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The Bancroft Library

University of California
Berkeley, California

Western Mining in the Twentieth Century
Oral History Project

Philip Read Bradley, Jr.

A MINING ENGINEER IN ALASKA, CANADA, THE WESTERN UNITED STATES, LATIN AMERICA, AND SOUTHEAST ASIA

With an Introduction by
Noel Kirshenbaum

An Interview Conducted by
Eleanor Swent
in 1986 and 1988

Since 1954 the Regional Oral History Office has been interviewing leading participants in or well-placed witnesses to major events in the development of Northern California, the West, and the nation. Oral history is a modern research technique involving an interviewee and an informed interviewer in spontaneous conversation. The taped record is transcribed, lightly edited for continuity and clarity, and reviewed by the interviewee. The resulting manuscript is typed in final form, indexed, bound with photographs and illustrative materials, and placed in The Bancroft Library at the University of California, Berkeley and other research collections for scholarly use. Because it is primary material, oral history is not intended to present the final, verified, or complete narrative of events. It is a spoken account, offered by the interviewee in response to questioning, and as such it is reflective, partisan, deeply involved, and irreplaceable.

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It is recommended that this oral history be cited as follows:

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Copy No. 1

PHILIP READ BRADLEY, JR.

1974

Photographed by Russell Abraham

San Francisco Chronicle, September 27, 1999

BRADLEY, Philip Read, Jr. -- On Thursday, September 23rd, 1999 at the age of 94. A member of a prominent California mining family and longtime resident of Berkeley, he was born in Copper Cliff, Ontario, and raised in Treadwell, Alaska. Attended Culver Military Academy and graduated from UC Berkeley School of Mines in 1927. Served on the California Mining Board for 32 years under four governors, most time serving as chairman. Founded the California Mining Association, Western Governors Mining Council, and was on the board of governors of the American Mining Congress. A member of the AIME and the Mining and Metallurgy Society. In his sixty year career, he worked in the US, South America, Guatemala, Thailand, Canada, and Mexico. Survived by Katherine Connick **Bradley**, wife of 58 years, sons Philip, Arthur, and Gordon **Bradley**, daughters Ginger Sutherland and Joan Wactor, and five grandchildren. A private memorial will be held by the family at a later date. Interment will be in Nevada City, California. In lieu of flowers, contributions can be made to the Bancroft Library Oral History Department c/o University of California, Berkeley, CA 94720, or to the charity of your choice.

ACKNOWLEDGMENTS

Special thanks are given to the following members and friends of the Bradley family who contributed to the cost of producing this oral history.

Arthur C. Bradley
Gordon C. Bradley
Joan Bradley
Katherine C. Bradley
Philip Read Bradley III
Bruce S. and Jeannette C. Howard
Ruth Bradley Hume
Sheila Kelly
Frances Bradley Ludington
Virginia Bradley Sutherland
John J. Trelawney

Philip and Katherine Bradley, in memory of Sewall Bradley
Bruce and Jeannette Howard, in honor of Katherine Bradley

Continental Can Company, Matching Grants Program

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PREFACE

The oral history series on Western Mining in the Twentieth Century documents the lives of leaders in mining, metallurgy, geology, education in the earth and materials sciences, mining law, and the pertinent government bodies. The field includes metal, non-metal, and industrial minerals, but not petroleum.

Mining has changed greatly in this century: in the technology and technical education; in the organization of corporations; in the perception of the national strategic importance of minerals; in the labor movement; and in consideration of health and environmental effects of mining.

The idea of an oral history series to document these developments in twentieth century mining had been on the drawing board of the Regional Oral History Office for more than twenty years. The project finally got underway on January 25, 1986, when Mrs. Willa Baum, Mr. and Mrs. Philip Bradley, Professor and Mrs. Douglas Fuerstenau, Mr. and Mrs. Clifford Heimbucher, Mrs. Donald McLaughlin, and Mr. and Mrs. Langan Swent met at the Swent home to plan the project, and Professor Fuerstenau agreed to serve as Principal Investigator.

An advisory committee was selected which included representatives from the materials science and mineral engineering faculty and a professor of the history of science at the University of California at Berkeley; a professor emeritus of history from the California Institute of Technology; and executives of mining companies.

We note with much regret the death of two members of the original advisory committee, both of whom were very much interested in the project. Rodman Paul, Professor Emeritus of History, California Institute of Technology, sent a hand-written note of encouragement just a few weeks before his death from cancer. Charles Meyer, Professor Emeritus of Geology, University of California at Berkeley, was not only an advisor but was also on the list of people to be interviewed, because of the significance of his recognition of the importance of plate tectonics in the genesis of copper deposits. His death in 1987 ended both roles.

Thanks are due to other members of the advisory committee who have helped in selecting interviewees, suggesting research topics, and raising funds.

Unfortunately, by the time the project was organized several of the original list of interviewees were no longer available and others were in failing health; therefore, arrangements for interviews were begun even without established funding.

The project was presented to the San Francisco section of the American Institute of Mining, Metallurgical, and Petroleum Engineers [AIME] on "Old-timers Night," March 10, 1986, when Philip Read Bradley, Jr. was the speaker. This section and the Southern California section provided initial funding and organizational sponsorship.

The Northern and Southern California sections of the Woman's Auxiliary to the AIME [WAAIME], the California Mining Association, and the Mining and Metallurgical Society of America [MMSA] were early supporters. Several alumni of the University of California College of Engineering donated in response to a letter from Professor James Evans, the chairman of the Department of Materials Science and Mineral Engineering. Other individual and corporate donors are listed in the volumes. The project is ongoing, and funds continue to be sought.

Some members of AIME, WAAIME, and MMSA have been particularly helpful: Ray Beebe, Katherine Bradley, Henry Colen, Ward Downey, David Huggins, John Kiely, Noel Kirshenbaum, and Cole McFarland.

The first five interviewees were all born in 1904 or earlier. Horace Albright, mining lawyer and president of U.S. Borax and Chemical Corporation, was ninety-six years old when interviewed. Although brief, this interview will add another dimension to the many publications about a man known primarily as a conservationist.

James Boyd was director of the industry division of the military government of Germany after World War II, director of the U.S. Bureau of Mines, dean of the Colorado School of Mines, vice president of Kennecott Copper Corporation, president of Copper Range, and executive director of the National Commission on Materials Policy. He had reviewed the transcript of his lengthy oral history just before his death in November, 1987.

Philip Bradley, Jr., mining engineer, was a member of the California Mining Board for thirty-two years, most of them as chairman. He also founded the parent organization of the California Mining Association, as well as the Western Governors Mining Advisory Council.

Frank McQuiston, metallurgist, vice president of Newmont Mining Corporation, died before his oral history was complete; thirteen hours of taped interviews with him were supplemented by three hours with his friend and associate, Robert Shoemaker.

Gordon Oakeshott, geologist, was president of the National Association of Geology Teachers and chief of the California Division of Mines and Geology.

These oral histories establish the framework for the series; subsequent oral histories amplify the basic themes.

Future researchers will turn to these oral histories to learn how decisions were made which led to changes in mining engineering education, corporate structures, and technology, as well as public policy regarding minerals. In addition, the interviews stimulate the deposit, by interviewees and others, of a number of documents, photographs, memoirs, and other materials related to twentieth century mining in the west. This collection is being added to The Bancroft Library's extensive holdings.

The Regional Oral History Office is under the direction of Willa Baum, division head, and under the administrative direction of James D. Hart, director of The Bancroft Library.

Interviews were conducted by Malca Chall and Eleanor Swent.

Willa K. Baum, Division Head
Regional Oral History Office

Eleanor Swent, Project Director
Western Mining in the Twentieth
Century Project

May 1, 1988
Regional Oral History Office
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Western Mining in the Twentieth Century Oral History Project
Interviews Completed or In Process, April 1988

Philip Read Bradley, Jr., A Mining Engineer in Alaska, Canada, the Western United States, Latin America, and Southeast Asia, 1988.

Horace Albright, in process

James Boyd, in process

Catherine C. Campbell, in process

Helen R. Henshaw, in process

Lewis Huelsdonk, in process

Frank Woods McQuiston, Jr., in process

Plato Malozemoff, in process

Gordon Oakeshott, in process

Langan W. Swent, in process

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Department of Materials Science and Mineral Engineering
University of California, Berkeley

Mr. Philip R. Bradley
Former Chairman, California State Mining and Geology Board

Professor Neville G. Cook
Department of Materials Science and Mineral Engineering
University of California, Berkeley

Professor Roger Hahn
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INTRODUCTION by Noel W. Kirshenbaum

I have had the pleasure of knowing Phil Bradley for about thirty-five years. I first met him when I was still a youngster attempting to enter the mining industry. I was seeking a summer job in the mines and had been stymied by a series of negative responses to letters written to companies in an industry with which I was unfamiliar. Through Phil's kind efforts, I was able to find challenging summer work in the research lab at the Bunker Hill operations in Idaho. Phil, of course, had the advantage of coming from a mining-oriented family, one with forebears prominent in the profession. While this surrounded him with mentors, those who know him would never consider that he had been given a "silver spoon".

Certainly Phil Bradley is not the only wise and experienced person I have known who can point to a long career in a particular industry. However, too few can take--or are even interested in taking—a long and broad view of their personal activities in the context of the history of their own industry, as he has done. This has enabled him to make valuable use of the lessons of the past. Although to my knowledge he has never described himself as an historian, he has, indeed, the attributes of at least a practical historian in mining and metallurgy.

Phil has often agreed with me that in so many aspects, mining paradoxically gives the appearance of being based upon renewable rather than depleting resources. Such newer industries as electronics and computer technology find minimal practical benefit in searching or even recalling their past. In mining, however, thanks to changes in metal prices, advances in metallurgy, new markets and applications, improved exploration techniques or mining methods, very many "worn-out" mining districts come back into production—as though they were renewed resources. In a world where changes are continuously accelerating, the minerals industry thus deserves to have a particular respect for its history.

Although Phil's experience is global, a case in point which illustrates not only the cyclical nature of mining but also the timeless durability of Phil, is found right in California. The Mother Lode region has had its peaks and valleys of production for over 140 years. Through his family, Phil intimately knew this early history, and he was personally involved at the time of the area's revitalization following the price increase of gold during the great depression. During World War II, gold production ceased, but after the war, activity again resumed until the 1950s when escalating costs doomed the production of what was at that time a fixed-price commodity. Nevertheless, I remember Phil plugging away for the Harvard mine--urging that someone should have a look at that area near Sonora, as "there is still ore there". Not long ago, a major operation commenced at that location; it is in fact larger than in the old days, a result of surface mining which uses new, large equipment. And now, in 1988, Phil told

me recently, he has been asked to do consulting work on that same property--as well as at another mine in Mariposa County, where he was involved around 1932 to 1934.

It seems appropriate that this grand old gentleman still uses the knowledge of mining activity that he and his family were involved in decades ago. But more significantly, he is interested in enabling that knowledge to be used by those of following generations. In this latter connection, it has been my pleasure to have been associated with him in a continuing but so far unsuccessful effort to return the library and other facilities of the California Division of Mines and Geology, removed by bureaucratic decree in 1984 to an inconvenient location in Contra Costa County, to its original and rightful home in San Francisco, where this unique and invaluable reference source will have its greatest use. Phil has told me that one of the easiest tasks of his long career was a consulting assignment for which I recommended him: assisting in distinguishing mining artifacts from a heap of items which had been gathered up during the process of conducting an environmental impact study on an area in the historic Mother Lode which was soon to be flooded by a new dam.

Phil's demeanor is unassuming, yet he doesn't shrink from speaking out whenever the occasion justifies. He has always been an advocate of the small- and medium-size producers such as mercury mines or underground gold properties. Not only has he pursued his private and professional endeavors, but he also has generously given his time as an active public figure on federal and state mining boards. All these activities have given him personal associations with the most notable figures in the mining and governmental worlds.

It is certainly fitting and fortunate that we have an oral history from Phil Bradley; thanks to his virtually photographic memory, this wise and modest man can vividly and accurately relate his far-ranging experiences in a profession which itself is so very historic.

Noel W. Kirshenbaum
Manager, Mineral Projects
Development
Placer Dome U.S. Inc.

March 1988
San Francisco, California

INTERVIEW HISTORY

Philip Read Bradley, Jr. was the obvious choice as the first memoirist in the oral history series on Western Mining in the Twentieth Century. A truly representative mining man, he was born into a mining family; engaged in mining all of his life; founded, belonged to, and/or directed many local, regional, and national governments on mining matters; and is a noted raconteur of Western historical and mining lore.

The Bradley family has long been connected with mining in the West. All four of Mr. Bradley's grandparents lived in the California Gold Belt; his maternal grandmother, Hester Harland, was born on the Bidwell Ranch near Chico. As a historical side note, this same grandmother was one of the founders of PTA and an active suffragist, the California secretary for Susan B. Anthony. In the 1890s the Board of Lady Managers for the California World's Fair included both of his grandmothers, Virginia Shearer Bradley and Hester Harland.

The Bradley family was associated with great mines--Bunker Hill and Sullivan in Idaho, Alaska Treadwell and Alaska Juneau--in a time when mining was a premier industry, and great personal fortunes were to be made in it. Famous men like Herbert Hoover, John Hays Hammond, and Bernard Baruch were acquaintances and associates in mining. Philip Bradley is both proud and modest about his family's accomplishments; he admires his uncle's intuition and management skills which led to the acquisition of wealth. Philip Bradley has a strong sense of family and of history. One evidence of this is his saving some of the papers of his uncle Frederick W. Bradley when all the rest were destroyed.

Both his father and uncle attended the mining school at the University of California at Berkeley, as did he, his brother, and four cousins. "U.C. was a fine University, but Bob Sproul was the boomer that made the damn thing go--he gave it life," he says.

Although he was born in Copper Cliff, Canada, where his father worked for a time, his roots are in California, and love of the state and of his profession permeate his oral history. "The great thing about mining, you get nice isolation," he says. Alaska, another of his great enthusiasms, is also in a mining sense an extension of the Mother Lode. Like most mining men, he has been peripatetic, working in places as far-flung as Bolivia and Thailand, but he says he hopes to be buried in Nevada City, California.

Philip Bradley is the epitome of the California mining man, and stands in the finest tradition of all good mine managers--paying good men a little extra, respecting the workman's judgment, and "camping on it"

to get the job done. He has pride in his profession for creating jobs and good living conditions in opening up new places--"That's what mines do!" he exclaims. He is tortured, more than fifty years later, by a memory of the Depression wearing down a man's pride.

Philip Bradley served on the California Mining Board for thirty-two years under four governors. For most of that time he was chairman. He founded the California Mine Operators Association, now the California Mining Association; he founded the Western Governors Mining Advisory Council; he was on the board of governors of the American Mining Congress. His active mining career was truncated by World War II, but he continued for many years as a consultant, serving as recently as the 1980s as an advisor on mining archeology at the Melones Dam site, and in 1988 as mining consultant for the Harvard and Pine Tree mines.

During Philip Bradley's early years on the California Mining Board, it consisted of five men who were powers in the mining industry. As he said, they were men like mine manager Lewis Huelsdonk, "Mr. Sierra County"; Will Browning, whose uncle invented the Browning machine gun, and who was "a hell of an effective man"; and Edmond Brovelli, "a cement man." Later the board was broadened to include a representative of the Earth Sciences faculty at Stanford. More recently, the board, now named the State Mining and Geology Board and enlarged to nine members, includes only one mining engineering member. By statute the board "is comprised of individuals with specified professional backgrounds in geology, mining engineering, environmental protection, chemical engineering, urban planning, landscape architecture, mineral resource conservation, seismology, and one public member." As Philip Bradley has observed in his oral history, these changes are indicative of wide changes in the industry as a whole, and in the public's attitude toward mining.

Philip Bradley's oral history will provide readers with a broad view of Western mining, including Alaska, as it opened up new areas to settlement, advanced technology, and influenced legislation. The exportation of American--and in particular, Californian--expertise is also discussed.

I first met the Bradleys in 1948 at a mining convention in San Francisco. Since that time, I have been with them from time to time at mining meetings or social gatherings. He is not a formal or distant person; it seems that everyone who knows him calls him "Phil."

Since early childhood, I was aware of the cave-in at the Treadwell Mine. Although it happened before my birth, it was the circumstance that brought the fathers of some of my good friends from Alaska to the Homestake Mine in South Dakota. A number of them used to return to Alaska for vacations, long before it was stylish or easy to do so. The Bradley link to that event and those people gave us a common interest, and it was a personal pleasure to hear his first-hand story.

In addition to participating in the project as the first interviewee, Phil and his wife Kay (Katherine Connick) were early supporters of the Western Mining in the Twentieth Century project. He has served on the advisory board, and he and his wife have given invaluable help. Had it not been for their early encouragement and support, the project would have been longer delayed.

The letter inviting Philip Bradley to participate in the project was sent on April 15, 1986 and after a planning session on April 16, the eight interviews of about two hours each were conducted between April 22 and July 1, 1986 at his home. One brief supplementary interview was taped on March 17, 1988.

The interviews all took place in the late afternoon in the Bradleys' spacious Berkeley home designed by Albert Farr. The beautiful garden demonstrates Kay Bradley's talents. On a table in the entry hall is a very large brass assayer's balance--a charming decorative accent, and a motif for the Bradley family.

For the first interviews we sat in the library, where family pictures line the walls. In addition to oil portraits of their five children, there is a photograph of Patio San Francisco in Guanajuato, Mexico, where Phil's parents enjoyed living. Later we sat in a bay of the living room, within sight of his parents' house, and very near that of his parents-in-law, the Arthur Connicks.

Phil's memory is still good, and he is a gifted raconteur, well-known for his interest in California and Alaska history, and for his ability to recount mining lore from his own experience and that of his family. During the interviews, an outline was occasionally referred to. He seemed to enjoy the interviewing, and was not at all self-conscious about the taping process. His speech is richly cadenced; his choice of words precise; significantly, he speaks just the same off-tape as when the tape recorder is turned on, voicing strong, but not narrow, opinions.

The transcript of the interviews was lightly edited: some sections were moved to provide better continuity, and repetitions were eliminated. Mr. Bradley reviewed the transcript and made a few changes to clarify meaning or to correct spelling. The tapes are deposited in The Bancroft Library.

Eleanor Swent, Project Director
Western Mining in the Twentieth
Century Project

14 April 1988
Regional Oral History Office
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University of California at Berkeley

PHILIP READ BRADLEY, JR.

GENEALOGICAL AND BIOGRAPHICAL INFORMATION

Birthplace: Copper Cliff, Ontario, Canada
Birthdate: December 21, 1904
Home address: 2801 Oak Knoll Terrace,
Berkeley, California, 94705
(415) 841-0899

Spouse: Katherine Connick
Birthplace: Eureka, California
Birthdate: April 6, 1916
Place of marriage: Berkeley Date: April 18, 1941

Father: Philip Read Bradley, Sr.
Birthplace: Georgetown, CA Date: December 10, 1876

Mother: Mabel Harland
Birthplace: Siskiyou County, CA Date: July 10, 1878

Grandparents :
Father's father: Henry Sewall Bradley
Birthplace: Milton, Mass. Date: c. 1825

Father's mother: Virginia Shearer
Birthplace: Winchester, Virginia Date: c. 1843

Mother's father: Henry Harland
Birthplace: Ripon, Yorkshire, England

Mother's mother: Hester Harland
Birthplace: Bidwell Ranch, Chico, CA

Brothers and Sisters:
Henry Bradley, born September 3, 1906
Ruth Frances Bradley, born December 31, 1915
Frances Ruth Bradley, born December 31, 1915

Children:
Philip Read Bradley, III, born March 9, 1942
Arthur C.Bradley, born June 30, 1943
Virginia Bradley Sutherland, born November 7. 1945
Gordon C. Bradley, born September 18, 1951
Joan Bradley, born February 19, 1959

BRADLEY, PHILIP R.

Office: Mng. and Met. Eng.
(Home): 2801 Oak Knoll
Berkeley, CA 94705
(415-841-0899)

Born: Dec. 21, 1904, Copper Cliff, Ont.

1926 BS Mining, University of California, Berkeley

1960-date Consulting Engineer, CA, Thailand (fluorspar), Colombia, (gold placer)
1960 A/J/I (gold mine), Chihuahua, Mex., Mine Mgr.
1956-1958 A/J Ind. of Los Angeles (successor to Alaska Juneau Gold Mining Co., San Francisco), Director
1945-1956 Alaska Juneau Gold Mining Co. of San Francisco, Consulting Engineer, VP, Director. Alaska Juneau CA subsidiaries and Atolia Mining Co., President
1934-1945 Mother Lode, NV and OR, Foreman, Supt., Mgr.; also built two tailings mills privately, NV and CA
1926-1933 Copper-Lead-Zinc mine, Ontario (3 yrs.), Silver-Lead-Zinc mine, NV (1 yr.), Gold mine, Mother Lode, CA (1 yr.), Staff Engineer

Member: AMC Bd. of Gov.; Mng. Com., Chmn., San Francisco Chamber of Commerce (also former Dir.); Defense Minerals Agency, Washington, DC; Fed. Natnl. Com. on Multiple Use of Natnl. Forest Lands; CA State Mng. and Geol. Bd., (former chmn.); Fed. Advisory Com. for CA Dir. of US Bureau of Land Mngmt.; Fed. Advisory Com. for CA Dir. of US Forest Service; Reg Geol. and PE (Metallurgy) CA; Reg Mng. Eng. OR; SME of AIME

9/83

FAMILY BACKGROUND AND CHILDHOOD, 1904-14

[Interview 1: April 22, 1986]##

Forebears

Bradley: I was born in Copper Cliff, Ontario, a smelter town. It was the main smelter of the Canadian Copper Company. My father Philip, Sr. was superintendent there. A little earlier, he had worked for Alfred Mond of the Mond Nickel Company. This was at the Victoria Mine, not far down the Soo Line below Sudbury. At that smelter, my dad had been foreman and had blown the first blister copper ever made in Canada.

That's interesting. [laughs] Do you know what blister is? It's simply the best grade, although unrefined, copper that a smelter can turn out. From this point it goes to the refining plant, which might be on the Atlantic coast or someplace like that. Blister is not pure by any means, not bar stock or commercial, but this was the first ever made in Canada. They were apparently always working on improvements.

My dad told me a story about trusting the working men to do the right thing, if you give them a chance. When he first went to work at Copper Cliff, the tuyeres in the blast furnace were all wide open. Somebody had told the workmen to open them up, to have a good blast in there. And he didn't know whether tuyeres should be open or not, but as he went around, he noticed that over time, they were being closed a little bit each day by the crew. And the reason they were being closed was that the workmen there knew that that was the proper way to work them. He didn't have to tell them. He didn't have to know, and he didn't have to tell them.

And this story comes out of a conversation that developed up at the Beebe Mine in the Mother Lode, about 1933 or '34. And the subject was, the good working man, or good mill man, knows what he should be doing, and they do the right thing, if you give them a chance.

Grandfather, Henry Sewall Bradley

Swent: How did your father get his training and experience?

Bradley: All right, we'll start with Henry Bradley, who was Fred's father and Phil's father. Henry grew up in Lowell or Milton, Massachusetts, more or less a suburb of Boston. He went to some school there and took an engineering course, such as it was in those days. This may have been a school eventually absorbed by M.I.T., which did not exist in those days, as I found out talking to Mike [Morrough] O'Brien. Mike was dean of the School of Engineering at the University of California in the '60s and a graduate of M.I.T. [Massachusetts Institute of Technology]. I talked to him about this, and he said M.I.T. was not formed until 1865. My grandfather Henry Sewall Bradley was at whatever that school was, in the 1840s.

In October of 1849, he boarded a sailing vessel in Boston Harbor and sailed out of there and came around the Horn. He landed in San Francisco in May of 1850. He kept somewhat of a diary, and I got hold of it, but it turned out to be really nothing more than a copy of the captain's log each day, and that we turned over to the California Historical Society.

In any event, he landed in San Francisco in 1850. A little group of friends had formed a partnership on the ship, and when they left San Francisco, very shortly after landing, they took off for the Merced River. Why Merced, I don't know, but apparently it had a reputation in those days of being a good place for placer mining. But they did not do well on the Merced.

Swent: They were mining?

Bradley: That's what they came for! They couldn't do anything on the Merced--the water was too high--and they went up into the hills a little bit to a Burns Creek, and he worked in Burns Diggings.

I know just where that is because in the year 1940 I was put in charge of a mine down there not far from Burns Creek, and I got to know that country pretty well. This was the Jenny Lind, a lode mine on a good quartz vein. I'd already been in charge of the company's Pine Tree Mine, in Mariposa County, and Burns Creek and Pine Tree were just over the hill from each other. It was a pretty fair mine, but like most of the gold mines in California, it got stopped by the advent of World War II and that was the end of it. So far as I know, the machinery is all still there, although I've had nothing to do with it for thirty years or more. Haven't even been by in that time.

Bradley: Well, anyway, Henry Bradley worked there for about $6 a day shoveling rock into sluice boxes, but he got pretty tired of that

pretty soon, and took off and went to San Francisco. He went from San Francisco to Marysville traveling on the steamer, either the New World or the Senator, which you find in all the histories. Good ships, important ships, brought out here from the East within the year and put to work on the Sacramento River.

He wound up in Yuba County, right on the edge of Nevada County, and there he spent the rest of his life. He died of pneumonia in the year 1881. I have around this house all his notebooks. He became a surveyor up there, and I have all his survey notebooks here. The last notebook has in it--he was out calling on somebody the next to last day of his life--he didn't know it, but it was the last entry in his notebook--he was collecting a fee, and he went home and died the next day.

That left his widow with five children. She'd already given birth, I think, to eight. The oldest of the five was either Martha or Fred, then Edith and Mabel and Philip. Those were the surviving children. There's a plot in the cemetery in Nevada City that has all the children in it, and now has Fred and Phil, and Phil's wife Mabel, my mother, and some day it'll have me in it, if I have my way.

Fred's name was Frederick Worthen Bradley, and the Worthen name comes either from that school in Massachusetts, or from the first man Henry worked for, a dam-building job on the Merrimac River.

Grandmother, Virginia Shearer Bradley

Swent: You told me before that your grandmother was a writer.

Bradley: The memoirs were written by my other grandmother, my mother's mother. But Virginia Bradley was the chairman of the group of California women who worked on the California World's Fair of 1893. And oddly enough, Hester Harland was the secretary of the group. Virginia was a Nevada County girl, and Hester was a Sierra County girl.

Virginia had been brought out here by her father in 1852, and they settled near Park's Bar. I've been there several times. There are some fig trees there, still growing, that her father is supposed to have planted. He was a storekeeper.

Henry Bradley was by then working up in that part of the country, in Yuba County just over the line from Nevada County. Henry's work carried him back and forth. He and Virginia were

Bradley: married in the year 1859. Virginia then was I think fifteen years old. I have a letter that Henry wrote to his family in Massachusetts telling him about their first Thanksgiving dinner.

When he left the house on Thanksgiving morning, he told his wife he expected to have a Thanksgiving dinner when he came home that night. And she told him--and I can imagine her doing it, because she was always a very firm person, believe me; even as I knew her when she was eighty years old, she was a firm person--she told him she wasn't going to do anything like that. But her letter says when he got home--he described the Thanksgiving dinner--it was wonderful! I think there were seven sorts of vegetables she'd cooked up. Oh, she'd done just as good a job as she could, and she was only about fifteen or sixteen. She'd just gone to work. That's the kind of person she was, all through her life.

I can remember her eightieth birthday, which we celebrated in the old Bradley home in Nevada City. The Bradley home was then occupied by Fred's next sister Mabel and her husband. Mabel got up a birthday party for her mother, my grandmother, and we happened to be up there and we enjoyed it; it was wonderful.

I remember how lithe she was. As they were cleaning up, someone dropped a spoon on the floor, and this eighty-year-old woman went right down on that spoon like a cat. My golly, she was lithe! She was a well-favored woman, and you could see where these great talents of Fred and Phil had come from. They came right down from that mother. Of course, none of us knew anything about the father. None of Mabel's children were born by the time that father died in 1881.

Uncle, Frederick Worthen Bradley

Bradley: Fred finally came down to the University of California with the class of 1884. He stayed for two years, and always told people that he had done three years of work in those two years. He came down for his last year of college, and a job he had expected to get, a janitor's job here in Berkeley, had blown up. Someplace around here we have his letter that he wrote home to his mother telling why he was dropping out of college.

Fred was one of the greatest letter writers that ever existed anyway. His letters were so concise and clear, nothing extraneous in them at all, and this letter was just like that. Clear and simple--there it was.

Bradley: So he went back to Nevada City and what he did immediately I don't know, but it was not long before the Spanish Mine, which was up on Poorman Creek, just across the river from the town of Washington in Nevada County, maybe at the most twenty miles above Nevada City--that mine came on the market. It had failed because of mismanagement, and Fred took the opportunity to take it over. He must have been working there, and must have known about it, because he wouldn't have gone in blind, I'm sure.

Swent: Had he worked in mines before?

Bradley: He must have been twenty or so. He'd had to work because he was the oldest son of a widow who had four or five other children. He may already have worked at the Spanish Mine. He bought into it, and his mother showed me the note that Fred had given her for $6,000 that he borrowed to open that mine. He got it producing, and made money, right from the beginning. And that got into all the news, because apparently it was one of these mines that had been so poorly handled, it made news.

Swent: What does poor management mean?

Bradley: There are so many things. Poor management of a mine begins usually with your difficulties with the crew. You've got the wrong people on the crew, or you're not treating them right, they're getting sore at the bosses and they're just laying down on the job, they're not given the right things to do that the mine calls for, and so on and so on.

Swent: Was he particularly good with people?

Bradley: Proved to be! One thing he did, which was not highly thought of in those days, but he did it--he got Chinamen to take the work over there, and he paid them as low a wage as he could, but they worked for it, and he got that mine running, and producing, and making money.

My dad worked up there when he got out of college, which was about ten years later, in 1896. He had quite a few stories to tell abuut that. One that I remember was that they were having trouble with skunks up there, and so they rigged a figure-four trap and caught a skunk.

Do you know what a figure-four trap is? If the arm of the four is jiggled by an animal taking the bait, the whole thing collapses. You use an apple box, or anything like that, and down it comes. So they went out one morning, and the thing was collapsed, and the skunk was in there. Then their problem was, what to do about it, because if you've got an outraged skunk, you've got to be awfully careful. The next time they set the trap, they put a stick of dynamite in it, and then they got off at

Bradley: a distance of a hundred yards or so with their rifles, and they shot until they hit the dynamite, and blew everything up. They lost the trap but they got rid of the skunk!

Another story was how they'd all looked forward to a Christmas dinner. They'd gone down to Washington to the grocery store there, and amongst other things had bought a lot of canned olives. They'd looked forward to that. Dinner served, there were no olives. When they asked the Chinese cook what had happened, he said, "They were all spoiled, all black."

Fred did so well at that Spanish Mine that he got a lot of good notices out of it. Amongst other people who came looking for him to work for them was James J. Hill of the Great Northern Railway, who wanted Fred to take over all of his examinations through that stretch that the railroad ran through in Montana and Idaho. But Fred wouldn't take that job, I don't know why.

John Hays Hammond came along and offered Fred a job at the Bunker Hill Mine in Idaho. The mine had been discovered and opened up not long before. The manager was Victor Clement. I think John Hays Hammond married the daughter of the president. At any rate, in 1893, when Fred had been working there about three or four years, Hammond and Clement decided to take off for the gold fields of South Africa.

I have the letter downstairs that Victor Clement wrote saying that to take his place, he could recommend no other than his assistant, Fred Bradley. So that's how Fred became associated so strongly with Bunker Hill. That was 1893; by 1897 he was president of the company. He moved down here and set up an office in San Francisco which he maintained for the rest of his life.

Fred had a great deal to learn about three sides of mining in all this. One, of course, was the problem of dealing with an ore body such as those lead ore bodies there in the Coeur d'Alenes. You dealt with them a little differently than with the quartz veins of California. Then he had to learn a great deal in behalf of the company about the problems of selling lead concentrates out of the mill. That wasn't easy. The price of lead fluctuated from time to time; the buyers would offer one price at one time and another price at another. There were strikes, road problems, transportation problems, all that sort of thing. And all that was in Fred's lap for quite a few years while he was running Bunker Hill. The third thing was labor.

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Bradley: I read once in a notebook that I found in the San Francisco warehouse one of Fred's notes on a $250 doctor bill he paid, and he put it down to a gas explosion. And this was what everybody

Bradley: thought the explosion was. He'd even sued the gas company, and collected on his suit. But it turned out years later that a labor agitator by the name of Orchard wrote a book about all the labor unrest in the Coeur d'Alenes and in it wrote about his attempts to assassinate Fred Bradley down here in San Francisco. He tried twice.

Swent: And your uncle wasn't aware that it was an assassination attempt?

Bradley: No. And I knew Uncle Fred well enough to know that he didn't believe ill of people. For instance, I saw a lot of correspondence of his concerning an automobile that I knew pretty well. When I was in college, he had sold a big Locomobile--do you know that big Locomobile down in the Oakland museum? He had one just like it! And he had sold that, and bought a big Lafayette. Here was lots of correspondence with the people who sold him the Lafayette. Fred wanted either some correction, or some compensation for something or other, applicable to the purchase price. The seller wouldn't do it, and I know the reason; Fred didn't. His chauffeur had arranged the deal, and had taken something under the counter for it, so there was no more money left that the automobile dealer could put into that car. That's all there was to it! Fred didn't understand things like that about people. He'd grown up in the country there, and he generally thought that people were honest. Because they generally all were, where he grew up.

Swent: Were there unions at that time, before 1900?

Bradley: Up in Idaho, they had formed a union. These were a pretty bad bunch. I guess it was the Western Federation. They'd been down in Colorado, and they moved up to Idaho. They blew up the Bunker Hill mill. In fact, I think they did assassinate a governor of Idaho.

Father, Philip Read Bradley, Sr.

Swent: Your father wasn't involved in this?

Bradley: He was not up there. He worked at the Spanish Mine a couple of years. My father was on the track team here at the University, and in 1895, the University of California sent this track team east. It was the first sports team ever to cross the continent: the U.S. Transcontinental Track Team of 1895. They won all but one of their meets. We used to have a silver cup around here that my dad got for winning the 880-yard run at Princeton and so on. I don't know where that thing is now; maybe my brother has it. They beat everybody until they came home. They stopped in Denver, and

Bradley: lost to the Denver Athletic Club. My dad had written home that they were all tired out, that he had incipient pneumonia, and so on. Mile-high Denver was the only one that beat them.

I looked in the Nevada City paper one time, particularly the Fourth of July editions, to see if my father had come down to Nevada City for the foot races. On the Fourth of July in those days, and even when I was a boy in Alaska, one of the big events was always a track meet. But he wasn't in it. About two years later, I was sitting on a bench in North San Juan talking to one of the other bums up there, and along came a little old fellow, and he looked at me and said, "You're Phil Bradley, aren't you?" And I said, "Yes." And he said, "I saw your father win a foot race in Graniteville on the Fourth of July in 1896." So my dad was up there at Graniteville, up at the Spanish Mine, working there on that particular Fourth of July. He didn't come down to Nevada City.

Then when Fred set up his office in San Francisco, he began to spread out, and became a consultant for lots of people. I have a great many of his reports downstairs. One of them is a report on a mine called the Gentle Annie. I was called up to Placerville about three weeks ago, to look at a mine that the city of Placerville has built a park around. It's a tunnel that tourists can walk into; it has floor planks. They told me that was the south extension of the old Gentle Annie. So I looked around here, and sure enough, I found Fred's notebook on the Gentle Annie. To me the most interesting thing in it was Fred's statement that "some of these smaller tunnels are said to have been run before the Washoe excitement." Fred was using a term that Californians, who didn't think so much of the Comstock, were using--"the Washoe excitement."

When he did that work, he had R.A. Kinzie helping him. His oldest son and I were classmates here at Berkeley. Kinzie was class of '94 here at Cal. Fred used him a lot on these little miscellaneous jobs. In about 1897 or 1898, Fred put in much of a couple of years in Mexico looking for mines in behalf of himself and John Hays Hammond. Bob Kinzie helped in that work.

I have lots of the resulting correspondence, and I can't keep it all in mind. But there is one thing in it I remember. This fellow who had been so important up in Angels Camp--C.D. Lane--I know where his house is in Angels, it's still there, a nice brick house. He was running a mine at Angels which in its time was the best gold mine in the United States. For two years running, it produced more gold than came out of Cripple Creek [Colorado]. That was a good mine; this was the Utica Mine, on the Mother Lode.

In this correspondence between Fred Bradley and John Hays Hammond, is a statement, I think Fred's statement, that Lane might have been a very good mining man, but he was no businessman at

Bradley: all. He was down there trying to buy mines. In 1897, I suppose Alvinza Hayward was still alive. There were three--Hayward, Hobart, and Lane--who were owners of this Utica mine. Lane was trying to look for a mine for that little partnership. Now, the odd thing is that this fellow wound up in Alaska in about 1895, and he bought into a lot of claims up above Juneau. These later became the central claims of the Alaska Juneau Mine. Then he went out to Anvil Creek, out on the Nome peninsula, and got into placer there. I don't think he made any money there; I know he didn't make any at Juneau, although he got a company started that was bought out by the Alaska Juneau Company when it was formed, about 1899 or 1900. All they say about him at Angels--if you read local history, they just speak of him as having lost his money in Alaska. Well, I know where it went in Alaska; people in Angels don't.

Swent: You were saying that Fred went to Mexico; what part of Mexico was that?

Bradley: In back of [Hidalgo de] Parral; I don't know what state of Mexico that is; I'm not quite sure. I'd have to look at the map to find out. But it was in that country west of Parral.

Swent: Somewhere around Durango or Chihuahua?

Bradley: It may be in Chihuahua. It was the Esperanza Mine and two or three others there. They did an awful lot of work on those. Later on--

Swent: He was still president of Bunker Hill?

Bradley: He was president of Bunker Hill while he was doing all this. Some place here I've got John Hays Hammond's autobiography, which was written after Fred died, and Hammond was very critical of the way Fred had handled the work at Esperanza. And there was no reason for it; that was bad business.

Swent: Hammond was in Africa at that time, wasn't he?

Bradley: He was in London most of the time.

Swent: When was he jailed in Africa?

Bradley: He and Victor Clement got caught in the Jameson raid, and thrown in jail under sentence of death.

Swent: For almost a year, wasn't it?

Bradley: Yes. But Hammond had lots of pull. Hammond was a man who, for some reason, was very highly thought of everywhere. He must have just had a way about him. Important friends in the United States

finally intervened, and got him out of jail, along with Victor Clement.

Swent: Did you ever know him?

Bradley: No, I never knew Hammond, I missed that. I don't know when he died. But I knew Herbert Hoover. I met Hoover in Fred Bradley's house, first. And later Charles Segerstrom got Hoover to come to Sonora in September, 1939, and talk to a meeting of specially invited people, of which I was one in those days. Hoover talked very nicely and very clearly and very typically. He didn't want this country to get into a war because he said, we're having political troubles enough. And he said, in effect, war means total power on the part of the government over all the people. They're all dependent on what the government tells them to do. We've got enough of that now; we don't want any more.

Swent: This was shortly before World War II?

Bradley: I think that was the day or the day after the Athenea had been sunk by the Germans. I think that was on the 3rd day of September, in 1939. Anyway, we had a little talk up there out on the street afterwards, and it was nice. He knew the Bradleys. He didn't know quite what I was doing up there; he wanted to know first about the quicksilver mines. I told him I wasn't there for quicksilver; I was opening up the Harvard Mine down in Jamestown. Well, he was interested in that.

Swent: How did your father get up to Canada?

Bradley: Well, he finished college in the class of '96, and his first job was at the Spanish Mine up at Poorman Creek on the South Yuba in Nevada County. And the next thing I know about him, he was down there with Fred in Mexico, running Fred's Esperanza mine assays for about a year. Next thing I know about him, he was in Canada. Now, how he got those jobs, I never heard. But I suspect his older brother had helped him a little bit.

A Traveling Family

Bradley: So Phil went to Canada, and then in 1906, he left Canada. We went to New York--I was talking about this to my daughter Ginger just yesterday--I was telling her how many times I had crossed the continent as a youngster. Here I was, born in 1904, perhaps a year or a year and a half old. I was brought out here to show off to all the relatives. Then back to New York, and then to South America. My dad had a job in British Guyana, up the Mazaruni

Bradley: River. I don't know whether this was a placer or a lode mine, but I suspect the latter. A gold mine, in any event. And we stayed down there until 1907. My brother was born down there.

[Laughs] A few years ago, I was telling people how glad I was my father got his little family out before this Reverend Jones or whatever his name was had killed all the people with cyanide. And people would say, "Ooh, when did your father get his family out?" "He was out in 1907; that was good timing."

Then we came back to New York, for another trip back here, then back to New York where we then lived until 1912. My dad worked in an office in New York for Fred Corning. I called on Fred Corning in new York in 1930, and we all had dinner at his house, and he told me some things about himself that I thought were interesting.

He'd been a classmate at Freiberg of Victor Herbert's. They hadn't both been in the mining college, but Victor Herbert had been there. Anyway, Corning, I think from a few little things I've picked up, had a financial interest in Bunker Hill. There was a time, of course, when any mine is new, you've got to go out and dig up money to get the damned thing started, to get a mill built and that sort of thing, and I think Corning had come in on that. Because I've seen some of Fred Bradley's letters, written after he became general manager up there, and copies were going to Corning; I think he was an important man in the company.

In 1912, Fred sent for Phil to come west and go to work in Fred's office in San Francisco. So here we all were; I remember we got off the "Overland Limited" on the last day of February.

Swent: You traveled by train every time?

Bradley: The only other way then was oxcart.

Swent: I was wondering if you ever went by ship.

Bradley: The Panama Canal hadn't yet been finished. We did of course go on the ship to South America and back. And I'm a little pleased with myself because apparently when we came back, I was not three years old, and I remember a couple of little scenes on the ship. One was a black boy diving for pennies that tourists were throwing off the side of the ship as we lay in one of the harbors. Then the other was taking a bath down in Georgetown. At one time I brought up both of these pictures, or memories, to my mother, and said, "What were they?" I kept thinking of these things.

Well, she told me. This bath thing I described to her pretty well. I was in a big tub on a high place and this black gal was giving me a bath; I remember that.

Bradley: Well, we landed here in February 1912, and I went to grade school here in Berkeley, for all the rest of '12, all of '13, and spring of '14. In the spring of '14, my dad was called to Alaska.

Fred had become a director of the Alaska Treadwell Gold Mining Company, about 1900. In those days, it was one of the largest--well, it started out in 1882, sometime in there, and was the largest gold mine in the world.

Perhaps I've mentioned this, but nobody has this in Alaska--I've got to get it down on paper, and get it up there, for historical purposes. The University of Alaska told me they would publish anything I wrote about the history of mining at Treadwell and Juneau. The Treadwell Mine, creating all the commerce that a mine can--payroll, travelers, freight back and forth, supplies back and forth--that's the one that got the steamship companies running lines to Alaska on a regular, scheduled basis. And that was the real opening of the door to Alaska. That one mine did that! Which is what mines do!

It gave the United States a thousand-mile step-out--the most northern port of the United States was back in Seattle, and suddenly the Territory of Alaska now has a port, a thousand miles to the north.

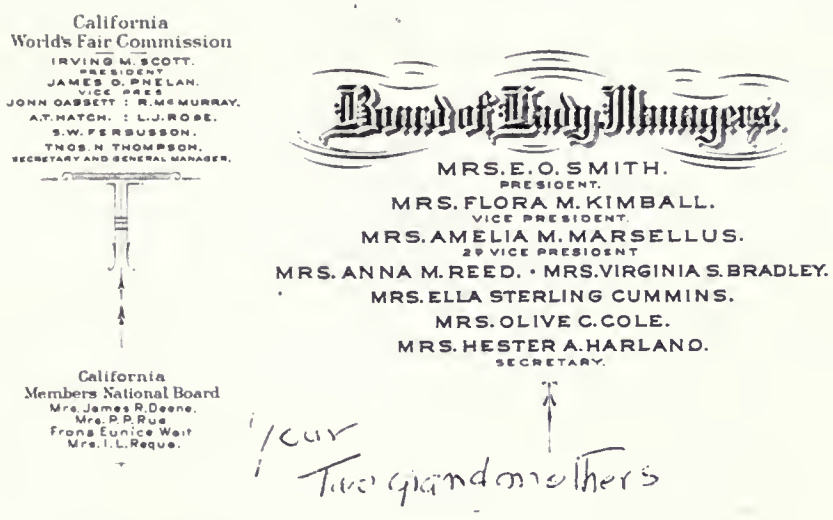
Swent: And it's open the year around?

Bradley: Yes, yes. Just far enough south in Alaska that the water was open to shipping all year long. The ships came up in much greater numbers in the summertime than they did in the wintertime, but they came.

Fred Bradley was made a director and a consulting engineer, following one of the Meins, I guess W.W., Sr.; I'm not sure. I'm going to have to write to Tommy and have him straighten me out on the Mein family up there because there were so damned many of them.

Swent: W.W. was at Alaska Juneau, and also in Venezuela, and Africa, with Inco.

Bradley: W.W. was at El Callao, in Venezuela, and he was consulting engineer for the Treadwell Company, at a time when the president of the Treadwell Company was the mayor of San Francisco, or had been. He had also been president of the California Academy of Sciences and all that sort of thing; apparently a rather important sort of person. He became president of that company, and Mein stepped down--why, I don't know; perhaps because of his African connections--and Fred Bradley took his place. Just about 1900. And all the other directors--Fred was made a director--were commercial people, bankers and so on. No mining people, so Fred



Philip Bradley's grandmothers, Virginia Bradley and Hester Harland, worked together on the California World's Fair of 1893.

left to right, rear: Philip, Jr., Frederick W. Bradley (uncle), Henry (brother).

front: parents and twin sisters on steps of mine manager's house.

Treadwell, Alaska
ca. 1918

Bradley: became managing director for that company; finally made president ten years later, and stayed with that mine all the rest of his life.

That was an important mine, and it was an important community, and it was the damnedest, most beautiful place for a youngster to grow up in. Gee, that was a piece of luck that I just [laughs] have to be thankful for almost every day. That was a wonderful place. Because it was a busy place, and a decent place. People got along there, beautifully.

Swent: When you say it was the largest mine in the world, is this in terms of production, depth,--?

Bradley: Tons treated per day.

Swent: Did they ship concentrates to Bunker Hill in Idaho?

Bradley: Not to Bunker Hill, no. To begin with, they chlorinated the concentrates. That took all the trees off up there, but nobody gave a damn about trees in those days; there was no such care; the environmentalists hadn't yet been invented. Then they gave that up, for what reason I don't know, about 1905, and began shipping concentrates down to the Tacoma Smelter.

Swent: This again stimulated shipping, of course.

Bradley: Yes. In time, the Treadwell Company acquired an ownership interest in the Tacoma Smelter. Then, sometime between 1900 and 1910, American Smelting and Refining [Company] decided they wanted to buy the Tacoma Smelter.

II THE BRADLEY FAMILY AND ALASKA MINING

Fred Bradley and Bernard Baruch; The Tacoma Smelter, around 1905##

Bradley: By the way, today's the anniversary of the cave-in of the Treadwell Mine. Twenty-second day of April. It caved the night of the twenty-first. Twenty-second day of April, in 1917. I'll never forget that.

Swent: That's a very important event.

Bradley: Yes.

Swent: You were starting to say that the AS&R wanted to buy the Tacoma Smelter.

Bradley: They sent [Bernard] Baruch out here, yes.

Swent: And that's how he met your uncle?

Bradley: Yes. That's when Baruch and Fred Bradley got together, and apparently they developed a strong liking for each other. And from there on Baruch and Fred did a lot of work together. Baruch arranged it with Fred that anytime Fred had anything that looked pretty good, to call on Baruch for money. And he did. One example was the Atolia tungsten mine down in Kern county and San Bernadino county--they made a lot of money out of those tungsten mines. They came in just at the right time to fulfill the tungsten needs of World War I.

Baruch told me a story about his acting for AS&R in the purchase of that smelter. He said, "I billed them for a million dollars, for the services," and he says, "They didn't like that. They put Sam Untermeyer on it." Well, Sam Untermeyer was a New York lawyer of considerable fame, and I guess he did the important legal work for the Guggenheims. He says, "They put Sam Untermeyer on it," and then he grins, and chuckles, and said, "I got my million dollars." [laughs] Baruch had simply beat the Guggenheims.

Bradley: I think some suits followed that, because of some contract that existed between Bunker Hill and the Tacoma Smelter for treatment of Bunker Hill concentrates. Bunker Hill eventually built its own smelter up at Kellogg [Idaho]. That was built by Jules Labarthe of Bradley, Bruff & Labarthe--no relation to these Bradleys. They also built a big mill on the Gastineau Mine on Gastineau Channel in Alaska, and they built the big mill for Alaska Juneau. They also built a great many other things; they built the smelter down at Magma [Arizona]. They were very good.

Swent: But that was another Bradley.

Bradley: Another Bradley. That was George O. Bradley. I met his son once, but I never met George Bradley. But I met all the rest. Charles Bruff was up at Juneau a great deal of the time during the building of the Alaska Juneau mill. When I came down to college I fell in with the second Labarthe boy, Warren Labarthe, who died only two years ago, and he and I became pretty good pals. We traveled a lot in this country getting jobs. We worked together on the Comstock in our freshman year; the next year we worked in the McGill smelter over in Nevada; the next year we went to Alaska and worked for the Alaska Juneau. Then he graduated from college, but he and I both went to the same place; we went together down to a tin mine in Bolivia. That was interesting country.

Swent: Let's get back to the Treadwell cave-in on April 21st. You were there at the time, on Douglas Island?

The Alaska Juneau Gold Mining Company

Bradley: Well, my dad was sent up by Fred to take the place of Robert Kinzie when Fred and Kinzie had a falling-out. He left here in April of 1914, and I will not forget--there's nothing special about it, except it was just an unusual event--going down to the Sixteenth Street station in Oakland with my mother and brother and seeing him off. So we sent him off to Alaska, and then my mother took us two boys up to a summer place in Placer county, and that itself was rather interesting.

That was my first acquaintance with California gold country, because from where we were you could see the diggings over at Red Dog, and You Bet, to the north, and looking down in the southerly direction you could see the diggings at Iowa Hill, and so on. I began to get sort of a mining vocabulary into my system then, because of course my mother had not grown up in Downieville, her mother had. She married here. Her husband was shot in the back by an irate Italian one night, dead, and that was the end of that

Bradley: family's life up in Downieville. My mother was then, I think, about ten years old. But they all came down here to the Bay and lived here ever after.

But in any event, I now remember so well the words that my mother used, and my father as well, that come out of that California mining country. Words like panned out, or paid out. So that's how we got to Alaska. We went there in 1914, and my dad had the job of running the Treadwell Mine. And the Alaska Juneau then--let me back up.

The Alaska Juneau ore body was on the surface, way up in the "basin" above Juneau. That was at the head of Gold Creek, which put it pretty high, at an elevation of, say, three thousand feet, or perhaps more. It's high enough that the Alaskan winters were very heavy and hard to deal with; and thus mining up in the basin, where there was lots of gold, still could be conducted only in the summertime. The Alaska Juneau Gold Mining Company--a little local company is all it was then--Fred bought into that, probably because he could see up there things that reminded him of California gold occurrences: the quartz veins in the slate, and so on--there's an awful lot of California there.

The Haulage Tunnel, 1912

Bradley: Even before he had bought into that mine there was talk around there of driving a tunnel in from the shore of Gastineau Channel. Fred finally drove it in at an elevation of about 400 feet above the sea, so there was room above the shore line for a mill. There were two or three smaller tunnels, in order to get to the portal of the main tunnel, which--this portal--was back about two miles from Juneau. Drove in then about seven thousand feet.

One important idea behind it all was this: this was a tunnel from which they could work all year long, if the ore was there.

Swent: How did they drive the tunnel in those days?

Bradley: Just as you do today. They used Ingersoll-Rand machines and they put a beautiful big compressor up there, which is still up there and now regarded as a museum piece--which it is. Four-thousand-foot machine, rope drive. Oh boy, it's a honey! That tunnel would permit all-year operation if the ore were there. It would also cross-cut the ore zone underneath the outcrops, and well down--about fifteen hundred feet beneath. It would cross-cut the ore zone, and if the same ore was down there as there was above, that was a real mine, with a tremendous ore body. And that's the way it turned out.

Swent: They did this tunnel really just on speculation?

Bradley: That was gambling. And that, by golly, was Fred Bradley. Here Fred Bradley, by this time, had money in his pocket, had been making money. The Bunker Hill made him money, other things had made him money, and so he had money. He ran that tunnel out of his own pocket. In exchange for it he wound up with more than a half interest in the Alaska Juneau Gold Mining Company. But this was just the thing for a mining man willing to gamble--the way you must when you mine, in the hopes of hitting what you can--when you hit right in a mine.

Both of those things came out, they just came out. He made that mine. That is an example of the business of one man--with good help around him, of course--making a mine. I doubt that anybody but Fred Bradley could have carried that off. And I'll tell you why that is. That tunnel was finished about 1912. It included a raise up to the surface where the ore had been previously mined.

The Mill, 1915

Then they built a mill on the waterfront there at Juneau, a small mill, pilot mill, just to see how the ore behaved in a mill, how the ore behaved when you went to break it and mine it underground. They ran that mill for two years, and he then decided to build the big mill, the eight-thousand-ton-a-day mill.

Swent: These were stamp mills?

Bradley: No. Fred got sick, and got sent to the Hawaiian Islands by his doctor for a recovery, and it's possible that, if he hadn't gone to the Islands but instead had had control of the Alaska Juneau work all the time that he lost out there, it might have been purely a stamp mill. He did have thoughts of a number of units of 150 stamps each, for a total of 1,000 stamps. But the directors that he left behind running the thing decided that ball mills had done so well on copper ores down in Arizona, that we'll put ball mills in. They didn't work a damn. It took seven years to bring that mill up to snuff.

Swent: They also lacked sorting facilities, didn't they?

Bradley: They didn't have any sorting when they began it, and that was one of Fred's long suits, was sorting, which comes over from Nevada County.

Swent: Experience he learned there.

Bradley: Yes. They had no sorting in the mill, and that's the first thing they got into it when they had to rebuild it. That thing ran at a loss from 1917 until at least 1922--five years. Fred put up all the money to keep the mine and mill going until he just about ran out of dollars. Then Baruch organized a little bond-holders' association in New York. I forget who was in that, but Baruch, and people like that. They, I think, put three million dollars into that. But by 1928 that was all paid off.

I worked up there in the summer of '24, and that mine was paying its way for the first time. Gee, it was running well. It was a very well-run place. They were good people--I mean, the bosses in that mine were as good men as you'd ever find anywhere. Alaska Juneau paid a little higher wages than anybody else, and as a result they got a damn good crew. That was a wonderfully-run mine. And that was Fred Bradley, and [laughs] he had a little help from his brother too.

PR camped on it. We lived up there; Fred ran the very top, but PR was the mine and mill and the rehabilitation work.

The Alaska Treadwell Gold Mining Company

The Cave-in of 1917

Swent: Now, the Treadwell--?

Bradley: All right, it caved in in 1917, and that was the end of it. Except the Treadwell consisted of four mines, all together on the same lode. The fourth mine was not flooded, the one furthest south. But the three mines more closely connected, and producing the most ore, were flooded, and production from them ended on that night.

Swent: With practically no loss of life, or no loss of life?

Bradley: One man disappeared. I talked to his granddaugher in Juneau about three years ago, and I hope I see her again next time I go up. Because she was so sure that her father had been lost in the mine. He possibly had had an Indian wife as well as a regular wife, and his granddaughter--no Indian in her, she was from the regular family. Apparently there had been one other occasion when he had undertaken to skip the country because of family difficulties, and double family trouble. And there were two or three men who said they had seen him that night of the cave-in.

Swent: And he just took advantage of--

The Treadwell and Alaska Juneau Mines on the Gastineau Channel, Alaska

Bradley: It was just generally assumed that he just skipped the country on account of his domestic trouble. But the wife was paid off--I think it was a ten-thousand-dollar payment, or something like that. But that was the only possible loss of life.

Swent: Remarkable. Was it seeping before, so they anticipated it?

Bradley: Well, it came about like this, that the ground where it eventually collapsed completely had slumped on Friday morning. Because I remember we all went down from school in the school lunch hour to see it. And here was the track crew working hard to get the track realigned. The swimming tank building had a great bulge in the side and the other buildings there had cracks in them. But the track crew, and so on, was getting the pipes and the track realigned. That was Friday. All day Saturday a crew was down there, trying to pull all the buildings down that were around that area. They had dug by hand sort of a walkway around the area, and so on. We were all down there. [laughs] Kids were all down there.

Swent: So it wasn't just from one moment to the next.

Bradley: No. But about ten o'clock that night somebody on his way home from the Treadwell club down to where he lived a half a mile below, heard water rushing where this thing was. It was a very high tide, one of those damn April tides that come up. There's a twenty-two-foot tide out there, at certain times, and this was one of them. So he got hold of all the bosses, including my dad. Everybody went down to have a look at it, and that's when they started getting men out of the mine. They got them out.

Wernecke described this rush of water as being about the size of the Yukon River at White Horse--a pretty good flow. He was company geologist. The tide backed off, of course--at low tide it backed off. And it left a hole there, a couple of hundred feet around. The ground around it caved which made the hole larger, and left it with water in it. But the next tide filled it forever.

There's a hole there if you go look for it, but you have to look for it nowadays. Afterwards they built a railroad trestle across it, because they had the fourth mine down there for the train to serve, and so on, and pipelines had to be laid in and crossed. That's all gone now. That trestle was built in 1917. I was last there in 1981, I guess--hell, there's not a sign of it. And you can hardly see the place where the cave-in is. You can hardly find the glory hole--you know it when you see it, but it isn't the glory hole it used to be. Because the trees have come in, and they've covered it all up. So much for the environmentalists.

Swent: This is probably a good place to stop, isn't it?

Bradley: All right.

The Founders: The California-Comstock Influence on Alaska

[Interview 2: May 20, 1986]##

Bradley: All right, we were just talking about mistakes that got in histories, that circulated. I bought a history of Virginia City in Virginia City about a year ago. I've read it, and it has its share of mistakes. One of the mistakes is a statement that's made that Sharon was one of the organizers of the Bank of California, which is not at all true. I have a book upstairs that my daughter Virginia got for me. She was working in a bank and therefore had access to this book that was published by the Bank of California, a book called 400 California Street, and it lists all the original directors, and all the directors through the years.

Once we had a meeting upstairs in that bank, at the great directors' table--it's a round table, a beautiful thing. It may be a cut of redwood log that's been polished. Must be eighteen or twenty feet in diameter. I was there, and John Ross of the Mother Lode and Donald McLaughlin were there, and probably one of the Theriots was there, I don't remember surely. This was about ten years ago.

But in any event the bank was formed, I think, in the middle 1860s. William G. Ralston formed it. They got Ogden Mills to be president of the bank, because he was the most important financial man on the coast then. But Ogden Mills wouldn't have anything to do with the operation of the bank, he had his hands full, so Ralston named himself as cashier. Who the other men were I don't remember.

John D. Fry

Bradley: A stockbroker named Fry, from San Francisco, who was a good friend of Ralston's, came into the bank one day bringing a man named William Sharon with him. Now Sharon had made some money in San Francisco, in the preceding decade or so, after coming across the plains--I think he and Fry had come together in the first rush. The Bank of California had been represented in Virginia City by some firm or partnership, and it wasn't doing well. Ralston wanted to make a change, so he had already named a man to go up to Virginia City and take over the affairs of the Bank of California up there, and, in fact, to establish a branch of the bank there. Fry brought Sharon in, and, as an old friend of Ralston's, talked Ralston into sending Sharon to Virginia City.

Bradley: Now, several things about Fry we'll talk about. One is that his daughter, or daughter-in-law--some distant relative that he had adopted--finally married Sharon; and one of the books in The Bancroft is the Fry-Sharon wedding. They went off to Yosemite on their honeymoon--a great party, many many guests. But by this time Ralston was a rather rich man and could afford anything he needed. In any event, Fry was, in effect, Ralston's father-in-law.

And this is the reason Fry had the influence to persuade Ralston to send his second choice to Virginia City. The influence of Sharon on the history of Virginia City is quite strong; Sharon lived there about ten years. Amongst other things he arranged for the building of that railroad up there, the Virginia and Truckee, running first from Virginia down to Carson [City], and then from Carson over to Reno. As a matter of fact the Central Pacific Railroad across the Sierras was built partly because all this money was rolling out of Nevada. That meant something good for the railroad, so they built the railroad. Virginia City had such influence.

James Freeborn

Bradley: But in any event, we have to back up to the town I grew up in. The two men who got that mining started on Gastineau Channel, in Alaska, were really Fry and his partner Freeborn. Freeborn was a banker, Fry was a stockbroker. The histories that I read in Juneau say that these were two bankers from San Francisco, but no, Fry was a stockbroker. Made a great deal of money doing that. Freeborn was indeed a banker, and in 1881 became the director of the Bank of California. Eighteen eighty-one was the year that things blossomed up there on Gastineau Channel.

They, having made money in mining, and so being interested in mining, sent a man up there to Alaska; paid his way, gave him some money to work with up there, with a sort of a grubstake on the thing.

John Treadwell

Swent: Who was he, do you know his name?

Bradley: This is John Treadwell. I could talk about John Treadwell a great deal, but I won't do it now. But John Treadwell, who got up there very late in 1880, or at least early in '81--and this is only a

Bradley: short time after the discoveries had been made there--he came away in '81 not having been very successful in that part of the Gastineau Channel country where gold was first discovered. That part was what they now call "the basin," above Juneau. The basin is made by Gold Creek working its way down out of the mountains. The first discovery of gold, of course, was right where Gold Creek dropped into Gastineau Channel, and then you could follow the creek pretty well up to the basin.

Anyhow, the original miners to get up there into the basin found some pretty good gold. John Treadwell didn't get in on that. He was there, but unable to get claims or pick up land that would do his bankers any good. So on his way out in the fall of 1881 he picked up a lot of samples of Treadwell ore. The Treadwell discovery was on Douglas Island, the shore of Douglas Island forming one of the shores of Gastineau Channel, a channel hardly a mile across. I rowed across it once with my brother. As I remember it, this was the day when the new A-J [Alaska Juneau] mill started. Treadwell to Juneau was about three miles.

Treadwell got interested in the discovery that had been made there, and brought down with him to San Francisco quite a few sackfuls of Treadwell ore, and had some mill tests made in San Francisco. See, these were men who knew what you had to do to open up a mine. And that capacity prevailed all through the history of Treadwell--everything was done right. I don't know why. John Treadwell must have started it that way.

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He went back in the spring of 1882 with a small stamp mill and set it up over on the Treadwell side, and started working some of that Treadwell ore. I think I have pictures that show that stamp mill. I don't know where they are. In any event, it turned out to be quite an ore body--a very low-grade thing, but a very important thing.

They formed a company that was called the Treadwell Milling and Mining Company in 1882 or '3. Then, in 1884 or '5 or '6, a man named Henry Perkins got up there. Henry Perkins is a man I talked to as a youngster. He became quite famous, quite important, for the work he did all around the world.

Let me back up on that. Henry Perkins had been involved with the Malakoffs [hydraulic mine] up here in California, in Nevada County, where Henry was the chief engineer, then the superintendent, then the manager, following right behind those positions as they were held by Hamilton Smith.

In 1884 the Sawyer decision cut down hydraulic mining in that part of the country. If you're interested in history, don't ever get yourself caught saying that the Sawyer decision shut down

Bradley: hydraulic mining in California. It didn't. It shut down only hydraulic mining on the American, and the Bear, and the Yuba [Rivers].

Swent: Actually I guess they were still doing some hydraulic mining up until rather recently, weren't they?

Bradley: They were. There were a fair number of small hydraulic mines going up there in the Mother Lode when I was working up there in the '30s.

Swent: So Perkins had been doing hydraulic mining at the Malakoffs.

Bradley: That's right. Then he went down to El Callao, in Venezuela. The senior Mein was there.

So anyhow, the Sawyer decision was '84, and it was just pure accident that '84 was the year in which the Rand [gold mining district in South Africa] was discovered. And Henry Perkins went from El Callao to London. He and Hamilton Smith, his former boss at the Malakoffs, set up an office in London. They were in great demand, and so were a great number of Californians, because all this British money went to South Africa to start opening up those wonderful deposits on the Rand. They had to get gold miners down there, and who were the gold miners but the Californians?

And here were Hamilton Smith and Henry Perkins together, and Charley Butters later on. A man I met later on in San Andreas several times in the last few years--he's aged enough that he could be dead any day--his father was one of the men that was hauled out there to the Rand, and he was born on the Rand.

Swent: Is that Henry Poore?

Bradley: Yes. When I last saw him he was pretty shaky, but we sat and talked. He had had some connection with the mine that I ran in the '30s down in Mariposa county, the one called the Jenny Lind. I think perhaps his father had run it before he ever went to Africa.

At any rate Henry Perkins, who knew his way about money, got apparently to Treadwell and to Fry and to Freeborn, and got them to form a company called the Alaska Treadwell Gold Mining Company. And that was put on the market by a rather famous group and they put the stock of this company on the market.

Now one of the very first men to get quite rich up on the Comstock was Senator John B. Jones. That's quite a story, but you don't need it here. Jones was one of the first of the Comstock nabobs. He was looking around for investments, and he was one of the big investors in this new Alaska Treadwell Gold Mining Company.

Bradley: So there in itself is a little vignette of some importance, in respect to what a profitable gold mine does on lines that follow. It's always seemed to me that the function of the Comstock was to show the world that money could be made in mining; seemingly not much had been made previously. The gold mining in California from the Mother Lode and other counties didn't make anybody very rich. It didn't create any nabobs, no. Alvinza Hayward probably made as much money out of the Mother Lode because he had a pretty good interest in, I think, one of the mines at Sutter Creek. Then there were the Colemans up from Grass Valley that did pretty well too.

But there was none of this dramatic richness, this dramatic, sudden outflow of money in California as there was twenty years later up at the Comstock. That was so dramatic that it turned the eyes of the world in my estimation on the chances to make money in mining. And that's perhaps one of the reasons that the English developed the Rand so rapidly. The Comstock said surely it could be done.

Anyhow, so it was Comstock money went up to Alaska to open the Treadwell mines in the 1880s, where I grew up later. It seems to me that the function of the Treadwell Mine in respect to Alaska has been neglected by historians, and if I ever get around to writing something about Treadwell, I've got to emphasize this: up until the time of the opening of the Treadwell Mine there was no such thing as regular steamer service up that coast from, say, Seattle to Juneau. That's a thousand miles, and the Treadwell just moved the outskirts of the United States a thousand miles further to the north--I think I told you this last time you were here.

Swent: Well, yes, you did allude to it. Tremendously important, it is.

Bradley: And it set up a lot of mercantile establishments there. The Treadwell Company's own store, which was set up entirely for the purpose of keeping ordinary store dealers from gouging the miners, was all ready for the Klondikers, and I've seen papers of those plays with big advertisements for the Treadwell Company Store: "Outfit for Klondikers."

Swent: They stopped there on their way up to Klondike?

Bradley: Well, of course, like any gold rush, they were hauling all sorts of crazy stuff with them on the ships going to Skagway which they didn't need at all, they could have picked it all up right there in Juneau, at Treadwell. That mining at Juneau at Gastineau Channel, especially the Treadwell mines, contributed a great deal to the exploitation and the development of the Klondike. And after that, to that part of the Klondike's gold system that lay in Alaska. Klondike, of course, is in Canada.

Swent: Was there any connection between the Nome rush and the Treadwell? Did people go from Treadwell up over to Nome, or did they get to Nome another way?

Bradley: The only center of things on the whole coast, in those days, was Gastineau Channel, and most people that went up to Nome went through Juneau, of course. Some went through Skagway and up over the White Pass--White Pass railroad was built 1898--to get up on the Yukon River, and then take a river boat all the way down to Nome. It's a long, long trip, and I think the ocean route was a little more satisfactory.

I think I told you last time that Lane and Fred Bradley and Hammond were all down in the Parral country in Mexico. Fred was doing a lot of examination work there in his own behalf, and in behalf of John Hays Hammond. They were there a couple of years, they had my dad down there for a year as an assayer. I wish I had known that, or had that in my mind, because I spent a year down in that part of Mexico myself, and I'd just love to have talked to my father about that.

I do have around this house a copy of a lot of the correspondence--I've got Fred Bradley's side of the correspondence, between Bradley in Mexico, or San Francisco; he was back and forth--and John Hays Hammond in London. Amongst it is reference to the fact that Lane was not a good businessman. He may be a good miner, but he's not a good businessman.

Anyhow, Treadwell was put together, and it was enlarged, I think, by the year--it was developed, as I say, by Treadwell himself--beginning in the year 1882, and by about 1884 they had built a mill there to handle this big ore body they'd opened up. Treadwell was the superintendent. He designed, apparently, all the buildings and the whole camp layout, and by 1884-5 had put up a 120-stamp mill, which they very soon, within a couple of years, enlarged to 240-stamp. Now this is a mill good for a thousand tons a day, and this is one of the largest mines in the world by that time. And here was this fellow Treadwell up there doing most of the work.

Swent: And they also built houses for all their employees?

Bradley: Oh, houses for their employees, and so on! When I look back on it, that camp was a neatly built camp. Very sensibly built, and there was a railroad all through there, whenever you needed material to be moved, and all sorts of things.

Swent: That sort of management then, you think, continued because of his influence?

Bradley: Well, Treadwell sold out when this new Alaska Treadwell Company was born. He soon sold out and came down here.

Swent: Having made money?

Bradley: He could have been bought out for as much as two million dollars, certainly a million, because the three original owners, of course, were Fry, Freeborn, and Treadwell--he had a third ownership. Treadwell started doing the work, and doing the management, and Fry and Freeborn putting up the first money. Now just when, I don't remember, but the president of the Alaska Treadwell Company pretty soon was a man here in San Francisco who was head of the Academy of Sciences, mayor of San Francisco, and a great many other things. He was a man of considerable civic importance here in San Francisco. I don't think he was chairman of the board of directors of the Bank of California, but he was certainly on the board. This was a man named William Alvord, who, when he first came into California with all the pioneers, started a hardware business in Marysville and came on down here, transferred it to San Francisco. The Bancroft made me a copy of his biography, and on the outside of that copy is written on it in pencil "A.W. Hittell." It was Hittell's own copy of it that they've got over there of the life of this fellow.

But I should back up a little bit now. In addition to Treadwell up there, there was a family, two brothers named Corbus. I wrote a small history of Treadwell, a pretty recent history. It was a history that was mainly devoted to Fred Bradley, and Phil Bradley, and the people they had around them up there at Treadwell. This would be beginning not in 1884, but beginning about 1900 or 1898. And I left out the Corbus name.

The young Corbus grandson is up there now running the power company, and it's the power company and the City of Juneau that own all that great mining property that used to belong to Treadwell and to Alaska Juneau even in recent years. The Alaska Electrical Light and Power is Corbus's. That's Corbus country.

Swent: You were saying what wonderful management this company always had, so I suppose Treadwell selected good followers then.

Bradley: Well, it was a matter of luck. Treadwell himself gave the thing a good start. The buildings he designed, the layout of the equipment, the layout of the town, all the little houses, and all that sort of thing--he was responsible for nearly all of that, as far as I can tell. And he did a damn good job.

You know, I've been in lots of mining camps, and you can tell whether they're well-run, well-managed, just by the appearance of the buildings. You can. Golly, I remember one great big mill down at a copper mine in Mexico. It was just a horrible thing.

Bradley: The design of that was so damn poor it's no wonder that mine had gone broke. You could tell the people that had it didn't know how to mine, didn't know how to run a mine. And you have the opposite in other places. Treadwell is one of the opposites.

It was just luck that good men got into that thing. Treadwell, of course, was himself the manager of it for the first five to ten years, more or less. Then he was followed, I think, not necessarily by the Corbuses, but they were in there. Fred Bradley was put on the board of directors of that company about 1898, and from then on acted as managing director. He followed this elder Mein onto the board, and was then managing. You had bankers in San Francisco, but you had to have a man managing the mine who both understood mining and understood money, and who could communicate with the bankers. That was Fred Bradley's job, and from that he went on to be able to do a great many things.

Fred Bradley was managing director from about 1898-99, somewhere in there, until the company went out of business because it ran out of ore. Fred himself died in 1933, and my dad took his place.

Swent: Does the company still exist?

Bradley: No.

Swent: When did it cease to exist?

Bradley: Well, the first thing that happened there, in 1917 there, was a big movement of ground--

Swent: We talked about that last time because it was the anniversary of the day, it was April 22nd that we last talked about that.

Bradley: Yes. There was a movement of ground at just the wrong time, because it came at the time of the highest tide of the year. The sea got into the mine, and that was the end of it. The sea got into the three mines that worked together, and then they kept the fourth mine, which was separated—same lode. They kept that going until, I think, 1922 or '23, something like that. By that time the grade of the ore and the cost of the mining had caught up with each other, so they shut the mine down.

The Bradley Family Accomplishment

In addition to that, though, by that time the two Bradley brothers--Fred and his brother, his brother being the man in the field, and Fred being the man in the San Francisco office--they had their hands full with the Alaska Juneau. A mill had been

Bradley: built on Alaska Juneau with a designed capacity of about eight thousand tons a day, and it didn't do anything like that for several years.

Swent: Is that the one that was built in about 1915?

Bradley: It was building in '15. The day they threw the switch to start the mill, that was the day I rowed across the channel with my brother. My brother and I rowed across to see that.

Swent: That was on the mainland?

Bradley: It was on the mainland, yes. Geologically quite different from the Treadwell. The two ore deposits were parallel in course, but were separated by, oh, I think three to five miles--I'd have to look that up though. One was on the mainland, and the other on an island.

In any event, it took them from 1917 to 1924 to get that mine on a paying basis, a basis where it was not consuming any more funds. I worked underground in the Alaska Juneau in the summer of '24, and the thing was really beginning to hum. Ah, that was a great sight to see, the thing was finally working. It was great! By '28 it was paying dividends. All the loans had been retired, and it was paying dividends.

Swent: Quite an accomplishment, wasn't it?

Bradley: It was an accomplishment, because down the lode a bit Hayden, Stone and Company, of New York, had been pursuaded to go into mining on the same lode. They built a mill that was good for six or eight thousand tons a day, and no sooner did they get that mill going than they realized that with more power they could raise the daily capacity to twelve thousand tons. They then added to the power generating capacity around the channel and started this much larger mill.

This piece of business just went downhill. Heads went down to about what the Alaska Juneau had. This was much lower than they could make money on. Now there was another important difference between the Alaska Juneau and Alaska Gastineau: Alaska Juneau was run by a single man who knew damn well what the possibilities were, and he knew damn well that you had to run that mine right, and he knew damn well that he could run that mine right, eventually. That was Fred Bradley, helped by his brother. These two kept at it, and finally made that mine go, whereas these cookies in New York just gave up.

Swent: They didn't have, what, the training, or the--

Bradley: They didn't have the training. They had D.C. Jackling as an engineer--and Jackling was a damn good man in many ways--but by that time he'd become a figurehead. He came up to Juneau, I think, in the summer of 1915, in a beautiful big white yacht [the Cyprus] that belonged to him. Now Fred Bradley didn't go in for yachts. But Mary Bradley told me one day in San Francisco--sometime in the thirties, I suppose, or the forties--she said, I had a good husband; he left me $12 million. Now $12 million when Fred died, in 1933--that's $120 million today. She indeed had had a good husband. [laughs]

Swent: And his style of management must have affected all the people who worked for him, and who then went all over the world, didn't they?

Bradley: That's exactly what happened. When I was out running mines for the company, or for the office, in later years--I didn't realize it--but I was reaping the advantage of the reputation that the Bradleys had by that time. People were coming to me, high-grade men, looking for jobs, which I could give them in lots of cases, but I would get a high-grade choice of men, just because I was a Bradley, had the name, that's all.

Swent: I know that when I was young, and growing up at the Homestake Mine in Lead, South Dakota, that the men who came from Alaska--they came, of course, after the Treadwell flood--were certainly highly-respected men because of that background.

Bradley: Yes, J. D. Johnson, and Russell Wayland, and--. Oh, they were high-grade men, you bet they were. And they'd been working for Fred Bradley, and that to begin with was what you might call an accolade.

Swent: They went then from Alaska all over the world.

Bradley: Sure, but it was just natural that they'd go down to Homestake then. So many did.

Notable Acquaintances, Presidents Hoover, Eisenhower, Nixon, and Ford

Swent: You had mentioned one day that you felt privileged to have known so many of the greatest mining men.

Bradley: That's correct. I met Herbert Hoover over at Fred's house when I was about thirteen or fourteen years old.

Swent: Before he was president.

Bradley: He was about to be a president. I counted up the other day that I have known seven men in this world who either were going to be presidents of the United States, or have been presidents. I met Eisenhower when he was president, and then the rest of them either before or afterwards. Seven of them! That's pretty damn good for a mining engineer, you know that?

Swent: It certainly is! Who were they?

Bradley: Oh, well, the first one was Hoover. I first met him, as I was saying, at Fred Bradley's house. The next one I met of that group--to be president, and so on--was Nixon, when he was senator. I had a job in Washington which was pretty good. This was an emergency job set up by the government when the Korean war came into being.

Then Nixon. I went to Washington once and just missed Harry Truman by a day, because Scrugham of Nevada had got a hold of me--and I had known him in Nevada anyway, and by this time he was senator, so I had to call on him. He said, let's go over and see if Truman's in. Truman had just left town that morning, so I missed him, but later on I met Nixon there, while he was still a senator. And then, who else? The last one I met was Gerald Ford. He was here in Piedmont trying to help--what was the campaign of this young fellow, whose father used to be mayor of Berkeley? This young fellow has now become a banker.

Swent: Claude Hutchison?

Bradley: Yes, Hutchison. And by golly, Gerald Ford came here, do you remember?

Swent: I do remember.

Bradley: Yes, in Piedmont. But I had something to talk to Ford about, because just at that time one of his companies--you know, he was the director of Amax--was working on our property up there in Nevada county. Now, let's see, who else?

Swent: That's four.

Bradley: Yes, that's only four. As I say, there's seven.

Swent: Started with Hoover.

Bradley: Started with Hoover. Charlie Segerstrom had Hoover come to Sonora to give a talk to a selected number of men in the community, and in those days--I think I had my highest community standing of any place ever when I was in Sonora. I was director of the chamber of commerce, and all that sort of thing. I was in Sonora from 1938-45.

Swent: That was during the Second World War.

Bradley: Yes.

Swent: And you weren't closed down?

Bradley: Well, yes, it was closed down. Only damn thing you could do in those days, after being closed down by [War Production Board order] 208, was just hold the properties together. Keep a small crew on, keeping them in shape, and all that sort of thing. The Harvard was my best chance to be an important mining man. The Harvard would have been the best mine on the whole Mother Lode.

That was closed down by the San Francisco office, because my dad, who was then president of the company, could foresee the war coming, and he knew what that might do to Alaska Juneau, and Alaska Juneau was the source of all the money that was going into the Harvard, and such things. So he shut it down. "We've got to save our money, because there's a war coming." So we did.

Swent: And it hasn't reopened?

Bradley: Well, it's been reopened now by a Canadian bunch. To some extent was reopened by that Gulf and Western thing that was active up there until three or four years ago. They sold out to a Canadian bunch, who apparently dug up $50 million. They called me up the other day, and I have a date to go up there with them towards the end of this month and talk to them about becoming a consultant. They know very well I know more about that mine than any man alive. I do.

Swent: So there are still good mines up there?

Bradley: The Harvard was the least mined portion of the whole Mother Lode. Because I got to know the Mother Lode pretty well. And furthermore, besides being the least mined, it could have been made into the largest mine on the Mother Lode too. When I talked about it with Homestake I had no control about who it might be sold to, but I talked about it with Paul Henshaw, and then with--what's the name of that--

Swent: James Anderson, the geologist?

Bradley: Yes, the exploration man.

General James Doolittle##

Swent: Jimmy Doolittle was from Nome?

Bradley: Yes. He came down to Cal here to take mining. I think in the fall of '16. But anyway the war broke out, and he enlisted in the

Bradley: army and got into aviation, and you know his history since, with the army [laughs]. But he got a summer job. He must have come down in '15 or '16. He got a summer job that first summer up on the Comstock, and he'd talk to me about mucking on the sixteen-hundred level of the Con-Virginia. Used to love to talk about that.

So as soon as the war broke in spring of '17--he was then in college--he enlisted to go into aviation, and history knows the rest. But Mike O'Brien had him on the same advisory group I was on. And incidentally I saw this Mike O'Brien just the other day, down at Spenger's [restaurant], of all places. Did you ever know Mike O'Brien?

Swent: No, I didn't.

Bradley: Oh, boy. Ed Wisser didn't like him. [Edward H. Wisser, Professor of Mineral Exploration, University of California at Berkeley] O'Brien was dean of engineering. He took [Donald] McLaughlin's place when McLaughlin quit the engineering job. He was one of these black Irishmen, you either hated or loved him. Well, we all had a lot of respect for him, you didn't have to rub him, or be rubbed by him. He was a pretty smart cookie. He was a damn good dean of engineering, because he was a good engineer himself.

Swent: Not a mining engineer, though.

Bradley: Not a mining engineer, no, a mechanical engineer. He'd done a lot of work here on the movement of sand and so on up and down the Pacific coast here, in the western United States. Did a lot of work in pumping, pumping sand and so on.

ALASKA MINING AND ENGINEERING SOCIETY

JANUARY 30, 1915 8 P.M.

MENU

Toke Points ½ Shell

Assorted Olives ~ Celery ~

Bouillion in Cup

Filet of Sole vin Blanc

Spring Chicken, Saute

PETIT POIS, POTATOES PARISIENNE.

WALDORF SALAD

CAFE PARFAIT

Macaroons Lady Fingers

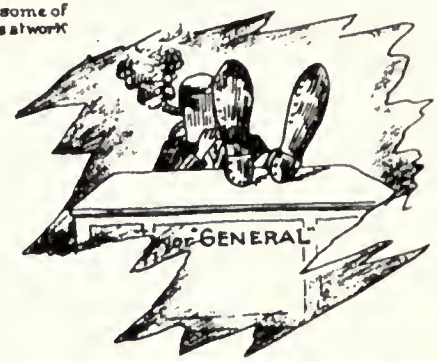
Neufchatel Cheese

Bar Le Duc

Bent Crackers

Cafe Noir

A Glimpse of some of the members at work



Editor Note: The Cartoonist carries a six shooter for self defense.

SPEAKER:	SUBJECT:
BULLION LAND **THANE**	The possibilities of Alaska's mineral treasure
PAY ROCK **BRADLEY**	Low grade mining
DIDACTIC DISCOURSER **MUIR**	The comperative effects of water and other liquors and solids in developing energy.
ANGULAR **MACKAY**	New mills and old
GOOD TIMES **JACKSON**	Stoping of large orebodies
EARLY VANNER **DAVELER**	Metallurgy
WATER POWER **LASS**	Hydro electric development
CHRISTIAN ENDEAVORER **BRUFF**	Condensed conceptions concerning concrete construction. Is it all con ?
BILATERAL DECLIVITY **STEWART**	Troubles of a Mineral Surveyor.
ENLIGHTENER **TASCHEK**	Photo Lithography
HIS LORDSHIP **WOLLENBERG**	Salmon Creek dam
BELEMNITE **HYDER**	Local Geology
ACETYLENE NEXT **NADEAU**	"How doth the little Diesel do".

6-B-94

32a

Program for meeting of Alaska Mining and Engineering Society, Juneau, 1915

III EDUCATION AND TRAINING

[Interview 3: May 27, 1986]##

Culver Military Academy, 1919-21

Swent: We were going to talk about schooling today.

Bradley: All right, we'll talk of schooling. Well, I'll begin by saying that I'm just back from my sixty-fifth reunion after graduation from the Culver Military Academy. That can belong in here because in the first place it was a good school, and I was sent there from Alaska. My only label that came out of that thing was that I was the cadet from Alaska. I was pretty young, and thrown in with a bunch of rather sophisticated young men from all the cities of the United States. I had a bit of a time that way, but otherwise all right.

I was sent there because two sons of mining engineers that were well up on the list of engineers were there, or had been there. Mark Requa was a consulting engineer on the building of the new Alaska Juneau mill in 1916, I think. His son Larry--Lawrence--had graduated from Culver that spring, spring of '16. Incidentally, he died in Salt Lake within the last six months.

The other mining son that was there was Jack Lisgar Merrill. I don't know whether he himself was a metallurgist, but his father was, and his father made himself quite wealthy by the way he did the cyanide work at the Homestake. He was developing cyanidation at Homestake just about the same time that Edward Letts Oliver was developing it in Grass Valley. Oliver perhaps a little earlier. But in any event Charles Merrill, who was a good friend of my dad's, sent his son over to Culver too. He was a senior there when I first went there--I was a year behind him. Darn him, he took away a lot of glory I had for a period of about four hours. We were both taking physics, and my physics examination came in the morning--final examination. I got 97 or 93, I think it was, on that exam in August; something like that. Anyway, I got

Bradley: something over 90. And that was unheard-of there, gee whiz, that was just glorious. His examination came in the afternoon. He got 100. [laughs loudly] He cost me all my glory.

But he came to Cal here, and he was a plenty astute young fellow. He became a Rhodes scholar at Oxford, and that worked out very well for him too. Then I used to see him around the Bay here, and I talked to someone just yesterday that had known him, and knew how he died. He died very suddenly of cancer quite a few years ago now.

But there were two mining engineers involved with Culver in those days: Charles Merrill, Sr., and Mark Requa.

Earlier Education

Nurse-Governess

Swent: When you were very small your folks went someplace and left you in the States. Is that when they went to Guanajuato, Mexico?

Bradley: Yes.

Swent: And they did not take you or your brother with them?

Bradley: No. There's a picture [indicating framed photograph on the wall] that my mother bought when she was down there, and that picture was in every house we ever lived in since.

Swent: She loved it.

Bradley: Yes, well, she liked that country. That was a glorious experience. Because she was young and attractive, and the patio that they were in, the Patio San Francisco, had been revived, and an awful lot of money was being spent there apparently, and lots of American visitors.

Swent: Now "patio" meant mine, and not a garden, right?

Bradley: Right. Patio was the term for all surface works of the mine, the mill, and the mine, and where the superintendents lived, and everything else. Apparently there were lots of visitors there, and my mother was just the right age. [laughs] And my dad was doing pretty well.

Swent: You didn't mind being left behind?

Bradley: Well, no. We were taken to Los Angeles. We were put in charge of an English nurse that my mother had got hold of even before we ever came out from the East. We were very young. This was 1907; I was three, and my brother was a year and a half or two. All we had to do was just be led around by the hand--I think that was all right.

We stayed near Westlake Park, and there's lots of pictures around here of the two of us, around Westlake Park.

Swent: Did you go to Mexico at all, were you taken down to visit?

Bradley: Not then, no.

Swent: Was this probably because she felt the conditions weren't safe there, the water and the food, and so on? Did that concern them?

Bradley: I have no idea why those parents left their children here in California, but I guess Mexico seemed like a difficult place. My dad had been down there before. He was there for about the year of 1897 helping out Fred Bradley on some examination work he was doing up near Parral, so he knew Mexico, and perhaps that's the reason he didn't take these children down. He knew enough about it not to take them down.

But then we went back to New York, and my dad worked in the office of Fred Corning.

I was in New York in 1930 and called on Fred Corning, and this time I was working for a living; I was on a payroll. Called on Fred Corning, giving a dinner in his house that night, in an apartment house very close to Central Park--probably about on Seventy-fifth, or someplace in there. I can only remember the one thing out of that dinner conversation still: he had been a classmate of Victor Herbert at Freiberg. I think that was the class of 1876.

Swent: In those days many people did go to Germany for their mining education. Did the change come with the land grant colleges?

Bradley: Later, I think. We have here a land grant college [University of California] which was established in the seventies, and, incidentally--I told you this one, I think--that two religious groups, two separate organizations had got together in Nevada City, California, in 1853 and held a convention there. And the first day of the convention was devoted entirely to organizational problems, and the next day of the convention was devoted entirely to the question of whether California didn't deserve to have a state university.

Swent: And this was when?

Bradley: Eighteen fifty-three. And there's two things about that. Those were the days when the towns along the California Gold Belt still had a great deal of importance, and held in them some of the most important men in California. The state had not yet been formed, or hardly had been formed, and in 1853 the gold rush had been only four years before and was still going strong. So you had this row of towns in California (on the Sierran gold belt) which had a great many people in it who later went on to become famous and important in civic doings.

For instance, Nevada City had William Stewart. And, incidentally, the Stewart plot in Nevada City was just about twenty or thirty feet from the Bradley plot. But Stewart, as a lawyer had been, I think, attorney general of the state of California. The Comstock boom came along in 1859-60. Stewart went up there and became a great power in the early days of the Comstock. Then Nevada became a state, and Stewart was elected as a senator from Nevada. From then on he was a politician, and an important one. I think he had a lot to do with silver acts.

I know that he created the mining law, under which the United States--not California alone--operates. The first one was '66, and the second mining law was '72. That's the one that's still going, with all those little changes, and so on, but basically it's still the mining law.

Swent: So your family left Mexico and moved back to New York.

Bradley: Left Mexico, came to California, and they went back to New York. By the time I was--oh, I must do some arithmetic. Before I was eight years old I had been across this continent five times. A mining family was a traveling family--the mining people were the traveling people of the world in those days. You know all about that.

Swent: Right. It wasn't as easy as hopping a plane, either.

Bradley: No, you didn't hop a plane. And I like to tell people that in 1895 my dad had been a member of the first athletic team that ever crossed the United States. That was by train, of course. Nowadays they just go overnight, back and forth.

Swent: But traveling by train was pretty nice, in those days, too. Fun for the kids.

Bradley: The only story of trouble was, when you got east there, you were running out of money, so you dug out a twenty-dollar gold piece your family had let you have. You had a hell of a time converting that into paper money. People in the East didn't take the gold--and didn't believe it was gold, you know.

The Calvert School

Swent: So did you go to school then in New York City? To public school?

Bradley: Yes. Now this is when my special education began, because there was an outfit in Baltimore called the Calvert School. My mother subscribed to that when I was perhaps five years old.

Swent: Although you were in the States at the time.

Bradley: In the States. We were living in Flushing, and my dad was working for Fred Corning. My mother subscribed to the Calvert School, and I can remember doing the daily work that they required. And I think that was a pretty good thing, not that they taught me very much at that age, but afterwards, when we came to Alaska.

We had been living in Berkeley, I was in the fourth grade here in Berkeley, went to Alaska, went into the fifth grade in the grade school there, and my mother got a hold of two things. She got a hold of a governess for us, and--

Swent: Did she have to ship one up from the states?

Bradley: Oh, yes.

Swent: Or from the lower forty-eight? [laughs]

Bradley: The states, yes, "down below." My mother got a hold of the Calvert system, and both my brother and I put in a year or more in which we did two years of elementary schoolwork.

Swent: With the Calvert School.

Bradley: Yes, Calvert School work. And it was pretty good. We had things all to ourselves, we weren't disturbed by any other children in school. One thing I remember in particular, we had geology. They had a little course in geology that we both got. That might have been helpful, for all I know.

Swent: There was a lot of emphasis on American history, too, as I recall, in the Calvert School. Or there used to be.

Bradley: I don't remember the emphasis on that. The Calvert School had so much English--this geology was all right, really. I don't remember any history.

Swent: So your mother didn't teach you in Alaska, then? But she taught you in Flushing?

Bradley: She taught us both in Flushing, but in Alaska we had a governess.

Public Schools in California and Alaska

Swent: And in California? When you were in Berkeley what did you do?

Bradley: In Berkeley it was the Berkeley schools. I was there in McKinley the first year, and the second was right down here at Emerson.

Swent: There were schools in Alaska, I suppose, but not very good ones?

Bradley: When we went there the Treadwell Company had a school down by the Seven Hundred mill. One teacher had all the classes in the same room. Then, in 1915 or '16 they built a new school, got two teachers, and had the classes divided: the upper four grades, and the other.

Swent: But you never went to that school?

Bradley: Oh, yes. I went there for the seventh and eighth grade--perhaps only the eighth--perhaps it was the fifth, sixth, and seventh we did under Calvert. I'm not sure of that anymore. And it may have been that I was in the Treadwell schools for both the seventh and the eighth--and possibly only the eighth. I graduated from the Treadwell grade school--and you must realize that everything at Treadwell was company owned; it was a real company town there, and oh, it was a good one. The store was just the best store in the world, and the school was good, the clubhouse was good. All the functions in the clubhouse were good, the dances.

And sometime about ten years ago now, say, 1975, Katherine and I took a trip to Europe, and we did Spain first, and then we came up and spent a little while in Paris, and then popped over to London. We'd gone to a theater in Piccadilly Circus, and we went upstairs in a restaurant after that. There were some people there, a woman and some children that I could talk to. And I had to tell that woman that in 1914, which was sixty years before, the popular song of the day had been Tipperary, "Goodbye Piccadilly, and farewell Leicester Square." I just thought [laughing] that was the most important thing in my life.

Experiences in a Company Town

Entertainment

Bradley: At the Treadwell club there were dances, there were movies every Saturday.

Swent: Was this divided between staff and employees, or did they let everybody--

Bradley: Oh, no, anybody could go. All the muckers and all their kids, and everyone else. Generally the afternoon picture was attended only by children, and the evening picture was attended by adults.

Swent: What about the club activities? Were those open to everybody also?

Bradley: Oh, sure. They had a fairly good library, and I remember making use of that library for some of my high school work there.

Swent: In school, did you feel you were given special consideration because of being the boss's son?

Bradley: I don't think so. No, hell no.

Swent: Might be the other way.

Bradley: Yes, it was the other way around. My mother and dad made us work to make darn sure these other kids didn't do better. And there was one, and his father was, I think, hoistman down at the Mexican Mine. He was smart, and I had an awful time staying ahead of him, and sometimes I didn't.

Swent: How about the teachers, did they show you any favoritism?

Bradley: No, how could they? Oh lord, no.

Swent: Did the other kids pick on you?

Bradley: No, we all got along pretty well together. No, there was none of that. This was a very decent town. There were four towns there: Juneau, the capital city, on the mainland; a road went down on that side of the channel for about three miles to the center of works for the mine called the Alaska Gastineau. In 1913 or '14 they started work on a very large mill. Then we lived on the island, on the other side of the channel, and this had two towns on it, that ran in together--an ordinary person could not tell when they walked across the line, from one end to the other. One was called Douglas and the other was called Treadwell.

But Treadwell was a company town, and all the houses were painted the same color--that was wonderful. They were all painted red with green trim. And the reason they were painted red was because the paint stock was the roasted concentrate out of the mill. It turned red when it got roasted, made a good paint body. So we lived in a red house.

Swent: Was Douglas a company town also?

Bradley: No, no, Douglas was a private town.

Swent: And Gastineau, of course, was company, and Juneau was not. Did you have a chance to make friends from the other towns very much? Did you do things with youngsters from the other towns?

Bradley: From Douglas, but not from Juneau. But we could always beat the Juneaus. [shows a photo] That house is red.

Swent: That was your house.

Bradley: I think I told you, largest house in Alaska. It's larger than the house they built for the governor. The governor's house is still there, and this house is gone, but by golly we lived well.

Swent: It burned, did you say?

Bradley: The whole town burned down.

Swent: What a shame.

Bradley: Well, the mine had shut down ten years or so before the fire. There was just no crew around, nobody around, no firemen anymore. The company had laid, I think seven years before, a six- or eight-inch salt water line in Treadwell up to Douglas, and that was used for fires in Douglas. But after the mine caved in and people were gone, there was nobody to tend to those things. Nobody to start the pumps, or that sort of thing. Douglas burned like Treadwell burned too.

Swent: Well, that's too bad. So your father then was in charge of hiring those teachers, and the storekeepers, and the librarian, and--

Bradley: I don't know how far he went in the matter of hiring teachers. There may have been somebody who was given that job, I just don't know.

Swent: He was running not only the mine, but the town as well, though.

Bradley: Yes. I saw that over in Nevada, that worked out for about two years, where they had just enough children that they rated a school, so I think the mill superintendent and the mine superintendent, and the general manager, and maybe two others, officially became the school board. Yes, they were appointed to the school board by the people in the county seat. So they got hired.

Swent: Was he the mayor, and the school board, and everything else?

Bradley: No, this town of Treadwell had tried incorporation way back around 1910 or so. It was mainly incorporated about five years, but there was no reason for it.

Swent: What about police affairs? Did you need any sort of policing?

Bradley: One fellow that had a star, and that was Jack Wilson.

##

Swent: Jack Wilson was a company employee?

Bradley: Yes, Jack Wilson was a company employee. He had a lot to do with the athletic affairs that were a part of life there. My dad hired him to come to our house probably once a week, and give my brother and me lessons in boxing.

Summertime Tourists

Bradley: His principal occupation seems to have been tourist guide, because these ships would pull up at the Treadwell dock with anywhere up to around a hundred people, summertime tourists. And they'd get off, and they had to be shown around, because obviously, if you didn't show them around, they'd get into trouble, they'd get into some of the machinery, and get hurt.

So that was handled by Jack Wilson, and I remember he had a little hat that said "Guide." They were taken up from the dock first up to the Three Hundred mill, and then from the Three Hundred up to the Treadwell glory hole, and Treadwell shaft, and then back down, I think possibly through the Two-Forty mill, I forget. Then on down to the dock.

Us kids used to sell them pictures, this is one left over. [indicates a photograph] But the man that made these pictures made a deal with me. He said, you sell them for 75 cents and give me 65; that means you'll make a dime on a picture. So I was an--

Swent: Entrepreneur.

Bradley: Entrepreneur. But all the kids were just out selling--not all of them, but the older ones. I was then, say, twelve, thirteen years old, and the kids up to fifteen or so were all selling pictures.

Swent: I was going to ask two things: what opportunities there were to get into trouble, and also what opportunities there were to get jobs.

Bradley: There were not opportunities to get into the kind of trouble kids get into these days. Around here kids have an awful lot of influence on each other, and sometimes it's bad influence.

Swent: Of course you weren't driving, so there weren't car crashes.

Bradley: No driving could be done there with no roads, and I think by the time we left up there, there were probably five cars on the island.

Swent: Your folks had one?

Bradley: No, didn't need one.

Swent: You said you rowed a boat across the channel.

Bradley: Hank and I rowed a boat once across the channel.

Swent: Was there a bridge?

Bradley: There was a ferry. As I say, four towns, and here they are in this picture. Juneau down here was the town of fame. That's where Gastineau was, three miles down. Then over here, Douglas Island. By the way, that's Mt. Bradley. It was named in 1934. After Fred Bradley died the community got together and talked the legislature into naming it for Fred Bradley, who really had done an awful lot for Alaska.

Swent: There's a big bridge across there today.

Bradley: Oh, today there's a bridge across. In fact, there have been two bridges right across here; one of them was built in 1935, and a replacement bridge was just built about two years ago.

Swent: So what kind of trouble could you get into? You must have found something mischievous to do? What about smoking, drinking?

Bradley: Oh, no, none of that. I never have smoked, and neither has my brother. Oh, and speaking of the rest of the family, there was a pair of twin sisters born to my mother up there on the last day of 1915. They were born in that house. In fact, [pointing] in that room. But anyhow--

Swent: You had a company doctor.

Bradley: Company doctor, that's right. But anyhow, one of those sisters lost her husband yesterday. Phoned up late last night to tell us about it.

Swent: I'm sorry.

Bradley: Well, I talked to my brother about it this morning, and he says, oh, he'd been trying to die for about a year now, hadn't he? Well he had, he'd been in bad shape.

Swent: So they were born in Alaska. How many were in your family?

Bradley: Four. We got five here. [laughs]

Swent: Outdid them a little.

Bradley: But growing up in Alaska for kids in those days was a wonderful thing.

Swent: Did you go fishing?

Bradley: We got lots of that, and we got a couple of hunting trips in with my dad. He got himself a--you know anything about rifles?

Swent: Very little.

Bradley: All right. He got one called a 250-3,000 featherweight, take-down, a Savage, a very nice-looking thing. Short barrel, I think about a twenty-eight-inch barrel. Nice lines, lever action. Two-fifty caliber is just a hair larger than a twenty-two. Army rifles, of course, are thirties. So he got that, and he wanted to try it out. He lent it to the secretary of the territory, a fellow named George Folta, and he got his picture in the paper because he went out and shot a bear with it. He was either the governor's secretary, or had the official legal title of secretary of the Alaska government, I don't know which, probably the latter.

Then my dad took us out one time on a trip to look for deer. He got one, no trouble.

Swent: You went to the mainland for that, or on the island?

Bradley: On the island. Yes. He just got the little company boat to take him down, oh, say two miles below the end of track. I guess we were down in Nevada Creek, which was about two miles. Then we worked our way back up on the hill, and pretty soon, coming back down the hill, you could see a deer. Lying down! And so at a distance of about a hundred yards he shot it--got it right through the neck. Then he had the problem of getting the damn thing down to the beach. Those deer were small, and it might have weighed seventy-five pounds, but he got it down all right.

That reminds me of another story that had to do with my brother Hank in that piece of country, and the little company boat. Hank and a boyfriend of his named Carl Hanson had been walking along the lower beach going around Nevada Creek, and they found a little trail going from a gravelly beach up into the woods. As you can see, the woods came down quite close to the beach.

So they followed it up, and there were five cases of Johnny Walker whiskey up there. [laughs] He high-tailed it home and told my dad about it. My dad got the company boat, and they went

Bradley: down there, and he confiscated that. So we had five cases of Red Label Johnny Walker in the house there for a long time. He didn't drink it, he used it for Christmas presents.

Swent: Now who could have put it there, and why?

Bradley: Oh, some bootlegger, somebody that was smuggling it in the town. That was the place they would land it, and then they would come down later on with another boat and take it uptown to Juneau and sell it to--

Swent: Your company store didn't sell booze?

Bradley: No.

Swent: Was there any bar or anything on the island?

Bradley: No, Treadwell was a prohibition town.

Swent: Makes life a lot simpler, in some ways.

Bradley: It did. Now I heard tales about Kennicott. Kennicott went further north, and that was a country where the winters were much more rugged, so they had good bunkhouses there, and nothing to do there but play cards, and so on. They didn't allow liquor in that camp either. But the card games were allowed to run until ten at night, and that's all. Card games in the bunkhouses, and that kind of thing. That's all something that you have to be careful about in Alaska, and people generally were.

Swent: Were there bunkhouses at Treadwell also, as well as family houses?

Bradley: Yes. Bunkhouses first.

Swent: Mess house?

Bradley: Big one, good one.

World War I, 1918, the Draft

Bradley: On the tenth day of May, in 1918, the draft went out. The first draft. It was also the last day of school--I was then in high school. And the high school had a litle cadet corps that was organized and trained by a Spanish-American War veteran. So we were taken by boat over to Juneau, and we marched into Juneau along with--oh, I don't know, I suppose the Elks and everybody else were in this parade. And at the head of the parade, of course, were these thirty or forty boys who had been drafted.

Bradley: We all wound up in the theater there, in Juneau, the movie theater, and sang all the patriotic songs. All the important people gave speeches, and then we sang all the patriotic songs that anybody could think of, like "We Won't Be Back Until It's Over Over There," you know, and that sort of thing.

Then that came to an end, and we all marched down Front Street to the docks, and there was the Peterson waiting. The Peterson was a little steam transport boat that would take the boys out to Fort Haines. And that's what they did, they took them all out, and every gas boat on the channel followed that Peterson down. We used to have pictures of it around here, and maybe we still have, but here was the Peterson in the lead, and every gas boat on the channel escorted them.

Swent: Gave them a real send-off.

Bradley: There was a community spirit up there that you couldn't beat anywhere else. Even the King and Wing, and I've seen pictures of the King and Wing over in the California Historical Society building there on Jackson Street. The King and Wing went clear up above the Arctic Circle in the summertime, it was quite a boat. But it was in Juneau, and it joined the parade. [laughs] And then we all had dinner in the Gastineau Hotel that night. We had whale meat, I remember that. Finally went home, a lot of us boys played around in back of the school house. We got a fire going and buried Hank in the sand--my brother Hank--let him think he was going to burn or something [laughs], and then we got to bed. Next morning Hank woke up with scarlet fever. I cannot remember whether they put Hank in a separate house up on the row. I think they did. Got in a nurse to look after him, kept him in quarantine up there.

And my dad and I moved up to the staff bunkhouse, the old Duncan bunkhouse, and we had our meals down in the boarding house, in a little room that had been set aside for the staff in the mining boarding house. Boy, I enjoyed that, golly I enjoyed that! I was in the same room with my dad, and we went down there and ate--

Swent: You felt like a real man, didn't you? Where were your mother and sisters?

Bradley: They were in the regular house, they were here [pointing at picture]. Of course Hank was taken out of that house, so his sisters wouldn't get this thing. And I was taken out, my dad was taken out.

Now it's a funny thing: I was in Juneau two years ago, and I was told where a woman lived that I had known in Treadwell. So I went and called on her, and she gave me a name for that little

Bradley: staff room. She said, I used to work in the sideroom--that's what she meant, that's what they called it. I'd not known that. They called it the "sideroom." She worked there.

Swent: In a lot of things the staff and the employees were all together though?

Bradley: Almost hundreds of them. I think they would feed up to three hundred people at a sitting there in the big mess house.

Swent: But they did have a little separate place--

Bradley: A little separate place for the staff.

Swent: Did they get special food, or the same food?

Bradley: Oh, I don't know. I don't think anything special.

Swent: Did you eat pasties?

Bradley: No.

Swent: Salmon and whale.

Bradley: [laughs] The whale was over at the hotel that night, and salmon, yes. We used to have salmon at home quite a bit, and one of the ways I liked it was the variety called kippered. I think that's just a smoked salmon, but I can remember how well that hard, red salmon--awfully good-tasting--with good mustard on it. That was a good dish.

Swent: What about the other people that were in school, and in the mining town? Were they all just from the lower forty-eight, or were there immigrants?

Bradley: Well, go back in history. The Alaska Treadwell mine started up just as not much more than a prospect. It was a mine worth developing, and the development started in 1882. Now John Treadwell apparently used Chinamen as much as he could, because you could get them for lower cost. But those who were not Chinamen there rose up, and one day they ran the Chinamen all out.

Let me back up. The gold discovery at Juneau was made first in here [points to a picture]. This creek was just dumping sand down there with gold in it. So they followed the gold on up and came into this great basin up behind this mountain, and this basin had pretty high-grade quartz in it, and that's where the placer gold had come from. And lots of individuals up there had started little mines and that sort of thing, but not a great bunch at all. The large numbers of men were the men employed here at the Treadwell mine.

Bradley: That grew pretty fast, and by 1889 or '88 they had built this Two-Forty mill, that's 240 stamps, and that was good for twelve hundred tons a day. That was the biggest stamp mill in the world. And in 1897 they finished an additional mill, called the Three Hundred, with 300 stamps, that was good for fifteen hundred tons a day.

Swent: So they had a total of 540 stamps going then?

Bradley: Yes. This was the biggest stamp installation in the world, and actually, that Three Hundred mill as long as it ran was the largest stamp mill in the world. That was good country!

Swent: A lot of noise in all those stamps.

Bradley: Oh, nice noise. Sure.

Swent: People couldn't sleep when it stopped.

Bradley: Couldn't sleep when it stopped, that was exactly it. And I remember the two times I came home from school by boat--opening the entrance to the channel, and that was eight miles down--the ship would come into that, and you could hear the stamp mills. Then I knew I was home. It was just a very low rumble down there. It was a low enough rumble that around town it became unnoticable, you know. Except, as you say, when it stopped. Then everybody got out of bed to see what the trouble was.

Then there were other mills too. There were, I think, a total of 960 or 980 stamps dropping there in the best year of all--that was 1915. And then they had to begin to slow them down because the ground was beginning to move, and they were afraid of trouble. Finally it came one night, the night of the twenty-first of April, in 1917. The ground gave quite a move, and unfortunately that was the night of the highest tide of the year. The water got in over the sand—they'd been building up the tailings of the beaches for a long time just to head off this kind of thing--the water got over the sand and into the mine. Within two hours they got all the men out, and within four hours, why, the mine was completely flooded. And that was the end of it.

Swent: But you were still there in May of 1918, you said? That was when the boys were sent off?

Bradley: Yes, that was after the cave-in.

Swent: So you finished your school year.

Bradley: Yes, and of course my dad was there, because in addition to being superintendent of the Treadwell, he was also superintendent of the Alaska Juneau. Alaska Juneau was run out of the Treadwell office anyway.

Swent: So the next year, then, was when you went to Culver.

Bradley: I went up to Culver in the fall of 1919, and put in two years there.

Summer Jobs, 1918-19

Swent: So you had another year in between?

Bradley: Yes, and I got summer jobs there each year.

Swent: What sort of summer jobs did you have?

Bradley: Oh, the first year I got started pulling nails out of the wreckage down in the bunkhouse. Then I was put on a salvage gang knocking rivets out of the overhead in the power plants, and all sorts of things. One summer, I think the second summer, I was out on a repair job at Nugget Creek, where the company had a power house. The dam was then about seven years old, and beginning to show signs of age, so they put a crew up there fixing that, and I was put on that crew.

Blacksmithing

Bradley: Oh, that was a wonderful time, because the man who was running that job had come back from the war--I think he was one of the draftees that went out that time--but when he came back he was wearing that campaign hat with the gold and black ribbon around it [laughs]. He was a commissioned officer. Damn good man, Charley Horner. He showed me about blacksmithing, and that came in pretty handy. I did some blacksmithing just for fun around the mine there, afterwards.

We had a blacksmithing course as freshmen or sophomores, up here at Berkeley, at the Hearst Mining building. Boy, I could out-blacksmith anybody. Most of the kids had never heard of a blacksmith before.

Swent: What was the necessity for this? You were not shoeing horses?

Bradley: No, but up until, I would say, about 1940, you had to have a good blacksmith around the mine. You just had to have, or else nearby. At the Harvard mine, which I did so much work at--I'm going up there tomorrow--we used to take most of that kind of work up to a foundry and shop in Sonora. That was very convenient.

Swent: I remember that this was very important in Lead [South Dakota], but I'm not quite sure what they did.

Bradley: Oh, they make shapes, and you've got to have iron shapes of all kinds. You've got to have hooks, and you've got to have pipe clamps, and everything else. That's what comes out of the blacksmith's shop.

Swent: That's a good thing to know. So you learned that on the job up there.

Bradley: I learned that on the job up there as a youngster.

Swent: So you had your own power plant, hydro--

Bradley: The company had it. Fred Bradley had started the power plant systems up there, and they were very important to the mine.

Swent: What about timber?

Bradley: Timber was towed in from camps around, not too far away. There was a sawmill in Douglas that the company owned, so they made all their own timber.

Swent: You had to bring in some food, of course.

Bradley: It came in by ship, from Seattle.

Health Care

Swent: What about your health care? Was there a hospital, or an infirmary?

Bradley: The Catholics had a damn good hospital up in Douglas. My mother [laughs loudly]--boy, she was anti-Catholic. And I have to tell you--you know, I talk about this too much--but even today one of my friends in this world is a nun. I don't see her very much, but she's still a very good friend. One of the reasons she's been a good friend is that she's never talked religion to me. She knows I wouldn't like that.

But anyway, I can remember my mother talking about the way those nuns would go around the hospital wearing those robes, and sweeping germs with them wherever they went, and all that kind of thing--boy, she was against them. But it was a good hospital.

Swent: So the company didn't have to have its own hospital.

Bradley: The company did not have a hospital, but it made a charge, I think, of a dollar, or a dollar and a half a month, for medical care. That went to the doctor, and he took care of the men no matter how much it cost, but he got that dollar. If you had a crew of fifteen hundred men, why, [laughs] that's good pay. He'd put them in the hospital, and the hospital would get their share of the money, when there were hospital expenses. The doctor's office was up in Douglas. I was sent up there for ear treatment--God, it was horrible. And it didn't do any good either.

Swent: What about a dentist? Where was the dentist?

Bradley: Private, up in Douglas. I think when I was about thirteen years old I had seven teeth pulled all at once. That was with--I can remember this plainly--he used for a drill, when he needed a drill--the only drill was foot-powered then. Well, my, the whole thing was--compared to what goes on today--that was awfully crude.

Swent: No Novocain?

Bradley: No, I don't think there was. I think that was a development of World War I. Anyhow, I lived through all of those things.

Swent: Were you aware of the religion of the other kids that were in school with you?

Bradley: Well, quite a number of the Treadwell children went off to the parochial school next to the big hospital. Well, that's all right, if they want to do it.

Immigrants from Europe

Swent: About the people that worked there--were there immigrant people?

Bradley: Yes. When it started with the first discovery in 1880, why, these were people that had come into Alaska just in the last two or three years, and one of the outstanding things, I think, about Alaskan history is this--

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Bradley: The Russians, who were in Alaska for almost two hundred years, had known of the presence of gold. And as a matter of fact, old Baronoff, who was running the trading company, which were the headquarters for Alaska and Sitka, had sent to Russia and got a mining engineer out. He had made scientific notation on the presence of gold here and there. Didn't do anything about it.

Bradley: Then Alaska was sold to the United States in 1867, and you know what the Americans are like, they go anywhere. By 1872 gold was being produced all along that Juneau gold belt. Some over in Sitka--and so on. All these free men, that we have in this country, so many went to Alaska to see what the gold situation was.

It was their presence that pursuaded an old German mining engineer by the name of George Pilz, and an American whose name I can't remember right now, but this American later on was a partner of the man who had what's now the California School of Arts and Crafts. Anyway, these two men got together about 1880, or 1879, and put up a little bit of money for teams of two men each, who would go out into that country and try to find gold. An interesting thing is that the idea was given to them by none other than John Muir. Now, John Muir must have been an awfully perceptive man. He had noticed all along that Alaska coast a tremendous similarity, geologically, to this California gold belt. And he just told these fellows, you better go out and look. And they did. And that's how come the Juneau gold was found, and how come the Treadwell gold was found.

Well, when the gold was found, even more people flocked to Alaska. What nationalities I don't know, but I think they were probably what you would then have called "Americans," typical farmers, and people like that. And drifters, and so on. But by the time the Treadwell mines were going in fair shape the population, apparently, was highly Scandinavian. That was followed--and was markedly so in my time--with a very high percentage of south Europeans.

Swent: Slavonians.

Bradley: Slavonians, and those types.

Swent: Italians, maybe?

Bradley: Not so many Italians. The Slavonians, and the Montenegrans, and that Balkan peninsula. How come that happened, I don't know, but it was probably the times, and a few other things all combined just right, and over they came. They were damn good miners. They made good miners, good people, good help. By the time the Alaska Juneau was running real good, say, in the 1940s, the Finlanders formed a high population.

Swent: Not until that late?

Bradley: By that time--they were coming in earlier, of course.

Swent: They were good miners, too.

Bradley: Well, of course they were. Once I had a conversation with John Agnew, then president of International Nickel of Canada. He said about this Finlander thing, he said, we try to keep our Finland employees limited to about eighteen percent of the crew. Too many Finlanders make trouble. I was then working out in the Sudbury Basin, and we had lots of Finlanders.

Swent: In what way did they cause trouble?

Bradley: Oh, in the communities they were, well, a little bit on the red side, you might say--a little bit on the demanding side, and that sort of thing. But at smaller places, no. And California during the thirties--California Gold Belt was full of Finlanders. I had known a great many over in Nevada before I ever came over here. As a matter of fact a lot followed me over when the California gold mines started here. They're pretty good men.

Swent: I've heard that some of them had a drinking problem--I don't know whether that's true or not--

Bradley: I think that was a problem. You'd see a Finlander absolutely loaded at eleven o'clock at night; the next morning he was plumb sober. Not the Irish. The Irish could drink, but it would take them a day or two to sober up--it's a funny thing. The Finlanders, they were all right.

Swent: You finished your schooling up in Treadwell then, in 1919--

Bradley: In '21. I showed you my graduation. My high school ended up in 1919, yes. Then I went to Culver for two years, graduated there.

The University of California, 1921-26

Bradley: I did too damn well at Culver, because when I came here to Cal I got put in all the high-ranking sections. I couldn't handle it. Especially in chemistry, I got put in a high-ranking chemistry section and I couldn't handle that. But in the others I did all right.

A Family of "Old Blues"

Swent: Did you have any family here at that time? How did you happen to pick Berkeley?

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Treadwell memories

Phil Bradley Jr. recalls golden years of current ghost town

By DEBBIE REINWAND
Empire Staff Reporter

While most Juneau and Douglas residents picture Treadwell as a ghost town long overgrown with brush, Phil Bradley Jr. remembers it as a bustling gold-rush town where he spent 10 years of his youth.

Bradley moved to Treadwell in 1914, where his father, Philip Sr., was general manager of the mine. His father eventually followed his older brother Fred as president of the Alaska-Juneau Mine.

As a youngster growing up around the mines, Bradley had many experiences, which he readily recounted for his listeners Thursday.

Tourism, he said, was abundant way back in 1914. "Although we didn't get them by the thousands like they do now," he said, "we'd get anywhere from 50 to 100 on a ship."

The children of Treadwell were entrepreneurs and would sell the tourists specimens of rocks from the mine, postcards, photos and jars of fool's gold.

"We kept them out of the miners' way. The tourists were curious, so there was a tour they could take that kept them away from the mine, but close enough to get a look at it," he added. "They only stayed for an hour in those days."

A lot went on in Treadwell socially, Bradley said. The Fourth of July was a particularly big day for the community. Many of the Douglas traditions have grown from activities started in the mining community, he said.

One event he recalled was the hose race.

"That was the funniest thing," Bradley said. "One man had the nozzle; two had parts of the hose; and one person manned the spool. Many times when they were trying to piece it together they'd get out of sync. Sometimes the end man would turn on the water when the middle wasn't yet connected. What a mess," he said, laughing.

According to Bradley, Treadwell had a great softball team. "We had a lot of college boys, engineers and such," he said, "and we beat Juneau every time."

Bradley, his brother Henry and twin sisters, Ruth Frances and Frances Ruth, all enjoyed growing up in Treadwell, he said.

"It was a wonderful place to live, a very lively place. There were over a thousand people there and a lot of person-to-person interchange went on," Bradley said.

There was an intellectual exchange, also, he said. "The town was full of young graduate engineers, doctors and because Juneau is the capital, plenty of lawyers. It was exciting," he said.

The community often banded together to support a cause, according to Bradley. When President Herbert Hoover called for national support for the Belgian Relief Fund, Treadwell residents put on a Belgian Relief Carnival and sent the proceeds to Washington.

"We all pitched in. I worked behind the screen in the fish pond," he said.

Bradley followed in his father's and brother's footsteps to the University of California, Berkeley mining school. He also spent several summers working at the Treadwell Mine, as well as at the Alaska-Juneau Mine.

All in all, living in Treadwell during the mining days was an experience he feels lucky to have had, Bradley said. "And our family is still together," he added. "My brother and the twins will be in town for the ceremony at Treadwell commemorating the mines."

Bradley wrote the words inscribed on the plaque, which will be formally dedicated at a ceremony Sunday at 2 p.m. The monument is 200 feet from the original Bradley home, "right in the old nerve-center of Treadwell, where people passed by every day," he said.

Mayor Bill Overstreet has declared Sunday as Bradley Day and urged all residents to attend the unveiling of the commemorative at Treadwell.

During his stay in Juneau, Bradley has been researching the history of Douglas and plans to publish a paper or book detailing the town's growth.

"We were there as children, when it was all happening," he said. "Some people have written about it, but there are gaps that need to be filled in. I feel a responsibility as one who grew up there to do it."

The University of Alaska, who recently issued the Distinguished Mining Service Award to Bradley, has approached him about publishing his work.

Phil Bradley Jr. Photo by Monte Paulsen

Bradley: How did I happen to pick Berkeley? Oh, P. R.--my dad--was a Berkeley graduate.

Swent: So that went without saying.

Bradley: Yes, of course it did. Sure.

Swent: Because a lot of Alaskans went to Seattle, to the University of Washington.

Bradley: Yes. Quite a few came here, though. We had lots of Treadwell boys who had been here, and who I could pick out in the alumni pictures up at the mining building.

[Interview 4: May 30, 1986]##

Swent: You said your uncle Fred was a great family man?

Bradley: Yes, and the more I read of his life, the more I realize he had as his right-hand man his younger brother.

Swent: It's a tribute to them both, isn't it, that they worked so well?

Bradley: Yes. His younger brother Phil was my father. But they also had as general superintendent up there at Juneau a brother-in-law, and then--

Swent: Who was that?

Bradley: His name was Metzgar, that was Lou Metzgar. He had married the youngest sister in the family. It has occurred to me since that it might sound like nepotism, but the fact is that Fred got more loyalty, and more hours of work, and more effort out of his own family.

Swent: And they didn't resent it?

Bradley: They didn't resent it, oh, no. I think I told you that when I was out running some of the mines that Fred had started here in California, I could get men coming to work for me because they were working for the Bradleys. That was a piece of luck. But Fred started all that.

Bob Kinzie, a Friend

Swent: I had a couple of questions that I thought you might fill in on before we go on. You had said that Fred and Kinzie had a falling-out. I didn't know what that falling-out was--do you want to mention that? Who was Kinzie?

Bradley: Bob Kinzie, class of '94 over here at Cal. His son Robert I used to see around fairly frequently. When Kinzie came away from Alaska, he came down here and got into the cement business, and became an authority on cement manufacture. His son Bob, the older of the two sons, ran the cement plant down at Santa Cruz for a long, long time, at Davenport. He and I were in the same class together here at Cal, and that was a funny thing, because one day we were standing in line waiting to register, and somebody said, here's somebody from Alaska! I said, oh, fine, who are you? And he said, I'm Bob Kinzie. Well, I'd been hearing about Bob Kinzie as a youngster all the time in the previous ten years, and here he was. We had a lot in common in college.

Bob Kinzie, Sr. had worked with Fred, probably, since his first days after graduation. I've got lots of notebooks around the house here that Fred used in making reports. He examined a great many mines for a great many people. One of the odd things about that is, that about two months ago I was called up to Placerville by some people who wanted me to take a look at the situation there; the city of Placerville has a park, and in the park they have a mine. This is what they now call the Goldbug mine, and that's an extension of the one that was called the Gentle Annie. You hear a name like Gentle Annie for a mine, you remember that forever. He used Kinzie on that job, I've got his notebook in here. Kinzie was then about four years out of college--six years, maybe.

I think he used Kinzie also on that big job down at Esperanza, in Mexico. Anyhow, he finally got Kinzie up to Treadwell about 1900. He became superintendent then, and stayed superintendent until 1914. He was a darn good mine manager, but I think the falling-out came because he had taken an interest in some sort of a venture up there in Alaska, and I think Fred thought that Kinzie was going outside of his authority to take a personal interest in something else, something that didn't come to the company. And they began rowing about it, and Fred and Kinzie agreed to part in early 1914, or late '13, and Fred got P. R. [P. R. Bradley, his brother] up there to take Kinzie's place.

Swent: So you didn't overlap with them in Alaska?

Bradley: No. Of course, we got the Kinzie house. That's that house which I told you is the biggest residence ever built in Alaska. I realize now that it's even bigger than the governor's mansion that was built for the governor in Juneau.

Swent: So you and Bob Kinzie, when you finally met, did have a lot in common.

Bradley: Young Bob and old Bob--I used to see a lot of old Bob at the Engineers Club. I ran into him once, and we had several days together really in Bakersfield, where he was doing some consulting

Bradley: work for that cement plant in Victorville--I think it was Monolith Cement. He was just as friendly and easy as could be. Good man. He and I got along fine. This is old Bob I'm talking about now.

Swent: There was another question that I had: you wanted me to remind you to tell the story about getting snow from Mt. Jumbo. [laughs]

Bradley: Oh, yes.

Family Recollections

Swent: Now, you just got through showing me a picture of your brother, and you said he was the smart one, but I thought, the other day, you said he was the lazy one?

Bradley: He was. That's what my dad thought of him. He would heckle about the people that have very active minds, but are physically lazy. Anyhow, my dad said at lunch one day, "Henry, if you'll bring some snow down from Mt. Jumbo, I'll give you ten dollars." So I went and did it.

Swent: Henry didn't want to.

Bradley: He didn't go. He didn't get in on it. I came home and told my dad, "Here's the snow, where's my ten dollars?" He said, "I didn't make that contract with you. I didn't talk to you about it, it was Hank." [laughs] My mother jumped all over him, and said, he owed me ten dollars anyway.

Swent: Who won?

Bradley: Oh, I got the ten dollars.

Swent: The other part that I thought was interesting--you didn't mention it just now--was about going and getting the black cloth.

Bradley: Oh, yes, I put that on a tree which was sticking up out of the snow, so that it could be seen, in case anybody argued that I might not have gone up on the mountain.

Swent: You went to the store first--

Bradley: Yes. Went down to the beach and got a gallon tin can--and there's lots of them floating around, because of the boarding house.

Swent: How far was Mt. Jumbo? How far did you have to go to get the snow?

Bradley: Oh, I suppose it was about a mile-and-a-half walk. First part was all up.

Swent: I think you're plenty smart. [laughs]

Bradley: Just one little thing, yes.

Swent: Well, we had stopped the other day just as you finished Culver, but you didn't actually say an awful lot about Culver. You did mention that you had such good grades in physics, and so on. Was there anything else that you wanted to say about Culver?

Bradley: Nothing especially. It's a funny thing, I said to this other classmate of mine who was there last week--we ate all of our meals together just because it was convenient--I said, I didn't do anything here, I was an awful green pea. He says, so was I.

Swent: Did you go back to Indiana for the reunion?

Bradley: Yes, last week. Indiana roads aren't a bit better than they were fifteen years ago, either. They have more of them, that's all, but they're not better. They get that freezing, you know, and it hurts the concrete, and so on. Also, Indiana fails to number its roads frequently enough so that you know where you are.

Swent: Were you terribly homesick when you were there?

Bradley: As a youngster? No, no. Both my mother and my father wrote to me fairly frequently, and it was a lively place.

Swent: Did your brother follow you there?

Bradley: No.

Swent: This was the first time, really, that you were separated from your brother, wasn't it?

Bradley: Really, yes.

Swent: And had you been very close?

Bradley: Yes. Very.

Swent: Where did he go to school?

Bradley: Well, when I went to Culver, for some reason he was sent to Juneau High--I'd been in Douglas High for two years. Douglas is on the island, next town. But he was sent over to Juneau High, I don't know why. He didn't graduate from Juneau High, he graduated from Berkeley High, because when it came time for me to go to college my brother and I were brought down here by my mother. We put up a few days in the Whitecotton Hotel.

Swent: Where was that?

Bradley: Well, I think they call it the Shattuck now. Then my mother got a place for us all to stay on Ridge Road. I came into college as a freshman, and Hank went to Berkeley High.

Swent: And your mother stayed here with you, then.

Bradley: She stayed here for quite a while. I forget whether she stayed with us that whole semester, or not. She probably did, and I think what happened was, my father came down to talk to Fred about the mine and I think we all had Christmas over at Fred's house.

Swent: And that was in San Francisco.

Bradley: Yes. Because we usually did have Christmas at Fred's house, and as I say, Fred was a great family man, and we were frequently invited over there for small functions, and we played with his sons a lot. Usually it was street football, or football down on gymnasium rugs down in the lower room in the house.

Swent: Were his sons about your age?

Bradley: Yes. Worthen was the oldest of the four of us; I was next; Jim Bradley next; Hank was next.

Swent: So you were all close in age.

Bradley: Very close, yes. Jack was the last, and John Davis, who was Worthen's cousin on the other side--in other words, I was Worthen's cousin on his father's side, and he was Worthen's cousin on his mother's side. John Davis, Sr. was a lawyer of pretty high standing here in the city, and politically, in the state, too. We were over there quite a bit, I think every Christmas, and probably every Thanksgiving, all during those four years. And I think I told you about being in the hospital down here at Alta Bates, didn't I?

Swent: No, not yet.

Bradley: Well, in about the year 1931 I was sent up to, first, a quicksilver prospect on the top of Buckskin Peak, in the Santa Rosa Range in Nevada. And I ran that prospect for the three or four months that we stayed with it. Then I was just moved over to the new Bretz quicksilver mine, which was an operating mine. A lot of people have been in that since, but we got the best of it.

Bradley: Winter came on, and the trucking became very difficult. I came down here to the Stanford-Cal football game that fall, and the next morning I woke up in the family suite up at the Claremont hotel--they had temporarily rented out their house here on Avalon--and I was yellow. So my mother got the doctor in, and the doctor said I had jaundice, and I better have an operation. So I was in Alta Bates for six weeks.

Swent: They did an operation in those days?

Bradley: Well, these days you'd stay there a much shorter time.

Swent: And they'd just give you antibiotics, or something, I suppose.

Bradley: Yes, but this was an operation, a gall bladder operation, and while I was open they yanked out the appendix too, on the theory that someday I'd be out in a mine, and I'd get appendicitis. My recollection is that the first week was pretty tough. [laughs] I think my mother was convinced she was going to lose me.

But anyhow it came out all right, and I was moved down out of this room I was in to a corner room. You see, things were not good in those days for anybody. Nineteen thirty-one was the depression. But the hospital was pretty well emptied, about half full, say. I was moved down into a very nice corner room. Alta Bates came in every night--

Swent: Alta herself?

Bradley: Oh, yes. She visited all her guests, all her patients. Came in after supper, talked to everyone for just a little while, and went on. She was a nice person too. I was then about twenty-six years old, so after Alta Bates left, [laughs] the young nurses would start coming in. We had a big time. I was just the right age for that sort of thing. But the greatest thing that happened to me in that hospital was, on Christmas day, the door was open into the room, and in walked Fred Bradley and Mary. And they had had to drive from their house in San Francisco down to the waterfront, take the ferry over to Oakland, and drive all the way up to Alta Bates. That's one of the reasons I say that Fred was a good family man. He came to see me.

Swent: Wasn't that nice.

Bradley: Oh, it was, it was wonderful! As a result of that, as Mary got older--she happened to be spending a good deal of time in hospitals--at Christmastime I always made a point of going over to see her in San Francisco. I owed her that, you know. So I did that.

Swent: Did your brothers and cousins go to Cal also?

Bradley: Everybody. Sure, we were all Cal, we were all "blues."

Swent: So all of these five--no, more than five--

Bradley: Well, there were six, weren't there? The four young Bradley boys and John Davis, that cousin, and Hank and me on this side.

Swent: That would be seven.

Bradley: It actually was six, because Sewall Bradley, the next to youngest of the Bradley boys--he's still alive--but he's always been just a bit retarded. His speech was always not good. So he didn't get to college. He went to A to Zed School over here, and once I was talking to Fred's mother about Sewall and I said, oh, he'll pull a rabbit out of a hat one of these days. And she said, not him. And she knew, and she was a very wise woman. And she was right. He never did.

Swent: Is your brother Henry still alive?

Bradley: Yes. But not in good shape, darn him.

Swent: Did all the others go into mining also?

Bradley: Yes.

Swent: Every one of them?

Bradley: Well, John Davis became a lawyer. But the rest of us went into mining. Hank never graduated here, but his major was metallurgy, and he was a first-class metallurgist.

Now, I was up at the Harvard Mine on Wednesday of this week, and of course they're doing a great deal up there. They're building a mill that will handle, I think, six thousand tons a day. They expect eventually to bring in ore from a great many sites near the Harvard, so they built a big plant. It's a new company gotten together by a young fellow who--I must admire for this--got himself hold of a lot of money, and it's all going in up there. I thought, when I left the Harvard--

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Bradley: --casualty of the war. I was told to shut the Harvard work down along in the fall of 1941--no, a little later, spring of '42, I guess--because my dad, of course, was well aware of the effects of war on gold mining.

Swent: So you closed the Harvard, actually, before L-208.

Bradley: He was afraid of the curtailment of the flow of money from Alaska Juneau. And he was right, because in 1944 Alaska Juneau itself had had to shut down.

Swent: Because of shipping problems?

Bradley: Just war economy. Mainly, in Alaska, it was labor problems, and not that there was any labor trouble of the ordinary kind, but they simply went off on these big paying jobs with the contractors. You know the government did an awful lot of contract

Bradley: work in Alaska, beginning about 1942. They were afraid of the Japs--the Japs eventually did land in Alaska, you know--and there was just all sorts of military defense work going on in Alaska. Big wages. Contractors were handling the work, and they were paying big wages. Alaska Juneau up until then was paying the highest wages in any mine in the country, but that wasn't enough.

Swent: Had the first world war affected--

Bradley: It had had some effect. It had simply made labor scarce up there on the channel. That didn't affect Alaska Juneau as much as it did Alaska Gastineau. When we get to talk about mines I'll have to explain about that.

Swent: Yes, we'll have to get to that. Anyway, your father and uncle decided to close Harvard and put everything into Alaska Juneau.

Bradley: Fred Bradley, by then, had died. The whole thing was in PR's hands, and of his board of directors down here, but I'm rather sure that was P.R.'s own idea, his own thought.

Swent: Do you think it was a good idea?

Bradley: Yes. Oh, sure, because as I say, Alaska Juneau itself had had to shut down about two and a half, three years later.

Swent: So they couldn't have kept them both going?

Bradley: Well, Alaska Juneau was the source of money, and the money had to be saved, because there's no telling what the future will bring in wartime for a mine like Alaska Juneau. As it happened, the future turned out bad. I'll tell you about that when the time comes.

Swent: Who were your college friends besides Bob Kinzie?

Warren Labarthe, a Friend

Bradley: Well, the best friend I had was young Labarthe, Warren Labarthe, called Stub--his college name was Stub Labarthe. He was a short man, but boy--he was the son of the Labarthe of Bradley, Bruff, and Labarthe. He was one of three sons of Jules LeBarthe, Sr. He majored in metallurgy, and myself in mining. But we fell together pretty well, and each summer we got our jobs together. And of course, one of the best parts of college, I thought, were the summer jobs. Not so much college itself--we learned quite a bit in college, and as I look back I <u>know</u> I learned quite a bit there--but it was accidental. What you learn in college is almost pure accident--well, maybe it wasn't accidental in the case of

Bradley: people like Plato Malozemoff; I think he came in about the time I was a senior. He was there to study, but I was there just to be in college, and there's a great difference. But we got summer jobs together, Stub and I.

Summer Jobs

Swent: How did you get those jobs?

Bradley: Well, of course the Bradleys were well-known, and my dad could send some inquiries around in the mining colony of San Francisco, and they'd be listened to. But the first job we got was through a man who was purchasing agent for what was called the United Comstock Mines.

Gold Hill, Nevada, 1921, Timberman's Helper

Swent: That was Nevada.

Bradley: That was in Nevada. We went up there on the Southern Pacific to Reno, took a sleeper up. The next morning we got off in Reno, and there was the Virginia and Truckee right on a parallel track, and you just went across and got on that. We got our ride up to Gold Hill where we were to work, and were given a room in the big bunkhouse there, and there we were the rest of the summer.

Swent: Had you ever been in the Comstock country before?

Bradley: No. Now, as an expert on the Comstock, I have to take this busload of people in September from the Oakland Museum Association up there. But I can tell them more than anybody else can anyway.

Swent: I'm sure you can. Now, when you worked up there, was it just as a roustabout, or what sort of job did you have there?

Bradley: I was first made a timberman's helper. That's a good job.

Swent: That's not the bottom job by any means.

Bradley: No. Up just a little bit, about one notch above the lowest, but it was a good job.

Swent: What was the lowest? Mucker?

Bradley: Just plain mucking, yes. But a timberman's helper has to use his head. The timberman is a man who has to use his head, and in any mine there's just an awful lot--should I call it improvisation? That's not quite the word.

Swent: That's a good one.

Bradley: It's not quite right though. It's initiative, and so on. A timberman is faced with all sorts of things, and he's got to solve his problem right there on the job, he's got to know how.

Swent: What exactly does he do?

Bradley: The timberman will follow up the blasting and the mucking sometimes, it depends on the nature of the rock, whether it needs support or not. If it's just a simple drift, he is not put to any great problems. But if, as on the Comstock, the damn ground was loose--.

Later on my partner and I, young Stub, were put on an afternoon shift. We went on at three, when the day-shift came off, and we were underground until eleven. We were cleaners-up. Together one night we mucked seven five-ton cars of muck out of one cave! [laughs] Right in the main tunnel. That rock just kept dribbling down all the time. We loaded out seven cars in no time at all. We had to muck this all by hand.

But that's what you had on the Comstock. You had moving ground, you had swelling ground, and so on. The Comstock was a good place to learn about problems underground.

Swent: It was dangerous then also?

Bradley: Oh, I wouldn't have called it dangerous--you can always jump out of the way. But the Comstock had sent a lot of engineers all over the world that were very expert.

Swent: And that was why?

Bradley: Yes, that's one of the reasons--the ground was bad. They had some terrible problems to solve. Well, let me tell you something about the Comstock:

In 1913, when we were all living in Berkeley, and before my father was sent to Alaska, my mother took me--and possibly me and my small brother, I can't quite remember--over to San Francisco one day, to see my dad about something in the office.

Swent: Where was the office?

Bradley: In the Crocker Building. It was always there. Fred had gone in there when it was new, when it was brand new after the fire. That

Bradley: was our office for how long after that?--the fire was 1906, say the building was built in 1907, and we were there until, oh, about 1957--fifty years. Good location. Fred always took his engineers--when it was convenient to do it and he was in town--he always took the bunch of us over to the Palace Hotel. They had a great big table there reserved for him. That was an education--Fred dealing with his engineers about the problems here, and the problems there, and so on.

Swent: You started to say your mother took you over.

Bradley: Yes, I was talking about that. We went over to the office, and then left the office after a bit. I made a drawing using a French curve, and it's still around the house here someplace. But her younger sister was an artist and had a place over in a building down Montgomery Street, or down on Sansome Street. Years later I went down to have a look at that building, because the paper was full of stories about its being torn down, and I'll be damned if it wasn't on the famous Montgomery Block. And I'm glad I'd been in it.

But anyhow, as we walked towards the Montgomery Block, on one side of Montgomery, there was an old white-haired man walking up on the other side of Montgomery, and my mother said, oh, there's Philip Deidesheimer. She'd known him in Downieville--when he left the Comstock he went over to Downieville. Deidesheimer is a pretty good name in western mining. So I got to see Philip Deidesheimer, and I'm glad of that! Because one of the first problems they ran into on the Comstock was the heavy ground. The high-grade vein kept widening and widening as it went down, and finally it got so wide they just could not hold the ground at all.

Philip Deidesheimer was working over in Georgetown, California, and I think he must have been in some of that gravel over there. There are a lot of gravel channels down in Georgetown, all through that part of the Sierra gold belt, and that gravel was sometimes pretty hard to hold. So somebody in the Ophir Mining Company sent for Deidesheimer, had him come up here, to see if he could solve their problems. Well, he did. That's when the square-set system of ground support was invented--Deidesheimer did that.

Swent: And that, as I understood, was really a California mining innovation, wasn't it?

Bradley: Well, Deidesheimer was a Californian sent over to Nevada. Nevada couldn't hold the ground, so Deidesheimer showed them how. I even saw square-setting done in the Bunker Hill Mine in the '50s. It's a practice that's just gone on, and gone on. Today it's pretty expensive, because there's a lot of labor, and timber's higher, and so on.

Bradley: someplace in that cylinder--there were floors in it--and someplace there was maybe a pasty, and someplace else was a piece of pie. We got them filled at the restaurant where we had breakfast, in Grass Valley.

Swent: And it was really a bucket! [laughs]

Bradley: Yes, it was a bucket, you bet you. It was a good, old fashioned lunch bucket.

Safety and Accidents

Swent: What about safety clothes? Did you wear special boots, and special glasses?

Bradley: Nothing of that nature had ever been thought of. No, there was nothing like that.

Swent: Did you have tools around a belt?

Bradley: No.

Swent: You carried your tools in your hand?

Bradley: Well, no tools--we didn't have to have tools.

Swent: For timbering, you didn't?

Bradley: No, not if you're a timberman's helper. Now, the timberman had an axe, and a few other things.

Swent: Hard hat?

Bradley: No.

Swent: Not even a hard hat?

Bradley: Oh, no.

Swent: What kind of lamps did you use?

Bradley: Carbide lamps. On a soft cloth hat.

Swent: For heaven's sakes!

Bradley: Well, what else would you wear? [laughs]

Swent: When did hard hats come in?

Bradley: Hard hats were tried on, I read, in Michigan, by some of the returnees from the First World War. Some of the boys who came back from the war decided hard hats were a good thing in the Michigan mines, and they took ordinary caps and they boiled them in something--they boiled them in some kind of goop and made them hard. Then they found a way of fastening the lights on them. Those were the first hard hats. But there were no hard hats underground here, in California, until the '30s.

I went up from the mine I was working in--I went up town at lunch time--and I went over to a store and I bought myself a hard hat. I went back in the mine, and the very first thing--I was climbing down the ladder in the shaft, [lowers voice] and I got a rock right on the top of the head. [laughs] Yes, I think they were bad magic, bad medicine.

Swent: If you hadn't had the hard hat, though, what would have happened?

Bradley: I don't know, I probably would have been knocked down that ladder.

Swent: Were there a lot of accidents to heads and feet that were unprotected?

Bradley: No.

Alaska Juneau, 1924, Miner

Swent: People were more careful, I guess.

Bradley: Yes, that's it. Working underground in the Alaska Juneau, there were only three bad accidents. About two days before we got to Juneau, bought our clothes and signed on, and were sent underground, there was a very bad accident in the mine--killed five men. It was one of these damn freak accidents that you get in a mine. They had a raise that went up from the number four to the number two level--number four was the main haulage level. This raise went up six hundred feet, and ore pass raises at Alaska Juneau were a pretty good size, because Alaska Juneau by this time was already up to its twelve-thousand-ton-a-day gait. So they had strings of ten-ton cars, forty-four cars in a train, and they were hauled by electrical locomotives out to the mill. That was nearly a three-mile trip.

But they were having trouble at the foot of this raise with the gates, because fine rock had plugged the gate. They had this big crew of men trying to get that fine rock to move and start filling the cars.

Swent: This was a gate that was at the bottom of the raise? A horizontal gate?

Bradley: Yes. Not horizontal, no, it was a swing gate. And all of a sudden it all gave way, because what nobody had thought of was the fact that with that thing plugged there at the gate, the water--the A-J was a very wet mine--the water was now six hundred feet deep on top of that plug. It suddenly gave way. It smashed about four of the ore cars underneath it, and killed five men. That was bad. I've told people about that in later years, and said, if you're running a long raise, you do what the Alaska Juneau did, you put a little sub-raise alongside, just to get up over that gate, where you might get a hang-up. You bleed off the water that might be accumulating.

The other accident I saw in Alaska Juneau was on the bulldozing level. You had a man in charge of all the bulldozing--his title was Bulldoze King--and if you got a hang-up up above the grizzlies, in the throat coming down from the stope, you've got a long stick, and you wrap four or five sticks of dynamite around that stick, and you stuck it up in that pile of rock that was hanging up there above you. You found a place where it would stay, and than you brought it back down and lit the fuse, and put it back up where you knew it would stay.

Well, this fellow, whose name was Carlson--he was a nice fellow--he just short-cut that business of finding a place where it would stay, and he was still trying to make that thing stick up there when it went off. He didn't find a place for it to stay--he lit the fuse--. As I recall, we pulled thirteen cars of rock into the cars down below on the haulage level before he came out. He was dead--not badly hurt at all, he was just plain dead; it was concussion.

And then the other accident that I saw there was where a man who had been just cleaning up in the main haulage drift had picked up a great big rock, lifted it up to the edge of the car, and given it a little shove. And it had a sharp edge on it, and that edge just came around as the rock was falling into the car, and just cut the hell out of him here on the wrist. It was arterial bleeding.

So I got the job of taking care of him, and getting him out of the mine. Well, I went out on a work train, but when we got outside, then I had to walk him down to Juneau to the hospital. Well, that wasn't bad, it was just a matter of holding that bleeding back--just by holding like that, that's all there was to it. The hospital took care of him, and I went back to work. But I'm made to think of that by what you said, that most people were safe because they chose to be. This fellow wasn't safe. That one that got killed by that premature blasting up in the draw hole, he

Bradley: was careless. And the five that got killed where the raise plugged, they had no choice, they were hard-luck victims, that's all.

Swent: Somebody just didn't think far enough ahead.

Bradley: That's right.

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Bradley: There, three months, and possibly four--three and a half--there were no other accidents.

Swent: For a mine that size that was--

Bradley: That was pretty good.

McGill, Nevada, 1922, Smelter Worker

Swent: Your first summer job was at the Comstock, and where was your next?

Bradley: The next summer we got a job over in the smelter at McGill. Stub Labarthe was put in the coal pulverizing plant, as a helper, and I was put on the repair gang that repaired the reverberatory furnaces and the roasters. That was good. On that repair gang I finally got so that I could walk out--you know, you've seen these movie pictures where the iron workers will walk right out on an I-beam, little tiny I-beam? I can do that myself! No trouble! You're just careful not to look down.

Swent: Of course you were what, eighteen, by then?

Bradley: Yes, I think that's just right.

Swent: Great stuff.

Bradley: A lot of that work was pretty nasty, because in a smelter you're always breathing the sulfur fumes. One of the tricks about it was--I don't know whether you know about how these roasting furnaces work.

Swent: I haven't been around those.

Bradley: No? Well, there's great central columns, very heavy central columns, vertical, that's run by machinery down below, that just turns it very slowly. And sticking out from this central column are rabble arms. These are arms that are bolted to the central

Bradley: column and have little plates sticking down. The purpose of that is to keep the concentrate that you were trying to roast stirred up all the time.

What would happen is that after a while these arms, just from the heat in there--everything was very hot--would sag. So the repair crew would have to go in there and cut off the bolts that held those arms to the central column, and snake them out and put in new ones. One of the things that was important to all that was somebody outside who would holler, "Skunk's under!" Now the skunk was nothing more than the train that took the roasted concentrate, drew it off from the bottom of this big cylinder, and would take it down to the bessemer plant.

But if you were inside of that damn thing, if you were on one of these floors--oh, I didn't explain that. Each furnace had about eight floors, with four arms revolving on each floor. If you were on one of those floors, when the "skunk's under," why, you wanted to get out of there just as fast as you could, because the minute they opened that door down below, in order to draw off this calcine into the cars, up came a great draft of dust and sulfur dioxide gas, just as strong as it could be, and you wanted darn well to be out of that furnace right now!

Swent: So that's why they called it the skunk.

Bradley: "Skunk's under!" Somebody down there would holler "skunk's under!" and boy, you'd stake out for fresh air as fast as you could. Well, that was all very interesting.

Swent: Were there any health ill-effects from that?

Bradley: Not so far as I know. I never had any trouble.

Swent: Most people doing that today would be wearing masks and respirators.

Bradley: Good lord, you'd have so many rules governing that that you'd go crazy.

Swent: What sort of clothes did you wear for that?

Bradley: Working overalls and a denim jacket.

Swent: What kind of shoes?

Bradley: Good leather shoes. That's where I first got acquainted with J.C. Penney stores. Downtown there was a J.C. Penney store, and that's where I bought all my clothes.

Swent: How much did you pay for a pair of overalls?

Bradley: I forget. I don't think they were very expensive, two and a half, something like that. But also leather gloves--you always wanted leather gloves, you were working with hot stuff all the time.

The overalls wouldn't last too long--it was a funny thing: because of the heat you'd always be sweating, and between that sulfur gas and your sweat the darn clothes would just disintegrate.

Swent: What did you do about laundry?

Bradley: I don't remember at all.

Swent: Probably had washwomen.

Bradley: We probably had somebody that came around. They put all the college boys in one building. Actually there were five of us from UC here. Then there were three or four from the Missouri School of Mines. One of them got pretty high up in mining in later years. I used to see his name in the E & MJ [Engineering and Mining Journal] all the time.

Swent: Do you remember who that was?

Bradley: Yes, Ed Pesout.

Swent: I'll bet you had good times.

Bradley: Oh, sure we did. And we didn't do anything that was out of line. My partner, he was careless about drinking, and a number of times I had to clean up after him in his damn room, boy. But nevertheless he was a good partner.

Swent: Was gambling important in Nevada then?

Bradley: No. I'll tell you about that, afterwards. But, no.

Swent: How were you paid? Did you get checks, or cash?

Bradley: I think we were paid by check. I know we were paid by check over in the Comstock, because I had an account in a bank over there.

Swent: Were there things like company stores?

Bradley: There were no company stores on the Comstock. There was a company store at the McGill smelter.

Swent: Was this a benefit to you?

Bradley: Oh, yes.

Swent: You couldn't get everything at Penney's.

Bradley: No, not everything. This company store was mainly, as I recall, for groceries and things like that for the families that lived there. They dealt in tinned goods, as I recall.

Swent: Was there a hospital, or what did they do for medical facilities?

Bradley: That I don't remember.

Swent: Of course, you were so young and healthy you didn't need anything.

Bradley: Yes, I never had occasion to invoke that kind of service.

Swent: Did you have a car there?

Bradley: A car? We did. We had bought it down here in order to get up there; an old Model T Ford. In those days you could not go over the Sierras at that time of year, in May. We had to go clear down to Bakersfield, then over to Mojave, and then turn north and go up through Lone Pine, and Independence, and so on. And then finally you worked out to the east, headed for McGill.

Swent: You and Labarthe did this together?

Bradley: Five of us.

Swent: All the UC crew, I see.

Bradley: Yes. The five of us. Yes, we got along all right. I remember we slept out in the open in the Tehachapi Pass the first night, and boy, those big freights going through there just blast you awake. And then we got on down, I think the next night we spent at Lone Pine, out in grass somewhere. Then we went on, and we drove all the third night. We got into Ely, Nevada around seven in the morning.

These were the days--you drive along the road, and here comes someone else--you always waved to him. Everybody always waved to each other out on the desert. Never stopped, but always waved.

We found that with a Model T Ford you could not turn out of the ruts. Larger cars crossing the desert seemed to recognise that--they always turned out. The first time we tried it--a Ford had a thing called a radius rod, and the steering wheel steered one wheel, and that wheel was connected with the other wheel by a radius rod. What happened was that this wheel was turned, but because of the rut this one wasn't, and the damn radius rod would just double. So we'd just take it out, find a big enough rock and so on, straighten it out, put it back on, and go on.

Bradley: Then once we burned out a bearing, and had to stop and fix that. But we did all right. I enjoyed that so much--thinking of it today I enjoy it. Just that slowly-paced trek across the desert. Always had these sand devils to be seen somewhere, a hundred feet high, or something like that, just whirling off in the desert.

Anyway, we got to Ely all right, got our jobs and got to work. We were put up in an old freight shed that had beds in it, because the copper company had built a railroad that connected both the Western Pacific to the north and the Southern Pacific to the north also, and came on down to McGill and Ely. When our work finished there that summer, when we decided it was time to go home, we bought a ticket--traveled like gentlemen--from McGill to Cobre, where it crossed the Southern Pacific. There we decided we'd hop a freight.

Swent: What did you do with the car?

Bradley: Oh, one of the fellows took it.

Swent: So then you got on a freight--

Bradley: Yes, it was just me and Stub by that time. We got on a freight. We ran into a bum there who told us just what to do, and we climbed down inside in the empty icebox of a refigerator car. It was empty going west. And we stayed in that thing two days and two nights. But one of the interesting things about that was this: we were going along and going along, and pretty soon it pulled off and stopped. So we stuck our heads up to see what was going on. And here came, running as fast as it could, a little passenger train with about four cars, and it had bunting on it. It was President Harding's funeral train.

Swent: And you watched from your refrigerator car.

Bradley: Yes, we watched. It stuck right along.

Swent: Did you know then what it was?

Bradley: Oh, his death here in San Francisco was quite wide-spread. That was a damn good guess.

Swent: What did your folks think about your riding a freight train?

Bradley: Well, we got off that train at Sparks two days later. Now, if you're on a passenger train, if you're on Amtrak, you make that run in probably three or four hours. It took us two days on a freight train, stopping all the while.

But we got off finally in Sparks. Took the trolley they used to have run between Sparks--and I know we took that down to Reno.

Bradley: Called home. What we worked out then was that we'd pay our fare then on a passenger train to Auburn, and my mother would drive up as far as Auburn and pick us up--so that's what happened.

Swent: She drove?

Bradley: Yes.

Swent: That was rather modern, for a woman to drive, wasn't it?

Bradley: Yes. The funny thing is that my mother was then living [points out window]--you see this house with the white front, and the next house, and the next house. She was living in the next house there. And after what happened to me [laughs], I went to sleep in the bathtub. First thing I knew my mother and the maid were taking the door off to see what had happened to me. I was pretty tired.

Anyhow, I went back to college. That winter Stub didn't come along, but Jim Christie did. He was one of the five that had gone up to McGill with us. In fact, he was one of the three of us that worked on the Comstock. Oh, I didn't tell you what we did for the Fourth of July, the year we were on the Comstock. We came to the end of the shift one night, we were all standing in the station waiting to get the cage up, and the shift boss says, "No work tomorrow boys, it's the Fourth of July."

So we went up on top and changed our clothes, and began to wonder what would we do--had the whole day off. And Stub had spent a lot of time as a youngster over in Mason--or Mason Valley--where his father had run that smelter. And he said, well, let's walk over to Mason. We found out by inquiry, or looked in the map, it was fifty miles. We decided we didn't want to walk any fifty miles. We finally wound up walking down to Reno--that was only twenty-four miles. And we walked down. We got in at about two in the morning, and went in a restaurant, and had something and then went down the street and watched the four o'clock Overland Limited going west go through, then went over to the place where the post office is now, which was then just a great grassy park, and went to sleep.

Fellow woke us up in the morning, he says, you boys want a job? Sure. He says, well, come on. So he took us to a barn where they had an airplane. Gave us some rags, he said, clean it up, make it shiny. We're going to use it in the Fourth of July parade. So we did. And he says, now, you come with me and we'll go out here to the airport, and we're going to get some of these planes up in the air. This airport was not where the present airport is in Reno, it was to the west of Virginia Street. So we were out there for two, three hours, and in those days you started

Bradley: airplanes by three or four fellows pulling on the propeller, so that was our job. Pulling on the prop to get the plane up in the air.

So the fellow came back pretty soon, and he says, well, boys, you've done a pretty good job. I wish I had more money to give you, but here's a dollar apiece. [laughs] We'd spent five or six hours working for the guy, and he gives us a dollar apiece. Well, we just started back to Virginia City. For two miles we got a ride in an old farmer's pick-up. He picked us up and gave us a ride. He turned off then, so that's all. Then we walked, and we walked, and we walked, and we started up that grade. Here was an old baby grand Chevrolet full of guys. The Chevrolet was steaming, and they were knocking the tops off of beer bottles and pouring the beer into the radiator.

We never did see them again. This was at the foot of the grade, and we walked for three hours after that. Never did see those fellows--they never got that thing started again. Way up at the top of the grade somebody picked us up and took us on in to town.

Swent: But you had to walk all the way up.

Bradley: We went into the first restaurant we saw and had coffee. I've never tasted better coffee in my life. I remember that.

Swent: Then you had to report for work the next morning?

Bradley: Sure. Well, we were young and full of fire. No trouble. But that was--

Swent: That's a Fourth you'll never forget, anyhow.

Bradley: Never forget that place, and that Geiger Grade Road--historic road. I think it was built in 1861, and it's been rerouted somewhat by the highway department of the State of Nevada in recent years. It doesn't go quite on that route. I've got to see it though, one of these days, see where it goes now. But that was one of the historic roads around there.

When Virginia [City] had started, and the Comstock had come to life, the only way to get in was to come up Gold Canyon from Dayton. You came up by mule or by foot, and that was the only way you could get up there. But by the time we were there, there were roads that you could use an automobile on.

Swent: You said that you worked sometimes during winter vacation also.

Bradley: Well, three of us got a job in the Empire Mine, in Grass Valley. Just mucking, just shoveling rock, that was all.

Swent: That was just for a few weeks then.

Bradley: About three weeks, yes.

Swent: So you had one summer on the Comstock, and one at McGill, and then the next summer you went to Juneau. Did you go five years to college?

Bradley: Yes.

Swent: So you had four summers.

Bradley: Yes. What happened was that my dad got a communication from a very good friend named Charlie H. Monroe who lived up in the Plaza Drive country someplace, and had an office in the Hobart Building in San Francisco. I think he was a Nevada City man. You know, a very high percentage of miners all over the world had come out of Nevada City and Grass Valley. But anyway Charlie Monroe had gotten a letter from people in the East who wanted to pick up, I think, three young fellows as engineers on a sampling job down in Bolivia.

Bolivia, 1925, Sampling a Tin Mine

This was the Patino tin mine down there. Patino had wanted to list the stock of that mine on the NYSE [New York Stock Exchange]. And that required, of course, an evaluation of the mine. So he'd gone to a Philadelphia concern, consulting mining engineers, Yeatman and Berry, and arranged with them for the sampling job, evaluation job. Funny thing about that is, I knew young Yeatman in Culver. He was there as a first year man when I having my fourth year there.

But anyway, my dad talked to Charlie Monroe, and Stub Labarthe and I got two of those jobs. The third one went to a fellow who had graduated here in the class of '23 two years ahead of us. A fellow named Victor Bramming. So the three of us went down there. And it took a whole month to get there.

Swent: How did you go?

Bradley: Well, we took a line that had the Manchuria, and the Mongolia, and the Kroonland and the Finland as passenger ships. Each one made a weekly trip between San Francisco and New York, and back again. We got the Finland down to Panama. Well, that was two weeks, because we stopped in Los Angeles. Nowhere else though.

Bradley: We stayed in the old Tivoli Hotel in Panama--it's gone now--and one day we hired a car and got driven all around Panama. We were shown the old town that had been ruined by Henry Morgan the pirate. And we were shown a tower there, and I took a picture of that tower. Many years later somebody went in there and started digging in the bottom of that tower and came out with an awful lot of silver. Silver that had been hidden there when Morgan the pirate knocked down the rest of the town.

Then, for the rest of the trip, we got a steamship called the Santa Elisa, belonged to the Grace line. The only thing about that ship was that about twenty years later--I was at Juneau--here it was on the Alaska run. No longer a Grace liner. But it came in to the Alaska Juneau dock there, and took on a load of concentrate. Old friend.

Anyway, we got down to Antofagasta, Chile. We may have stayed in the hotel there two nights, I forget for sure. Got the train up one morning, headed for a town called Oruro, in Bolivia.

Swent: What year was this?

Bradley: This was the year 1925. I'm giving you an awful lot of detail, but you can cut it all down--

Swent: No, that's great. Oruro. This was one of those famous railway lines built by the English, wasn't it?

Bradley: I suppose so. The trouble is, the train jumped the track about two miles out of Oruro. A lot of cars came off, but they picked us all up in cars from town, it was all right.

We got in a good little hotel--not much of a hotel, but it was clean and nice--in Oruro, and we were there for a day or two. And then took another train up to the tin mine. That was about a half a day's ride.

Swent: Did this place have a name?

Bradley: Where this tin mine was? You can hardly spell it, it was Llallagua. This was pretty high, this was up around thirteen thousand feet.

Swent: And this was in Bolivia.

Bradley: Yes. It was in the flat part of the country, although around Oruro there had been--and remains easy to see, you can spot some of them--some rather valuable and rich silver mines going way back, a couple hundred years. We went to work there, perfectly routine work. Stub was put in the assay office because he was a metallurgist, and I was put underground.

Swent: Had you graduated, by now, from Cal?

Bradley: He had graduated, I had not, because, as I say, the family idea had been--me coming in to college so young--to make it five years. That was a good idea, by the way. Although, when I got back from Bolivia, I learned that you cannot get a degree at Cal if you haven't spent a whole year here. So while I was counting on one semester here I had to take two--it was all right.

Swent: Did you speak any Spanish?

Bradley: No, I didn't. I just learned a little mining Spanish--poco mas aqui, you know, and that kind of thing.

Swent: It wasn't essential for you?

Bradley: No, it wasn't essential. There was a funny sequel to all that. In 1932--

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Bradley: I had come down from Nevada, and I was sent over down to the Pine Tree Mine to do some sampling there.

Swent: Where's the Pine Tree?

Bradley: In Mariposa County, in California. On the Mother Lode. And I got a big Mexican Indian as a helper. He was a man who had been in that [Mother Lode] country quite a while. We did all the sampling in Spanish, because I knew all the sampling terms in Spanish. And we did it all. But we got to talking. Down in Llallagua I had had as a roommate a fellow named Waters. Funny thing was this whole group had been pulled out of Company C--Company C, I think, was the first battalion of the Twenty-Seventh Engineers. Do you know anything about them?

Swent: No.

Bradley: You never heard that story about the Twenty-Seventh Engineers?

Swent: No.

Bradley: Well, W.R. Ingles had got it up. He started off in the iron country, in the lake country.

Swent: Minnesota, you mean?

Bradley: Yes, up in there. Or Michigan. He formed an engineering company, and it was trained and sent over to France. They reached out and they got a lot of mining engineers and so on from this country too. These guys I was with were all Twenty-Seventh Engineers men.

Bradley: They had never been in any great danger--they had a lot of war stories to tell, but they were more comical than anything else. But here I was--I was down there in 1925--in 1932, seven years later, I was in Mariposa County. Had this big Mexican Indian--this big Yaqui Indian--helping me. His first sergeant during the war had been the guy I had as a roommate down in Llallagua, Waters. Fellow from the University of Oregon.

Return to Berkeley

Studying Platinum Metallurgy

Bradley: Anyhow, I came back and I finished college. I had to hunt around for an awful lot of courses to put in time on. One I took that I really enjoyed was one on the metallurgy of platinum. This was just me and the old professor--it was a graduate course.

Swent: Who was the professor?

Bradley: E.A. Hersam. I've got old, old Blue and Golds around here, and here he is. He was here a long, long time. He's a nice little guy, too. Anyhow, Metallurgy of Platinum was a treatise on metallurgy in Russia. So I had to get a book that would translate English into French, and also I happened to get one out of the library that translated French into Russian too. So I got a lot of good words out of that dictionary. And I finished the course all right.

Later Platinum Mining in Colombia, 1980

Swent: Did you ever need that afterwards? Have you ever worked with platinum?

Bradley: I did get a little platinum work in a long time later. Six or eight years ago, perhaps, I was called to do some consulting engineering on a placer down in the Republic of Colombia. That place had in it not only gold, but platinum. You have never seen anything prettier. I took my pan, and painted it black, and you take that black-bottomed pan, and pan it, and see a silvery streak of platinum and a golden streak of gold. That's a pretty sight, oh, that's a pretty sight!

This was a country that had snakes in it.

Swent: Colombia?

Bradley: Yes. Lots of snakes. They had two kinds that I saw. One was this Coralea, that's the striped one.

Swent: It's a pretty thing, but awfully dangerous.

Bradley: Around here there's the California coral snake--they've got them, you know. It's got a different combination of the yellow, the white, and the red. You can tell from that combination that they're harmless. That's the rule about those snakes.

Swent: [laughs] I never wanted to look at one close enough to find out.

Bradley: I've seen them in Mariposa County. But in Colombia they were the worst kind. These fellows who were hydraulicking for the placer had really a small rig, but had this thing turned up against a bank, and down came a stump, and along with it three of these darn things. Well, they just sluiced them down into the river.

Swent: So they were doing hydraulic mining there?

Bradley: Yes, on a small scale--pretty small-scale stuff. But I heard a story: they had taken somebody out, or gone out with a little party, to look down into some of the pits that they had dug into this placer. And they asked one of these natives to jump down in there, and he did. And he jumped right on top of one of these corals and it bit him. So they pulled him out pretty fast, but by the time they got him down to the river--not very far, a half a mile--he could hardly walk, so they had to carry him. Put him in a canoe, paddled him back up the river to camp, turned him over to the witch doctor. The witch doctor was the main piper--you know what a piper is, in hydraulic mining?

Swent: No.

Bradley: Well, he's just the fellow who runs the nozzle. That's his title--piper. So they turned this guy over to him, and this piper might have said some words over him--I can't remember that part of the story--he might have mumbo-jumboed. But he told him, you get in that corner, and you stay there. And that's what he did, the fellow stayed there the rest of the day. The witch doctor finally told him at about five o'clock that he could go home. He showed up for work the next day, and he was all right. His leg was still swollen, but he was all right.

So I talked to a good doctor friend who lived around the corner here about that, and I said, what I thought was, the worst thing you can do about a snake bite is take off on a run.

Swent: Stimulate it?

Bradley: Yes. That's the worst thing you can do about a rattlesnake bite. And I said, this witch doctor knew that, and he just made the guy stay still. Nature could then take care of the poison, and it did. That's all there was to it.

Swent: Provided you start with a pretty tough body to begin with.

Bradley: Oh, I think so, yes. Anyway, that's the way that worked out.

That was about the only thing down there. I had to write a report, and one of the things I said in the report was, for God's sakes put up some buildings there to sleep in that were bug-proof. They weren't doing that. They were just laying down a wood floor and tacking the sheet iron to it. The bugs came in from every possible direction. As a matter of fact, when the job was over and I got back to Medellin my suitcase was so full of bugs I couldn't believe it. I had to take the thing and turn it upside down over the bathtub and shake it.

Swent: When was this?

Bradley: Not too long ago, maybe ten years.

More about Bolivia

Swent: The Bolivia tin mine at Llallagua, was that up in the altitudes?

Bradley: Oh, I'll say it was. Yes, now I'll back up on that story. Me and another fellow got sent up to a mine called--oh, I can't remember. But this was a very high mine. We took the railroad up to a town, got off at the town, a car was waiting there for us, and away we went. We were in the car for probably six hours, something like that. Finally came to the mine. In the meantime we went over a seventeen-thousand-foot pass, and that probably--then, at least--was the highest automobile road in the world, no question about it. We got to this place and stayed there then two months.

The only thing of any interest was that every morning a little herd of llamas went by the house, and every night the same little herd came back. One of them was an absolute dead ringer for the dean of mining up here. It was a funny thing.

But we had a lot of walking to do around there, and so on. These natives were pretty lazy in that place. In fact, I guess they were down at Llallagua too, at the Patino mine.

Swent: How high was this mine? You went over seventeen thousand feet to get there, but--

Bradley: Came back down to about fifteen.

Swent: Still. I'm pretty lazy at fifteen thousand feet too.

Bradley: Yes, well, the mill was down at the bottom of the gulch, had to do some work down there for about two weeks, but most of the time we worked up high at the mine level. To get there we went up by mule. I'd never ridden a mule before, had a hard time steering that damn thing.

Swent: They're wonderful animals, though, aren't they?

Bradley: Oh, they are. But this was all rock path, about this wide. If you didn't have a mule, you would never make it.

Oh, I had one funny thing happen in that mine. One day during lunch, during the coca break--do you know what a coca break is?

Swent: Was it the equivalent of a coffee break here?

Bradley: Yes. All the natives are allowed a half an hour off in the middle of the afternoon to go outside and sit there and chew coca. Coca is the source of cocaine. Coca leaf, there. Well, good lord.

Swent: Kept them going.

Bradley: Theoretically, but actually the effect was--I think it paralyzed all their stomach nerves. None of them ate enough.

Well, anyway, during one of those coca breaks I thought I'd go up on an old upper level, and I did. It was up two hundred feet at least, three hundred feet, above where we were working. I got in and I started walking in this long, long tunnel. The further in I got, the funnier the light got, and up ahead of me there was something flickering. It wasn't an ordinary flicker, it was a blue flicker.

I just had to, in effect, take myself by the collar and make myself walk in there.

Swent: You were all alone.

Bradley: I was all alone, yes. When I finally got up to it, it was just a column of ice that went from the back down to the floor. And my light was reflecting it. That was an eerie thing, that's the kind of thing that the word "eerie" was made for.

We ate in a staff room that the company had there. There was a Czechoslovakian there, and he spoke Spanish. There was a Dane there, and the Dane--young fellow, Ky Rundborg--he could speak

Bradley: anything. He was the mill boss. He'd speak Quechua to the Quechua Indians out there, and he'd come back and he'd talk English to us. He'd talk Spanish to the Czechoslovak, and he could even talk German to the German that was there--there was a German engineer there. That was certainly a melting pot. But our English got by, there was always somebody there who knew English, and we got by.

Swent: Did the company get listed on the stock exchange afterwards?

Bradley: Oh, yes, Patino mine's in the price list. It took about two years--but it got listed. You see this mine up in the high country that I went to was also a possession of Patino's. It was run by Germans. He had a German general manager who lived down below by the mill, and a German mine manager, that lived up on the hill near us. We always had lunch with him. He knew how to fix lunch. Whatever his mozo served was always accompanied by a bottle of pale beer and a bottle of dark beer. We could drink them both.

Swent: There have been people with German names very high up in Bolivia for some time, haven't there?

Bradley: Well, I was in Guatemala for a couple of weeks, and that country's practically half-German. The Germans got into that country rather early in the game. Before World War I. In fact, I read one book on Guatemala that said that it was the Germans that put the cream in the coffee. There's lots of Indians in Guatemala damn near as white as you and I. The girl we had cooking for us up in this camp in Guatemala--that was some stove; it was a stove with four wooden legs, wooden runners--wooden strips--and about this much dirt on it, and a fire in the middle of it. That was the stove. She was pure fraulein. A yellow-haired blonde, German-featured, and she was a good cook too. But she was just pure fraulein.

Yes, the Germans must have been pretty busy down there. And if not in Guatemala, I think all up and down the west coast of South America. Now I think there's a great many Japs there.

Swent: Well, that was a good summer then? You enjoyed that?

Bradley: Well, I was there [in Bolivia] for more than a summer. I had an eight-months contract, of which two months was used traveling. It was all ship travel then.

Swent: It took another two months to get home?

Bradley: It was one month going down, one month coming back. We had to come back through New York, because this South American ship that I came up on--it was a fine ship, a brand-new one, with a turbine engines and two propellers--boy, some ship. We went in to the

Bradley: Ecuadorian port of La Libertad, because it had on it as passengers a lord and his lady who was a director of an oil company who was producing at La Libertad. [laughs] The ship went into the port as far as it dared, a small boat came out and took the lord and his lady, and then our ship tried to back out, and it ran right on a sand bar. We were there two days.

That meant I missed my connection in Panama. We kept on to New York, and caught the Pennsylvania [Railroad] and came on home by Pennsy.

Swent: I bet you were glad to be home.

Bradley: Yes.

Back to Berkeley

Swent: So then you had to go back to being a student after that?

Bradley: Yes, then a year of college. Now, there's one thing about it. I hadn't done too well in college, B's and C's. When I went to college after working at my trade, I found that I knew why I was in college. I got all A's and B's, no trouble at all! Because I knew why I was in college, finally.

Swent: It makes a difference.

Bradley: Oh, I took a public speaking course, and I took metallurgy of platinum, and I forget what else--I was just jumping all around--to get courses to fill in.

Tom Coakley, a Friend

Bradley: The public speaking course had in it Tom Coakley. In those days he was playing music around here. Then he went on to become an important band man in San Francisco. Then he got into politics. About the time I got on the mining board--well, I got on the mining board because Earl Warren had come in as governor. Earl was looking out for people that had worked for him, and one of them was Tom Coakley, and Tom Coakley was given the job of Superior Court Judge in Mariposa County, of all places.

There was a case came up down there later on against the gold mine where I had worked, and they had a Los Angeles lawyer for the plaintiff. At about half past eleven, or quarter to twelve, Tom

Bradley: Coakley had said, "Well, it's time to go to lunch. And I don't want anyone here to think that it has anything to do with the trial, but I haven't seen Phil Bradley and his wife for a long time, and we're going to go have lunch together." Well, ordinarily, a Los Angeles lawyer would just say, oh, that's the end of the trial, that's totally improper. But he didn't do it, because Coakley had a pretty good standing.

Swent: And you were one of the witnesses?

Bradley: I was a witness. But Coakley and I were by that time old friends. I've seen him quite a bit since too.

Mariposa's a funny little place. When I first went there, which was in 1932, I had to go down to the courthouse a few times for things having to do with the mine. I was at the Pine Tree Mine, I told you that. I came to the conclusion that that was a damn fine community. All the best people in the community were in the courthouse, and that county was being very well run. Isn't that way now. You heard about the problem between Mariposa County and the Division of Mines? And the museum? All the minerals that were in the museum over in the Ferry Building--the Division of Mines Museum--are now in Mariposa County in storage.

Swent: Oh, is that where they are?

Bradley: Yes. Because somebody in Mariposa County got the idea that they were going to make a big thing out of this great display of California minerals. Going to be able to stop the buses coming up from Merced to Yosemite, charge people a dollar or so to look at these things, make money. It couldn't any more happen than fly. But this one guy in Mariposa--you know how people are--just got it in his mind, and he talked the Mariposans into taking it up with him. So somebody made an arrangement with a bunch of college kids in Cal State Fresno to come up here one night, and they cleaned out the museum and took it down to Mariposa. This was about five years ago, and it's still there. Except for the gold. The gold is now out in the Academy of Sciences.

And that's a funny thing, because the big problem about that museum full of mineral specimens is the bulk, the absolute mass. There wasn't anybody else in the state of California with any sense who'd take that mass on. The people up at Jackson had a big, empty, I think a high school building, and they wanted the collection, but they didn't act fast enough. Mariposa thought, oh, boy, we'll make something out of it. They had no more capacity for making something out of it than flying. That's one of the reasons I think Mariposa has changed. The best people were in the courthouse when I was there, beginning 1932. By 1980 it was just full of a bunch of bums.

Swent: Well, that whole thing of closing out the Ferry Building is a darn shame, isn't it? That is, closing out the mining--

Bradley: They've closed off the Ferry Building on the theory that a development corporation of some kind was going to develop it into something big for the city of San Francisco. And nothing has happened. That development corporation has pulled out, and nobody is taking its place. So all that empty space that was occupied by the Division of Mines from--God knows when--1906 or so--is all empty.

Swent: A lot of it's out in Pleasant Hill--

Bradley: [laughs] The Division of Mines is out there--

Swent: And the library's out there.

Bradley: And it's hard to get to. The library's in another building, and a great many of the books are still in cases--I mean packing cases, I don't mean shelves. It's a hell of a mess.

So the Mining and Metallurgical Society has been trying to do something with this, and this poor guy Peters, who was trying so hard to do something with it, has died. Which, unfortunately, is a good thing. Chuck Peters was one of these fellows that had no capacity for explaining himself or his problems properly, clearly. Everybody got so fed up with that Peters--luckily, as I was saying--in the last six months he died.

Swent: I noticed that in the paper.

Bradley: Fellow used to be with Mountain Copper, what's his name?

Swent: Do you mean Fowler?

Bradley: He's undertaking to have it, and he's beginning to pull a few people to him. I reorganized this thing to begin with, and then I pulled a few people to him, and something may possibly come of it.

Swent: Well, is that a good time to stop?

Bradley: Whatever you say.

IV A CAREER AS A MINING ENGINEER

[Interview 5: June 10, 1986]##

Bradley: When I came back from Bolivia and went back to college, I had no trouble with grades. I had aged, I had matured, I was just fine. When I graduated then, at the beginning of the year 1927, as I recall--

Swent: You're listed as the class of '26.

Bradley: I know I am, but I consider myself '25, because I started with the class of '25, and stayed with them for all four years.

Swent: Those were your closest friends, then.

Bradley: Yes. So I'm a "twenty-fiver."

Swent: Who were some of your college classmates that you--

Bradley: I came back and I got into college just at the beginning of '26, that's right, and I graduated then at the beginning of '27.

Sudbury Basin, Ontario, Canada, 1927-31

Lead, Zinc, Copper

Swent: How did you go about getting a job after college? Did you consider going back to South America?

Bradley: No. Now we come to an outstanding part of anything I did in mining--a lot of my work was handed to me by the Bradley office. When I'd finished that extra year in college I was sent out to Ontario, where they had started a lead-zinc operation.

Swent: Just where you were born!

Bradley: I was about ten or twelve miles away. Yes, it's the funniest thing.

Swent: Had you been back in the interim at all?

Bradley: Oh, no, hadn't been back in the interim. But this came about because a man that my father had known when he was at Copper Cliff, where I was born, came here with a proposition to lay before Fred Bradley, and Fred took it up. I got sent out there to work on it. I was there almost four years.

Swent: Was there any international business that you had to go through--did you have to get a work permit for Canada?

Bradley: Not then, but I think Abe Yates had had to do that. That's the reason you're thinking of it. A year or so before, two years before, perhaps. He graduated here, I think he was the class of '24. He was sent up into Canada by Homestake and had to get a special permit, but I didn't; I don't know why. Rules change.

Swent: And you were working in what capacity then?

Bradley: Engineer. Just an engineer in the mine. A surveyor, and so on. After I got there the company sank two shafts, these in a distance of about three miles, and connected the second shaft with the first shaft, underground, and one of the things I had had to do was the surveying for that connection.

Swent: How deep were they?

Bradley: They connected on the three-hundred level, but it was a long connection. From the first shaft you came out on a cross-cut, got into the vein system, followed that around in a wobbly sort of way, and then finally straightened out for about twelve, fifteen hundred feet on a straight line. Then turned and ran a cross-cut from the number two shaft towards these workings coming over from number one--I hit it within about an inch. That was a good piece of work.

Swent: Must have been a thrill.

Bradley: Yes.

Swent: What was the name of the company?

Bradley: This was the Treadwell Yukon Company. Working in Canada. This company had been formed by Fred Bradley about 1921 to go to work in some mines that Livingston Wernecke had turned up in the Yukon, off--oh, I can't remember the name of the river, but it was up in

Bradley: the Mayo country. The old Treadwell Company had a lot of money, but hadn't been able to find any mines until it got into this one. Fred Bradley took that Treadwell money and some money from Bunker Hill, and used that to finance a new company that he called Treadwell Yukon.

Swent: At this time he was already head of Bunker Hill and of Alaska Juneau?

Bradley: And the Treadwell Company, sure. Alaska Juneau, by 1921, was not yet making money, it was still absorbing money.

Swent: And Treadwell was closed.

Bradley: Most of Treadwell was closed. The last of the Treadwell mines closed in the next year, 1922.

Swent: Were there Canadian partners, then, in this Treadwell Yukon Company?

Bradley: I don't think there were. The "Yukon" comes from the fact that the new mines were in the Yukon, not because of Canadians.

Swent: But the Yukon is in Canada?

Bradley: Oh, yes.

Swent: But they were American. Okay.

Bradley: Livingston Wernecke used to live right up here [in Berkeley]. Bought a house up here when he came down from the Yukon. He was manager up there, and he did a tremendous job.

Swent: Is he related to the architect?

Bradley: No. This is W<u>e</u>rnecke, the architect is W<u>a</u>rnecke. Livingston Wernecke had graduated from the University of Washington--I think about 1907 or '08, somewhere in there, I can look that up--and had gone to work first in Alaska on the Copper River and Northwestern Railroad. Then had come down to Juneau and gone to work for the Alaska Gastineau Company, and he'd been in on the construction of a very large concrete dam that later on came into the possession of Alaska Juneau. It's still making power, but it's now in the possession of the Juneau Electric Light and Power Company.

Swent: So how did you get up to Copper Cliff?

Bradley: That was a very simple trip.

Swent: It wasn't way out in the wilds somewhere.

Bradley: No. You went from here to Chicago on the Overland; from Chicago to Sudbury on the Sault line--went through Sault Ste. Marie, and to Sudbury, and Copper Cliff was only four miles short of Sudbury. The mine I worked at was only thirteen or fourteen miles from Sudbury.

Swent: This was a very busy district?

Bradley: It was then, because in addition to the International Nickel Company's smelter plant at Copper Cliff, there was a big smelter of the Mond Company a bit east of Sudbury, and three or four of the International Nickel Company's mines, and then there was our company, the Treadwell Yukon, doing its work in the basin. And not long after that the Lindseys, Thayer Lindsey and his brother, got a mine into operation a bit northeast of us. I can't remember the name of it. And International Nickel, during my time there, opened up the Frood Mine. That became a very large underground nickel mine.

Swent: You were not mining nickel, though.

Bradley: Oh, no, we were mining a copper, lead, zinc, and silver deposit. But I remember the Frood so well because I went over there a good many times. And the man who sank the main shaft for the Froods was an old Nevada City pal of my dad's, a fellow named Hussey. My dad told me later that the International Nickel Company had got all these high-priced engineers--consulting engineers--up there to try to settle on where the shaft ought to go. Hussey says, "I'll sink it right here." That's where it went.

That shaft was fifty-four feet wide, and eighteen feet across, and they sank it with that eighteen-foot dimension so they could run onto the cage a mining truck, or just an ordinary truck, with sixteen foot timbers on it, and let it down into the mine. You know, sixteen is the standard length for timbers. That was a big shaft, and a big job. They had some beautiful compressors there; all I remember about it is that they were vertical compressors. The name of the manufacturer was Bury, it was an English manufacturer, and each of these were five-thousand-foot machines. They may have had five there, I don't remember that for sure, but that's a hell of a lot of air.

Swent: This is used for the drilling.

Bradley: All the things you use air for, underground.

Swent: It's interesting that a Canadian company had a lot of Californians there. You'd think they might have a lot of people from England, Cornwall-trained—

Bradley: No, oddly enough, in that country, an ordinary miner was as likely to be a Finlander as anybody. They came over from Finland in droves. But they're good miners in Finland, and these people were good miners.

Swent: But for their trained people they turned to California?

Bradley: Well, the managing president of International Nickel, that is, the local president of International Nickel, was Nichols, from Dutch Flat. He was a University of California graduate. He was followed in time by Ralph Parker, who I think had come down from Nome, and Ralph Parker was also a California boy. I don't know what they've got up there now.

Swent: Were there any other friends of yours that were up there when you went?

Bradley: No.

Swent: You were all alone. Was it a company town situation, where the company provided your place to live?

Bradley: Oh, yes. A great deal of the work was developmental work, and that meant that a great deal of the work was just the construction of housing and the other facilities on the surface. And our company, the one I worked for, was run by a California man, class of '23. He got a pretty good name in mining afterwards, worked around Salt Lake, and so on, but I never--he's a man that taught me one thing that I hadn't known before. That is that self-confidence is not necessarily the mark of being well-informed. You've run into that sort of thing before.

Swent: Oh, yes. He was self-confident?

Bradley: He was totally self-confident, everything he did was right. And it made you think that hell, this guy knows what he's doing. He didn't always.

Swent: Were there any serious consequences of this?

Bradley: He got fired, finally. After about three years, four years maybe. I worked for him about three years, and then I was there the fourth year working for a man they brought down from Alaska Juneau.

Swent: So they were building a new town at that point?

Bradley: The whole plant and everything new, oh, yes. Now, one thing I remember about that place was the trouble with the roads though when the spring break-up came. The country was all on a sandy,

Bradley: muddy lake bottom, anyway. The mine itself got down to rock in place, but the surface of the country was a muddy, clayey lake bottom--with vegetation growing fine. But the trouble with it was that when the spring break-up came, it just turned into a soggy mess, and you could hardly get through it. The roads had a surface on them about that thick--

Swent: About two feet.

Bradley: About two feet thick, that would stand most vehicular traffic, although as you were driving, why, you were driving in a sag, and if that sag broke on you you were stuck. That was terrible.

Swent: These were surfaced roads?

Bradley: No. But somebody got smart then. It was the second group of operators, and every time there was a winter blizzard they went out with their tractor pulling a roller. They rolled the snow down just as tight as they could. That kept the frost out of the roads, kept the roads from freezing. And it also made a surface that didn't collect snow when the blizzards came. That was a much different thing. After that we didn't have real road troubles.

Swent: Where did you ship things in from?

Bradley: Well, we were only two miles from the main line of the Canadian Pacific.

Swent: So that wasn't much of a problem.

Bradley: No, that was no problem. Later on the Canadian Pacific built a branch line right to the mill that was built at the mine.

Swent: So you were there four years; did your job change?

Bradley: No, I stayed as a surveyor there. There was a lot of that work to do, a lot of mine and surface mapping.

Swent: Above ground as well as underground?

Bradley: Oh, yes. Lots of mine mapping to do, lots of surface mapping to do, and so on. I just stayed there as a mapper.

Swent: Enjoyed it?

Bradley: Oh, sure. Yes, of course I did.

PHILIP BRADLEY AT WORK

Above left: Pat Ryan, left, and Philip Bradley, surveying at Sudbury, Ontario for Treadwell Yukon Company in 1928.

Above right: Philip R. Bradley at Buckskin Peak, Nevada, 1931.

Below left: Philip R. Bradley working underground at the Pine Tree Mine, California, 1932.

Tybo, Nevada, 1931-32

Bradley: Then I got transferred to another operation of the same Treadwell Yukon Company, and this waa at Tybo, Nevada. Mining had gone on at Tybo since just about 1870, and so the Treadwell Yukon Company had picked up the old mine, gone down the old main shaft. I had worked in that shaft in the summer after my Bolivian experience, I drove up to Tybo in an old car I got. I worked in that shaft, worked in that mine. It looked pretty good from the work that was done from the old shaft, and so the company decided to sink a new shaft, build a mill, and proceed.

So I got there finally in July of 1931. I remember it was July because I left Toronto on the way from Sudbury out west here. I can't remember if it was on the first of July, which is a holiday in Canada, or the fourth of July, which is a holiday here--that point I don't remember right now. But I got out here and went up to Tybo, and stayed there for about one year. Again, simply as engineer. I stayed there from July of '31, to about July of '32.

And by this time, again, I'm dependent on Fred Bradley, and Phil Bradley. By this time some quicksilver prospects had been brought into the office, and Fred Bradley liked quicksilver very, very much.

Swent: What were you mining at Tybo?

Bradley: Tybo, again, was lead, zinc, and silver.

Swent: You were mining it and milling it?

Bradley: Yes.

Swent: And selling the concentrate.

Bradley: Shipping the zinc concentrate, as I recall, to Bunker Hill, in Idaho. And lead concentrate came down to Selby [California].

Northern Nevada, 1932

Quicksilver

Swent: So then a quicksilver property.

Bradley: A quicksilver property in northern Nevada. By this time I'd bought a car of my own, a nice Model A Ford. One of the tricks

about that was that I bought a small one, just a maximum of three passengers--whoever could sit in the front seat, that's all--because I noticed that on payday night all the men who had big cars went into Tonopah, and had an awful time getting back. There'd be about five men with them, they'd get to Tonopah. At the end of the evening they'd gather four of those, and then go out to start looking for the fifth. By the time they found the fifth, well, one of the first four had disappeared [laughs].

Sometimes those fellows weren't back until four or five in the morning. So I got anti-social, I bought a car with low capacity. That was deliberate. But that car worked out pretty well. I drove up to Reno then, when I got the assignment to the quicksilver mines, picked up the train going through that had on it Fred Bradley, Mrs. Fred, Jack Bradley, and Worthen Bradley.

Swent: Those were your cousins and your uncle.

Bradley: Yes. Mrs. Fred and Jack stayed on the train when it left Winnemucca, but the rest of us all got off, and we went out to the quicksilver mines. Fred asked the man in charge out there, what would be a good name for this new mine they were looking at, and they tossed it around in the front seat of the car, and they finally came up with that name Cordero. I think a lot of people have worked the Cordero mine since then, but the Bradley Mining Company was the first to work it.

And at that time I then left the Treadwell Yukon and went to work for the Bradley Mining Company, but the only difference was, there was a different name on the paycheck. They were all run out of Fred Bradley's San Francisco office. The number two man there was my father. Fred gave him an awful lot of work. I've got downstairs the instructions that Fred was always giving Phil, the instructions and the work schedules, and everything else. Boy, Fred worked the devil out of that guy. His younger brother, you see.

Swent: So he went out and inspected these things himself before he took them up, did he?

Bradley: Not always, but especially Alaska Juneau (in the late nineties) and Wernecke's Keno Hill mines (in the early twenties).

Fred Bradley's Morality and Intuition

Swent: He did the financing.

Bradley: Fred did the financing—I can stop here and tell you, that the more I learn about Fred Bradley as I read the history of what he

Bradley: did, the more admiration I develop for that man. He was a man of tremendous capacity, absolutely of the highest morality, and that's in contrast to some of those cookies who were running the copper mines around the country. Did I say the greatest intuition about mines?

Swent: No.

Bradley: That's something he had. The second year that I was with those quicksilver mines in Nevada, at the end of the first year, winter had come. And I came down here to Berkeley and found myself plopped into Alta Bates Hospital with jaundice. That took me six weeks in Alta Bates, had a gall bladder operation, and appendix operation, and so on.

Then I was kept in the San Francisco office for a little while, and the man who was managing the affairs up in Nevada, where the quicksilver was, had me looking around, finding out what I could about big steam shovels, and that sort of thing.

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Bradley: They had a small open pit there at the Bretz mine that was producing very high-grade quicksilver ore.

Swent: Open pit--that was something different for you, wasn't it? You'd been doing underground work.

Bradley: That was different. Yes, up until then, my experience was all underground. Now, open pit. I sized the situation up one day, and on my own decided to move the crew all over to the other side of this ridge that we were digging into. And I did, and we got even better ore over there. Then, on instructions from the mine manager over there, I went up in the middle of the ridge and sank a shaft. We got good ore down the shaft. So we had ore in three spots--high-grade ore. That's when this manager up there had me in San Francisco looking for steam shovels, he was going to have one hell of an operation out of that.

Fred came through the office one day, while I was working, and he said, "Philip, don't work too hard on this. We don't know enough about it yet." And he was dead right. [laughs] That was this intuition I speak of. We had hit, one-two-three, the only blobs of ore in that whole piece of country. We hit them all, one-two-three, then after that there wasn't any more. Fred just sized it up correctly, that's all. As I say, he's a man of tremendous intuition about mining.

Swent: Did the depression have any influence on all of this?

Bradley: It had. The depression had, not much later than that, shut down Tybo.

Bradley: Scrugham. He was just as friendly as he could be. He took me all around, and he finally got a hold of Mark Sullivan, who was one of Truman's secretaries. And Sullivan looked all over for Truman that day, he wanted to introduce me to Truman, but Truman had apparently skipped town fairly early that morning, so he never found him.

Swent: When you gave this party was there any thought of its having a political effect?

Bradley: Oh, no, no. It was just that time of year.

Swent: Whom did you invite?

Bradley: We invited the whole damn country, but, as I say, we had the United States Senator Oddie, the United States Congressman Scrugham, and we had this young fellow who was a legislator. They were volunteers.

Swent: I was wondering whether you thought about legislative relations, and public relations, and that sort of thing.

Bradley: No, not at all. It just turned out that way. And that's when I first became conscious of that kind of thing, that's all.

I saw a good deal of Oddie in later years, and he was always very friendly.

Swent: He was interested in mining, of course.

Bradley: He was one of the men that got Tonopah started, you know. Back about 1901 or '02, and I think he made a great deal of money out of it.

The Pine Tree, Mariposa County, California, 1932 and 1934

Gold

Swent: So from there you went down to California, I think, didn't you?

Bradley: I don't quite remember. I'll have to think about that.

Swent: When were you in Mariposa?

Bradley: Well, I first went to Mariposa just after that geology class from Cal here had gone down there and swiped the hands off the court house clock. Mack [Frank McQuiston] was in on that, and so was

Bradley: Fran Frederick.* They were hauled up before the judge, the whole bunch of them, in cahoots with the instructor--who I think was "Tucky" [Professor Nicholas] Taliaferro--and the thing was settled by the promise that these people would never show up in Mariposa again.

Well, that was all right with me, because I learned that Fran Haseltine was teaching school down there, so I'd go down and see her about every third or fourth night. She was good company, she was a nice gal.

Swent: She's now Mrs. McQuiston.

Bradley: Yes. But that was fine.

Swent: You were not involved in the clock-swiping?

Bradley: No, no, I was here. By that time I was five or six years out of college.

Swent: Much too mature for that sort of thing.

Bradley: Yes. [laughs] Well, so Mariposa--let's see what happened. I was given a job down there sampling a lot of tunnels, because Fred Bradley had been president, a good many years before, of the Mariposa Mining and Commercial Company. That was the company that Fremont had started many years earlier. But it still owned all this land down there, owned this forty thousand acres or so. So I was sampling a lot of tunnels there, just to see if there was what Fred Bradley had hoped for. He hoped for a chance there to mine on a large scale, and by open pit, all that ridge to the north that contained the Pine Tree and Josephine mines.

Well, the sampling didn't bring it quite up to grade, to the grade that would be necessary for that, because what you have when you go to open pit mining in a place like that is an awful lot of waste to handle. It isn't all ore, by any means. The ore is there in streaks. So that was given up, but nevertheless they got some money together and put up a mill and went to mining by underground methods.

The man that was there to build the mill, that did the work there for Fred Bradley, got interested in the Big Blue Mine down on the Kern River, and he diverted some of the money from this Pine Tree Mine in Mariposa County for some of the work on the Big Blue. That finished him with Fred Bradley, so I got the job of running that mine. That was my first job in full charge of anything.

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*See oral history of Frank Woods McQuiston, Jr. (in process).

The Oregon King, Oregon, 1934

Silver and Gold

Swent: So you were the manager?

Bradley: Yes, I was the manager there. Except--damn it--there's another mine in there, where I was full-time manager, and that was a mine up in Oregon. I went up there in 1934, and that was just before. That was between the time I'd sampled the tunnels on the Pine Tree, and the time I got sent back to the Pine Tree a couple of years later as manager. I'd been manager of this mine way out in the center of Oregon, a mine called the Oregon King. Gee, that was a honey of a job.

Swent: What were you mining there?

Bradley: That was silver ore, oddly enough. Silver-gold ore. Geologically speaking, mineralogically speaking, it was a small Comstock. But what we finally did up there: we didn't sink the shaft, we emptied the old shaft and cleaned it out, and then we ran some drifts on some levels there, and cross-cuts. Already we had found there was a fair amount of good ore left in some of these old stopes up above, say, the three hundred level, or somewhere. What we finally did there was just take out all the high-grade and ship it off to the Tacoma smelter, and come away.

Swent: What kind of mining methods were you using?

Bradley: Oh, just simple stoping. Just the simplest form of stoping. We called it a stull and headboard form of stoping. Had a man killed there. Yes, the son of a gun had tried to cross the shaft just when the bucket was coming down. He got the hell knocked out of him, boy. That wasn't our fault.

Oh, and the doctor after that left me a quantity of morphine, just in case somebody got hurt. He told me how to use it--you just inject it.

Reopening and Developing a Mine in the Bradley Tradition

Swent: When you were managing a small property like that, how much did you have to do in the way of running the community as well? Did you have to take care of housing, and so on?

Bradley: Well, we started it off in that particular mine with a rented building down in the town, which was two miles below the mine, and

Bradley: we used that for a boarding house, and then afterwards we built our own boarding house up at the mine, along with an awful lot of other things. We built a power house, and a warehouse, and offices, and a place overhead for me and the bookkeeper to stay in, and we built a bunkhouse, finally, and so on.

Swent: You used local doctors, or did you hire your own?

Bradley: One local doctor, and he was way south, thirty or forty miles away.

Swent: That was the nearest hospital too?

Bradley: Yes.

Swent: So he gave you some morphine to use--

Bradley: In case.

Swent: Schools? Did you have to think about schools at all?

Bradley: No.

Swent: The men were all single?

Bradley: They weren't all single, but if they weren't single they already lived there. Now, this is an odd piece of country in one way: we had some people on our payroll there, the blacksmiths and two or three others, who had been fairly rich men only a few years before. Fellows who were--this was wheat country--turning out two hundred thousand bushels of wheat a year. And they were getting a dollar a bushel for it. Those fellows were living well. And then all of a sudden the bottom drops out of everything. They had a drought up there and nothing would grow, and these fellows came to us, and since they were all capitalists to the heart, they worked like hell. I never had a better crew! Gee, never have.

Swent: Local people.

Bradley: Local people, yes.

Swent: That's good.

More about Nevada Mines##

Swent: Let's go back to Tybo. So this is July of 1931?

Bradley: Yes. We were in Tybo--

Swent: What is Tybo near? Is this near Ely?

Bradley: It's halfway between Tonopah and Ely, way out in the middle of nothing. But it's a good place. The company built one of the nicest plants that you could imagine. All new residences for the staff, and of course a beautiful boarding house, and two good bunkhouses, and a good surface plant, a three-hundred-ton mill, and so on, and so on. It was very well built, very nicely built, and it was a very pleasant place to be.

Swent: I gather from several things you said that this was something you felt the Bradleys put high priority on, making a good camp.

Bradley: That's right, because you keep men that way, for one thing. (They built a pretty good camp out there in Sudbury Basin too.) Then even the old Treadwell mine had been just a lovely place--not new, of course, because so many of those houses were built between the period of about 1885 or 1890, and 1900. So they were a little bit old-fashioned, but they certainly were nicely arranged, and the crew was well taken care of.

Swent: Were you in on the building of this plant at Tybo?

Bradley: No, it was already built when I got there.

Swent: What about the one up at Sudbury?

Bradley: I was in on that construction, yes.

Swent: How did they go about building houses? Did they contract somebody else to do it, or--?

Bradley: No, it was all done by the company crews. You'd hire a man as a foreman, and he'd hire whatever help he needed and fly at it. They built two bunkhouses--no, three--and a staff house, and of course, a little later, after they'd been there a while, they built the mill, and all the surface plant that has to go with a mill. Pretty good job.

Swent: Were there more or less standard plans? Did you do the same sort of thing one place that you did another?

Bradley: Not exactly the same sort of thing. You can't build the same sort of plant for one mine and then duplicate it someplace else,

Bradley: because the mines don't duplicate. In any event, you build as well as you can, but you don't build anything elaborate. These were all built out of wood. Building there in Sudbury Basin was a little difficult because the ground—I told you the story about what happened to that ground in the springtime--it all heaved. They had to be careful with building foundations, and so on.

Swent: Nevada wouldn't be--

Bradley: Nevada was not like that, no.

So what had happened at Tybo: they had had a man in there that I had worked for when I worked at Tybo in the summer of 1926. They had him in there, and made him superintendent, and finally laid him off and put in as a substitute the man who had been an engineer at Tybo. For this reason I was called over to Tybo from Ontario, Canada, to take the engineering job. And that was just, again, surveying, and mapping, and keeping track of such things as an ore clerk, and everything else. It keeps you pretty busy.

I stayed at Tybo from July of 1931 until May of the next year, and got called to go to Winnemucca, and a place called Buckskin Peak, above Winnemucca in the Santa Rosa Range. There, for about three or four months, I ran a sampling job to see if that rock up there--which was volcanic, it was more or less layered, and had quicksilver in it--to see if it was worth mining.

More about the Bretz Mine

Bradley: Well, we gave that up about in September, 1932, and I was then shipped over to the Bretz mine. I told you something about the Bretz last time, and said that one of the interesting things about the Bretz was that they had started with a tractor pulling a scraper. That was doing all the mining, because the ground was soft.

This was on the west side of the ridge, and I got a good accumulation of good-grade ore stacked up there, and I moved everything over to the east side of the ridge and started digging. Got the same ore over there--good ore. As a matter of fact, I had a face there--an open-cut face--that was looking better every day, and finally I decided I'd better cut a special sample of that face, because it certainly couldn't get any bigger, and it happened that I cut it on the day that it was absolute best, and it ran 49.95% quicksilver. That's very high. That's one of the highest grade quicksilver samples I ever heard of. The length of the sample cut was eleven feet. That's the kind of a mine it was.

Bradley: Then, as I told you, we put a shaft down up in the middle of the ridge, halfway between those two faces, the one where we'd been working, and the one where we now started working. One of the workmen there had a car, and we were going to blast one day, so I got into his car and I moved it back, to get out of the way of the blast. The funniest thing--I was sitting there at the wheel of his car, waiting for the blast to go--it went off, and here came a rock, just bouncing along the ground toward the car. I didn't have time to get the car started and moved, and that thing came right through the windshield wing--glass wing there--right by my face. That's all, it just busted out the glass, and the company had to buy him a new wing. But I will never forget watching that damn rock come bouncing towards me right across that pit floor.

Swent: What kind of equipment were you using? Who sold you your scrapers and your trucks?

Bradley: A man named Udell had had charge up there, and he had bought an International Harvester tractor with a funny dump body on top of it, and he bought a little three-eighths-yard power shovel, and that was our main equipment--that was the digging equipment. That job was just as easy as anything ever I knew. Then they had a ten-yard truck that took the stuff that we loaded with the shovel, and took it over to the furnace, which was ten miles away. This furnace has been there, oh, I think since 1925, or '26. The location of this furnace is what's called Opalite--

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Swent: So you shipped your ore to Opalite.

Bradley: Ten miles.

Swent: And you also owned that smelter--

Bradley: The Bradley Mining Company had a quicksilver furnace there, a standard rotary furnace. The only funny thing that ever happened to me there was: they had an old tunnel up a little bit above the camp, and that's where they kept the powder. I went up there one day with the company truck, the Bretz Mine truck, and parked it outside the tunnel, and went in. It was used as a powder tunnel, a powder magazine. I started loading powder, case by case, into this truck.

About the sixth trip I made out, the truck wasn't there anymore. [laughs] These fifty-pound cases of powder I'd been sliding down in the bed of the truck, which was tilted a little bit, just cut the truck loose, and away it went. Didn't do any harm at all, I just went and got the truck, and took away the load of powder.

Swent: What kind of powder did you use?

Bradley: That was forty percent Hercules, I think. It might have been DuPont, but I think it was Hercules powder.

Swent: In the good old powder boxes?

Bradley: Standard wood powder boxes--

Swent: Which you don't see any more.

Bradley: You don't see them anymore. I got a couple up in the country and I just treasure them. That was mining camp furniture, you know, those boxes.

Swent: The best stuff in the world.

Bradley: Yes. Anyhow, winter came up there and we couldn't do any more work, and I came down here and went to a football game and got sick, and stayed down here three or four months.

Swent: Where is Bretz in relation to Cordero?

Bradley: Cordero is near McDermitt, then you go ten miles west to Bretz, then ten miles further west to Opalite. That summer I was there first looking after the Buckskin Peak evaluation job--that was high on a hill. Another man ran Cordero, and then they still had work going on at Opalite, too. Oh, yes, and then somebody was looking after Bretz--when Buckskin quit I was transferred down to Bretz.

Swent: The party that you told about, in October of '32, was at the Bretz?

Bradley: No, that was a party at Opalite, because Opalite was where the boarding house was, and the office, and the warehouse, and the tents, and everything else. So we had the party there too. That was an old-time Nevada party. People just came from everywhere to go to that thing. That was typical in Nevada--if somebody gave a party, people came from miles just to go to it. Now, that kind of thing has quit. I didn't know it, but that thing was coming to an end even then because the federal government got into a road program. New roads everywhere, and that, instead of giving people a chance to come to some center, all it did was give them a chance to escape to, say, Winnemucca, that was on the railroad, or something like that. I used to characterize Opalite as being a hundred miles from the nearest drugstore--and it was! That's a long way out. The drugstore was in Winnemucca.

Swent: But when there was a party everybody came.

Bradley: When there was a party everybody came from miles around.

Swent: How did you get the word out about the party?

Bradley: It just got out--it just got out. We had a lot of help from a fellow named Art Lyons, whose father had the Lyons Trucking Company there, which was located in McDermitt. McDermitt is a little village right on the Oregon-Nevada border. There were buildings there--for instance, there was a saloon there that was quite famous, because the back end of the saloon is in Oregon, and the front end of the saloon is in Nevada. There were different rules that applied in each end.

McDermitt was a Basque town, a sheepherder's town. I ran into a young lady there who was looking after a ranch that her father had had, and her sister went down and married the city attorney of Reno--I guess that's who it was. The father had died. This great Irish gal was running around, and she'd think nothing of riding out forty miles in a day just to look after the horses and cattle they had stashed around. The father had run that ranch, and got into the business of supplying horses to the Army during World War I, and they made some money on it.

This girl had an interesting experience a little later on, in fact [laughs] she and I had some pretty good experiences. It just bothered my mother no end--I had no business going with a Catholic girl! This girl was just black-haired, blue-eyed Irish, and she wore an Empress Eugenie hat--little black hat. Gee, she looked good in it! She put it on once when she and I drove down to Reno. I was on the way to California, and took her along to Reno, where she was going. Her experience was this: in the wintertime she taught school over just out of Fallon--I can't think of the name of the place--but just out of Fallon, and she taught school. Well, she had the income from the ranch, so she wasn't being very careful about getting her checks, her school pay, into the bank. She lived in Sparks in the wintertime, along with a couple of other girls.

One day, she said, by golly, she had a dozen checks, or more, it was high time to get them into the bank. So she got on the streetcar in Sparks and went over to Reno, and she got them into the bank about fifteen minutes before closing time on a Saturday morning. This was George Wingfield's bank, First National of Nevada. [laughs] It never opened again. That was the day it closed, because of the depression. So her checks hadn't done her a damn bit of good. I thought that was an interesting story. Interesting from the standpoint of bad timing.

Swent: Absolutely. This is '32, '33?

Bradley: This was '33, I think.

Swent: And the bank closed.

Bradley: In Nevada, yes. I lost about two dollars I had in a checking account in a bank in Winnemucca. That was also First National of Nevada. But I didn't come out very badly on that.

Swent: But she lost her whole year's--

Bradley: She lost all her accumulated paychecks, yes. Eventually, I think four or five years later, why, those banks began to come back, and that particular bank paid off something like sixty percent or eighty percent. But it's still going.

Swent: So the depression did hit you, even out there.

Bradley: It hit me by about two dollars, and that's all. Well, with that party, that was the closing ceremony for the plant. So I came away, and withdrew all but two or three dollars from the bank, and that's all I lost.

Fred Bradley, opinions and enterprises

Swent: Were people in mining--did you feel especially good about Hoover?

Bradley: Fred Bradley didn't think so highly of Hoover, I don't know why. But I know that was expressed around the family, that Fred just didn't have a liking for Hoover, and the way he did things. I don't know what the objection was. But, as I think I told you, I met Hoover in Fred Bradley's house in winter vacation--I was out in San Francisco from school, from the East, the Christmas of 1920.

Swent: You did mention that, but when I wasn't taping, so I think that's something you should tell.

Bradley: Well, it was just that Fred and Mary had a large dinner in the regular dining room, and all the kids were put in the regular breakfast room--there may have been a dozen of us: Worthen, and James, and perhaps the other two Bradley boys, and John Davis who was a cousin on Mary's side of the family. Jack Merrill was there, I remember very well. So Fred just brought Hoover in to see the boys, the children. So we all had a little talk, and that was all.

Swent: Of course, that was long before he was in politics really, but he had done the relief--

Bradley: This was 1920.

Swent: He had done the Belgian relief work.

Bradley: He had. And he may, by then, have been Secretary of Commerce, but I'm not sure. Because that job preceded his running for the presidency. Well, he ran for the presidency in 1928, and the Secretary of Commerce job he got in--I don't know when--1925 perhaps.

Swent: You didn't feel particularly close to him as president, then?

Bradley: No. I saw him again over in San Francisco, in the rotunda of the opera house about 1935 or '36. I should have gone up to him and spoken with him, but I didn't. I had with me then another Oregon girl, another Catholic girl, who's now a nun. Maybe you think that a country girl from Oregon was impressed by being that close to a president, or ex-president! Yes. So that was pretty good, and that was a girl I was very glad to do anything for. She was a nice, nice girl. But a farm girl from the middle of Oregon.

I'm not quite sure of the period--I can be sure of it to some extent--the period between my coming out of the hospital here in Berkeley in--by what I've been telling you it should have been January of 1933, and I guess it was. Then I recuperated, convalesced, for almost two months around here. Have you ever been in a hospital long?

Swent: Good gracious, no. I can't imagine being in as long as you were. Awfully long time.

Bradley: That was an awfully long time, but it was a damn good hospital, and I told you how Alta Bates herself came out every evening just to have a little talk, and so on.

But one thing I noticed about that: Hank, my brother, decided he'd take me for a drive around town. I was awfully nervous about his driving, and he was a good driver, but just being in a car in motion--nervous as the very devil.

Swent: You'd been closed up so long.

Bradley: Yes! That was one thing I remember. Then I told you about how that led into the example of Fred Bradley's intuition. Now out of the hospital, Fred's manager Udell had me looking up steam shovels and heavy equipment for doing a lot of mining at Bretz,and Fred came through the office one day and asked me what I was doing. I told him, and he says, don't work too hard on it, we don't know enough about that mine yet. His intuition about mining was just absolutely unbelievable.

Then I drove my dad up to Yellow Pine in Idaho. He wanted a ride to Yellow Pine, to get there, and he said, take me up there. So I drove him in my Model A Ford. We went through McDermitt,

Bradley: Nevada. I don't think we looked around at the quicksilver mines there, because they were not running. We went right on through McDermitt and up to--oh, I can't think of those places now--Jordan Valley, and Rome, and places like that, and finally landed in Boise. I think we stayed in Boise for a day or two, and then struck on out for the Yellow Pine country. That was all by car.

We were far enough back in Idaho that we ran into two or three pack trains on the road. That was still standard equipment up there. Pack trains and mules. We got in up to Yellow Pine and stayed there several days, and I think my dad probably then took the train out of Boise over to Seattle and went on to Juneau. Or he might have gone anywhere--as I told you, Fred was making him do an awful lot of work.

A year or two after that Fred had a pretty good-sized gold prospecting job going on out in Quebec, besides the lead-zinc mine in Sudbury Basin. They had something going on up in the Sierras--one mine, I know, called the Nidever. They were starting up Bodie, and Fred had his younger brother Phil out there just looking after all those things, not to see that they went right according to Phil, but that they went right according to the schedule and the plans that Fred had laid out for Phil and the mine to follow. He was an iron man in that way. He got an awful lot of work out of his brother.

But again, you think it's nepotism, you think it's a horrible thing, but no. In Fred's case, he had his brother here and had a brother-in-law running the mine at Juneau, and a few other minor relatives around, and I have come to think of that as a demonstration that he'd get real loyalty out of his relatives. More so than anyone else coming in. I think that was true.

Swent: What did he look like?

Bradley: He was a fairly tall man, but not awfully tall; had a strong face, it was a strong face--I'll dig you out a picture here--and an aquiline nose that had come down, I think, from his father; and a mind that was just like a steel trap. It was one of these minds that when it reached a decision, it was the right decision. He was a real thinker, he had a real head. And everybody knew it. If Fred Bradley said that was the way to do things, that's the way you did them! [laughs] And you didn't argue with Fred Bradley, because if you got to arguing with him he'd come out with a laugh. He'd laugh at you because you were arguing things that weren't quite right. But <u>he</u> was right.

Swent: And you didn't mind this? He must have had a way of doing it that you didn't resent.

Bradley: Oh, you couldn't resent him at all, no. No. So all those things went on up until 1933, when he suddenly got sick, and died.

Swent: Where were you when he died?

Bradley: By that time I was working in Georgetown, California.

Swent: You came down from Yellow Pine.

Bradley: Yellow Pine was just a trip, and as I say, I think that on that trip my dad got on a train in Boise, and went over to Seattle, and probably went up to Juneau. I came back down to Nevada in my Model A Ford, and in there is the gap that I don't remember.

Clarkdale, Nevada, 1932

Gold

Bradley: I went down to Tonopah, and it might have been on this trip. I just thought, perhaps, I'd have time to knock around a little bit. So I went down to Tonopah and heard about a discovery down on the desert about fifty miles below Goldfield, and went down to have a look at that. The discovery was made by an old gold miner around there named Tom Clark, and he was calling his little camp Clarkdale--this was in 1932. There was nothing doing in Nevada then, everybody swarmed into this little place, and I missed Will Rogers by about five days. He'd come up from Los Angeles to see what was there.

These things were then important news. Because there was nothing else--it was the depression.

Swent: This would have been silver?

Bradley: Oh, this was gold. Two parallel quartz veins about fifty or sixty feet apart, and he'd leased them out Tonopah-style.

Swent: What does that mean?

Bradley: He just turned them over to leasers, in pairs--or a little crew of two or three men would take a lease, sink a shaft, and see what they could find. I think there were probably ten sets of leasers on that thing.

Swent: And this has been traditional of Tonopah, has it?

Bradley: It was traditional pretty well at Tonopah, and at Goldfield. It was a custom that had developed in Nevada long years since. It was the way you did things in Nevada. So I stayed in that camp overnight, and slept on a cot. As I recall, I counted seventeen people there, and of them twelve either knew me or knew my brother. A lot of people had worked at Tybo; my brother Hank was there in the mill at Tybo, and I was there in the mine at Tybo, and so on. Hank was in the mill in Tybo earlier than I was there.

In the meantime he had been sent over to Bodie. I bought this car in Tonopah, and when I got it I began making trips every weekend, or every couple of weekends, over to Bodie to see my brother. He had a lot of cronies over there that we used to see around for a long time, all over the country.

More about the Pine Tree, Fred Bradley, and Bernard Baruch

Bradley: Fred Bradley started the work at the Pine Tree Mine in Mariposa County sometime in 1931. He had foreseen the forthcoming boom in gold. You wouldn't call it really a boom--the price of gold then went from $20.67 an ounce, in the course of about three years, up to $35.00. About a 70% increase.

That brought on lots of mining. Just such as has been brought on now, by the present increase in the price of gold. But I'll tell you there's a great difference between the people who are trying to mine gold today, and the people like Fred Bradley, who had been in gold all their lives and knew exactly what they were doing. Today these people are throwing money at the mines, just spending all kinds of money. Fred was very careful about money, and he did the Pine Tree on a rather--I shouldn't say a niggardly scale--but he didn't spend a dime more than had to be spent. And there's an awful lot of difference between running a mine carefully and economically, and just running a mine.

Swent: He didn't have stockholders breathing down his neck, did he?

Bradley: He had a few stockholders. One of the men who had joined him in this thing at Pine Tree was Bernard Baruch. And to fill out the position of Fred Bradley and Baruch I have to tell you a few stories.

The Alaska Treadwell Gold Mining Company had long owned an interest in the smelter at Tacoma. The smelter at Tacoma was taking ore both from the Bunker Hill over in Idaho, and all the concentrates from the Treadwell Mine of Alaska. And that was quite a bit, about a hundred tons a day was being produced up there and being shipped in in five-thousand-ton barge loads.

Swent: Were they the same kind of concentrates?

Bradley: No, the Bunker Hill concentrate was a lead concentrate, and the Treadwell concentrate was just pure pyrites.

The American Smelting and Refining Company decided that they wanted to buy the Tacoma smelter. I think because by that time trans-Pacific shipments were beginning to get more important, and so on. So AS&R sent Barney Baruch out to make the deal. Fred Bradley handling the selling end, and Baruch the buying end. That was about 1905, or '06. Out of that came such a strong feeling on the part of Baruch for Fred Bradley's competence, that anytime thereafter that Fred Bradley wanted money for mining, he could just call on Baruch.

Swent: Very convenient.

Bradley: Yes. Baruch just thought very highly of Fred's competence for mining and otherwise.

[laughs] My brother married the daughter of a mining engineer, an Englishman here, who by this time was on the West Coast, had been for a long time. His opinion of Baruch was this, that Fred Bradley was the only man in the world that could keep Baruch honest. I think that's an exaggeration, myself. Afterwards I saw a good deal of Baruch, and came to enjoy him, and admire him very, very much.

I was talking to him one day, and he said: "Back in my time, when things were good, I could look at the economy and make a prediction that I regarded as reliable, about what would happen next, or in a few years, and I could act on that. And that made me a good deal of money." He said, "It makes a little difference who's in the White House." And I said, "What do you think of Truman?" And he said, "He's a nincompoop." He says, "We've got a nincompoop in the White House now."

But anyhow, Baruch had lots of rules; my dad used to quote them. One of the rules was, "No use doing business unless it's good business."

##

Bradley: Alaska Juneau by '46 had been shut down a couple of years, and were looking around for some possible way of making their assets useful in something else. We had the idea that we could perhaps convert those plants up there, and especially the power plants, into a useful tool for the making of wood pulp, from all the tremendous quantity of wood that grows in southeastern Alaska. So I took the figures back to Baruch, and we worked them out and he

Bradley: says, "Not enough. You've got a new business here; you want thirty percent, and you haven't got thirty percent." That was a good figure.

Anyhow, where was I?

Swent: You were talking about Clarkdale. You were at Clarkdale--

Bradley: Oh, I was down there at Clarkdale.

Swent: And when you walk in and your name is Bradley, you're not going in unknown, by any means.

Bradley: I was not unknown. As a matter of fact the day before I'd been in Tonopah, and had gone into the back part of one of those restaurants there, where there was game of pan going on. I walked out again, and as I walked out I heard one of the men say, "There's the Treadwell Yukon man." There's the Treadwell Yukon man.

Swent: Fred Bradley's sons also were in mining, weren't they?

Bradley: Three of them.

Swent: So there were five of you.

Bradley: Yes. My brother, who was principally a mill man; Worthen and James and Jack--and Jack, later on, worked up to the presidency of Bunker Hill. Then he got himself killed in an auto accident down on the Peninsula.

An interesting story about that was: a woman came into Shreve's one day, with a ruby-and-diamond bracelet, and asked for an appraisal. They gave her one, it was about $30,000. That had been found by her son-in-law, a road worker, at the site of the wreck, and had come off Jack's wife's wrist. The son-in-law gave it to his wife, and his mother was old enough and wise enough to think that there was something a little bit funny about it, that they shouldn't hang onto the thing if it was wrong. I don't know what happened about the $30,000. I think the bracelet went back to Mary Bradley, but I don't know what she did about it, whether she paid that family.

Swent: Jack and his wife were both killed, as I remember.

Bradley: Yes.

Swent: And left several children?

Bradley: Left at least two, if not four. My sister Ruth gave a big party on Lake Tahoe for my brother's seventieth birthday. She invited people from all over, and one of the sets of people that she

Bradley: invited was John Bradley's son, who came down with his wife and children from Spokane, where he had the Ford agency in Spokane. So the Bradleys did pretty well on the money thing.

Swent: So you were down in Clarkdale--

Bradley: I was down in Clarkdale, and I drove Tom Clark back to Reno. The other two things about that trip: Just out of Mina, he said, stop here. And he says, I went down that gully the last trip I came down here, and I answered a call of nature. And after that I couldn't find my glasses, and I think they're right down there. So he went down the gully, and came back with the glasses.

The next thing that happened was: I'd come around that long turn that you come around, where you're straightening out and heading for Hawthorne--we had had lunch in Mina--and suddenly I was awakened by a funny noise. It was the left front wheel of my car in the coarse gravel, just on the edge of the embankment of the road--just on the edge. The noise of that woke me up.

My brother had pointed out, up in Virginia City--we were up there about a year--he said, all these wrecks; young fellow goes down to Reno with his gal friend and they do up the town. They come back, and someplace about a mile out of Virginia City they wreck. What happens, he says, when you drive in the night, you have to look out for this. You come around the last corner and there's your destination, just ahead of you. If you're not awfully careful, that's when you go to sleep. That was happening right along there--it happened to me that way.

Yes, I was about two miles out of town. I could see it. Yes. [laughs] I learned something that trip.

Virginia City, Nevada, 1934

Reworking a Tailings Dump

Bradley: Now the gap comes. I can't recall what happened. Hank and I and another fellow, here in town--another fellow who is a metallurgist--heard of a tailings dump in Virginia City. By "tailings dump" I mean just what a tailings dump is: material that's gone through a mill, all ground up, and so on, but that still has gold and silver value. This was at the time when the silver prices were going down, but gold prices in the world were coming up.

Bradley: So we borrowed some money from my dad and went to work up there--bought some machinery and went to work. We had a great time building a little plant there, getting it going. We'd probably gone up there in May, and about August Phil Bradley--I'm speaking of my dad--and Livingston Wernecke, who was doing a lot of running around for the company, ran across a mine called the Oregon King, in the middle of Oregon. It was decided that the Alaska Juneau would put some money into reopening that mine and seeing what was there. I got that job.

More about the Oregon King

Swent: Just you, alone.

Bradley: Just me, alone, yes. Running that mine. That was the first job I had--except for that exploration job at Bretz, which was very simple--of full responsibility for a mining operation. It was an old mine, but we opened it up and put a surface plant on it. Never put a mill on it--we didn't find enough to justify it.

Swent: You shipped your ore, then.

Bradley: Shipped quite a bit of ore up to the Tacoma smelter finally, until the mine closed down.

Swent: But you had to recruit the workers, and the whole thing.

Bradley: Yes. Put in a power plant, put on a hoist, headframe, bin--

Swent: I've been meaning to ask about power. What did you do for power at all these different places?

Bradley: Well, in a place like that, where there was no power handy, why, you put in diesel engines. Wernecke worked that out. He got me two diesel engines. One ran the compressor, and the other ran the generator. You needed the generator, of course, for electricity for the hoist. The compressor just plugged all along by itself.

Swent: Where did you get your diesel fuel from?

Bradley: The nearest town was thirty miles away, and I could order it very simply.

Swent: You were on a highway?

Bradley: No, not a highway.

Swent: Or a road, or something?

Bradley: I'm not sure that we even had a telephone line into town, but thirty miles is no distance, really, to communicate over. We had arranged something, I don't remember just now.

That country--I told you a little bit about it the other day--the blacksmith was a man who had harvested a couple hundred thousand bushels of grain off of his place only a year or two before, and now he was busted, because the grain market had completely dropped--that was one thing--and the second thing was that they had a drouth up there. This country just went dry--just overnight, almost.

Swent: Was this the same time as the big "Dust Bowl," and the dryness all over the Midwest?

Bradley: Yes.

Swent: I didn't realize it hit up in Oregon too.

Bradley: Oh, it did, yes. And that was rich wheat country up there. So I saw all that. One thing I saw up there was--and I'm told now that the banks are trying to get away from this--but this was fifty years ago: the banks had just routinely foreclosed on all the notes that they couldn't collect on, and you could see what the result was--the banks were all sitting there owning farms that they didn't know how to run. The guys that knew how to run them were sitting there busted. Nothing was very good. I think that the banks are showing a little more sense about foreclosing on those sort of things--at least out here in the West. We hear all these stories about foreclosures in the Midwest.

But anyhow, I stayed on that job for about a year, and the company shut it down finally, because we hadn't found quite enough ore. Wernecke concluded it was a little Comstock--it was a type of mineralization that just duplicated the Comstock, but on a small scale.

Examination Work Out of the San Francisco Office, 1934-36

Bradley: Then I came back down here and was put in the office. I was sent out on various examination jobs. These were the days when the office, all in all, had pretty good standing, and there were just any number of mines being brought in by people. Not so much by miners, but by promoters, because there was a great crop of small mines around, that the miners had, and they'd go to a promoter, who would then come into the office. So I had lots of work in that respect. Clear over in Arizona, New Mexico, Nevada, and California.

Back to the Pine Tree, 1936-38

Bradley: Then I was sent down to the Pine Tree Mine. Now, this was the second time I'd been at the Pine Tree. When I came back from the adventures around Tonopah, Nevada, I was sent down to the Pine Tree for about a month to sample tunnels down there. Fred had been, years before, president of the Mariposa Mining and Commercial Company, and that was a company that Fremont had got together fifty or sixty years before, to handle the property that Fremont, by then, had.

No one has ever for sure found that place where Fremont built a house. But he and Jessie Benton Fremont had had a house there in Bear Valley, where I was given a cabin. I think Tom Coakley, who now lives out at Rossmoor, and who had been superior court judge of Mariposa County--a very active guy, looked into everything there--I think he came as close as anybody to finding the location of that Fremont house, but he couldn't be sure either.

You know, Fremont was quite a figure in a certain part of the history of the West. Of course, he was an explorer, sent out here to explore, and, I think, to do what he could towards solidifying the hold of the United States goverment on the West here. As a matter of fact, I think he was out here before the treaty was signed between Mexico and the United States to keep California to the U.S.

Swent: So he formed this company, then, which your uncle became president of later.

Bradley: Later, yes. Fremont formed this company, I imagine, in the early 1850s. Fred Bradley was president of it, oh, say, in 1900, or something like that.

That brilliant scale there [indicating a balance on a table] comes from that country. It came from one of the mines on the Fremont Grant. It's from the Princeton Mine.

Swent: So you went back to the Pine Tree.

Bradley: I got sent back to the Pine Tree in 1936 to take the place of a man who had been my boss up in the quicksilver mining country in Oregon and Nevada.

Swent: Is that Udell?

Bradley: Vance Udell. He and Fred Bradley had a falling-out over the way Udell was using a little of the Pacific Mining Company's--this was the company that had the Pine Tree--money on the Big Blue Mine

Bradley: down near Kernville. [laughs] It's one of those things. If the Big Blue mine had turned out as well as it looked, why, I don't think anybody would have said anything. The Big Blue Mine just didn't quite make it.

So Udell was set aside, and I was given his place. He and I were quite friendly, so there was no trouble there. There was one thing about Udell: he thought he was a good accountant, but he wasn't. And you must know something about how difficult it really is to set up a good accounting system for a mine.

Mine Accounting and Controlling the Grade of Ore Mined

Swent: What are some of the problems, then?

Bradley: Well, you can state it this way: that you should be able to trace an entry that you put in the books back to the equipment that that entry represented. Udell couldn't do that--in his books you couldn't do that. So about that time the office got a hold of a young Italian, Catassi, and he was just a whiz. The last I saw him he was running this blood bank down there on the corner of College and Claremont. I've got to stop in there one of these days and see if he's still going.

Swent: Was any of this taught in your courses at Cal? Did you get any accounting?

Bradley: Yes. I thought it was very valuable. I thought it turned out to be a very valuable thing in later years, because between that and this Catassi readjusting the system of the books, I got very good and very complete cost accounts down at that Pine Tree Mine. I thought they were very good.

Swent: Did you have to make decisions about what grade of ore to mine?

Bradley: Oh, yes, you did. Believe me, you did. One of the problems I had at the Pine Tree was holding down the mine foremen. I had two awfully good foremen down there, but I always had to hold them down, because this was a mine that was doing a hundred and fifty tons a day very easily, and that was a fairly large mine for all of California. Not the largest, but relatively large. These mine foremen would get ambitious, and they'd want to just break more rock and put it through the mill. It is very easy to see, if you put too much rock in a mill, you bring the grade down, and you start losing profits. That's a good rule--that's almost rule number one. You don't overmine a mine.

Bradley: For instance, Alaska Juneau was designed for eight-thousand-ton-a-day operation. It took quite a number of years to bring it up to eight thousand tons. From that experience I derive my fears about what these new cookies up in the Mother Lode now are going to be able to do. It may be easier with modern equipment to get more tons out of a mine and into a mill, but in Alaska Juneau days it took an awful lot of adjustment in the mining and in the milling, years of it, to get that mill up to its designed capacity.

We got it up to eight thousand--now they were learning how to mine that lode--eventually brought it up to twelve thousand; finally, just by way of experiment, kicked it up to fourteen or fifteen thousand, and that's when they dropped back. By doing that they found that that mine had a certain practical limit. That's mining.

Swent: That's the trick of the manager, isn't it?

Bradley: Yes.

Swent: You did have your mill there, at Pine Tree.

Bradley: Yes, Udell had built it.

Swent: And then you shipped the concentrates from the mill.

Bradley: We had a railroad two miles away, the Y.V. Railroad--Yosemite Valley Railroad--came up the Merced River, Yosemite, and we shipped a carload of concentrate, oh, I suppose, once a week, and it came up to Selby.

Swent: Did you ever have to do any marketing?

Bradley: No, that was automatic with a gold ore. No.

More about Fred Bradley and Other Famous Men

Bradley: Going back to this career of Fred Bradley, I've written some things about it, and he learned a great deal about mining right here in California on these California quartz veins. He did so well that he was offered jobs of almost any kind.

It's very noticeable, if you read the history of the Rand, how those English financial people who had ownership of the Rand collared California engineers to run the mine. California was the place where the gold experts were. [laughs]

Bradley: Two of the most prominent men that went out to the Rand were Henry Perkins and J.H. Jennings. Tommy Mein's father had worked for Henry Perkins down at El Callao. J.H. Jennings had been with Henry Perkins doing something here at California, because when I went to look up old claims and their ownership around my own property in Nevada County years later, there were some claims owned by J.H. Jennings and H.C. Perkins together. And they're right almost where we have our cabin. They were active then.

Swent: Your uncle never went to Africa?

Bradley: No, and Hammond gave him hell. Hammond, in his autobiography, gave him hell for two or three things, and he wrote that thing after Fred was dead and should not have criticized Fred as much as he did. He was critical of him for not having gone to Africa. Fred told me once that the trouble with going off to foreign jobs was that when you'd come home, why, you'd lost all your contacts.

Swent: He never went further than Mexico?

Bradley: Never went further than Mexico, no. But lots of others went out to Africa. An uncle of mine, who was in charge all the time he was out there at the Robinson mill, this was Henry Harland--he'd been working on the Pine Tree in California when this African thing showed up, and he went out there. And Mein, of course, and Gardner, who I think, by marriage, is some relative of Mein, and for whom young Gardner Mein is named. Without looking them up I can't tell you any more.

Between Jennings, who got into cyanidation, and Butters, who is a real cyanide expert--the cyanidation of gold was really developed right down on the Rand.

Swent: You weren't doing anything other than just grinding these ores in your mills? For instance, at Pine Tree, did you do any further milling?

Bradley: Whereabouts?

Swent: Well, Pine Tree--any of these places.

Bradley: Tybo, of course--going back to Tybo--that was the standard crushing and grinding and flotation situation. In that mill you used cyanide as a depressant for the pyrite in the flotation feed.

Swent: Were you using flotation methods developed by Californians?

Bradley: I would suppose pretty much, yes, although lots of the development of flotation came out of the copper mines in Arizona and Nevada.

Swent: How did you get your mills designed? Did your brother do that?

Bradley: Lloyd White of Berkeley designed most of the mills of the twenties for Fred Bradley.

##

Bradley: So somewhere in the early 1900s a young Italian man came out and got a job with Bunker Hill in the mill, and the name was Gelasio Caetani. He was an Italian nobleman, and the first one of his family, you might say, who had a practical slant on life, because all the rest of them went into either the church or the military. This fellow thought he'd better be an engineer. So he took training, at least in English school, if not also in Italian, and came over here. And he got a job with Fred Bradley.

By 1911, a firm had been got together called Burch, Hershey, and Caetani. Burch was a mining man who had been general manager of mines at Bunker Hill. Hershey had been the geologist for Fred Bradley at Bunker Hill, and Caetani the metallurgist. And they got together a concern with offices in our Crocker Building, and kept it going for quite a while.

One of the big jobs they had, or one of the jobs they had that was rather outstanding, was putting together the operation at the mine in Plymouth, California--what's the name of that mine? Can't think of it. Maybe it's Plymouth Con., for all I know.

Swent: Did Burch, Hershey, and Caetani design any of your mills for you also?

Bradley: No, not Caetani, because the war came along and Caetani went back to Italy. Did I tell you about his blowing the top off of a mountain?

Swent: [laughs] No.

Bradley: Well, he got into the Italian army, and hit a mountain in the Alps that had a lot of Austrian troops on it--he just drove into this thing [laughs, gestures]. Reduced several thousand Austrian soldiers into nothing! He came back to the United States five, or six, or eight years after the war as Italian ambassador to the United States.

Swent: Did you ever see him?

Bradley: I never saw him, no. But he was very well liked, very highly regarded. I did see a very interesting thing. Fred Bradley and Mark Requa, and maybe one or two others, formed something called the San Francisco Exploration Company. Fred had around a whole bunch of engineers, and geologists like Hershey, and so on. He sent a couple of them down to a Central American country which I haven't got the name of, as I sit here. They were looking at a

Bradley: mine, and it sounded pretty good, but this damn country had just had a revolution, so nobody knew what the miners' rights were, what they could do about transportation, or anything else. The country and its government were just upside-down.

I have engineering reports on it which I think may have been made by Clifford Dennis; another engineering report that I think may have been made by Jim Parks, who is Fred Bradley's wife's brother, and who ran the mine in Plymouth; a geological report that I'm sure was made by Hershey; and then a final report that was made by Caetani. Caetani went down there, and he got hold of the president of the country--you can see why he was made Italian ambassador, because he just knew how to treat with these top people. He got hold of the president of the country and got everything all straightened out that could be straightened out, with respect to these political things.

He came back and wrote a beautiful report on that, but the San Francisco Exploration Company gave it all up, finally. We'll have to look up the name of that mine, because I think it was one of the most important mines down there in Central America. But I've got all that damn stuff written down--I've got all the reports! They're just interesting as hell, and especially the Caetani report. The man that talked to the president.

Swent: That's going right to the top.

Bradley: He went all the way to the top. [laughs] I think the president was a lucky man, to get a man like Caetani to talk to.

That was one thing.

Swent: So we have you at the Pine Tree.

The Harvard Mine, Jamestown, California, 1938-45

Bradley: Well, I camped on the Pine Tree--because there's only one way to run a mine, and that's to camp on it, anyway. I camped on the Pine Tree from '36 to '38, and then in 1938 the company took over the Harvard mine, and I was just transferred from Mariposa County to a little more civilized county, which was Tuolumne, and I lived in Jamestown then from '38 to '45. That's where I got married to this gal. [Katherine Connick] You know, I told you, I think, she just lived over here about two blocks.

Swent: So you took her out to Jamestown, where you were living. You didn't have to build company camps then?

Bradley: No, no, rented a house. Got a nice house for $25 a month. [laughs]

Swent: We haven't talked about money; did you have a salary from your uncle all this time?

Bradley: Oh, yes, I had a salary from one company or another all the time. When I got to Jamestown it got pretty good. All my expenses were paid, and everything else. Yes, I was just a salaried man all the time, and that's all my dad had been. He thought that was enough, and he told me about it. He just used example after example of men that had risen in the mining industry, but only on salaries. That was enough in those days.

One of his examples was Russell Wayland.

Swent: He did all right.

Bradley: Yes, and Russell Wayland lived right across the street from us in Treadwell. I can remember trying to teach his four-year-old son how to untie a knot--Russell, Jr. They had a nice yard, and they had a gate there, and tied the gate closed [laughs], and I showed him how to untie it. Young Russell was then four. [laughs]

We all went in the company boat down to a place called Grindstone, maybe ten miles away in the ocean, and at that time Mrs. Russell Wayland's mother was visiting. Her name was Fanchon Borie.

Swent: I remember her. She lived to be about a hundred.

Bradley: Did she? Well, what happened on this trip was--it often happens, you know, people aren't used to it: she went to get in a little skiff that pulled up alongside the gas boat, to be rowed ashore. She hung on to the edge of the gas boat, and her feet, you know, more or less pushed the skiff away from the gas boat, and she fell in the water. Well, they had to take her back to camp. Us kids thought that was just as funny as could be.

Swent: What did you do as a young married man in Jamestown?

Bradley: In Jimtown? Worked like hell.

Swent: Were there other people in the town that worked for other mines? Did you have a social life?

Bradley: Yes, there were, but the social life was composed of people who were not, generally, miners. But it was there, and Katherine got along fine.

Swent: You were working awfully hard?

Bradley: Oh, yes. My hours at that mine were about eight in the morning to two at night. We were drilling this ore body out, and I had to log the cores, and all that sort of thing. Awful lot of work. I had a couple of fellows working for me to do the mapping and so on, some of the geology. One of these fellows had worked for me at the Pine Tree, and another one had been my boss in the engineering office at Sudbury Basin. He was a man who had graduated from Cal here in 1906. Some of his stuff got into Peele*--he dug up a lot of stuff in Russia--conversion factors, and so on--for Russian measurements and Russian weights into American. He's a pretty good man.

Swent: What was his name?

Bradley: Edward L. Stenger. I had to close down the Harvard Mine in 1942, and I had no compunction about laying people off because everybody got jobs right away.

Swent: Did you stay there after 1942, then?

Bradley: We stayed there until '45.

Swent: Although the mine was closed.

Bradley: Yes. Well, we kept a few little odd things going; I kept a mechanic going, a mechanic and a helper, and, as a matter of fact, we took a whack at trying to recover copper from copper tailings about twenty miles away -- Copperopolis tailings.

Oh, I had one story that I was going to tell you: I did that sampling job in 1932 down at the Pine Tree mine, and I stayed at the house there--and this is just incidental--of an old John Trabucco, and his wife. They were both old people, but they were glad to have us there. This Udell, who was in charge of things, had married one of their daughters, but they were also the father and mother of Judge Trabucco, a very famous judge here in California, in his time. He was superior court judge of Mariposa County, but he was taken to all the important cases all over California. Taken out of Mariposa County, because he didn't have much work to do there, but put on these important cases because he was just right for those things.

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*Peele, Robert, Mining Engineers' Handbook (2 vols.), John Wiley & Sons, Inc., New York, 1918, 1927, 1941.

Labor Unions

Bradley: Then, when I was running the Pine Tree mine this CIO [Congress of Industrial Organizations] business came into being, so it was Judge Trabucco himself who called all the mining people of the county together in the courthouse one night, and we had a session there deciding what we might do, what could be done if the CIO came in, and so on.

Swent: They were sending in organizers, were they?

Bradley: They hadn't yet, but it was a threat.

Swent: When was this?

Bradley: We'll say it was '36--it might have been '37. I finally wound up with the job of running the CIO out. [laughs] That was a tricky thing. Down at the Pine Tree--we had the biggest payroll in the county, we were the big mine in the county--so I stood out a little bit. I had the custom there to allow the accountant, if he got the payroll checks out before the fifth, or the tenth, or the twentieth of the month, to pass them out--have a payday. The official payday was the fifth and the twentieth, because he made them up for the previous two weeks each time.

So I told him here was the CIO going to come into the county--we knew this--on a certain night, payday night. And I told our accountant, I said, you've been pretty good about getting these checks out, but I think it would be a good idea if something would happen in your office so you couldn't get them out on this particular night. And he didn't. We all worked together, this was a good community. So there were no paychecks that night, and here was the CIO up there in the bar in town, and buying drinks for everybody, but nobody else buying drinks. [laughs]

And then, of course, the sheriff and the highway patrol had heard about their coming in, so they came down and they parked in front of the boarding house. And after a while, I was in the car, and geez, when I got into the Ford there were two shotguns. They were ready for anything! But most of the time that night I was out there batting out flies [playing baseball] in the main street. About a half a dozen, or a dozen, of the boys that worked for me--the younger ones--were down at the other end of the street just shagging these flies. And that gives you an idea of the feeling. There was no tension--nothing tense there. If there was tension, it was on the part of the CIO.

Then, a couple of days later--somebody else had arranged this, maybe the judge arranged this--an AFL [American Federation of Labor] organizer came in. So I arranged it for that particular

Bradley: morning that the mechanic would go into the mine and would find the hoist inoperable. By the time he and his helper came out of the mine, and the hoist worked, this AFL man had signed up everybody in the yard. All the miners were waiting in the yard to go to work, and he had signed every one of them up. So the CIO was out.

Swent: You preferred the AFL?

Bradley: Oh, yes. The CIO is tough, and nasty.

And then I got the job of setting a new wage scale for the whole county. I got the job of negotiating the new contract for the AFL union, and so on. It just happened that this AFL union man was from the printers union from the city of Modesto. He didn't know much about mining, so he was pretty easy to handle, and he was a decent guy anyway.

So we got that all straightened out. I had for a long time thought that the wages down there in Mariposa County should be a little bit higher than the wages along the Mother Lode because we were at the end of the circuit. Grass Valley and Nevada City were at the top end of the circuit, and of course they had big mines, and these were well-established cities, so they didn't need any support. But down in Mariposa we were getting a few rustlers all the time, but not men of the competence that were working the big mines elsewhere. So I raised the pay of a miner from sixty cents an hour to sixty-five cents. They got $5.20 a day, whereas they were getting $4.80 before.

Swent: And they were glad to get this?

Bradley: Oh, sure.

Swent: Is this the depth of the depression?

Bradley: Not the depths, this was '37.

Swent: Coming out of it by then.

Bradley: Yes. Now I wanted to tell you this story about being up at the Beebe Mine in Eldorado County. I was sent up to the Beebe mine after that sampling job ended that I was doing at the Pine Tree in 1932. Then I was sent up to the Beebe to be engineer there--mapper and sampler and so on. This was in Georgetown, California. It happened to be the town that my father had been born in, because his father had been brought down from Nevada City, where he'd been spending his life, to take charge of the California Water Company, which was an important company in those days. This was the '70s. Water was the thing for mining. You had to have

Bradley: water or you couldn't mine. So the job of running that California Water Company was one of the best jobs in the whole gold belt, and he got it.

My father's sister Mabel was born in Georgetown, and my father also, about a year and a half later. They were taken back to Nevada City after a while. In the meantime Fred went to a pretty good school that existed in Placerville--I don't remember the name of it. He was in Placerville, and was thirteen years old when my dad was born.

Here I was, sent to Georgetown, where my dad had been born, in the year 1932. I got my room in the home of the widow of the man who had run the newspaper in Georgetown years before. She was a judge, by the way. She was spending most of her time in going through the old newspapers and taking out things that would make a good story at that day, and sending them down to the Sacramento Bee--she was stringer for the Bee, and all that sort of thing. So she was doing all right. Her name was Horn, everybody called her Ma Horn--I forget what her first name was.

An Adventure at the Beebe Mine, 1933## *

Bradley: That reminds me of an adventure I had at the Beebe Mine. This was one lovely summer's evening. It was the 26th day of July, 1933, and I was up visiting with Harry Burmeister and his wife at their house on a little hill that was part of Georgetown. As we sat there talking, it got darker and darker and the lights didn't come on anywhere. I concluded, "Well, there's trouble on the line coming over from the Drum Power House at PG&E and perhaps nobody's called PG&E to tell them there's no power and I had better go downtown and do it." So I went downtown and put my nickel in the phone and called. No, they hadn't heard of any trouble, so they sent out a crew to check it right away.

Then I thought I had best go over to the Beebe Mine and see what had happened there. There was, you might say, hell to pay at the mine: the afternoon shift had shot late, and when the night shift went down, the mine was still full of powder smoke. And here they were, down there, no ventilation, no power to run the hoist: they couldn't get out! The master mechanic of the Beebe Mine had already gone underground to see what he could do to help.

Swent: How did he get underground if the hoist wasn't working?

Bradley: Climbed down--climbed down the shaft ladder.

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*This section was added on March 17, 1988.

Bradley: My kid brother, Hank, went over to call on Mrs. Chandler--the wife of the master mechanic—and he told her the whole story: these men underground there, maybe being killed with the smoke and her husband's down there amongst them. She fainted right into his arms. She was as big a woman as you'd ever want to see. That was a funny story.

But anyhow, I had just--that day or that week--got in a shipment of rope for my Alpine Mine because at this time I was foreman of this little mine that was sending about fifty tons a day of ore to the Beebe. Being trucked up. [laughs] I had 500 feet of new 5/8 hemp rope. I always got 5/8 because when it got damp in the mine it always swelled up to 3/4. Anyway, so I drove pretty fast for the three or four miles down to the Alpine, threw the rope coil into the back of my Ford, and ran like the devil for the Beebe. And meantime, the boys at the Beebe knowing I was coming with this had rigged up a little overhead carriage--a little overhead rig--to handle a pulley and this rope. We had a stretcher there.

And they let me down. The bottom level at that time was at 230; it wasn't very deep.

Swent: That means 230 feet?

Bradley: Yes. But it was deep enough. [laughs] We would have never gotten out if the power hadn't come on. But I got down there, and myself and a fellow named Jimmy Cartoni and this mechanic, Chandler, went to put the first man of the crew into the stretcher and we got him in all right; he was pretty well out. And we called for the thing to be hoisted and the crew up on the surface pulled him up by this rope. Pretty soon, back down came the stretcher, empty, and we tried to put the second man in. And I realized that after we had been working on him for five or six minutes that we were just sitting there laughing at each other. We weren't doing anything. That was the effect of the laughing gas in the powder smoke. Everything seemed to be funny. Well, you pulled yourself together and we got the guy tied in and hoisted out.

And then, down on the rope came Joe Kiviaho. Now Joe Kiviaho was a Finlander. I had met him, oddly enough, in Ontario, Canada, and he was one of the two best mine foremen I ever saw or ever had work for me. But he came down, and just about the time he got there, the power came back on. The lights--! So we got the men out by the regular routine, just hoisting them out on the cage. Fine. I got out on the cage, everybody got out on the cage, and we were all clear.

Swent: It was a close one, though.

Bradley: It was, it was. [laughs] I thought to myself later that my willingness to go down in that mine was not a particularly wise thing to happen.

[tape turned off temporarily]

Bradley: There were a couple of rather, almost comical, incidents. As I told you, I was living in the house of Maude Horn, who was stringer for the Sacramento Bee. So I told her the whole story that night when I got home, and she sent it down to the Bee the next day--I think she phoned it in. And the Bee published it the following afternoon. The San Francisco Chronicle got hold of it, I think, the third day. And they came out with a front page headline that said, "Nine Men Trapped in Sierra Mine." On the fourth day I got a phone call from Aunt Mary [wife of Fred Bradley] up in Alta, California. She wanted to know what was going on, how was I, and all that. I had practically forgotten the thing by then; I had lots of work to do. But I told her, and it was very nice of her to call.

Swent: Were there nine men, actually?

Bradley: Yes. That included me. And I think it included maybe Chandler, and maybe the shift boss, and I don't know. I can't remember now.

Swent: That could have been a very bad one.

Bradley: When I took mine rescue and first aid training here at the University, they said this carbon monoxide is bad stuff. You can get into a garage with a car running, and if you notice the effect of the exhaust fumes, it's too late. You can't make it out. Once you notice it, that's the end. [laughs]

While we're on the Beebe, I'll talk about the Hadsel mill. This consisted of a double-hung pair of big things like water wheels. They were, I think, twenty-four feet in diameter. Scoops all around the outer periphery, which picked up the ore that was fed into a boot down at the bottom, and lifted it. And then, as the ore passed a critical higher point near the top, why, the ore spilled out of the containers it was in; it spilled off the shelves that were built inside the wheel. It fell down on breaker plates, and broke itself, and then went on out.

The holder of the mining lease, or the owner of the Beebe mine--I don't know which--was Fred Wise, an old Nevada mining man. He had had an operation on the Flowery Mine on the Comstock. My dad had gone up there to see it once, and he came back to report that Alec Wise was getting the last nickel out of the ore but it was costing him ten cents.

Swent: [laughs]

Bradley: And, as you well know, not every mine is run for maximum economy because sometimes maximum economy means throwing away a lot of stuff. And Alec Wise should have thrown away his tailings, but he kept on until he got some more silver out of them.

Well, anyway, he had this Beebe Mine--this is now 1932--and had been sold on the idea of this Hadsel wheel, and put it in. Well, the Bradleys--Fred Bradley--took it over. A. V. Udell was his manager for it, and I worked for Udell. He put me up there as mine surveyor and later on I was moved down to the Alpine Mine, which is two or three miles below Georgetown, and was running that. Hence, the rope I speak of.

We had to make lots of changes in that Hadsel wheel. The first one was to add an outside classifier--return the oversize into the wheel. It just wasn't a complete grinder. Then--oh, there were lots of things done, especially after my Alpine Mine ore was fed into the Hadsel. It was a quartz ore, not heavy enough to fully break up, but stayed in the mill as a gravel. Finally, balls were put in the mill there to help with grinding. And oh, yes, the first thing that was done there was to install a 24 x 36 jaw crusher ahead of the mill. It had been running, to begin with, on run-of-mine ore.

Well, eventually the Hardinge Company took it over. They installed two enormous wheels that didn't run on the overhung shaft but instead turned in a cradle, each one separately driven by a chain. Finally, after about three years, the Hardinge Company substituted regular ball mills. And that was the end of the Hadsel mill.

Swent: It was a substitute, then, for a ball mill?

Bradley: Yes, yes. The product was flotation feed. The feed was run-of-mine when we first went there, and the product went to flotation, but it was not good flotation feed; too much coarse stuff.

That taught me that if you're going to experiment with machinery, do it when you've got the mine going. Don't conduct a mill experiment along with the mine development. Get the mine going first. So that's that. That was the Beebe.

Swent: Is it still there? The Beebe?

Bradley: Oh, I was on an advisory committee at the forest service here and they insisted once on a trip to El Dorado County--this was about ten years ago--to see the Beebe Mine. We went to it and there was absolutely nothing there but the glory hole--an open pit! The water company had bought that to stow water in. And by the way, that water company was a very important thing in California back

Bradley: in the 1870s. One of the men they had on it--the general manager--was Henry Bradley down from Nevada City. My father's next sister, Mabel, and he were both born in Georgetown because of that.

Sampling at the Alpine Mine, 1933

Bradley: Now there's something I'd like to tell you about the Alpine Mine. The Alpine Mine had an old rock dump, typically strung out on the surface which itself had had a fairly steep slope. This dump seemed to promise to make a good mill feed for the Beebe so seemed to justify sampling.

Mine dumps characteristically are a bit hard to sample but sampling results here were good--the mill heads assays when the rock finally was shipped off to the Beebe corresponded surprisingly well with the dump sample assays, so the method seems worth a word or two.

On looking over the dump carefully, I concluded that with the coarse fraction having landed at the down-slope margin of the dump and the top rock being all fine, the average rock was represented by size and that the average size was about two-thirds of the way down the face of the dump. This told me the dump should be sampled by a belt of channel samples taken two-thirds down the face of the dump, the belt was extended across the front end of the dump, and all along the side from front to back end. It was not completely level. Continuous channel samples were taken from this belt, each probably about ten feet long. As noted, the assay results from these turned out to be close to mill heads assays when the rock finally was milled. Accordingly, I have confidently used this principle elsewhere.

Swent: Sampling is one of the most important aspects of good mining, isn't it?

Bradley: Oh, yes! My father was a very good sampler, and he taught me how important it is. He took great pains to go into sampling with me. That Harvard Mine was the biggest sampling job on a gold deposit done in California until the Homestake project at Knoxville came along, many years later.

The Depression##

Bradley: One of the things that I remember so well about Georgetown, we were being rustled for work, always, by people who had never been around a mine before. They'd come to you, and they'd say, I'll do

Bradley: anything. Well, that was the key. If they'd do anything, you knew damn well they didn't know anything. So I regularly turned them down.

But there was one guy--: One day I just happened to be outside the hoist house when this fellow came up the road in his car, and he parked about a hundred feet away. He got out on the driver's side, and his wife got out on the passenger's side, and she stood there and watched while her husband came up and asked me for a job. [pause] I have never seen a more anxious look on a face of a woman in all my life. I should have known right then I should have found some damn job for that guy.

The fact is--it didn't occur to me for years afterwards, because for one thing we all had jobs up in the gold country; we didn't have to worry about whether we were going to have a job or not. It was the people in the cities that were having such a bad time--people we didn't know. But we should have instituted a system there whereby you could give one of these poor busted so-and-sos a week to ten days' work. Trying to put him back on his feet--morally, if not financially. That's what we should have done. Didn't do it--didn't think of it.

Swent: But it still bothers you?

Bradley: It does. I think about it now, think I should have done something.

Swent: Those were terrible times.

Bradley: They were. Down here in San Francisco you had all these riots going on, the longshoremen all on strike, and everything. Terrible. Well, hell, we sat up here in the country and kind of snickered at it all, that that's not going on up here. I finally wound up as superintendent of that mine in Georgetown.

A lot of interesting things in that funny little town. There was a young fellow working with me there, who had worked with me up in Nevada, his name was Phil Cox. He later worked for the Bradley Mining Company running that mine out here on Mt. Diablo, that quicksilver mine out there. He ran that.

But we were working together there in Georgetown, and we heard one night that the firemen were going to have their annual dance in about a month, and we heard that they were having a meeting of the firemen's association in Georgetown that night. So both of us went down to the meeting. That was held in the garage of the only garage man in town. He was the fire chief. Before we got out of there we were both members of the fire department!

Swent: So you could go to the party.

Bradley: Well, we got to the party all right, but the next day after the meeting--and we'd been living in Georgetown then about five or six months--there was a fire downtown. House caught on fire. It was an odd thing, because all during the fire there were these explosions. The man that owned the house--it was a two story house, with a big gabled roof--he had drilled the rafters up in the attic with about one-inch holes, just big enough to hold a twelve-gauge shotgun shell. That was his fire alarm system! He wasn't going to have the house burn down over his head without knowing it. These damn things were going off all during the fire.

The joke was, it was wintertime. We brought the fire engine down, put the intake hose from the pump into the ditch there, and pumped for half an hour at the most, and finally--no more water. [laughs] What that intake hose had done was just pick up a lot of ice that they hadn't seen, or something. It just got into the pump, and after that, no more water.

Swent: So you lost the house?

Bradley: Well, we lost the house, but before we lost it we had every window and every door out of it. Just took it to pieces right there. [laughs] Funny thing.

Reminders of Earlier Times

Swent: You mentioned that when you got there you rented a room. I suppose this was the first thing that you did, and in those days you rented rooms in houses. Where did you board?

Bradley: Boarded in the house that was down at the end of the street, which was next to the house that my dad had been born in. You come into Georgetown from Auburn, and on the right there are two white houses. This is the one that we boarded in, and the other is the one that my dad had been born in, the old (and then still) water company house.

Swent: So there still were boarding houses in those days. Did you have a bucket lunch?

William Ralston's China

Bradley: No, we came back down there for lunch. Quarter mile, or something like that. Old Amy Shannon treated us well. She had, in her front room--which she didn't allow most people into--she had a whatnot, and it was full of things, china that had--

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Bradley: --been sent over here by the Emperor of Japan. It had been sent to William Ralston because Ralston had entertained the Emperor of Japan here when he was the big dollar man in San Francisco, and the cashier of the Bank of California. How much stuff got to Georgetown I just never found out, but it was there.

Then, a similar thing down at Jamestown--I never saw any of this--but one of the old men still living in Jamestown when I was living there was an old fellow named App. "Old" in those days could have been only, say, sixty-five years old. He looked old; he had white hair, and a white mustache. He looked awfully good on a horse--he was a slim fellow and he rode across our property frequently on his horse. He was the son of one of the Donner girls.

The Donner Party

Bradley: She had married an App--his father--I think in Sacramento, and they all moved down to Jamestown. The story was, that in that house of his in Jamestown, there was more paraphernalia left over from the Donner party than any place in the country. And incidentally, it was only about two months ago that I was taken to the place where the Donner party had all their trouble. You know, you go to Truckee, and down on the right, if you take the old road, there's that big statue to the Donner party. That's not where they had the trouble at all! It was about eight or ten miles off to the northeast from Truckee. There's a visitor's park now, and there are signs there that tell you the whole history, but I do want to check this stuff, because I never trust anything I read on a state park sign. But it just said that they had come down a hill from the northeast, come down this hill--and I didn't see any hills around there--and broken an axle when they hit the bottom of the hill. There were two Donner brothers, and this was one of their wagons. Since it was snowing, they decided they'd better get that damn thing fixed before they got snowed in, and go on.

So they cut a lot of saplings, and laid them up against trees, and so on, and made shelter for themselves. They got the wagon fixed all right, but they went into these shelters for the night. That night, when they went in, there was eight inches of snow. The next morning there was three feet. They were stuck. This is at the end of October. They were dying off--they'd been there all that time, and were dying off--at the end of April.

It's the most innocent piece of country you ever saw. Flat, trees, all that. A thin woodland. But good lord, there was

Bradley: nobody else in the country, there was no source of help. And they had complicated their problems, you know, by getting stuck on the Hastings cut-off, and a lot of other things. They'd just come by the wrong route and done the wrong things all along.

Swent: Weren't prepared.

Bradley: And then hit that early, heavy snow.

Swent: Awful story.

Bradley: Yes, but that's what you were up against when you tried to cross the Sierras in those days. Did you ever read Goldsborough Bruff?

Swent: No.

Bradley: Well, he's got two volumes. I've got them in here and I'll lend them to you sometime if you're good. Goldsborough Bruff was a member of a party that was organized in the city of Washington. He was a federal employee. He and a whole bunch of others decided they were going to come west, and they did.

Following Pioneer Trails

Bradley: They got diverted below Winnemucca. Below Winnemucca you had your choice of going southwest and across the Forty Mile Desert, and then hitting the Sierra, or else taking a route that the Applegate brothers had worked out. I think the Applegates had been with Fremont, but anyway they had a place up in Oregon, and came out from their place and hit this Humboldt trail down near Winnemucca. Peter Lassen was with them on his outbound, eastbound trip, and he decided that that was the way that everybody should come.

Now, you had some rather bad situations there in respect to Black Rock Desert, which is--well, I could drive to it now, but I could hardly tell you how to get there. There is a great big mountain on it that is just black as the dickens, but it sticks right up out of a flat floor which is just absolutely dry. So they had eighteen or twenty miles to go before they could get any water. That was the trouble with the Forty Mile--you had forty miles without water. And those things were very important to the travelers.

But Bruff came by that route, and came by the Black Rock Desert. David Smith and his wife, and Katherine Bradley and myself, hired a four-wheel drive one year, five years ago, and we followed that route out. There's something called High Rock Pass up there in the northwest corner of Nevada. We didn't go all the

Bradley: way through High Rock Pass, because it just didn't look right, even though we had a big four-wheel. Katherine's brother Bob and his wife walked through it sometime later.

In any event, beyond the High Rock Pass is Surprise Valley. Surprise Valley leads you to Fort Bidwell, and in Fort Bidwell there's a low pass over the Warner Mountains. You can go up over that, and you drop down into Goose Lake. And from Goose Lake you've got a free run to the state of Oregon, if you were one of the Oregon travellers. At Goose Lake also, if you're headed for Sacramento, or California, you got something damn tough ahead of you.

Goldsborough Bruff was a good writer, and he was an excellent draftsman. I went up and down a piece of road over there in Nevada, in the Humboldt Valley, just to find the place where he must have made this sketch of--I forget the name of the mountain, but there's a mountain out there. I found it because that profile that he drew, had in his book, was exactly what I could see there. He was good. But anyhow, he got stuck up there below Goose Lake in the Pit River Indian country, and that wasn't good.

Peter Lassen wanted everybody to take that route, because he was trying to establish a colony on the Sacramento River near where Los Molinos is now. All it did was just get him into trouble. That's just one of the things that's happened here in California.

I'll give you the name of that pass, the way you go out of Fort Bidwell and over the mountain to Goose Lake: that's Fandango Pass. I don't know why they called it that. There's one more thing I wanted to say about that Fandango Pass: I've been up on that two or three times now. There was a time when I was first in Nevada, that you could go out on the flats there between, say, Winnemucca and Fallon. These are the flats that are south of the present route of the highway, and south of the present route of the Southern Pacific. You could pick up almost any kind of artifact you wanted that had been left there by pioneers as they kept dumping their loads, coming along.

In 1940, or '41, the army built an air base near Fallon and fixed all those people up with jeeps, and you can't even find the old trails now, let alone find artifacts. But you take that Fandango Pass, and you'll see trails there, and you'll know damn well that those are pioneer trails, for two reasons: one is, that country only got used once--just one year did they take that trail; and the other thing is, there's nothing in the country to blot out those trails--there's nobody up there.

There is at Fort Bidwell, and at a couple of little towns here and there, but the country's just not used, and you can't even find USGS [United State Geologic Survey] quadrangles of that

Bradley: country. USGS hasn't even got there, or couldn't the last time I looked. So there you know, when you see these ruts, that those are above a hundred and forty years old. That's one of the benefits of roaming this western country. There's lots of history to see, if you know where to look for it.

Swent: And feeling as rooted here as you do, too. When you can go back and live in a mining camp next door to the house where your father was born--that's an experience that not many people have. That's wonderful.

The Bradley Home in Berkeley

Bradley: We had looked at this Berkeley house, about 1951, and at that time the lady who had it--a widow woman living here with just one person--owned two lots, on one of which the house had been built. She wanted a price then for two lots and the house that we didn't think we could afford. So we came up and looked it over, and went away.

We liked the house when we first saw it, and then about a year or a year and a half later we heard it was on the market again, but not with the double lot. The woman had decided she was going to give up the big house and build a small one on the remaining land, which is what she did.

I came up here one morning, and got her to the door, and the conversation went something like this: "Oh, yes, Mr. Bradley, how many bicycles are there in your family?" I said, "Two, I guess," and she said, "Oh, all right, you want to come up." She said, "You may have too many bicycles," and I said, "Well, I'll come back about two o'clock with my wife and her father."

So we came back and looked the whole house over, and then sat down right here--I can remember Arthur Connick sitting in a chair right there, and Mrs. Wright sitting somewhere else, and the rest of us gathered around. And Arthur Connick and Mrs. Wright got into a conversation about people here, and about things here--nice things, things they both knew. Arthur Connick had by then lived in this neighborhood about thirty years, and Mrs. Wright had been here forty.

I got to the office the next morning, and there was a note there to call a certain number. I called this number, and it turned out to be a lawyer in San Francisco. The lawyer says, "I'm Mrs. Wright's lawyer, and she has already told me that you are just the people she wants to sell her house to." That was just plain luck, and it came about because Arthur Connick, who was as

Bradley: tough a guy as you want to have doing your business for you--he was a banker--was also just as gracious and gentle as he could be when he wanted to be, and that's what had happened here. Mrs. Wright had just been captivated by him. So we got the house.

Swent: She didn't care how many bicycles you had.

Bradley: No. We got the house.

Swent: It's a beautiful house. Albert Farr was the architect, wasn't he?

Bradley: Yes. I've got the original blueprints on the house downstairs.

Swent: Did you have several children already when you moved in here?

Bradley: I can't remember whether we only had four, or whether we had five. I think we had four.

Swent: That's still quite a houseful of people.

Bradley: Oh, yes.

Swent: It's a large house.

Bradley: Yes, well, we needed one. It's worked out fine, and it's the best damn house for parties and weddings you ever saw. This poor girl that lost her husband here, three or four months ago, this daughter of ours, we married them right here, right in this alcove. This is where we always put the Christmas tree anyway. Moved this table out behind that thing, and married them right here--it was a good wedding. Then one of our sons has been married in this house. It's a great house to have a Christmas in, believe me.

Some of Philip Bradley's homes - Alaska, Nevada, California

The P.R. Bradley home on Oak Knoll Terrace, Berkeley.

P.R. Bradley's house at Opalite, Nevada in 1931 - note double roof, canvas walls - Boarding house in the background - at right.

Treadwell Mine manager's house, 1917, the largest house in Alaska.

V AN ADVISOR ON MINING

[Interview 7: June 13, 1986]##

Swent: Now this is--oh, dear, Friday, the thirteenth!

Bradley: [laughs] Is it?

Swent: Friday, the thirteenth of June.

Bradley: So far it hasn't bothered me.

San Francisco Chamber of Commerce

Swent: [laughs] No. We're going to begin today talking about government agencies; we'll start with the San Francisco Chamber of Commerce. When was that?

Bradley: About 1939. I'm pretty sure it was 1939 because I was then working on the Harvard mine, and that had started in November of '38. This thing came up not long after that. By that time I had a pretty good standing on the Mother Lode, and was a member of the Board of Directors of the Tuolumne County Chamber of Commerce. There are five Mother Lode counties: Mariposa, Calaveras, Tuolumne, Amador, and Eldorado.

I had been in Mariposa County for oh, I think, about two years, and got moved up to the Harvard Mine when the company took that on. I hadn't been there too long before my standing in the community got pretty good and I was made a director of the chamber of commerce, and all such things.

But what happened was: I think he was the treasurer of the city of San Francisco, and I think his name was Boyd--now, I can't be sure of either of those facts. He had the idea that the city of San Francisco was not reaching the back counties well enough.

Bradley: He talked to people down here, talked to the then president of the chamber of commerce of San Francisco, who was Ernest Ingold. They decided that they might, as a part of the San Francisco Chamber of Commerce, form a mining committee, which would give them the contact they wanted with the back counties. So a meeting was set up, and I was called down to attend it.

In those days I was moving fairly frequently between the Mother Lode and San Francisco anyhow. A meeting was set up down here in the Bohemian Club, and we had lunch and talked things over, and decided, yes, it was practical to set up a mining committee of the San Francisco Chamber of Commerce, because every firm that supplied to the mines up and down the Mother Lode, and all the entire Gold Belt was represented in San Francisco.

They formed it. George Dodge was made the first chairman, and he was a rubber company man. Eventually Bert Austin became a chairman, and eventually I became chairman of this Mining Committee of the San Francisco Chamber of Commerce. I think I did not become chairman of that until we had shut down the Harvard Mine and I had come down here and I was permanently attached to the San Franciso office.

The San Francisco Chamber of Commerce did reach out into certain governmental fields, and particularly undertook some things that were conveyed to Washington by the city of San Francisco, or by the chamber. We had then in congress a congressman representing the Second Congressional District, which is one of the biggest in the world, you know. Stretches all the way at least from Redding clear down to San Bernardino. That's the Second District of California, and Clair Engle then represented that.

He represented that for three, or four, or five years, and then became senator--the senate position opened up, I think, when Bill Knowland quit, or something, and Clair ran for it and made it. He was a pretty good man--Democrat, but a pretty good man. I always voted for him, and he and I got to be pretty good friends. The fact is, one of the big gold mining outfits in the West here came to me and said, we can get you all the money you need to run against Clair Engle in the next congressional election.

I thought about that a bit, and finally decided not to, for two reasons: one is, I had watched Clair Engle work, and he was pretty near unbeatable--he was an awfully good vote-getter. He ran away with Calaveras County when Jesse Mayo, then state assemblyman from Calaveras--for years Jesse tried to run for nomination to the Senate--ran against Clair Engle, and Clair Engle just walked all over him. Just took that county. Clair was running on behalf of, perhaps, eight or ten counties, but here this man who was running against him had his own county. Didn't get to first base.

Bradley: I didn't think I could beat Clair. I was well-known on the Mother Lode, and apparently somewhat admired in lots and lots of places, and had no enemies that I knew, but I didn't want to run against Clair Engle because he was a pretty good friend of mine for one thing; and in the second place I didn't think I could beat him.

Swent: This was for Congress?

Bradley: For the House. Do you remember that movie that was made with Marilyn Monroe, when she was in New York on a street and a subway came along underneath and blew her skirts way up?

Swent: I've seen the pictures.

Bradley: Clair and I stood on the street together watching that being made. He and I were pretty good pals. That was one reason I didn't run for it. But, as I say, the other one was that I don't think I could have--I would have been an absolutely green pea, politically. I was well liked up and down the Mother Lode, I was president of the Mother Lode Mining Association, and I also helped form the Mother Lode Firemen's Association, and all sorts of such things. All these little community things that you could then get into up and down that Gold Belt of California. All small towns, everybody knew each other--I knew the sheriff of every county and they knew me--and that sort of thing.

It was this kind of thing that led into being in the San Francisco Chamber of Commerce, and again, the San Franciso chamber did some pretty good things in Washington that were helpful to the mining industry simply because we could go to Clair, or anybody like that. We had the whole damn chamber behind us, and the San Francisco Chamber of Commerce was not one to be overlooked by the Washington people. So it worked very well while it lasted. I forget now what brought it to an end, but I think it was just the general collapse of the mining out here on the coast.

Swent: So this mining committee probably doesn't even exist anymore?

Bradley: Oh, no, it doesn't exist. You couldn't be on the committee in the first place if your company didn't have a membership.

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Bradley: When the Harvard and the Alaska Juneau, one after the other, had to shut down, why, we didn't keep up our membership in the chamber of commerce, so I couldn't do anything more about it. But nearly everyone else in the mining business was dropping out anyhow. One of the most helpful members in that thing, most useful people in that, was Bob Searls.

Swent: He was the lawyer member of the Searls mining family, wasn't he?

Bradley: He was one of the lawyers in the family--I think there were two. But he was the San Francisco lawyer.

Swent: What sorts of things did you go to Washington for?

Bradley: Well, there was a great effort made to get something through Washington, through the Congress and the Senate, that would restore gold mining, or at least create some sort of a subsidy for gold that could restore gold mining after the L-208.

Swent: L-208 was the War Production Board order that closed most gold mines during the war.

Bradley: Closed most gold mines.

Swent: But did not close the Harvard.

Bradley: The Harvard was not an operating gold mine--it was not subject to L-208; it was closed down before L-208 was issued. But, oddly enough, my Pine Tree mine should have been subject to L-208, but was not shut down, because the smelter needed the concentrate that we were shipping out, just as a flux for all the other ores they were treating. Alaska Juneau was not shut down by L-208 because of its community importance. It just held together that whole community of Juneau and all of the surroundings. It was the only thing going there.

So it didn't get shut down by L-208. It shut itself down, finally, because--I think I told you--a War Production Board committee, a wage committee meeting in Seattle, or in Spokane, or someplace, dealing with Alaska Juneau, had decided that the wages should be raised in Alaska Juneau. Alaska Juneau was a mine where the costs are extremely critical, and it just could not afford to increase the wages, especially in view of the fact the the crew had shrunk to the point where they were not getting the daily tonnage out that was really necessary.

The lawyers advising the company, and advising my dad, finally realized that the war board--whatever board it was--had no jurisdiction over a non-operating mine. So PR and the board of directors just shut the mine down like that, and the government was out, as far as Alaska Juneau was concerned.

Swent: So none of these mines were really closed down because the ore ran out?

Bradley: Oh, no, no.

Swent: It was strictly other economic considerations.

Bradley: Yes. Other forces. No, the Alaska Juneau probably had a tremendous amount of ore left in it.

Swent: And you feel the Harvard mine does too.

Bradley: I know exactly what the Harvard has, and these new people may mine it a little differently than I would have, but that thing I knew to the nickel what that would have done. That was the biggest and best mine evaluation job ever done by drilling, until Homestake did that thing up here in these lake counties--

Swent: At McLaughlin?

Bradley: Yes, at McLaughlin. No one had ever done anything like this before in California.

Swent: Tell about it.

Bradley: The Harvard mine was brought into the Alaska Juneau offices there in San Francisco by a man who worked just across the street. A Hooker of the old Shaw Hooker Company, who had put about $150,000, or something on that order, into the Harvard mine, and realized he had something that was very large and would require a lot of money. He had Alaska Juneau as a neighbor--the Alaska Juneau office was a neighbor to his office there. He came over and made a sort of a step-by-step arrangement with my dad: we were to do a certain amount of work, and then if that work proved out to our satisfaction, why, then we could take into possession a controlling interest in the stock of this Harvard Gold Mining Company, and so on, and so on.

We finally did. I was up there continuously at work for pretty nearly five years, from November of '38 until April or May of 1942. Did at least thirty-two thousand feet of drilling, and got at least fifteen thousand assays out of that drilling. Nobody had done anything like that before. It was a most interesting job.

Swent: Why was it that nobody had done it before? People just hadn't persisted to that point?

Bradley: Alaska Juneau was about the only set of people to come along with these sort of ideas, the sort of idea that was necessary to determine what was there. Alaska Juneau was just absolute expert on low-grade ore, because Alaska Juneau's mill heads were ninety cents a ton from an underground hard-rock mine, and they knew more about managing a mine where the ore didn't have quite the gold in it that you'd like, than anybody in the world. They were absolute experts at it. That had come down from Fred Bradley--from Fred to Phil, and then to the crew up there.

Swent: Did you have people at Harvard working who had worked up at Alaska Juneau also?

Bradley: No, but there was what you might call total communication. I don't recall what set up the basics of the means of determining the value of the ore body; whether I did it on my own, or whether it was a result of conferences that we had when some of the Alaska Juneau people were here--I don't remember. It just went along.

All that work is still available, and those people, the people that have that mine now, have come to me and talked about a consulting position for me, because they've seen the information I have. Apparently, it's better than anything they have, anything that caused them to take the mine over. They had me come up there about a month ago to talk to them about contracts. That's all it was, just very general and quick talk on the nature of the contract they'd get out--that was all. So I came home.

Swent: So as an outgrowth of your work with the San Francisco Chamber of Commerce, was this how you met people like Clair Engle?

Bradley: No, no, I had known Clair up there in that country. He was a resident of Red Bluff, but he was down on the Mother Lode a great deal, the congressional representative of District II of California.

Swent: Were you active in the political party? Did you do any political party work?

Bradley: I became elected up there a member of the Tuolumne County Republican Central Committee, but that didn't have a great deal of weight.

Swent: Did you meet any governors through that?

Bradley: I was meeting governors otherwise, and as I told you, little things like that party up at Opalite, that closing party, that gave me one governor on the list. Of course, I knew the governor of Alaska--I had known several governors of Alaska--because in Alaska the Bradley name was one of the big names.

Swent: Governors came and went, but the Bradleys stayed.

Bradley: That's right. [laughs] That, in turn, traces back to two things: one is the mines there became awfully important, and particularly because of the way Fred Bradley ran them; the other thing was that Fred Bradley had with those mines up there made himself known in the mining industry. He became president of AIME [American Institute of Mining, Metallurgical, and Petroleum Engineers], and things of that nature.

Swent: When did you go on the California Mining Board?

Bradley: Here I was in 1939 living in Jamestown and working at the Harvard mine, not yet married. Charles Segerstrom got hold of me and invited me to come with him to some of the meetings of the State Chamber of Commerce, which were held--there was a valley unit, or a valley section--sometimes in Stockton, sometimes in Lodi, Modesto, and all such places. I found I could do that kind of work very easily, I fitted right in. So I was getting acquainted with a lot of people who were not mining people. Do you know anything about Charles Segerstrom?

Swent: No. The name sounds familiar, but I don't know him.

Bradley: Well, Segerstrom was a banker up there, had the bank in Sonora. He was also a miner. He and two or three other people had had this big tungsten mine in Nevada, up on that hill near Winnemucca--and near Imlay. Their hard luck with that tungsten mine was that they threw the switches and got the mill going one morning, and armistice was declared at eleven o'clock that same morning.

Swent: Nineteen eighteen.

Bradley: Nineteen eighteen, yes. So they had to pull in their horns, but nevertheless that mine did keep producing tungsten, and was one of the good tungsten mines of the West. Segerstrom got a name from that. But when this gold price went up in 1933 and '34--and don't you let anybody tell you that Roosevelt made that price. There's a lot of people around that say, "When Roosevelt raised the price of gold." He had nothing to do with it.

Swent: How did it happen?

Bradley: The English did it. When the post-war depression came about, the English at first set the price of gold back--they had demonetized gold, or taken the price off it, during the war, because the war just raises such hell with the economy that a gold standard doesn't work. But the British had tried to go back to the old world price, which was $20.67 in U.S. money. Something else in British money, but gold traded back and forth freely at those two prices.

It didn't work. The economy had been so upset by the war that they couldn't hold things, they couldn't hold their monetary system together well enough, and British trade suffered. So about 1928 or '29, someplace in there, they created a free gold market in London. It still operates today. In fact, you hear of the meeting twice a day that sets the price of gold even today.

Swent: The London price of gold, yes.

Bradley: Yes, well, that's that market. With that in operation the price of gold started to go up again in late '28, or maybe early '29. I can remember seeing telegrams in the office here in San Francisco giving the price of gold for the day, and that sort of thing. It was creeping up.

Incidentally, Alaska Juneau was shipping out four bars of gold each shipment. I forget how frequent those were, but they may have been once a week, or every two weeks, or something like that. I'd see in the office a copy of a telegram being sent to Baruch: "Alaska Juneau today shipped four bars of gold; two to the U.S. assay office at Seattle, and two to B.M. Baruch at a certain address at New York." He was buying gold. He was a smart man, he knew what money was doing, you know.

Swent: He was buying it personally?

Bradley: Personally, yes. And the price of gold was sneaking up all the time. Incidentally, my dad told me later on that after Roosevelt got to be president, and called in all the gold, Baruch turned in all his gold into the government. He was a pretty good citizen.

Swent: I would think so, if he did that.

Bradley: Yes. Also he'd been in with Fred Bradley on the Atolia tungsten mine. I worked down there a good deal off and on, long after the war. I told you that the situation had arisen as a result of that Tacoma smelter purchase. Baruch had told Fred that he could have money for any promising mining operation. Anything that Bradley thought was good enough, Baruch wanted to get in on.

That's how Atolia got started, about 1906. Atolia was a tungsten mine on the eastern end of Kern County, and the northern end of San Bernadino. They came together out there in the desert. But Baruch put money into that, Fred put a lot of money into that, and together they made a lot of money because World War I came along, the price of tungsten went sky high, and this turned out to be a very rich mine as they opened it up. Everybody made money.

Another thing my dad told me was: Baruch took the two million dollars in dividends he got out of that mine, and turned it over to Red Cross. My dad said, that's another sign of good citizenship--he wasn't going to make money on the war. Of course there was something called the War Industries Board, that President Wilson created, and Baruch was made head of that during the war, and all sorts of things.

Swent: He was called the advisor to presidents, wasn't he, because he advised so many?

Bradley: Oh, he was. [laughs] But I told you what he told me about Truman: "We've got a nincompoop in there as president now." Anyhow, Roosevelt had made a lot of use of Baruch, and of course Wilson had during the war in that emergency situation.

Swent: We were talking about your political activities, and the fact that Segerstrom had the tungsten mine.

Bradley: Well, Segerstrom had had that tungsten mine. I'm just setting up the fact that Segerstrom was a miner as well as a banker. Just before World War II came along, why, he got interested in the Carson Hill, and the Carson Hill was the best gold mine on the southern end of the Mother Lode. Amador County produced more gold than Calaveras County. I think Calaveras County probably was the second county in gold production of the five Mother Lode counties, and a great deal of it came from the Angels-Carson Hill area.

I was down at the Oakland Museum yesterday, in the Historical Guild meeting, and I said, there's all this fuss being made now about celebration of the fiftieth anniversary of the building of the Golden Gate Bridge. I said, about three or four years ago there was a fuss being made in the papers, and as a result I had some phone conversations with a woman in--maybe Angels Camp, maybe above that country someplace. This woman was a daughter of a Jerry Maroon, who was the foreman of the mill at Carson Hill. I knew him pretty well.

It turned out that at Segerstrom's request, Jerry Maroon had made a golden rivet, and that rivet was the last one driven on the Golden Gate Bridge. So I said, here's something the Oakland Museum can do, we can open that thing up again, and try to find out. But they never found out, in this inquiry three or four years ago, what became of that golden rivet. But that was Carson Hill gold, that was Segerstrom gold.

Swent: He invited you to be on this chamber of commerce.

Bradley: He invited me to some state chamber of commerce meetings, and I began going to them. That put me a little bit in the public limelight too. As I say, I was elected a member of the Tuolumne County Republican Central Committee, and I was director of the chamber of commerce, and all that sort of thing. I was getting right into the community. It was very easy to do, because they were the kind of people I knew, that was country I knew.

Then this San Francisco Chamber of Commerce thing came up. I got called down to sit in on the meeting. I forget who else was there at the meeting; I think a fellow named Bill Losh, a publicity man, was there, and probably Al Knorp was there. But anyhow the chamber of commerce mining committee was decided, and towards the end I got to be chairman of that thing.

The Western Governors Mining Advisory Council

Bradley: Then Eisenhower got elected president, and I suddenly got an idea one day, sitting in the office, that some of us should get together, get a date with Douglas McKay, and go up there in Portland and talk to him about mining, because he was going to be Secretary of the Interior. We found out after we got there that Sam Williston had done the same thing on his own.

I went first on that to General [Warren T.] Hannum, who was the director of the Department of Natural Resources for the state of California, and was my boss on the mining board. I went to him, and I said, what about this? And he says, well, it sounds like a good idea. I said, will you get our governor, Earl Warren, to write to McKay and make a date?

Hannum said he would, and he did, and Warren made a date, and three or four of us went up. Now, there were half a dozen people that I tried to get to go up. I remember getting hold of Henry Mudd on the phone--he didn't think there was much use. Down in Los Angeles they're not the politicians that we are here in San Francisco. He couldn't see any use to it. As a matter of fact, I think the only ones that could do it--it was pretty short notice, just before Christmas--were me and Donald McLaughlin. I sprang the idea on him, and he thought it was a good idea, so he went up, and I went up.

Swent: He was a natural-born politician.

Bradley: Well, he was!

Swent: Yes, he really was.

Bradley: So in addition there were the men who were the chiefs of the natural resource departments of the state of Washington and the state of Oregon. They both came down. We had a nice luncheon meeting in the Arlington club there in Portland. Boy, that's some place. That's the Bohemian Club of Portland.

Swent: And was it your suggestion to invite these other people from other states as well?

Bradley: Yes. Oh, yes, I cooked the whole thing up.

Swent: And were the natural resources people from California also there?

Bradley: Just me at that time, representing the State Mining Board.

Swent: But there was no other state official there.

Bradley: Not from California, no. So we talked with McKay, and he said what he thought he'd like--

Swent: Had he actually been installed?

Bradley: No. I think he'd been nominated. His name was in all the papers, it was known that he was Eisenhower's choice. But of course he had to have the Senate approve him, and all that sort of thing. He came through all right. He said what he thought would be a good thing was for the western states to form some sort of an organization that he could communicate with on these mining problems.

That was just before Christmas, and in February either the [American] Mining Congress or the AIME, and I forget which, but probably the Mining Congress, was having an annual meeting in Los Angeles. So I think again I went to the governor here in California, and got him--this was through General Hannum, who was just between me and the governor--and got the governor to write to all the other governors of the western states. Several of us sat down and decided which states it would be: Nevada, and Oregon, and Washington, and California, and Arizona, all these adjoining states. So our governor would write to the other governors, say that this meeting was taking place in Los Angeles, and that we would use part of that meeting for discussion of what we could do in the way of a western states organization.

That came out very well. Then it resulted in a second meeting in Salt Lake. [laughs] That was a half funny one, because we all went to lunch at the Alta Club at Salt Lake, and I had on my right the governor of Utah, Bracken Lee. He explained to me, amongst other things, just why it was that he'd turned down the school people in the education department there on this request for money. That got into all the papers, you know. He says, "It's like this: the highway people come to me and they want to build a new highway from here to there--that highway's got a beginning and an end. He says, the water people come, and they want to put in a new canal, a new water supply. Well, that's got a beginning and an end. And the educational projects never end." So he turned them down.

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Bradley: All of that we did for them, this Western Governors Mining Council, and I think Sam Williston and I did most of the paper work on it here. Sam just took it right up.

Swent: Is it still going on today?

Bradley: No. It quit about six or eight years ago.

Swent: How was this financed? Who paid your expenses?

Bradley: Because I was a member of the State Mining Board, and was a member of this Western Governors Mining Advisory Council, I got my way paid, say, to Salt Lake, or places like that. Some people paid their own way, and so on.

We named it, right there in Salt Lake City, the Western Governors Mining Advisory Council. What we wrote up as a constitution, you might say, or charter, we got every governor to sign. So it got off to a good start, and it lasted twenty years.

Swent: You would attend the meetings where the governors were already meeting

Bradley: That's it. Every year the Western Governors Conference met, so we would have our own meeting there.

Swent: You got time on their agenda, then?

Bradley: That was because of a woman over in San Francisco that made all the arrangements for this Western Governors meeting. She just put us in there.

Swent: She was a San Francisco-based person.

Bradley: Yes. Some of us took her to lunch once in a while, and that sort of thing. It just worked out fine. She just took a liking to these miners, that's all.

One of the drawbacks was this, as you can well imagine: about every two years you got a new governor in, and you had to educate them all over again. He was no damn use to this council until he got educated about mining, and it would take about two years to educate him. [laughs] Just as soon as you got him educated there'd be another governor to educate.

You know that this thing was formed--when was it?--twenty-five years ago, maybe thirty years ago now--and mining was pretty lively then. Especially the copper mines--well, good lord, even the copper mines have, you might say, gone underground. So our last meeting was in Reno, and some governor had raised some kind of an objection. These people just accepted the objection and decided because of the bad state of mining there was no use in going for it any longer. But it worked.

Swent: You only met with them once a year?

Bradley: We met twice a year. We met with the governors once a year. They only met with each other once a year. I remember in particular the meeting up in West Yellowstone, and Mr. Reagan's first year as governor of California. Well, Reagan came into the hall--this is a big hall that belonged to the Union Pacific Railroad when they used to feed the hundreds of people that they took up with them to

Bradley: Yellowstone on that branch line they ran up out of Salt Lake. They had all these facilities, and this governor of Montana got a hold of things and he set up a great big dinner. But he set up also a place for the meetings of the governors, the little committees they got together.

The morning it started the place was full of governors, and I was talking to a governor that I knew--incidentally, it got so that there were about half a dozen governors that would say, "Hello, Phil!" They knew me, so that was fine. But all the newpaper reporters were there, particularly because of Reagan. Reagan was making quite a splash, you know. He did right from the start.

But those S.O.B.'s--this hall had an entrance foyer, and then a set of steps that went down into the big hall. Reagan appeared at the top of those steps along about eleven in the morning. Every damn one of those newpaper men who had, maybe, been talking to a governor himself right there on the floor, dropped everything and ran up and grabbed at Reagan. That's newpaper people for you, they're awful. So I didn't like that, but that's what happened.

Then Reagan, about the third day of the conference, got up and said, we've got these water problems in the West, and he recommended that every state in the West make an inventory of their water supplies. I thought to myself, this fellow's got a lot to learn. Half the states in the West didn't have the money to do that kind of thing, but Reagan didn't know it. He came from California, a rich state. That was interesting.

That meeting came to its end, and we went on and had two or three more.

Swent: Did the governors initiate contact with you in between meetings, when they needed information?

Bradley: There was always somebody in every state that kept in touch with his governor. I did through the Sacramento organization, and as I say Hannum, who had the mining board under him, was in the governor's cabinet.

The California Mining Board, 1944-76

Swent: You didn't tell how you got on the Mining Board.

Bradley: On the Mining Board--that goes back to Segerstrom, and that's the reason I mentioned him. Earl Warren got elected governor of California, and he had all these boards to appoint. Sitting in the meetings of the board of directors of the Tuolumne County

Bradley: Chamber of Commerce, I would get in on these requests that the governor's office was making of such organizations for names for certain jobs in Sacramento. Warren was an awfully careful man about that. That chamber of commerce didn't put in my name, but it came in from a lot of other sources because of this activity I had been in on then for a period of three, or four, or five years. So I got nominated to the board.

Swent: How were you notified of this?

Bradley: I forget--oh. [hands a letter to interviewer]

Swent: Oh, this came to you in the mail. Do you want to read it?

Bradley: State of California, Executive Department: "I, Earl Warren, governor of the state of California, by these presents appoint and commission Philip R. Bradley to a member of the State Mining Board"--this is my first one. Yes. Earl Warren, sixth day of April, 1944. And I got quite a number of these after that. I was appointed, I think, at least six times.

Swent: And you were chairman of it for a number of times.

Bradley: [laughs] I was chairman for twenty-five years! On the board about thirty-two!

Swent: This appointment lasted through that term of governor, did it?

Bradley: Well, yes, that's what it would have been, but I was in Sacramento a good deal in those days, and helped General Hannum with a bill in the legislature that set up a mining board with the five members with four-year staggered appointments.

Swent: So they overlapped the governor.

Bradley: They did overlap that way. I got us a repeat appointment from Warren on this thing, and then I started getting the benefit of four-year appointments of the next four governors. Picked those up. I was appointed by at least two of them twice. Warren was followed by "Goodie" [Goodwin] Knight, then, I think, Pat Brown. I got enough appointments and reappointments out of those to keep me on the board for thirty-two years.

Swent: The longest time anybody's been on, I'm sure.

Bradley: There have people on the State Board of Equalization for more than forty years, but I think I'm one of the records.

Swent: I think so. Was Warren favorable to mining?

Bradley: He was. One of the first things we did as a mining board was to organize a meeting in San Francisco of miners and state mining people--our equivalents in other states--from all over the West. We had a tremendous meeting in San Francisco, and Warren came to that. We got out a whole bunch of resolutions, we had it printed, and so on--it was good stuff. We didn't bring about anything, except to put mining in the public eye a little bit more.

Swent: You were supposed to be an advisory board to the state--

Bradley: The function of the mining board then, as I recall--we had something like 260 words, set us up, in the public resource code of the State of California. If you're set up by 260 words only, you've got lots of power--lots of room to roam. I liked that, we could organize ourselves, and I did hold elections about every two years. I always got reelected by that board until Paul Henshaw and Dick Jahns (they were both on the board) finally decided--and it was their privilege to do it, of course--they decided the board should begin having new presidents. So I lost my job as president, which was all right.

The thing was, that I was here in San Francisco, free to go to Sacramento any time it was necessary, free to go down Market Street and go into the Ferry Building, and talk to Ian Campbell [State Geologist] about his problems. I was also relieved of any real work because of the Harvard Mine being shut down, and all these others. I think I made an ideal chairman of that board because of all those things, and I knew mining, and knew the problems of miners, so I thought it was pretty good.

Swent: Did you work with legislators at all?

Bradley: Not very much. I saw [former Governor Edmund G.] Pat Brown about two years ago. There was a lunch over at the university, at that thing Katherine belongs to, that Bancroft advisory thing [Friends of The Bancroft Library]. And they had Pat Brown there. So he and I got off in a corner and started talking about old times. He said that my board was the best one he had, because, he says, "You fellows were honest. You did what you said you'd do." Well, you know how it is in Sacramento, people always playing games. We weren't, we were miners, and we were doing the right thing.

Pat Brown liked mining, for a fact. He came to me once and said, "Phil, you get together a five-man committee of gold men, and I'll get an audience for you with President Kennedy." Because he and Kennedy had flown together, going up to the dedication of the Whiskeytown Recreational Area in California. That was the first one in the U.S. to be dedicated as a recreational area alone. So Kennedy went along to give the talk.

Bradley: They saw things down on the ground as they flew along, and Kennedy was asking what they were, and Brown said, that's where the miners worked. So he got Kennedy interested in mining. So he said, "You go to see the President, I'll get you the date." So the five were myself, Donald McLaughlin, Lew Huelsdonk, Merrill Shoup from Colorado, and Hank Day from Idaho. I'd been told this in October, and I got my letters all written, but we never got to see the President. This guy Oswald ruined it all.

Swent: About the mining board--what sorts of things were you trying to get done?

Bradley: Well, it seems to me that about a third of the time we were talking about getting gold restored to its rightful place in the economy. I'd been to Washington now, had been called back there during the Korean emergency--

Swent: Would you like to tell about that?

The War Production Board, Washington, D.C., 1950

Tungsten, Manganese, Chromium

Bradley: Well, that was a good thing. I got a call one day at the San Francisco office from Jim [James] Boyd, who was then head of the Bureau of Mines, and had been roped in on a minerals production committee for the purposes of the Korean emergency.

The Korean thing came along, scared the hell out of everybody in the East because there had been such troubles in Washington because of World War II. They weren't going to have that happen again, they were going to be ready for anything. The first thing congress did was create a War Production Board, and they made [Charles] "General Electric" Wilson the head of it. And he was a hell of a good man, too. We had contact with him. That thing then was divided down the line, hell, they even had a fisheries committee. But they did have this minerals production committee, and Jim Boyd was made head of it.

So he got to phoning people, and he phoned me in the San Francisco office one day, and he said, "We're setting up something here in Washington for this Korean thing. It's going to take us about two months--come on back, will you?" I said, "All right, I will. I'll talk to the people here."

Well, Alaska Juneau was doing nothing, so it didn't make any difference. But I thought to myself, "for two months"--the word

Bradley: of "two months" from Washington is much more likely to mean six. So I got there on the eighteenth of December, and I left on the eighteenth of May. That's exactly six months. But it was very, very interesting.

Swent: What were you doing?

Bradley: Well, Boyd divided his responsibilities up into little committees that had certain metals to look after. There was a copper committee, and a god-knows-what committee, but I got tungsten, and manganese, and chromium.

Swent: Were you inventorying reserves?

Bradley: Well, the purpose of the committee was to try to decide what the country could produce, what it couldn't produce, what had to be brought in from other parts of the world, and what had to be done about that, and so on. If you were going to produce in this country, what you had to do to bring about production.

Swent: There was something like this, of course, during every war--they gear this up. But then it stops.

Bradley: John Morgan, who I think is now head of the Bureau of Mines--if he's not head he's right up at the top--is still there. We all wound up in congressional committee hearings, and most of these were carried out by Clair Engle. But John Morgan came one day, and testified before the committee; he read from a book all about the difficulties with the procurement of manganese. And what he was reading was Civil War testimony. Yes. Testimony of Civil War hearings before Congress. [laughs] And right then I felt like things don't change.

They brought down Howard Young to run the agency after a while. Howard Young was running one of those big zinc companies, the one out of St. Louis--I forget which one. He made a very good executive.

Swent: So you were checking on tungsten, chromium, and manganese. Did you go out and visit the places, or do it from Washington?

Bradley: I had a beautiful trip down to the Haile tungsten mines down in North Carolina. In there I got some wonderful samples of Huebnerite. I found those at the foot of a ladder in a drift, when I was going through that mine. I put them all in my pocket. But I suspect very strongly there was some young engineer working for the company who was up in that stope picking up specimens and bringing them down, and would come back for those. But when he came back, [laughs] they weren't there.

Bradley: That was a good trip. That's the only trip I made, though. It was mostly sorting out information that was fed to you by the experts of the USGS on these three commodities. Dwight Lemmon on tungsten, Bob Thayer on chromium, and Max Crittenden on manganese. He wound up in USGS down at Menlo Park. Dwight Lemmon since has died, and I don't know what's happened to Thayer since then. But this was all 1950--this is over thirty years ago. Why, how time flies! [laughs]

Swent: Did you work with a lot of people that you already knew?

Bradley: I hadn't known any of them before.

Swent: Boyd you'd known. But not the other people?

Bradley: Boyd I'd known, yes, of course, and the man who ran the thing under Boyd was Sam Williston. Sam lived in Palo Alto, and he was very helpful in working out the Western Governors Mining Advisory Council. He was a very active member of the mining committee in the San Francisco Chamber of Commerce, and so on.

Truman was president. I'll tell you how I remember that: all the important people in the United States got a telegram one day from the President of the United States asking them to come to a meeting in Washington where the material situation of the country would be talked about. It was a big auditorium that holds about two thousand people on the lower floor of the Interior Building, where we were all posted. And we went to the meeting. We got a talk from Harry Truman, and I remember telling people how refreshed I felt after that talk, because I slept through the whole thing. That was the kind of a voice he had, it was a monotonous thing.

But I did listen to the talk by Charles "General Electric" Wilson, who was the head of this administration, and he was good. You could feel that guy, you could just tell why he was running something like General Electric. You know, people let you know, just their demeanor, their character comes out in things like that.

I was about half-way through my self-appointed six months by then. But it was an awful waste of time. Nothing came out of it, except that I personally made a lot of good and useful friends.

Swent: Did you have to go through FBI clearance, and Senate approval?

Bradley: I had to get some kind of clearance all right, but I think it was done right in those offices. I had some contacts with especially the Secretary of the Interior--I think that by that time was Chapman. But I found that you could talk to the Secretary's

Bradley: secretary--they were all eastern girls, or most of them were eastern girls--you could talk to them in a gruff western voice and you'd get their attention. [laughs]

For instance, somebody would write to the Secretary of the Interior about some mine he knew about. Well, that would come down to me, if it was a tungsten mine, say, right from the secretary's office--that is, via his female secretary. So I had lots of conversations on that back and forth.

One guy wrote and said he knew of a lot of manganese in Central America, and he said he recommended very strongly that the U.S. government take some money and go down there and buy the land. He said, you wouldn't buy the manganese mine to begin with, because then the enemy would know what you were doing. His idea was that the money that was ordinarily used in mining should go into the purchase of cattle. Because owning cattle, each year you could double your assets, and if you did that enough then you'd have a lot of money to go mining manganese with. Well, [laughs] that's one of the times when I used my gruff western voice in telling the girl up there in the secretary's office how that letter should be answered.

Swent: You didn't think cattlemen always doubled their money every year?

Bradley: I didn't think so, no. But anyway, there was a lot of that sort of thing going on there in Washington. This fellow, I think, or maybe somebody else, wrote in and said, if you remember, I met you at the Democratic state convention here in Minnesota in such-and-such a year, and all that sort of thing. Politics is just that deep!

Swent: A contrast then to your experience in Sacramento.

Bradley: A contrast, yes. Sacramento was pretty well run, and as a matter of fact I think one of the best governors that we have ever had here in the state, from the standpoint of capacity and management of his affairs, was Warren. And as a matter of fact, I think Warren reached his political peak as governor of California, and not as supreme court justice.

Swent: He was a good manager?

Bradley: Good manager of the state's affairs, very good.

More About the California Mining Board

Governor Reagan; Personnel Selection

Swent: To get back to the state mining board; did you have any concern with taxes? Has there ever been a severance tax problem, or those kinds of things?

Bradley: I was invited to a meeting in Sacramento where those things were discussed. A guy from Pasadena who's still on the Board of Equalization was there. I sat next to him, and we argued about things--I didn't like him at all. But that's the closest we got, I would be invited to a meeting. I got invited to a meeting up there with a lot of the principals of these San Francisco labor leaders, and they were a tough bunch. But luckily for the rest of us, they didn't know what they were talking about.

Swent: What were they trying to get?

Bradley: Oh, I forget what it was. Labor was just trying to get its share of something. I forget entirely. You could just tell that while they were tough guys, and probably ran their own little affairs very, very well--they just didn't know what they were talking about when it came to talking commerce, or industry, or economics, or anything else. That was an interesting thing.

Swent: Did you work very closely with the Division of Mines?

Bradley: Oh, yes. Of these two hundred and sixty-odd words that created this board were words that told us that we would make policy for the Division of Mines. Which I think was a pretty good idea. Now, Olaf Jenkins didn't like that, and Olaf Jenkins was one of the two best state geologists we've had.

Swent: He was there for a long time.

Bradley: He was there for a long time. He was followed by Ian Campbell, and those two were especially good men, they were high-grade men. Olaf told me once, years later, he says, there doesn't have to be a mining board. But he was wrong. The mining board was a good idea.

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Bradley: It was re-formed in the administration just ahead of Warren, but it was created as a board of trustees for the Division of Mines way back around 1900 perhaps. And you know who was on that board in 1907? Fred Bradley. [laughs] I didn't know that for a long time, but he'd been gone for ten years--he died ten years before I ever went on the mining board. So we never got to talk about it.

left to right: California Mining Board, ca. 1956, T.H. Rodgers (Chancellor Oil), Lewis Huelsdonk (gold mine manager), Bert Austin (mining engineer), William C. Browning (mining engineer, copper), Philip R. Bradley (Chairman, Mining Board).

Swent: But you think it served a good function?

Bradley: Oh, yes. Served a good function.

Swent: And what was that?

Bradley: Well, the function is generally that the mining industry has that much contact with the Division of Mines, and the Division of Mines has that much contact with the industry that they're created to serve. You just can't have a gap there.

Swent: So it was more a liaison with industry than with the legislature or the governor?

Bradley: Now, we were able in Warren's administration, and Knight's administration, twice in each case, to set up a lunch for us all with the governor in Sacramento. And at this lunch we just kicked around things generally.

Swent: Directly with the governor.

Bradley: Directly with the governor. That was a good idea. Now, one of the objections I had to Reagan as a governor, on many, many points, was that Reagan was not a man to be close to what you might say were his subjects. He was not close to the citizens of California.

Swent: He put more layers in between there, didn't he?

Bradley: Well, not so much he put in more layers, but he was just a bit aloof. He ran things the Reagan way, and he ran things in accordance with what influential people in Los Angeles may have told him before he ever came up here to be governor. He got a hold of a number of men, a committee, I suppose, of ten or twenty men, and put them to work on reporting on the function of the various parts of the state government. Out of that the mining got transferred from San Francisco to Sacramento, and that was a big mistake. That's hurt the Division [of Mines]. The Division isn't anywhere near what it used to be when it had the independence that it had as a San Francisco entity.

Swent: You were on the mining board still, and you had to go up to Sacramento to talk to people.

Bradley: Well, we fairly often scheduled meetings in San Francisco. I'll tell you something--you don't necessarily have to put it in here--but when Cal played two or three games down in the Rose Bowl, I'd always call a meeting on the day after, down in Los Angeles.

Swent: [laughs] People were there.

Bradley: They were there. But it meant we got free transportation [laughs].

Swent: Of course, you had people from the South.

Bradley: We had people from the South. Now, to begin with, it was interesting. To begin with, we met in San Francisco in the office of Van Deinse, who was president of the Yuba Gold Dredging Company. He was a very capable man, and he was put on the board. Tommy Mein was put on the board--he was even younger than I, though, and hadn't been out in the field quite so much as I.

Another very high-grade man was William C. Browning, who was a trustee of the University of Utah--he was a graduate of the University of Utah, and was one of their trustees. He was a man of considerable competence. I had the somewhat unpleasant, but otherwise honorary job of being his pall-bearer when he died. He'd named me. That was a compliment.

Swent: Did you have any influence in appointments to the division?

Bradley: We were required by law to take a part in the choice of the head of the division. In one case it was Olaf Jenkins, and in the other case Ian Campbell. The procedure was this: word was gotten out by the State Personnel Board all over the United States that there was this particular job available. So they got all sorts of letters looking for the job. The first function of the mining board was to read those letters over and throw some this way, and some that way. One of the men we threw out when Ian Campbell was being considered was the state geologist of the State of New York. Because we thought no one from New York could possibly know anything about California geology. It was just simple.

The fact is that they now have a former state geologist of New York as the head of the division. But this was not brought about in my time.

Swent: Of course, Jenkins had been with the division, hadn't he? He worked up to it.

Bradley: A long time, yes. Ian Campbell came in from Cal Tech [California Institute of Technology]. We'd seen him--he was the kind of guy that got around, too. Everybody knew him.

Swent: So you did the initial screening.

Bradley: We did that first screening, and we sent back to the state personnel board that there was no point in getting in touch with these so-and-sos, get in touch with these. So they did, and their procedure was to set up a written examination. But the mining board had a big hand in that, because we were asked to, permitted to, write out questions for that examination. So we did. The

Bradley: examination was given. A certain number of those who passed the examination--I forget how this choice was made--but a certain number of them then were subjected to an oral examination, and this oral examination was by a number of people who, generally, I selected. I was chairman of the board, and those fellows didn't want to be bothered with it, so they let me do it.

I remember on this board that finally selected Ian Campbell there was Paul Henshaw and Ira Joralemon. I forget who the others were. Then the function of the board was to pick out the three who had passed the highest on the written and the oral examinations, and pass those names on to Sacramento. You didn't make the pick of the one out of the three, you made the pick of the three, and Sacramento picked one out of the three.

Swent: Meaning the governor?

Bradley: No, not the governor, one layer below the governor, the Director of Natural Resources. That's how we got Ian Campbell. And Dick Jahns later told me what a hell of a time they'd had getting Ian Campbell in. Well, I went through every step of the procedure, and I had known whether Ian Campbell had a hard time getting in or not, and he didn't. But Dick Jahns was a funny guy, he was a suspicious son-of-a-gun.

These were men around me, Van Deinse, Browning, Tommy Mein--no fool; a fourth man on that thing was George Halleck, who was from Nevada County, and he was president of the California Hydraulic Miners' Association, and they put him on the board for semi-political reasons, you might say. They wanted somebody that represented one of these country mining organizations, and they put him on. He was a nice guy. And I had a good standing in the mining industry, so the five of us had a good standing in Sacramento, with people above us, or along side of us, and so on. It was a good board. For me, that lasted thirty-two years.

Swent: That was a time when mining was still more influential in the state.

Bradley: There was still a little mining then, but it was only shortly after that that the legislature put through this SMARA--Surface Mining and Reclamation Act bill, and that hasn't been good for mining at all, here in California.

I went down to an office in Sacramento, and I inquired there whether that bill would go through, and I was told positively, by two people in that office, that the governor would not sign it. That's how much they knew about it, because he did sign it. And that's been bad for California mining.

Bradley: I have told the American Mining Congress more than once--and I might be speaking at a committee, or something like that--watch California. You're going to get all sorts of conditions and restrictions on mining out of California. Every state will have them someday, but they will start in California, so you watch California. That's just the way it's come out.

The American Institute of Mining, Metallurgical, and Petroleum Engineers, a Fifty-year Member

Swent: That's another thing that you haven't mentioned, which you should, which is your activities in the Mining Congress, and AIME, and all of those things.

Bradley: Well, I was not so active in the AIME. I got my fifty-year membership for attending that thing just this year, I think, but it might have been hung over from last year--I forget.

The American Mining Congress

Swent: You've been very active in the Mining Congress, though.

Bradley: I was quite active in the Mining Congress.

Swent: You were on the board?

Bradley: Not on the national board. There are two boards for the Mining Congress, or there were in my time: there was a national board of governors, and that worked in Washington; then there was the board of directors for the convention, and I was on that always. Because Julian Conover, who was the secretary of the thing, and I got along very well.

[laughs] For the Seattle meeting of 1953, he finally made me program chairman, and that's just the next job below convention chairman. But I could never take that, because by that time Alaska Juneau was shut down, and we didn't have any money in the office. I just couldn't take part in those things. My dad had been general chairman. My dad was general chairman here in the 1940 meeting of the American Mining Congress.

At that meeting--by the way, we had a little special meeting where selected people were called to join, and I was one of them--that decided there should be a California chapter of the American Mining Congress, and my cousin Worthen was elected chair-man of

Bradley: that. Of course, that went on then until California was just so steeped in the war that there wasn't any more mining. I talked to Allen Overton [executive secretary] about that, about reviving that sort of thing. He says, no, the board of directors has now declared there'll be no state branches of the American Mining Congress. There had been, before that, a few. I think the Missouri lead district had a branch, and so on, and we had this one here.

Swent: One of my first experiences with anything like this was coming with my parents--I can't remember if it was Mining Congress, or AIME--in September 1948, in San Francisco.

Bradley: I suspect that it was the AIME, and Tommy Mein was running it.

Swent: Possibly. I remember I had a lot of fun; it was the first time I'd been to anything like that, and I really enjoyed it. And I remember all the handsome Bradleys--there were several Mr. and Mrs. Bradleys, and you must have been one.

Bradley: In '48? Yes, Katherine and I were married then.

Swent: And there were a couple of others, too, weren't there?

Bradley: Oh, sure, Jim, and Jack, and James--all had wives then.

Swent: You were all so good-looking, and there was one of these cruises on the Bay--

Bradley: On a ferryboat.

Swent: And the Meins were there, and they were handsome, and Don and Sylvia were not married yet, but this is when he first had Sylvia there as his date--

Bradley: Yes, he picked her up in Denver.

Swent: And everybody was buzzing about that--

Bradley: Yes!

Swent: And that was a lot of fun. It was just, I guess, the first big one after the war. And people were in the mood for a good time. Mining was still a big thing then, of course.

Bradley: It was, in California here. They didn't know it, but then they were going down the chute.

Now, I have one thing to get into here, that came about as a result of my activities in the Mining Congress. There was an article published in Collier's, which was still running--quite an article. The thing was headed something like, "I Can Steal

Bradley: Government Land." This fellow went on to explain just how you could take up a mining claim, and keep it forever, and all that sort of thing. Well, that got everybody stirred up. It even got the Wilderness Society--I think it was--stirred up.

They went to two bodies in Washington: they went to Julian Conover [of the American Mining Congress], as representing the mining industry; and they went to the Forest Service, because so many mining claims were on Forest Service land. And Conover arranged a meeting of the Forest Service people in Washington and mining people who were brought in. The mining people that were brought in included at least two lawyers from Salt Lake, who were pretty competent cookies--in fact, one of them is about as competent a lawyer as I have ever known, you might say with the exception of Bob Searls.

And they got two mining engineer-geologists into that thing, and I was one of them. We had a meeting the night before, and Ray Holbrook, of Salt Lake City, told us exactly what he had worked out, and got our advice on certain points, and so on. Well, the next day we had this meeting with the Forest Service. The head of the BLM [Bureau of Land Management] was there, Marian Clawson. And the head of the Forest Service was there. I can't bring his name to mind now--[Richard E.] McArdle of the Forest Service. And they had two or three lawyers from the Forest Service.

It was a pretty good meeting. Ray Holbrook laid this thing out that he had dreamed up, that he had worked out, and we all chimed in as seemed appropriate; and if the Forest Service would ask a question, why, one of us would answer that question in a way that would fit in with what Ray Holbrook had worked out. The Forest Service accepted that hook, line, and sinker! So then Conover arranged another meeting, in Salt Lake, for nothing but mining people, and we went over that whole thing, and it got accepted there. And <u>then</u> it went into Congress, and they just passed it like that.

That was, I think, Public Law 167. That was a good law, it was well done. It made it more difficult for miners to hang onto mining claims indefinitely--and there was an awful lot of that--and it eliminated the privilege of claiming certain valueless minerals under the mining act. Holbrook had dreamed up the idea of "common variety" [minerals], and his scheme eliminated those.

That was a good idea, because people were going out and putting mining claims on gravel, and on slabstone, and everything else. That was not a good thing--not with the population increasing to the point it has now increased after the war. Stone and gravel were perfectly legitimate things for miners to claim in the early days, but not now. He eliminated them--that was a damn good idea.

Swent: That grew out of this meeting.

Bradley: It all grew out of that meeting that Conover worked up, the Mining Congress worked up, in conjunction with the Forest Service.

Later on I got appointed to--and this came about, I think, because of a big meeting we had in Sacramento once. Sam Williston and I--and this was Sam's piece of work--got together, me as chairman of the state mining board here, and Sam we'd nominate as chairman of the Western Governors' Mining Conference. I was chairman of that for the first year and a half. Then I did a little electioneering, and got Sam Williston in as second chairman--good one.

Sam got the idea of getting as many governors as possible to meet in Sacramento and go over these mining problems. It worked out very well. Katherine was there--wife of the chairman of the mining board--and she was amused by Virginia. Now, you don't know who Virginia is. Virginia was Governor Goodie Knight's wife, and she was the kind of a gal that has to have her picture taken at just the right angle, and all that sort of thing--a Los Angeles gal.

The United States and California Forest Services

Bradley: That meeting came out well. We had one committee meeting there that had to do with mining claims in the forests. The chief of forestry in California, for the U.S. government then--the U.S. Forest Service--was Charlie Connaughton. He sat in the back, and he heard us all talk, and he heard me talk. From me, apparently, he heard quite a different slant than he'd been hearing from miners, and he liked it. So about two years later, in the Truman administration, I was invited by the secretary of agriculture to take a position on a committee which he was appointing, but chaired by his assistant in respect to the Forest Service--it was really a Forest Service committee, but it was a good one.

Out of that I got a good many trips to Washington, and several good trips out into the country into the forest, to see the forest problems. That was probably the best committee job I ever had, that was good. Then, after that, when that job was over and Harry Truman was out of office, and all those federal committees collapsed, I got put on a similar committee here with respect to California, and that's the one I told you that Guy Bjorge had been on before I went on. But that was good work. The Forest Service people are high-grade people.

Swent: Did you deal with them when you were mining, too?

Bradley: I never had much occasion to deal with the Forest Service as a miner, and it's a funny thing, ten or fifteen years ago I got a communication from a woman living in Fresno. She had a mine up in the mountain above the Friant dam country, and she was having trouble with the Forest Service about that. So we made a date--

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Bradley: She was a little dinky woman, but her daughter, who came along on the trip, was a pretty good-sized gal. So we had, in this pick-up truck that I was driving, me, and this little woman, and the big daughter, and my brother--all in the front seat of the pick-up. We made it.

Funny thing about that was, that our company lawyer, who did work on the side, had told me all about this mine without my realizing what mine it was, because the people--I think, this woman--had gotten hold of him, and he had fought the Forest Service over some things in respect to those claims. Now, that fight was all over, and I didn't have anything to do with the Forest Service on those claims, but again, this is a typical case of a woman who thought she had a mine because it had gold in it--you could pan gold here and there--but it was nothing commercial. There's so much of that.

Anyhow, that's the closest I got to the Forest Service in dealing with any mines here in California. All the mining ground in at least the Mother Lode, and very generally in the next four counties north--Placer, and Nevada, and Sierra, and Plumas--nearly all of that is patented ground. Ground long since patented. And, oddly enough, the Harvard has one claim there that goes back to before 1872. It was taken up and patented under the mining law of 1866. That was at the time when the country was just feeling its way into the right to mine. The Comstock had come along very rich, made a great deal of money, was very important to the West, but every mine owner up there was a trespasser on government land. There were no laws by which you could go on the land and mine. The government just turned its head the other way, because you couldn't stop something like a Comstock. But there was that period.

Swent: What about water? Did you ever have any dealings with the water board?

Bradley: No. One of the subjects before the mining board was a complaint by the clay miners up in the Ione district. The State of California was getting ready to run a canal through that country. The mine owners were very much against that, so the mining board took that up, but we didn't have to take it very far, because just a little research showed that before the federal government could run ditches through any of that country, it had to deal with the

Bradley: state Division of Mines first. There was a law in existence that required that. So none of that clay and sand mining up there in the Ione area was ever interfered with. But that's the kind of thing that the mining board got hit with once in a while. We did our best.

Swent: You were an intermediary, then?

Bradley: Yes, but we were the ones that initiated the action. This is the way the mining board acted, it was the group that took the action that went on and solved the problem.

Swent: You really initiated things, you didn't just oversee.

Bradley: We initiated things, yes, very much. We acted more or less as ombudsman for the mining industry. And with those only 260 words, we had lots of power, lots of ways to do those things. The board now has got thousands of words, since this SMARA came in, they got thousands of words--the board is just hemmed in.

Swent: Can't do so much.

Bradley: Can't do so much.

American Mining Congress Meetings

[Interview 8: July 1, 1986]##

Swent: Would you like to tell me about going to mining meetings?

Bradley: Well, I went to all the Mining Congress meetings for a period of at least thirty years scarcely missing one--something on that order--and actually I was finally made program chairman for the Mining Congress at the meeting they had in Seattle in 1953. Program chairman is the next on the ladder up to general chairman, but by 1953 Alaska Juneau was shut down, an effect of war, and it couldn't support any of these things any more, so I was just left behind in it.

Swent: You went to one in the 1920s in Sacramento?

Bradley: Oh, yes. The first one I ever went to was the one they had in Sacramento--an annual meeting in Sacramento, California, of all places. But then it was in 1924, and California was then a state with a great many active mining enterprises in it. So it was probably natural that it had come to California like that. They built a great big wooden stope out in one of the parks there, in a government area, and the purpose was that the mine rescue team

Bradley: from the University of California--and in those days you had to take the mine rescue and first-aid training here, which was a very simple thing because the Bureau of Mines had a mine rescue and first-aid station in the mining building at Cal.

They had a great big Packard truck, I think about a 1918 model, and it was rigged to store all the goods that it might need in case of a mine disaster. You could take that truck and go off to the disaster and have everything you needed. Well, the mine rescue and first aid class had about twenty seniors in it, so we were taken up to Sacramento. The driving of that truck was turned over to me--for what reason, I don't know--but I just worked into it, and we took it to Sacramento.

We stayed in a YMCA in Sacramento--which was pretty close to downtown, it was on one of the main streets, or just an extension of it--and one of the things we did just to kill time one afternoon, was to all go see The Covered Wagon. Do you remember that picture?

Swent: No.

Bradley: I think it had Will Rogers in it. But in any event, later on, years later, I was living in Tuolumne County taking care of the Harvard mine. Tuolumne County was where they had made The Covered Wagon. It was a good picture.

We only had to give one demonstration in Sacramento of mine rescue and first aid. The only thing that came out of that was: there was one boy who was sent up there--when I say "up," he was up on the second floor of the stope--to be the victim. Somebody went up there and sent up a flare to make smoke, and make things seem realistic, and they set this flare too close to him, and he got his arm fairly badly burned out of that. But he'd been told not to move, and by golly he did not move, and that thing just burned him.

Well, some other things about it: this was a pretty big truck, in fact, I think it was as large--if not larger--than the streetcars that were then in operation in Sacramento. So we had more or less the right of way as we drove through town. A cop would be at an intersection directing traffic, and he'd see this truck coming along with United States government plates on it, and he'd stop everything and let us through. Well, little did he know it was just a bunch of college boys out for a lark! One of the boys dug up the address of a bootlegger out on the outskirts of Sacramento, and we even went out there one night.

Swent: With the U.S.B.M. truck?

Bradley: With the truck with the U.S. plates. I don't know what kind of a stir we made in the neighborhood, but we went out there, and some of the boys bought some liquor--they wanted it--and then we went back to town. I don't know what the outcome was on that, whether there was any fuss or not. We never heard of it.

Swent: I wonder how long it is since the Mining Congress has met in Sacramento?

Bradley: As far as I know, that's probably the only time they ever met.

Swent: Did they show equipment in those days, too?

Bradley: Have an equipment show? No. I don't know when that started, but that was one of the problems of the Mining Congress, was--every three years, when they had the equipment shows--to place the Congress meeting in a town that had facilities where they could show equipment. And that really reduced their places considerably.

We had a meeting in Spokane in about 1947 or '48. There was no chance of having any equipment show there, but it was a very good meeting, because Spokane--of course, with the Coeur d'Alenes of Idaho next door--Spokane was a very central and important mining area. Mines over in the state of Washington, a few mines in Oregon, a great many mines in Idaho, and in British Columbia. Of course, Bunker Hill, and, I think, Hecla, were some of the largest mines in the whole country. So it was most appropriate to have it there.

I can remember the chairman of the Bureau of Land Management giving a talk, saying, the mining laws have got to be changed! Well, that was forty years ago, and they haven't been changed yet. You can't change the mining laws, they're so beautifully done, and they deal with such a number of unknowns, that you can't make them any better.

Swent: What was the BLM motivation? Why would they want them changed?

Bradley: They'd want them changed to give themselves more opportunity for regulation of mining. But mining, even now, is over-regulated, and getting more so every day.

Swent: Now, BLM is under Interior?

Bradley: Yes.

Swent: And mining is also.

Mining Laws

Bradley: The history of mining law--and I'm going to have to just sit here and take it off the top of my head, and not give you a very thorough example of mining law and how it grew--a mining law bill was put in by Senator [William] Stewart. Now, Stewart had been a lawyer on the Comstock in the days of the Comstock when everything was developing: mining law was developing, corporation law was developing, laws for the possession of land were developing. And Stewart did most of it.

He was a very powerful character. He got himself elected senator from Nevada, went back to Washington, and in 1866 some law was introduced into Congress that would deal with a great many things besides land use. The mining law of 1866 which was the only operative law in existence then was changed in 1872 by a law made specifically to deal with mining on the public domain.

Swent: As I understand it, that, essentially, is still the same law.

Bradley: Still the same law. There were two large changes made in subsequent years. One, I think, about 1920, when a great many of the mineral commodities were taken out from under the right of location--under mining claims--and made leasable. These are a lot of the soluble salts--the kinds of things that migrate, don't stay in one place, therefore you cannot make a law that holds them. And things of that nature.

That was one big change. The second big change came in the year, I think, 1957, when the concept of common varieties was developed.

Swent: You had good friends in Congress at that time.

Bradley: Clair Engle, of course. I don't know whether [Wayne] Aspinall was in Congress from Colorado then, or not. But he was a great deal of help to the mining industry, believe me. He was one of the best friends we had.

Swent: Can you explain a bit about where mining comes into the federal government scheme of things?

Bradley: The Bureau of Mines had its head, and he reported to the Secretary of the Interior. BLM had its head, and he also reported to the Secretary of the Interior. When you stake a claim in the national forests, the Forest Service handles all the approval or disapproval of that claim--handles all the factors there are in perfecting a mining claim on the government's side. It does it as an agent of the BLM--<u>the</u> agent of the BLM for those things. They

Bradley: tie together well on those things. There's no conflict between them on that. There's an awful lot of conflict between mining people and them.

Here in California, when I was chairman of the mining board, I cooked up a meeting in Sacramento, and then it was carried over to another meeting in Los Angeles, in which we worked up, to the satisfaction of the California mining industry, some changes in the California law regarding mining claims. California had its own laws, and they could not set aside anything of the federal law, but they added to it, added requirements to the location of claims, that were our own.

The purpose of these two meetings we held—the one in Sacramento and the one in Los Angeles--was to conceive of some changes in the California law that would eliminate some of the weaknesses that Washington kept perceiving, and actually, in a way, making trouble for the mining industry. This worked out well, because we had this thing all worked out on paper and ready to go before the legislature ever got hold of it. So we could hand them a perfected package, and it went right through the legislature, just as had the American Mining Congress Bill of Public Law 167.

Swent: Was this later?

Bradley: This was later. For instance, there was a great fuss coming out of the federal agencies, that they couldn't tell where the claims were--people weren't keeping up their posts and their identifications of the land that they were locating. So we made the requirement that every year a man make an affidavit, that his posts were indeed where he had put them.

And there was a lot of fuss by some of the low-grade mining people on that. They said, my God, I've got to survey my claim each year. Well, that wasn't true. California has been plagued by a great deal of ignorance as to the mining law. And the Forest Service is, even today, having a great deal of trouble with these ignorant people, who are doing things that are not within the law--they just think they are. That's a source of trouble.

Let the federal government work that out. I'm not in that racket any more.

Swent: I would think that every inch of California would have had a claim staked on it by now.

Bradley: You might say that every inch of the Gold Belt had claims on it. The claims sometimes fall on one another, on the same ground. The worst example of that kind of thing was during the uranium boom up

Bradley: in Utah, and Colorado, and Arizona--the Four Corners country. The saying was, that if the ground didn't have seven claims on it it wasn't any good.

Swent: [laughs] They were actually posting armed guards in a lot of those places, they had to. I guess they don't do that in California any more.

Bradley: No. In recent years I have seen armed guards on mining property, but protecting property as much as anything. Trying to keep people off--I don't know whether the property was actually a patented property, or property just held by location. But their guards were there. People are doing that nowadays, in fact, you couldn't just walk onto the Homestake property up there in Napa County.

Swent: No, I'm sure you couldn't. What about highgrading? You haven't mentioned that at all.

Bradley: No, I haven't mentioned highgrading because it was never a great problem. There was some. The great stories, and legends, and drama about highgrading occurred mostly in Cripple Creek, and Goldfield--in the palmy days of Goldfield, say, from about 1902 or '03, up to or through World War I.

Lou Metzgar, the general manager of Alaska Juneau, came down here to look at some mines, and took me along. In fact, that's how we came by the Harvard. We had the Harvard in our lap, and we had the Oriental in our lap. Lou Metzgar came down, and we looked at both of them, and Lou decided on the Harvard because it was so much more like the Alaska Juneau, had all the same mining problems and so on. The Oriental was different.

That was a good trip though, because we ran into Fred Searls in Nevada City, and he took us through his Zeila mine, and we went up to the Sixteen-to-One, and so on. I was wearing a necktie, and Fred made me take it off when we went underground at Zeila. He said, I'm superstitious about these things. Well, I'm perfectly glad to fall in with the superstitions of a man like Fred Searls.

They had a mill at the Zeila mine. They were doing maybe two or three hundred tons a day, and I remember Fred saying he wanted to run an exploration tunnel clear through the ridge--I think this was the upper reaches of Harmony Ridge. You know, you can take Highway 20 out of Nevada City and tie into the main transcontinental highway up there about at Yuba Gap. The Zeila was down below Yuba Gap just a little bit. You were starting for Nevada City when you went west past Zeila.

But it was a mine with a long history, and Newmont had it then.

More About the Harvard Mine

Swent: But you picked up the Harvard.

Bradley: We picked up the Harvard, and I can talk about the Harvard for hours--maybe I already have, I forget.

Swent: You have talked some about it, but you might want to add more. You didn't ever say anything about highgrading, and that's one thing people are always interested in.

Bradley: The Harvard was a low-grade mine. I drilled there. I was logged to lay out the entire exploration program at the Harvard.

Swent: This was a mine that was already developed, was it?

Bradley: This mine already had a two-hundred level, a little bit of a three-hundred level, a good deal of a five-hundred level, and had been mined down to the eighteen-hundred level in the days before World War I. We kept it open to the five. We only drilled to the five-hundred level, and the reason was that we were only interested in the hangingwall ore, which had never been mined.

All the mining in the period between 1901 and 1916, when the Harvard was at its most productive, had been carried on in the footwall. There's a great quartz vein runs through that country--central vein, quartz vein, and I forget what else they called it--but it ran all through that country, and was a characteristic of the Mother Lode. This older mining on the Harvard had all been done in the footwall under the quartz. In their time, before World War I, it ran just about three dollars a ton.

In our time, when we had thirty-five-dollar gold, it was worth five dollars a ton. However we were looking at, and developing, and appraising, a great mass of low-grade ore that lay on the hangingwall side of this great quartz mass. My figures on it were over five million tons, when I was through drilling, and had that data all worked up.

Swent: What were your costs running, when you're talking a five-dollar-a-ton ore?

Bradley: We had five-dollar-a-ton ore down at the Pine Tree. That's what we recovered down there, five dollars. We had a $5.50 mill head.

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Bradley: It was a typical Mother Lode occurrence: $5.50 mill heads, five-dollar-recovery. That recovery bought the mine, and I think it probably paid for most if not all of the capital investment that

Bradley: had been put in there, but it returned no profit--there was no taxable profit on the Pine Tree. You just could not make money on five-dollar rock.

But at the same time--let me tell you something about the Pine Tree: there was an old machinery salesman of considerable competence that told me years later, after we'd shut down and gone, and so on, when we were all having lunch one day together, he told me that he'd seen all the mines on the Gold Belt of California--he'd been in every one of them. And he said the best-run mine of all was the Pine Tree, the one I was running. I'm kind of pleased with that.

Swent: Those are the fellows that really know.

Bradley: Yes! He was a tough old bird, you bet he wasn't saying it just to be nice. He told me I ran the best mine. Well, I was doing a pretty good job I thought, myself, anyhow.

Swent: That's another thing you might want to say something about, is the equipment salesmen, and what part they had in all of this.

Bradley: Oh, my gosh. Yes, you can talk about that, because they all had this run, this route, up and down the country, and you could always have an equipment salesman come in, oh, about once a week. There was always one there. A lot of them I liked. A lot of them were good men, and they were nice to deal with--gave me a lot of good information, and so on.

I got to using Gardner-Denver stopers at the Pine Tree. I ordered quite a few because the Gardner-Denver man had come through and left them behind for me to try out. The miners liked them and I liked them--little light, new stopers the Gardner-Denver had come out with. We'd always used these great, big Ingersoll-Rand 120s--they were heavy things, and awkward.

The Bradley mines had <u>always</u> used Ingersoll-Rand equipment. Alaska Juneau was just loaded with it. Had a beautiful big compressor up there, a four-thousand-foot compressor for Alaska Juneau--gee, that was a pretty thing to watch run. So when I bought these Gardner-Denver things, why, the Ingersoll-Rand people came down and wanted to know what the hell--in fact, they started in in the head office here in San Francisco. So they finally came down, and I said, I'm just using the best machine. [laughs] That was easy.

Incidentally, I'll stop right here and talk to you about the San Francisco office. The San Francisco office occupied three floors in the Crocker Building. The Bradley boys were down on the fourth floor, but the ninth floor had the purchasing agent in it, and some of the accountants. And the tenth floor had in it the

Bradley: office that for years was occupied by Fred Bradley, who ran everything, and when he died my father took that office over. I was sometimes on the tenth floor and sometimes on the ninth floor. But we did all the engineering in that office; all the purchasing; all the legal work was down at San Francisco; all the directors' meetings were held there in San Francisco.

The purchasing had been going on for years, because that office included the latter-day offices of the Alaska Treadwell company, included the offices, of course, of the Alaska Juneau, of the Bunker Hill--which is a big, big mine--and all the lesser mines. The purchasing was done for the little mines that the Bradley boys ran. They had mines over in Nevada, and mines in Idaho, and so on. So the purchasing that could be done in the San Francisco office was very important. Arthur Hammersmith, who had been with the company for years, and was now purchasing agent--he was also secretary of some of the companies--was a very competent man, at least when it came to his sales of Bunker Hill lead. He purchased only from people who would buy his lead—nothing wrong with that!

Swent: So he was doing purchasing and marketing as well? Sales?

Bradley: Yes. He didn't have any problems with marketing gold.

Swent: [laughs] No. So there were people who would buy the lead, and then make equipment?

Bradley: Well, not that so much, but if you wanted pipes and pipe-fittings he went to Crane company, which was one of his best customers on lead. That kind of thing.

That was a good set-up, and the war ruined it all--the war just ruined it all, that damned thing. The war shut down Alaska Juneau, shut down a great deal of the exploration work that had been going on.

But I want to tell you something about the Pine Tree and Fred Bradley: Fred, back about 1907, or '08, or '10, had been president of Mariposa Mining and Commercial Company, which owned all forty thousand acres down there in Mariposa County. In the forty thousand acres was the Pine Tree mine, and a dozen others that were idle. Fred Bradley, as I've told you before, was a most intuitive man. He knew what was going on around him, and about 1930, or '31, he decided the price of gold was going to have to go up.

So that's when he picked up the north half of that forty thousand acres down there up in Mariposa Grant, and he treated it as just something to have and to work on. He had some money there in the office of Baruch's and his own that was in the treasury of

Bradley: a couple of these mining companies. One of these mining companies was the Atolia mine--I haven't talked to you about that. The Atolia was one of the big tungsten producers of the country. The Atolia is in the San Bernardino and Kern Counties, right where they come together. During the war it had been a very important mine, of course. I understood that Baruch's share in that mine paid him $2 million in dividends--I think I told you about that.

Swent: That's the one that he gave--

Bradley: Turned it over to the Red Cross. Said he couldn't make money out of war. My dad told me that Baruch was a pretty good citizen, and he had all those stories to show it.

Swent: You were talking about Fred taking the north half of the Mariposa Grant.

Bradley: Yes. North part of it--I shouldn't say half--because he could see that gold was going to be a damn sight better. So he put a man down there running it who was not altogether responsible about accounting for the money he used. He put in his own accounting system, and it was not a good one. So for that reason, and a number of others, he was laid off down there, and I was put in his place.

That was my first job where I ran everything around the mine. It was easy to run, there were good men there. In the '30s there were lots of rustlers, you had your choice of miners, and I think I told you about setting up the wage scale for the county. The CIO threatened to get in, so we sneaked the AFL in ahead of them and made out a wage scale--we didn't change the wage scale very much--because, as I told you, Mariposa County was on the end of the run. The ten-day miners circulated all the way from Grass Valley down to Mariposa, but the bulk of the circulation was, say, in Calaveras County or around Angels Camp, Grass Valley area.

So in order to get more circulation down in Mariposa County we raised the wages a nickel an hour.

Swent: Well, that was significant at that time.

Bradley: It was, it was. And where, say, Carson Hill, which was the biggest southern mine on the Mother Lode, was paying $4.80, why, down at the Pine Tree we were paying $5.20. That's what that nickel an hour did to us. But it was something to do. I've always thought that the fact that Fred went in down there was a good example of his intuition about mining, and money, and gold.

So we ran that mine until the war shut it down. It got about $3 million--made no money, but paid for the property, and, I think, paid for most if not all of the machinery.

Swent: If you'd been able to continue it it would have then made money afterwards, would it?

Bradley: If we'd been able to continue the same thing--I often, talking about mining economy, use 1939 as a standard year. Nineteen thirty-nine was one of the years just before the war when everything was stable: wages were stable, and costs were stable. You could use the 1939 California mine as being a good example of the kind of mining that was going on and could be done.

Today I have to say that the price of gold has gone up almost ten times, but the cost of mining in '39 style has gone up about fifteen times, and I can't understand why there's so much mining development being done in the California gold belt. The first one to try it--and go belly-up--was that Blazing Star up in Calaveras County, and I think there's two or three more that are trying it and spending a lot of money, and they've got to lose. That may include the Harvard, and I shouldn't say that because I've got a letter upstairs asking me to talk to them about consulting work there. But I am not fully sure those guys know what mining is.

My knowledge of the Treadwell mine, my knowledge of Alaska Juneau, and my knowledge of the Alaska Gastineau tells me that the operation of a large-scale mine is not in the least simple, not in the least easy, and it's not in the least to be readily costed. There's so many things sneak up on you, unforeseen things that are typical of mining. They sneak up on you, and they create problems that have got to be solved, and solving them costs money.

I've already told you about Alaska Juneau, and how, down the channel a few miles, Hayden, Stone of New York undertook to build a six-thousand-ton mill on an extension of the same ore body. They built a most wonderful power system: they put in a concrete dam above Juneau, and they put in another dam below Juneau, and they had wires running all over, and lots of power. They had a very well-built mill, very well-built tramming system.

It proved in the end that they made several mistakes, and one of them was that they did not work out a good mining system. They more or less neglected the mine, whereas Fred and Phil Bradley--that was where my dad was most useful, was working out that mining system at Juneau--together worked out a mining system that was darn near perfect. Fred, in turn, hung on. He put an awful lot of his own money into Juneau, and finally had to go to friends in New York--Barney Baruch was one--and raise some money by the sale of bonds. But by 1928 that money had all been returned and that mine was paying dividends, and it kept on until the war shut it down.

Swent: What happened to the Hayden, Stone venture?

Bradley: Oh, they quit. They just plain quit. They didn't have a man like Fred Bradley in that organization. They didn't have men with that determination. There was one more thing to that Hayden, Stone thing: Fred Bradley raised about $4 million to get the Alaska Juneau going by selling shares on the New York stock exchange, and Baruch had helped him with that.

He put that in very carefully, and he was a great man to make a mine pay for its own improvements wherever it could, and this Hayden, Stone had one hell of a bonded indebtedness on their operation, because, as I say, they built these wonderful power plants, and a just wonderful tramming system, and everything else--just the very best, you know. Then they wound up with a capital burden on that thing that the mine couldn't handle.

Now, as it turned out in the long run, twenty years later or so, Alaska Juneau took the property over--and made it go! Of course they made it go, because they knew how to handle that kind of ore up there.

Swent: You implied once that there was a difference between the California mining method and other methods.

Bradley: Oh, there's considerable difference, because California ores are different. Alaska Juneau was a hundred, or two hundred, or so, California mines all rolled into one. So it had the advantage of large tonnage, and that's a considerable advantage.

Swent: I wasn't thinking of the ore, but of the people that you--as I remember once you said--that California people were more determined and more knowledgable about running the mine, and the people down at the Hayden, Stone prospect were not Californians.

Bradley: Well, that's true, of course, especially if you take Fred Bradley as being the representative Californian.

Swent: A super example.

Bradley: Incidentally, I have in my mind--I may have told you this--five men who have meant a great deal to mining in the United States. Now, I'm eliminating the copper people because I don't know them. Of the copper people there was old Jackling, and there was--oh, I can't think of that name.

Swent: Joralemon?

Bradley: No, Joralemon was different. Joralemon was not an operator, he was a technical man. I simply can't think of those names now. There were a lot of them that were very, very good. Henry Krumb, Will Browning--I can see a man's face and I can't think of his name.

Swent: But the gold people you knew.

Bradley: Well, these men I met, but they lived in a different world. It was not like the gold or lead or silver mining world of California and Idaho and Alaska. Californians, on the whole, did have a feel for mining that a lot of the rest of the nation never had. That may not exist in California today, unless it exists in old-timers like me, and we're too damn old to get out in the field.

Swent: You were starting to say that there five.

Bradley: Oh, yes, five men--and not necessarily in this order--but you can start with John Hays Hammond, because he made more of a splash in mining, I think, than anybody else. The other four include Fred Searls, Fred Bradley--good lord, I have--

Swent: Hoover.

Bradley: Hoover, yes. And one more. I'm speaking of men who were very active in the period of 1900-1910 and did so much then. Of them, two were Nevada City people--Fred Bradley and Fred Searls. Nevada City was quite a place in its time. It turned a lot of good men loose--

Swent: What about Reno Sales?

Bradley: Well, he was another technical man, like Ira Joralemon. He was a geologist for the Anaconda Company, and a damn good one, but his geological knowledge, and application of all that, extended to the Butte area and, I think, little more. Ira Joralemon, on the other hand, had a very broad knowledge of things in this world.

Swent: Searls and Bradley were both from Nevada City; that's interesting.

Bradley: I found a letter--I was cleaning up the San Francisco warehouse of the company for Jack Bradley one day, and I found a letter--that I may have around here somewhere--Fred Bradley writing to his mother from Bunker Hill; Fred was now at Bunker Hill, and working there for a big mining company. So he sent money to his mother in Nevada City for Christmas presents for people, and he said, and don't forget the Searls boy--because Searls, probably, then was about a boy of eleven or twelve, something like that.

Swent: So they were friends.

Bradley: Oh, yes. Hoover, and Bradley, and Searls, and Hammond, and Don McLaughlin.

Swent: Did they ever work together, Searls and Bradley? Were they ever partners in anything?

Bradley: No. Homestake and Bradley were partners in a couple of operations here. They had the Halstead Mine up on the Feather River. They operated that jointly. Homestake did the field operation, each outfit put up their share of the money, and they also had the mine at Bodie. The Bradleys ran Bodie, but each side put up the money.

Swent: But the Searls--they were parallel, but not--

Bradley: Parallel, yes, but I can't think that there was any communication, or need for it. If there was I don't know of it.

Swent: Must have been a close sympathy--

Bradley: Oh, close sympathy, yes. I used to see Fred Searls around; he was always very friendly, and so on.

THE BRADLEY FAMILY, 1981

left to right, rear: Joan Bradley, Virginia Bradley Sutherland, Philip R. Bradley, Jr., Katherine C. Bradley, Gordon C. Bradley, Philip R. Bradley, III.

left to right, front: Arthur C. Bradley, Kathleen Bradley (Mrs. Arthur), Christine, Alberta Bradley (Mrs. Philip III), Katherine.

Photograph by Jeff Weissman

VI A MINING AND METALLURGICAL CONSULTANT

Swent: Do you want to get to your consulting jobs now?

Bradley: Well, my consulting jobs I don't think have amounted to an awful lot.

Mexico, 1960

Gold-Silver

Swent: You had some interesting trips.

Bradley: There were two of them that were quite interesting to me, but they were not important jobs in mining. One of them was the year I spent in Mexico, not so much as a consultant, but as an actual mine operator. I was down there as a "wet-back" in reverse. I was caught by the 1960 census-taking in Mexico, too. Boy, I had to dodge around that one! But I ran a mine down there for Alaska Juneau, and that was a little hard, because I was working for people who knew nothing about mining. They had different ideas.

Swent: Where was this?

Bradley: In Chihuahua, way out in the mountains. Good place, lovely place, and good people. Not a very large community at all, but good people.

Swent: Did your family go with you?

Bradley: Katherine and baby Joan made a visit once, came down on a visit, and that was kind of interesting, because my wife was telling somebody about it, and said that they had built us a wooden floor in this adobe building. Well, I had to correct her on that--I built that floor. As I built the floor I just sprayed under it all the insect powders that I possibly could.

Swent: The property was owned by Alaska Juneau?

Bradley: No, it wasn't owned by Alaska Juneau, which by this time was run by that Los Angeles company, called A. J. Industries. It was a very small mine, a thirty-ton-a-day mine with pretty good ore.

Swent: Silver?

Bradley: Surprisingly enough, more gold than silver. It was an unusually high gold content for a Mexican mine. And high zinc content, too, but that zinc didn't mean anything. I suspect there were high-grading problems there, at least after I came away I heard there were. The highgrading wasn't in the mine, but it was in the mill.

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Swent: We were talking about highgrading in the little mine in Mexico.

Bradley: Yes. They were helping themselves, as much as they could get away with it, to the gold that was stuck in the bottom of the launders around the mill.

Swent: That affects your profits in a hurry.

Bradley: It could, but this was after I had left. I was there a year. These people in Los Angeles that ran that mine thought of everything on a very personal basis. And that's no way to run a mine. [laughs] You run a mine for the mine, not on account of people. You don't put this pal in here, or that sort of thing, and that's what they finally did.

Swent: Is it still running?

Bradley: Oh, I have no idea, because this was, I think, about the year 1960.

Swent: It would have been Mexicanized by now, anyway.

Bradley: Would have been Mexicanized, yes. But it was a nice place to be. The experience I'm very glad I had.

Thailand, 1966-70

Fluorspar

Bradley: Then the next important consulting job I had--the most interesting anyway--was looking after this fluorspar mine in Siam. The thing occurred just exactly like the California quartz vein. I was in

Bradley: California all over again, very simple. And nobody out there knew anything about mining; the thing belonged to a man who had the title of Prince somebody, and he had a brother there in the office in Bangkok who was supposed to be running things, but he just disappeared after a while. One of the main things about him was that he always had a loaded pistol on his desk. That's the way people worked in that country.

Swent: When was this?

Bradley: Oh, I think my time there was spread out over four different years, and in one of those years I may not have gone there, in other years I was there two times. The last year was 1970. I stayed on that trip for maybe four months, something like that.

The fellow that was president of the company was a Jew, he was a scrap dealer. His father before him had been a scrap dealer, and he had wonderful stories to tell, which I liked very much. His story was this:

After the fire, the trade in scrap was tremendous--

Swent: The San Francisco, 1906 fire?

Bradley: Yes. This Irishman came driving up one day with a team of horses and a wagon full of stuff. The Irishman gets down off the wagon and says--to the father of this man that I worked with in Siam--says, how's the price of lead today, Meyer? Meyer says, well, it's just fine. Come on in and have a cigar! The guy really had--Meyer had spotted it--he had a load of tin, he had a whole load of tin bricks. Not lead at all. I'll bet a nickel that transaction was concluded on the price of lead, too. [laughs] I like that story. "Come on in and have a cigar!"

But that was the only one I knew of any importance. This fellow was the University of California--I think the same class as my father--class of '96. But he'd gotten into the scrap metal business. He had a connection with the Schlage Lock Company. I knew those people but I never asked them about this scrap dealer.

Swent: So they owned this mine out in Thailand?

Bradley: Well, this prince owned it, but these fellows had a working lease on it of some kind, and the people who were putting up the money were a couple right here in Berkeley within three blocks of this house. They'd been conned into it. So they hired me, jointly, with this scrap dealer. They hired me to see what was going on, and what had better be done, and I made four trips on that basis. The fourth trip was interesting in this respect: I asked them, before I went over there, to do what was necessary to get me a permanent standing with the government over there, so I wasn't

Bradley: there just with a visa. They didn't do it. But in any event I also asked for a reorganization of the company. Not that I wanted anything special, but I wanted at least to be a director, and they did have a reorganization of the company in that respect, and I got myself made director in charge of production. I went out, and on that trip I stayed on the mine nearly all the time.

Swent: With the authority to really do something.

Bradley: The only way to run a mine is to camp on it, you know. So in the meantime, another funny thing about that: the bank these people were using was the Chartered Bank of London. It had a big establishment [in Bangkok] down on the river, right next to the Oriental Hotel. Next thing, I run into the man--the man the Chartered Bank had down there running that was sent up here to San Francisco to take charge of the Chartered Bank here. Now he is one of the owners of this new Pacific Bank. My daughter works for him.

Anyhow, another thing I found—and it was an awfully good thing that I got this stockholders meeting, and board of directors meeting, and all these things together there--I learned that the company had some suits filed against it for one thing and another. You cannot defend yourself in Thailand unless you have a properly constituted corporation and the minutes of the annual stockholders' meetings and directors' meetings have all gone into the ministry of finance, or whatever it is. They hadn't been doing that; they were unable to defend themselves! Well, that's the kind of thing you can get into in mining. I worked that problem out, along with certain others.

Swent: What about mining in a place like that? Could you get the same kinds of equipment there that you could get here, for example?

Bradley: Yes, but this was a pretty poor country, and I had left behind with this fellow, on the third trip, an order for drill bits. I don't think it was more that a hundred dollars worth of drill bits--they would have come down from Japan. By golly, they didn't get them. So I found these miners were drilling out there with practically bare steel.

That's the kind of thing you run into when you're dealing with people who know nothing about mining. They don't know the importance of the right kind of equipment and machinery.

Swent: Were the men trained?

Bradley: The men there that did most of the work, or the important work--the breaking of the ore, and so on--were some Filipinos that had been brought in from the Philippines. They were miners, they knew what they were doing. And they had a mine foreman there who was a

Bradley: Filipino, and he was a tough S.O.B., believe me. He'd been a guerilla in the Philippines during the Japanese occupation. Boy! He got shot at a couple of times there in camp, in Thailand, in Siam.

He took it all as a matter of course, but he did tell me, he said, I wouldn't go out and walk around the way you do, at night. That's what I did, I walked around that camp at night, just to say hello to people, and so on. I was always going around, just walking around. He thought that was awful. His experience in life and my experience in life were two different things.

But then I helped the company get a hold of a new man to send out there to run the mine for a year or so, and we got a fellow from the a steel company that I'd known for a long time, and he took the job. When he came back here, after that year, he was just shaky. He hadn't been able to stand it; he was a city boy.

I'm not. I rustled Donald McLaughlin for a job once. The mistake I made--Alaska Juneau had closed down--I just said, is there anything for me at Homestake? and he called me up a few days later and said no. I didn't have a chance to tell him that I was looking for a field job, I wasn't looking for an office job. I wanted a field job at Homestake.

It was a mistake of mine not to pursue that a little better, because the work I'd done at the Harvard mine was exactly the same kind of thing--only they did it on a larger scale--but exactly the same kind of thing that they did up there in Napa County: drill the ore body out, and define the ore body, get all the arrangements made with the government, state, and everything else. I could have handled it all, damn it.

Anyhow, that job in Thailand was pretty good because it didn't cost me a dime, I didn't have to pay for any transportation, or any food, or anything else. Incidentally, on food, I ate there with the mine foreman, and he had a Thai cook, a young lady--he eventually got her pregnant. [laughs] That kind of thing was going on all the time out there.

But I found that in order to more or less survive there I had to come in from Bangkok with things like canned apricots, and canned pears, and canned dessert fruit, and canned beans, and things like that, that I was used to. Because the only thing I really recognized that I was being fed there every day was rice. Well, as it happens I like rice, so it was all right. But I had to get these other things, because there was some awful funny stuff served up.

I was able, when I got home here, to impress my children, because the cook had about an eight- or nine- year-old boy as a helper around there. Once he was out on the grassy banks of a

Bradley: creek that went by looking for something, and putting it in a bucket. I asked somebody what that was for--he was out there digging up marijuana! And she was using marijuana as an herb in the cooking! Yes. Well, that's perfectly natural. So, I had some, and didn't know it. The children here were impressed.

Swent: Did you get sick at all?

Bradley: Oh, no. No, the poor person that got sick was my wife. She went out with me on the last trip, and we had a little bit of a rough time. We stopped in Honolulu; the next stop was Wake Island. We were flying Japan Airlines on that trans-Pacific trip, and that's a hell of a good airline, believe me. It's a long flight, but the stop in Honolulu breaks it a bit. Then we stopped at Wake, because there was a big headwind, and they had to take on gasoline. They never would have made Japan without stopping at Wake. Well, that was interesting. There's nothing at Wake, you know. Just absolutely nothing. But we weren't there very long, anyway.

We went on--pretty slow trip, as a result--but we went on to Tokyo. We put up on that trip in the--oh, my--a great big Japanese hotel, the Palace. I've stayed overnight in eight different hotels in Japan, but this is a very good one. Right by the palace, moats all around it, all that big Japanese stonework. Good place.

One morning, quite early, before breakfast, I made her get up, and we got a taxi. We just toured all that country, toured as much of the royal palace as they'll let you, and that kind of thing. That was a very good thing to have done--we had a good breakfast afterwards. Then we took a trip down to Kyoto, and another one up country, I forget where, and so on. We saw a lot of Japan, but she was pretty damn sick.

When she got home there was no place for her but Alta Bates Hospital, because she had—not jaundice, but--

Swent: Hepatitis?

Bradley: Yes, hepatitis. I told her she should have got shots here, before she ever left.

Swent: She was sick from the time she left?

Bradley: Well, she began to get sick when we were in Tokyo, and she was very badly sick when we made these side trips. Oh, we went down to--at Kyoto, that--oh, what's the name of <u>that</u> hotel? Good one. It's got it's duplicate in San Francisco.

Swent: Miyako?

Bradley: Miyako, yes. Good hotel. We enjoyed ourselves there, except for the fact that we'd go around on a bus to see the town, and she'd never get off the bus, she'd just curl up in the seat and sleep. Aw, that was too bad.

Swent: She did get on to Bangkok, though.

Bradley: We got down to Bangkok. That was an awful trip, too. We left Haneda airport in Tokyo on a Friday morning, and there were about six inches of snow on the ground. The airplane would fly all right. Of course, several hours later we were in Bangkok, late at night, eighty-five degrees. We got held up in Hong Kong. Hong Kong airport is a terrible place anyway, and some plane going out on the airport runway broke down just ahead of us, and we had to sit there while they fixed that thing. We were in that plane, just sitting there, for about three hours.

And the airplane line didn't say anything about that three- or four-hour delay to the man who was waiting for us in Bangkok. [laughs] He was sore as hell. But anyhow we survived, or she survived. I stayed there, of course. She went on to see a very good friend of hers in Florence--sick all the time. Went from Florence, to Frankfurt, to Los Angeles in one day. Long trip.

Swent: Even when you're well, but especially when you're sick.

Bradley: My first trip, when I went out there, I had planned to be at the mine about two weeks, and then we were going to go on to Prague, where they were having this International Geophysical Year meeting. Ian Campbell was to be there, and quite a number from the Division of Mines, and I'd have known them all.

I got hung up in Bangkok. I couldn't do my work there in two weeks, and what I avoided by not going to Prague was the Russian takeover there. Everybody was made to stay in their hotel rooms, or in their hotels. Some of these boys from the division came back a little bit shaky over it.

Swent: I would think so. So that was '68?

Bradley: I think it was.

Swent: Where was this mine? Way up in the mountains somewhere?

Bradley: The mine was out at the head of the Malay Peninsula.

Swent: South of Bangkok?

Bradley: Somewhat southwest. As you went from Bangkok out to the place, you were skirting the upper reaches of the Gulf of Siam.

Swent: I just assume mines are always up in the mountains.

Bradley: No, this was not mountainous at all. This was fairly flat country. That rise of the country was probably no more than five hundred feet above camp, which itself was nearly sea-level.

Swent: A far cry from Grass Valley.

Bradley: Yes, a far cry from even Juneau. On the whole it was good.

On the third trip I put in a metallurgical system. Previously, the one-ton cars were coming out of the mine and being dumped on the ground, right on the surface of the waste dump. As soon as they were dumped, about a dozen women flew at that ore carload there and picked out the waste and threw it away, and picked out the good ore and threw that to another side, and that is all the metallurgy there was. That stuff was taken down to a bin and loaded out to a freighter at Bangkok, and shipped right off to Japan, and used by the Japanese without any further treatment.

Simplest thing in the world, but I finally decided that I could improve on that. So I built an ore bin, a little bit lower--this was the darnedest thing: they had a big new ore bin down there for the trucks to load out of. So I built a bin for sorted ore right next to it. It took about two years for this plant of mine to get finished, and by the time it was finished this big ore bin was just like this.

Swent: On its side.

Bradley: Not on its side, but way tilted. Termites were down there, and one trip I made down there, I guess this was the last one, I just cleaned out about thirty or forty row houses down there which had done that in camp itself. They weren't safe at all. Because the termite gets into the bamboo, and everything falls over. These people didn't know enough to use concrete.

I went out to a plant that Kaiser was building for lime--a cement plant. They didn't know that the tides came up, and they built houses for their staff out on a nice, flat place, and the tide would come in and flood the bottom floor of that house by about a foot of water. That's Kaiser for you. You know, if a man is mining, he's got to look around him.

Swent: And be there. [laughs]

Bradley: And be there, and take care of things before they ever get bad, but Kaiser was not good either.

Swent: There weren't local people with influence enough to tell them?

Bradley: Well, I don't know why it was. Kaiser, you know, is a firm that does things its own way. Pretty obstinate about some things.

Anyhow, I built this sorting plant, and I had to do it all out of my head almost. I fixed up a screen to make three sizes. One was a very fine size, that you couldn't sort, and it got in the way; the other was about an inch size, that you could sort, made good ore; and the other was a size about two inches. I put them down, I let this screen discharge onto a twenty-four-inch wide conveyer belt. One streak of ore coming off the screen fell onto this side of the conveyer belt, and one onto this side. And I put places for the women all to sit alongside the belt.

You never know, when you put in something new like that, whether the people who live there are going to like it, whether they're going to accept the change. These gals just loved it--gee, it went good!

Swent: More comfortable for them.

Bradley: More comfortable--they weren't down on their knees, you know. Then in addition to that I put a spray on top of the screen, and the ore was washed when it came to them.

It was clean, easy to sort, and there was a lot of room there, a lot of hillside, for the discard to go onto. It all worked out well. But I never did see the assays that came back from the first load of ore from that system that we had sent to Japan. I never saw those--I was gone before it came back.

Swent: They were assaying them in Japan?

Bradley: Assaying them in Bangkok.

Now, this whole business of shipment to Japan was set up on a basis that you couldn't ship pieces bigger than this, and you couldn't ship pieces smaller than that. [gesturing] That mine out there, under this scrap dealer, was not paying any attention to rules. In the system of land ownership in that country, you can go to work on a mineral deposit, and you can have possession of it, but you must not produce from it until you get it surveyed by the government and made official.

They didn't pay attention to things like that. The government had surveyed some land out there, and the corners were marked with two-inch galvanized iron pipe, and do you know, that damn jungle color and that galvanized iron color are exactly the same. These things were very hard to see, and I had to take men out with me who had known where they were at one time, and we looked. Then I sent them up on a big tree. The first thing, I'd paint the

Bradley: galvanized iron an orange color, then I'd put a big eye up in the tree so I'd know where to look, and I'd tell them that the eye of Buddha was watching.

Nothing was being done correctly, according to the government rules. Or, I wouldn't say nothing, but nearly everything was not done there. And a lot of senseless things were being done in the mines--good lord. It was just a fool's paradise. I got it straightened out a great deal, but then I didn't stay there.

Swent: Did they pay any attention to safety?

Bradley: "What's that?" No. No. One fellow got sent to the hospital, his feet were smashed because he'd sat down in the drift, back up against the timber, and went to sleep. Feet out on the tracks--[laughs] an ore car came down and smashed his feet. Yes. That's the kind of people they are. And then, for shoveling--you never could, when you were driving a drift, you never could get a man to shovel directly from the muck pile into the car. That just wasn't done.

Well, you can't change these little things like this. It slows things down, but they weren't being paid much anyway. They were shovelling into little shallow woven baskets, and that is what they dumped in the car. Old Siamese customs--

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Swent: The knack, of course, is knowing what you can change, and what you can't.

Bradley: I should tell you, that one day I was out there with a man and a tractor. The tractor was clearing some land for me, clearing a survey line, and rolled over a rock. Out from under this rock comes the most beautiful <u>blue</u> tarantula you ever saw. The young man with me reaches down and he squeezes it, just so. And pretty soon there's no more wiggle to it, no more life, and he just crumples it up, and puts it in his pocket. That was going home for dinner. They eat <u>anything</u>!

They eat lizards, they love lizards, and some of the lizards there are pretty big.

Swent: No wonder you sent for canned things.

Bradley: Oh, it was terrible from that standpoint. Yes. And I told you about the cobra we saw.

Swent: No, you didn't.

Bradley: I came around the corner one day, on the way into the mine from the highway--it was about a thirty-kilometer trip--came around the corner and here was a big snake stretched across the road, so we stopped to let the snake go by. It was a jeep road, so it was not more than nine feet wide, and this snake--his head was already in the grass on that side, and his tail hadn't come out of the grass on this side--he was about a fourteen footer. It was a king cobra. Very deliberate, very majestic, as he crossed the road.

The boys had a story about going out one night after dinner just for a spin in the jeep, and they crossed a big stick lying in the road. They got across the stick, and went on, and then they turned and stopped, and turned around. And this stick was standing up looking at them! [laughs] Must have been the same one.

Swent: You can drive over them, and they survive?

Bradley: Oh, sure. They're pretty tough animals. Awful looking, terrible looking. There was a Red Cross establishment in Bangkok where you could go to get cholera shots. You got them for a dollar apiece there where you had to pay ten dollars for them here in San Francisco. But that thing had connected with it a big viper pit, because snakes are quite a problem in Bangkok, especially to the farmer. So they've got a place where they make up anti-venom. They had one or two big cobras in there, and as I say they're just horrible looking, repulsive looking things. Their whole face is all wrong.

Further Advisory Work, to the University of California

Swent: I understand you're on a curriculum advisory committee for Cal, aren't you?

Bradley: Oh, I have been a time or two.

Swent: Do you want to say anything about your alumni activities?

Bradley: Well, the latest thing, I was over there just last week for a meeting with the dean of engineering and the dean of mining, and a helper girl who's in charge of development over there, to find out what the problems were in the restoration of the mining building. So we got a little start on that. That'll be a long-range thing, but that is needed, and I'm very glad to have a little "in" over there, of any nature at all.

For a long time I was on a committee of engineering alumni who were advisory to the deans of engineering for all the campuses of the university system--that's seven of them. So we had

Bradley: meetings now and then at every one of these universities. Either Kaiser or Bechtel always provided the transportation by plane, because the principal operating man at Kaiser was a Cal graduate, and the same thing at Bechtel. In fact, the Bechtel man was the chairman of the committee. I don't remember his name, and he's no longer with Bechtel.

One of the members who contributed a great deal was Eneas Kane. I don't know what he does, I think he's just a consultant. I see him at the Engineers Club every so often. Another one who contributed a great deal was Shirmer Sibley, president of PG&E [Pacific Gas and Electric Company]. There were always two or three PG&E men on this committee.

I found I liked the Santa Barbara engineering dean a great deal; he and I got along fine. We had one meeting at Santa Cruz; that didn't accomplish very much because they had no engineering problems that anybody recognized. But Davis is very good, and San Diego, and--what's that marine school just above San Diego?

Swent: Scripps?

Bradley: Yes, Scripps. And Riverside, and Irvine--Irvine is a new university and it's beautifully done.

Swent: Not much mining engineering anymore.

Bradley: No. Mining has resumed over here at Cal after about ten years in the doldrums. I never could understand why Donald McLaughlin didn't do anything about that, but I never talked to him about it. And nothing could be done about mining at Cal unless Donald McLaughlin really said so.

Swent: He was the dean.

Bradley: No, not the dean, but he was the ex-dean, and chairman of one of the very important mining companies in the country, and so on. Finally he got into it, when Ernie Kuh was dean of engineering over there--they had some good deans. Ernie Kuh may have been the best I have seen--he was a Chinaman, but he was good.

Mike O'Brien was very forceful. He was a man that either had lots of enemies, or lots of friends. He made enemies. Ed Wisser didn't like Mike at all, and Ed Wisser is one of the men that contributed a great deal to mining over at Cal.

[laughs] There was a mining meeting at Reno one time, and Ed was on the program. It was getting along towards noon, and the program people were worried about running over into the lunch meeting. So about three times one of the program men came out on

Bradley: the platform to tell Ed that there wasn't much time. Finally Ed just threw up his hands, and he said, "You can read it all in the transcript anyway. I'm not going to talk." That was Ed's style. And he was right.

More About the Defense Minerals Agency

Bradley: The other consulting job that I had, of course, was the Washington job. I had two jobs in Washington. One was when the Korean emergency broke. It was interesting to see, that what you might call a low-grade panic had swept Washington, because they were simply not going to be caught short on goods, and men, and supplies, and materials, the way we had been caught short in World War II. Nothing was ready in World War II, and Roosevelt himself was responsible for some of that. He had just kept industrial performances down so badly that this country was not ready to start building airplanes, or anything else.

So this time, when the Korean thing came around, and it looked like World War III, why, Congress and President Truman immediately created an agency to handle all these things. They called it the Defense Production Agency, and they put in as a head a very good man, and that was Charles "General Electric" Wilson.

There was a Charles Wilson there from General Motors, and a Charles Wilson there from General Electric. The man they gave the top job to was Charles "General Electric" Wilson. He was a good man. I only had to listen to him once, but he was one of these people that just emanated intelligence, and force, and capacity, you know, as he talked. Those people are good for the country.

People that want to criticize Ronald Reagan--I notice that Herb Caen in the Chronicle is criticizing Ronald Reagan quite a bit--but in my estimation the American system is such, that when elections come, you've only got a choice between two men. That pretty much limits your choice, and that's the American system, and I say to myself that under the limitations of the American system we've got just about as good a president as we could possibly have.

I think Reagan's done a pretty good job, myself. Oh, sure, he's got limitations, but he's done a pretty good job.

Swent: Sometimes the less government we have, the better it is.

Bradley: That's what Jefferson said. The best governed people is the least governed people--and he was right.

Bradley: I had anticipated most of the hurdles that you have to go through in Washington, to get anything done, but one thing I had missed on. That is the great number of people that are involved in any move an individual wants to make, no matter how high his ranking is.

I was a sub-head in the Defense Minerals Agency; I had tungsten, and chromium, and manganese--all the problems in those were coming across my desk. Well, that wasn't a very high thing, but it was fairly important. Copper was all in the hands of one man, Tom Lyons, and Westin Bourret was there, with one of the minerals. It was divided up. We were set up with little committee skeletons that you could fall back on with experts from both the Bureau of Mines and U.S.G.S. in those particular subjects. I had some of the most expert advice that you could possibly get.

One of the things I concluded in Washington was, there are plenty of meetings, and you could sit with a table full, or a room full of people, all of whom were expert on the subject that was being spoken on--they were real experts. But the joker, to me, was that while you were sitting in a meeting talking about things, none of you were doing anything to push the problems along, or get the problem solved—you were just learning.

Swent: How did they get pushed?

Bradley: Slowly, very slowly. That's the reason it turned out I was right about my six months rather than two.

Swent: Or else the staff gets the work done while you're having the meeting.

Bradley: Well, we didn't have much staff. I had a girl--. Oh, I brought in, finally, a Bureau of Mines employee that came off of a list of Bureau of Mines people, and I picked him because I thought he was going to be the least trouble, the least ambitious. I wanted somebody who would just take figures. Deal with figures, put them together, analyze them, collate them, listen--that's all I wanted. I wanted somebody that was pretty dumb, so I got this guy. We put him on that, just taking figures from every direction and putting them on the right pieces of paper, and that sort of thing.

Swent: Was there a second time that you were in Washington?

Bradley: Oh, well, that was when I was appointed to the National Advisory Board to the Forest Service. That was a most interesting thing. We had had a meeting in Sacramento of the Western Governors Mining Advisory Council. I had been president of that for the first year and a half of its life, then it came time to have an election, and

Bradley: we put in, or I put in, Sam Williston, because Sam was a lively guy, and he got around a lot. He was in Washington fairly frequently. I thought he'd stir things up, and he did.

One of the things he arranged for through "Swede" Nelson, and others, was for as many of the western governors as could come, to come to Sacramento, and we'd talk over mining problems. I had done this once before in San Francisco. We had had most of the governors in San Francisco to talk over mining problems. They were glad to do it, because any western state in those days had mining as a large chunk of its economy. So we had all these governors from Sacramento, and we had also, sitting in one of the back rows, Charley Connaughton, who was chief of the Forest Service for California and Nevada, I guess.

More About the National Advisory Board to the U.S. Forest Service

Bradley: Well, I must have impressed him as having a little broader view about the forest than most miners had, so when this advisory committee was created by the Secretary of Agriculture in Washington I got put on it. I'm pretty sure Charley had something to do with it. So I was on it for a period of four or five years, and that was most interesting.

The procedure usually was--not always--a meeting in Washington at least once a year, or a field meeting, out where the forest problems were, at least once a year. There might be three meetings a year--sometimes there would be two in Washington, and one in the field, or vice versa. I learned more about timbering and logging then than I had to know. But I was awfully glad to have been on it.

Swent: So this was national?

Bradley: This was national, yes. People from Utah, and Oregon, and Florida, and everywhere. Anybody that might have some association with the National Forest was on it.

Swent: Were there other mining people, or were you the voice--?

Bradley: No, I represented mining. I learned about one thing that the Forest Service had learned to do, and I noticed that later on the Bureau of Land Management took up the same procedures, and they never gave the Forest Service a bit of credit for it. Down in the Tonto Basin part of Arizona, they had learned how to make little all-year streams run all year. How to conserve the water, keep it from disappearing. Mainly it was an evaporation problem. Do you know what a phreatophyte is?

Swent: No.

Bradley: A phreatophyte is a kind of vegetation that sits along the edge of the stream and soaks up lots of water, and evaporates it into the air. So they were getting rid of all those sorts of things. All sorts of trashed trees out along the--it was almost desert that they were dealing with. They had learned to take two D8s, or big tractors, and string between them a tremendous chain. Drag that down, and you knock down all the bush, and all the small trees there, get rid of them, because they were just trash trees.

Swent: And they were soaking up the water?

Bradley: They were soaking up water, and that kind of thing. The Forest Service was doing a good job. One of our problems was to tell them whether this was a good idea, whether it was wise to conserve water, and whether it was wise to put more water behind, say, the Roosevelt dam, or the Coolidge dam, or one of those big dams in Arizona. Of course, we as laymen, had no government pressure on us to do anything, and that was our function, to talk about it.

Swent: Where, specifically, did your mining context come in?

Bradley: Heading off the environmental people more than anything else. For instance, there was a woman from Portland who was on the thing because she had a reputation for being a great conservator, environmentalist. She made a squawk—for instance, on one of our trips she saw a bench out in the forest that had concrete in it: "That's not natural." Of course it's not natural, but how in the hell else would you build a bench that would survive? That's the trouble with the environmentalists, they're all half nuts. She was a nice gal, and my wife and I were driving around Portland once, and we all went and called on her, but that's the kind of thing you run into.

You know what environmental problems have done for mining, they've killed about half of it. My wife and I have two hundred acres up in Nevada County, and running through that is a mineralized zone, from which gold has been produced in the past, and it's known now to contain gold. Amax came up there and drilled the whole thing a few years ago and got good gold assays out of it, and a group of Canadians is paying us money now to hold onto a lease on it.

But one of the requirements has been, that in order to be allowed to mine, they go before the Planning Commission of the County of Nevada and get a permit. Well, they went to the Planning Commission of the County of Nevada, in a public meeting. I think the average age of the women there is about thirty-five, someplace in there. At the age of thirty-five your children are all in school, so you can go to meetings, and talk about things you know nothing about.

Bradley: They were absolutely against this even though not a one of them lived within a mile of the place, not a one of them lived in the same topographic horizon--they lived on the other side of a big gorge--but they could see the cyanide coming down off our hills and going up on their hills, and all that sort of thing. That's the environmentalists for you.

Swent: So they stopped it.

Bradley: Well, they didn't stop it permanently, it's just hanging fire now. But, incidentally, I've learned that you go to a county with a thing like this and you run into just this sort of thing, you get all these ignorami there. You deal with that part of your land which is covered by the [Federal] government--and I've got two mining claims up there--and the county has no jurisdiction over federal land. So these people should be going to the government to see about getting permission to dig on [Federal] government land.

My idea is that if they do that, once they get started, why, then the county won't be so bothered by it. They're not doing that, they're not miners, they're just Canadians with money, who think they'd like to mine. They do have, apparently, three or four of these so-called heap leach things going around the country. One in Arizona, a couple up north somewhere.

But it's such a surprise and a disappointment to me to see a county like Nevada trying to stop these mining things. Nevada has been the most important mining county of any in the state. Now, suddenly, forty years since there's been any mining, it's filled with a different type of person, people who know nothing about mining and don't care anything about mining. They're against it. They don't know what it is, but since they don't know what it is, they're against it. Wonderful world.

Archeology for the Melones Dam##

Swent: Did you want to say anything about that Melones project?

Bradley: Oh, the Melones thing! Good Lord. The requirement by law today is that anyone damming a river--government or otherwise--must arrange for an archeological survey of the country that is to be drowned, flooded behind the dam. And congress says that you must spend one percent of the project cost on archeological survey. This is a $300 million dam project, so the archeologists had $3 million to spend.

Bradley: Now, the Melones Dam was backing water up on the Stanislaus River to a point well above the crossing of the Stanislaus and the Mother Lode. The point where they crossed was the old town of Robinson's Ferry. This involved the Carson Hill Mine. These archeologists were well-trained, decent youngsters--they were good to work with--but they didn't know one thing about mining; and of course what they were doing in tracing the tracks of man through that country, was mainly tracing the tracks of the Forty-niners. Well, this I knew something about. They hired me to advise them on it. I thought, "Boy, this is a good job!" The girl that was in charge of the whole thing, Julia Costello, is still living up in that country. She was very good to work with.

Swent: I think she's a historian up there.

Bradley: Oh, yes. She's written and published a very good brochure on the whole thing. She was a smart and careful gal. And she and I got along fine. She was a good boss. And I was able to furnish them with lots and lots of information they couldn't otherwise have gotten, so--

Swent: You were identifying things?

Bradley: Oh, yes, identifying things--old structures, ruins of structures, foundations, and things like that. And one of the things I learned from that was the location of the Rooney boarding house at Carson Hill. A daughter in the Rooney family was Theresa. She married J. G. Fair because he was up there leasing or operating on Carson Hill. He ran some tunnels and things and found some ore, this in about 1860. And in the course of all that, [chuckling] he went after this Theresa Rooney and married her. She became one of the richest mining women in all our history because of the Comstock connection. He was one of the big four in the Comstock.

Swent: And the boarding house is now under the Melones--?

Bradley: No, no. The boarding house occupies a knoll which is occupied now by a house belonging to a cattleman up there. I can't think of his name, but it's a very common name in that country and I ought to remember it.

Swent: So it's not inundated.

Bradley: No. No, Carson Hill is at least a mile from the water and much higher.

Swent: Well, that's all very interesting.

Bradley: Carson Hill was a very interesting mine. There is a group up

there now who are trying to cyanide the ore that they mine, and they may make a go of it because they haven't spent the money the way the group at Jamestown has.

Swent: So they're putting it through a cyanide mill, then.

Bradley: Yes.

Swent: I see.

Bradley: When I was at Jamestown [1938-43], we worked out a flowsheet. It involved cyanidation, of course. But the county won't let them cyanide now. That county won't let them cyanide; the adjoining county, Calaveras, lets people cyanide. It's nuts. [chuckles]

Jamestown is now making a flotation product; it takes a very fine grind to make successful flotation recovery of that ore. We were going to use a pretty coarse grind, classify the tailings, take out the sands, cyanide them, and cyanide the flotation concentrate also, and we'd have, oh, probably ninety-five percent recovery.

Bradley: These present people [1988] have to make a flotation concentrate. We'd have made a poor concentrate, and cyanided it, and recovered the gold thus; these people have to make a flotation concentrate and ship it out of the state--it goes to a mill over in Nevada--to be cyanided.

Swent: Much more expensive, isn't it?

Bradley: Ooh. And they're fussing about cyanidation up in Grass Valley district, too. Grass Valley and Nevada City were the cyanide capital of California for about fifty years. More cyanide went up there than to any other place in California. As my brother points out, the people in those two cities were not then sitting around in dread for their lives because of the presence of cyanide.

Swent: That's one of the changes you've seen, isn't it? Let's hope the time will come again when the public appreciates the importance of mining. Thank you for sharing your recollections, Phil.

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TAPE GUIDE -- Philip Bradley

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