his old friend and associate Jim Crawford who had been promoted to General Manager, increased the FE Company's activities to seven dredges and it was during this period that Jack became part of several historic events in Alaska's history.

The first came in 1954 when Jack was asked to bring a new dredging operation to life at Hogatza River in north-central Alaska. Several creeks in the "Hog" River basin were prospected by the company as far back as 1939. These promising prospects were left undeveloped until late 1954 when Jack, his son Robert, accompanied by Crawford, hitched a plane ride with Alaskan flying legend Sig Wien. Their goal was to determine how to get a dormant dredge in Livengood moved to the Hogatza River site. They chose a route and in early 1955 began a two and a half year effort to bring the Hogatza River dredging operation to production. Jack completed numerous trips to the site over the pre-production period, solving numerous logistical and engineering challenges before the dredge started producing gold in May 1957. The Hogatza operations continued for 18 consecutive years until finally shutting down in 1975. Jack's descriptions of the challenges faced and overcome at Hog River clearly held a special place in his memory.

One of Jack's most notable successes came in early 1958 when it was time to move the Dredge Number 6 from the mined-out Gold Hill area a distance of 7.3 miles to a new dredge site on Sheep Creek. Dredges had been moved before and Jack would eventually participate in all six of the company's dredge moves. But it is clear that Jack was most proud of the Dredge Number 6 move because it in this move that he took the most active role. The move required the use of three D9 Caterpillars, ten D8s, three HD20 Allis Chalmers, and two HD19s tractors. Jack and lead move engineer Richard Ludwig rode on the bow deck of the dredge and used telephones to direct the four lead tractors. After a series of false starts and minor mechanical mishaps the

dredged moved the required distance in a mere four and a half hours.

A less impressive but equally memorable event occurred under Jack's watch. On the evening of April 27, 1959 an ice jam occurred in the rock chute of Dredge Number 2 on Fairbanks Creek. The rock chute was where oversized rocks were directed to prevent their jamming the stacker belt at the rear of the dredge. Instead of clearing the chute with a metal pole as was the normal custom, the deck-hand on site tied a stick of dynamite to a willow pole and detonated it in the rock chute. In Jack's own words "This was done at 6:00 PM and the dredge was on the bottom of the pond at 7:00 PM." The spring run-off prevented repairs on the dredge until the rate of water flow into the pond could be controlled by pumps. Pumping was started in early May but it was not until June 10 that the pond was down to a level where repairs could begin. Repairs included patching the hole in the hull, repairing numerous electric motors which pulled a total of 509 kilowatts of electricity, correcting a bend in the massive digging ladder and washing the accumulated mud from the inside of the hull. The repairs themselves were a major engineering challenge but the dredge started operations again on September 18. It is a tribute to Jack that in his account of this expensive fiasco he never mentioned the name of the guilty deck-hand who was responsible for the sinking.

In 1955 Jack was chosen to serve as a delegate to the Alaska Constitutional Convention, a body of civic and business leaders in Alaska whose job it was to draft the constitution for the soon-to-be State of Alaska. Jack's talents were quickly recognized and he was appointed Chairman of the Resources Committee. He also served on the convention's Executive Committee. Those portions of the Alaska Constitution dealing with natural resources have stood the test of time, further attesting to Jack's versatile talents. Earlier he was known for his athletic talents as a member of the College's basketball team; he continued his interest in athletics as the founding President of the Midnight Sun Baseball League. Always supported by his family and especially by his wife Jewell, Jack was very active in the civic affairs of Fairbanks. Jack was President of the Central District Republican Committee in 1959 and followed that with the presidency of the Fairbanks United Way drive in 1960.

While Jack's many accomplishments were well known to his family and his contemporaries, his accomplishments and those of the FE Company would have been lost to history if Jack had retired and spent his remaining years at his favorite pass-time, fishing. Fortunately for us, prior to his death in 1978 Jack wrote a detailed history of the Alaskan operations of USSR&M. His 1979 posthumous publication "History of Alaskan Operations of United States Smelting,

Refining and Mining Company" was published by the Mineral Industry Research Laboratory at the University of Alaska and remains one of Jack's most enduring legacies. This amazing summary, from which much of the above information was drawn, spans a time period stretching from horse-drawn scrapers and rocker boxes to 12 cubic yard electric drag lines and giant floating dredges. During the period 1928 to 1964 Jack's efforts helped the company produce \$125 million worth of gold (about 3.5 million ounces). Perhaps even more impressive were the engineering challenges that men like Jack Boswell faced and surmounted. It is difficult to reduce Jack and his company's efforts to a few terse lines but a single fact brought out in Jack's history of the Alaskan operations of USSR&M stands out as one of the brightest stars in Alaska's glorious mining history: the efforts of the FE Company in the Fairbanks District, spanning almost 45 years of exploration, construction and operations resulted in the company recovering about 8.5% more gold than their drilled reserves indicated was present. Even in today's computer driven era this is an astounding achievement that has seldom been equaled and most likely will never be surpassed.



Jack and Jewell Boswell on a hunting trip near Fairbanks.

SOURCES

Beistline, Earl H. 1979 "Preface" in John C. Boswell cited below.

Boswell, John C., 1979, *History of Alaskan Operations of United States Smelting, Refining, and Mining Company*. Fairbanks: University of Alaska, Mineral Industry Research Laboratory

Boswell, Robert, 2004, Communications to author.

Noyes, Leslie M., 2001, *Rock Poker to Pay Dirt*. Fairbanks: University of Alaska Foundation.

Distinguished Alaskans Aid Foundation as '98ers

The Alaska Mining Hall of Fame Foundation was incorporated as an Alaskan non-profit corporation on April 27, 1997. The Foundation was organized exclusively for educational and charitable purposes, including donations to organizations that are tax exempt under Section 501(c)(3) of the federal tax code. On September 17, 2003, the IRS confirmed the 501(c)(3) status of AMHF, and further categorized the organization under codes 509(a)(1) and 170(b)(6).

The foundation is a non-membership corporation that depends on services provided by its officers and directors, others interested in Alaskan mining, and on donations and grants.

The Foundation is especially indebted to fifteen persons who have each contributed \$1,000 to become 98ers, in honor of the first stampedeers to Alaska in 1898 at Nome.

The 98ers

Earl Beistline
Thomas K. Bundtzen
Glen Chambers
Douglas Colp
Wendell Hammon Jr.
Walter Johnson
Wallace McGregor
John Mulligan
Patrick H. O'Neill
Elmer E. Rasmuson (deceased)
William Stroecker
Robert H. Trent
Mitch Usibelli
Joe Usibelli, Sr.
William R. Wood (deceased)

Most of the 98ers are recognizable as miners of national or international reputation. The late William R. Wood was President, Emeritus, of the University of Alaska. Dr. Wood suggested the organization of the Foundation. The late Elmer E. Rasmuson was an Alaska banker and benefactor, long interested in Alaska natural resource history. Dr. Walter Johnson's career was mainly in Native public health, but he knew many pioneer Alaskans. His own research has taken him to Sweden and

Norway in search of the true story of the so-called "three Lucky Swedes" of fame at Nome. The Foundation is seeking about ninety more 98ers, but it welcomes contributions at every level. For further information contact:

Wallace McGregor Chair, Finance Committee 1212 N. Washington, Ste 12 Spokane, WA 99201	Karl Hanneman Treasurer 626 Second St., Ste 201 Fairbanks, AK 99701
---	--

Alaska Mining Hall Of Fame Directors and Officers:

President *Emeritus*--Earl H. Beistline
President-- Mary A. Nordale
First Vice President--Paul Glavinovich
Second Vice President--David Stone
Secretary--Thomas K. Bundtzen
Treasurer--Karl Hanneman
Chair Facilities Committee--Mary Nordale
Chair Honors Committee--Charles C. Hawley
Chair Fund Raising and Publicity--Wallace McGregor

Board of Directors:

Paul S. Glavinovich Irene Anderson David G. Stone Wallace McGregor Earl H. Beistline Mary Nordale	Joseph E. Usibelli Sr. Karl Hanneman Charles C. Hawley Tom K. Bundtzen Curtis J. Freeman
--	--

Mailing Addresses:

AMHF Interim President
Mary Nordale
100 Cushman Street, Suite 308
Fairbanks, Alaska 99701

AMHF Honors Committee
Charles C. Hawley
11401 Olive Lane
Anchorage, Alaska 99515
phone 907-522-9201

AMHF Treasurer and Donations
Karl Hanneman
626 Second Avenue, Suite 201
Fairbanks, Alaska 99701

Associate Editors of the Paystreak
Charles C. Hawley
11401 Olive Lane
Anchorage, Alaska 99515

Tom Bundtzen Box 81906 Fairbanks, Alaska 99708
--

David G. Stone
Box 22893
Juneau, Alaska 99802