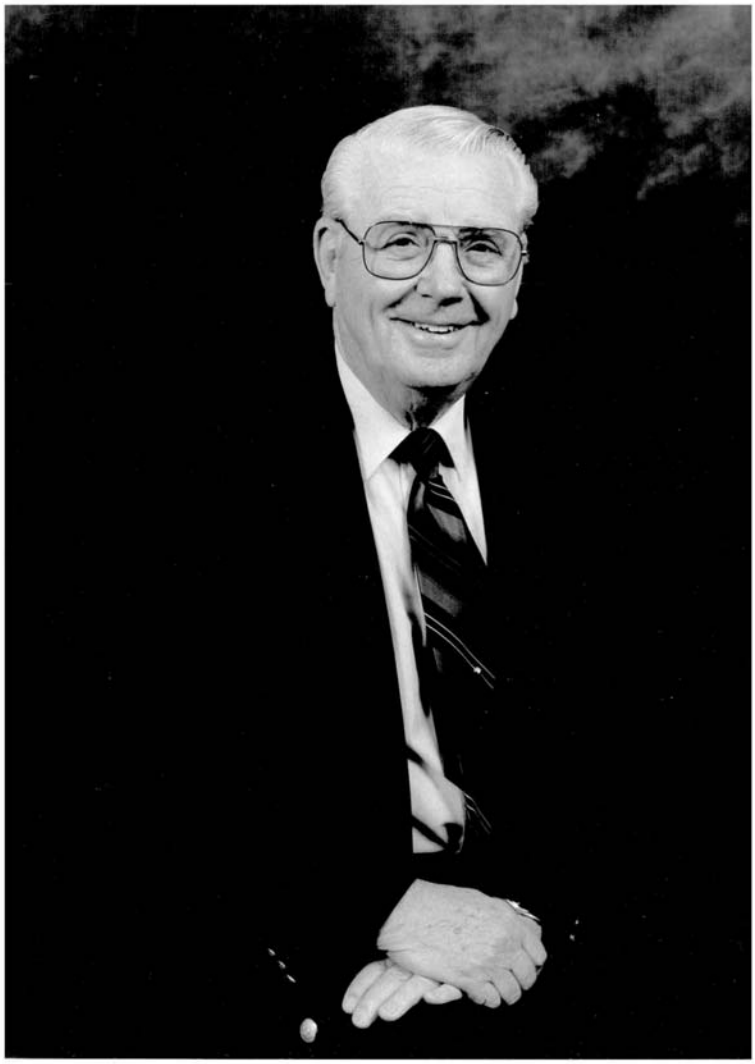

Frontispiece: Harvey Wood Boyce about the time of his oral history interviews.

ORAL HISTORY INTERVIEWS

Harvey Wood Boyce

♦ ♦ ♦ ♦ ♦ ♦

STATUS OF INTERVIEWS:
OPEN FOR RESEARCH

♦ ♦ ♦ ♦ ♦ ♦

Interviews Conducted and Edited by:
Brit Allan Storey
Senior Historian
Bureau of Reclamation

♦ ♦ ♦ ♦ ♦ ♦

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Oral History Program
Bureau of Reclamation
Denver, Colorado

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List of Illustrations[1]

1. All illustrations and documents, except the Statement of Donation, are courtesy of the Boyce family.

STATEMENT OF DONATION OF ORAL HISTORY INTERVIEWS OF HARVEY WOOD BOYCE

1. In accordance with the provisions of Chapter 21 of Title 44, United States Code, and subject to the terms, conditions, and restrictions set forth in this instrument, I, Harvey Wood Boyce, (hereinafter referred to as "the Donor"), of Boulder City, Nevada., do hereby give, donate, and convey to the National Archives and Records Administration (hereinafter referred to as "the National Archives), acting for and on behalf of the United States of America, all of my rights and title to, and interest in the information and responses (hereinafter referred to as "the Donated Materials") provided during the interviews conducted during the week of December 15, 1997, in Boulder City, Nevada, and prepared for deposit with the National Archives and Records Administration in the following format: cassette tapes and transcripts. This donation includes, but is not limited to, all copyright interests I now possess in the Donated Materials.

2. a. It is the intention of the Archivist to make Donated Materials available for display and research as soon as possible, and the Donor places no restrictions upon their use.

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Date: December 17, 1997 Signed: Harvey Wood Boyce
Harvey Wood Boyce

INTERVIEWER:_____
Brit Allan Storey

Having determined that the materials donated above by Harvey Wood Boyce are appropriate for preservation as evidence of the United States Government's organization, functions, policies, decisions, procedures, and transactions, and considering it to be in the public interest to accept these materials for deposit with the National Archives and Records Administration, I accept this gift on behalf of the United States of America, subject to the terms, conditions, and restrictions set forth in the above instrument.

Date:_____

Signed:_____
Archivist of the United States

Introduction

In 1988, Reclamation began to create a history program. While headquartered in Denver, the history program was developed as a bureau-wide program.

One component of Reclamation's history program is its oral history activity. The primary objectives of Reclamation's oral history activities are: preservation of historical data not normally available through Reclamation records (supplementing already available data on the whole range of Reclamation's history); making the preserved data available to researchers inside and outside Reclamation.

The senior historian of the Bureau of Reclamation developed and directs the oral history program. Questions, comments, and suggestions may be addressed to the senior historian.

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For more information about Reclamation's history program see:
www.usbr.gov/history

Oral History Interviews
Harvey Wood Boyce

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Harvey Wood Boyce on December the 15th, 1997, at about three o'clock in the afternoon in the regional offices of the Bureau of Reclamation in Boulder City, Nevada. This is tape one.

Have you been interviewed before by anybody for oral history purposes?

Previously Interviewed by Woman from the Boulder City Museum

Boyce: Yes, I have, here in Boulder City. The Boulder City Museum has a lady that is also doing a talk and then she'll publish it out into book form, and I did go through a two-hour period with her. I would suppose that if you contacted the curator of the museum, Mrs. Joe Lapin [phonetic], here in Boulder City, she could get a copy of that interview for you to help, maybe, expedite some of your questions.

Storey: Who was the interviewer, do you remember?

Boyce: I can't tell you her name.

Storey: Miss Woodluff [phonetic]?

Boyce: It could be.

Storey: I think Harvey gave me the name. I can put that in.

Well, tell me, Mr. Boyce, let's get your name straightened out.

Harvey Walter Boyce Is His Son

Boyce: My name is Harvey W., *Wood* W-O-O-D, Boyce, and the other one is my son, Harvey *Walter* Boyce.[2] So that's the difference between the two names.

Storey: Okay. Good. Where were you born and raised and educated, and how did you end up at the Bureau of Reclamation?

Born in Lovell, Bighorn County, Wyoming

Boyce: I was born in the little town of Lovell, Wyoming, Bighorn County.

2. Harvey Walter Boyce also has been interviewed for Reclamation's oral history program.

Family Moved to Anaconda, Montana, Where Father Worked at the Copper Smelter

My mother and father, after a few years, they met and married in *that* town, and they went from *there* to Anaconda, Montana, where the copper mill, smelter, was in operation, and Dad went to work for "the hill," as we called it, operating what they call the "slag dump" for the copper ore.

Memory of a School Injury in Lovell

My first, shall we say, recollection of school and like that was in Lovell. I had my eye cut open with a swing, from being stupid, as young kids are, and run underneath a swing and got clipped right on the eyebrow. Another half an inch and I would have had no eye. So that's my first recollection of grammar school.

Storey: That's back in the days when they made the seats out of two-by-eights, right? (Laughter)[3]

3. Note that in the text of these interviews, as opposed to headings, information in parentheses, ( ), is actually on the tape. Information in brackets, [ ], has been added to the tape either by the editor to clarify meaning or at the request of the interviewee in order to correct, enlarge, or clarify the interview as it was originally spoken. (continued...)

Mother and Father Divorced

Boyce: Or something similar, yes. (Laughter) From there, my mother and father split up, and they did this marriage-and-split-up thing three different times.

Father Sang for Radio Station KGIR in Anaconda

Each time that they went back together, there was another child, and my father, in order to earn, shall we say, additional money, sang for the radio station K-G-I-R, Butte, singing Western and folk songs on the radio. This was done every Saturday night. One of the pieces that he used to sing a lot was "Tying Knots in the Devil's Tail." Now, I can't begin to tell you what the words were of that piece of music, but it was a Western folk story.

3. (...continued)
Words have sometimes been struck out by editor or interviewee in order to clarify meaning or eliminate repetition. In the case of strikeouts, that material has been printed at 50% density to aid in reading the interviews but assuring that the struckout material is readable.

The transcriber and editor have removed some extraneous words such as false starts and repetitions without indicating their removal. The meaning of the interview has not been changed by this editing.

Brothers and Sisters

My three youngest sisters were the result of this marriage and divorce, marriage and divorce, and so forth that way. I'm the third member of a family of six. I had one older brother, who is now dead. I had one older sister, who is also now dead, as [are] my mother, my stepfather, and my father. We're all, shall we say, victims of cancer, and it comes and it goes.

Dad Worked with Father and Grandfather in Lovell Harvesting Vegetables

Now, when we were in Lovell, Dad worked with his father and grandfather in processing fresh vegetables, peas, beans, one thing and another like that. Most of the ranches were at least forty acres, some of them as much as a hundred and sixty acres, and you might [have] thirty to fifty acres, maybe, in beans or sugar beets.

Storey: Was this a Reclamation project? This was an irrigated project, then?

"It was an irrigated project, yes, but it was not Reclamation. The Mormon Church sent my great-great-grandfather and his family to Lovell to

establish the sugar beet factory . . ."

Boyce: It was an irrigated project, yes, but it was not Reclamation. The Mormon Church sent my great-great-grandfather and his family to Lovell to establish the sugar beet factory ~~at C&H~~[4]–I don't know, C&H or Spreckles or one of them. Sugar beets were made into sugar right there in Lovell, and that's what they went there for. Well, some of them branched out into harvesting the crops, and so, as the saying goes, that's how I managed [to be] there.

Sent to Mother in Boulder City in 1935 with a Brother and Sister

From there I went back to Anaconda, Montana, and went to school there. I left school in Anaconda in 1935 and traveled with my brother and next youngest sister to Boulder City on March

4. About 1870 to 1900 the Big Horn Basin area of Wyoming became an area of Mormon colonization. See: D. W. Meinig, "The Mormon Culture Region: Strategies and Patterns in the Geography of the American West, 1847-1964," *Annals of the Association of American Geographers* 55 (June 1965), Number 2, pp. 191-220. Also, *The Basin Republican*, in Basin, Big Horn County, reported on January 28, 1916, that four train carloads of Mormon settlers from Iowa passed through on the way to Lovell to raise beets "in the vicinity of the proposed new sugar factory town," and on May 5 it reported a "large acreage of beets will be raised this year for the Lovell sugar factory. . . ."

the 15th, of 1935. That's when we arrived here in Boulder City. I can show you a picture of the bus system, etc., that we, shall we say, arrived in Boulder City on. There's one in here someplace.

Completed Seventh and Eighth Grade in Boulder City and Ninth Grade with an Uncle in Livingston, California

I then finished the seventh grade and the eighth grade here in Boulder City, and then I went to California with my uncle and went to school my freshman year in Livingston, California.

Returning to Boulder City, Finished High School in Las Vegas

Coming back to Boulder City the following year in high school, and we traveled to Las Vegas by bus every day for high school through my sophomore, junior, and senior year, basically graduating from there in *1940.*

After Graduation from High School in 1940 Held Various Jobs

Worked as a Box Boy at a Grocery

After 1940, I had worked during the summertime and after school at night as a box boy with a driver, hauling boxes of groceries to the different houses and so forth and so on, which was a service that they provided.

Storey: Here in Boulder City?

Did Pick up and Delivery for Bill O'Hara's Dry Cleaners

Boyce: Here in Boulder City. I also got involved with a dry-cleaning establishment, which was called Bill O'Hara's Dry Cleaners, and I did pick-up and delivery for the clothing that was dry cleaned and pressed and so forth and so on.

Worked for Grand Canyon-Boulder Dam Tours

As school run out , I went to work for Grand Canyon-Boulder Dam Tours out of the airport hangar here in Boulder City, driving cab, hauling people down to the lake to put them on the daily tours by boat to the Grand Canyon and back, and I'd take them down at seven in the morning, and I'd pick them up at 4:30, five o'clock in the afternoon, and they had been to Grand Canyon and back. So I worked at

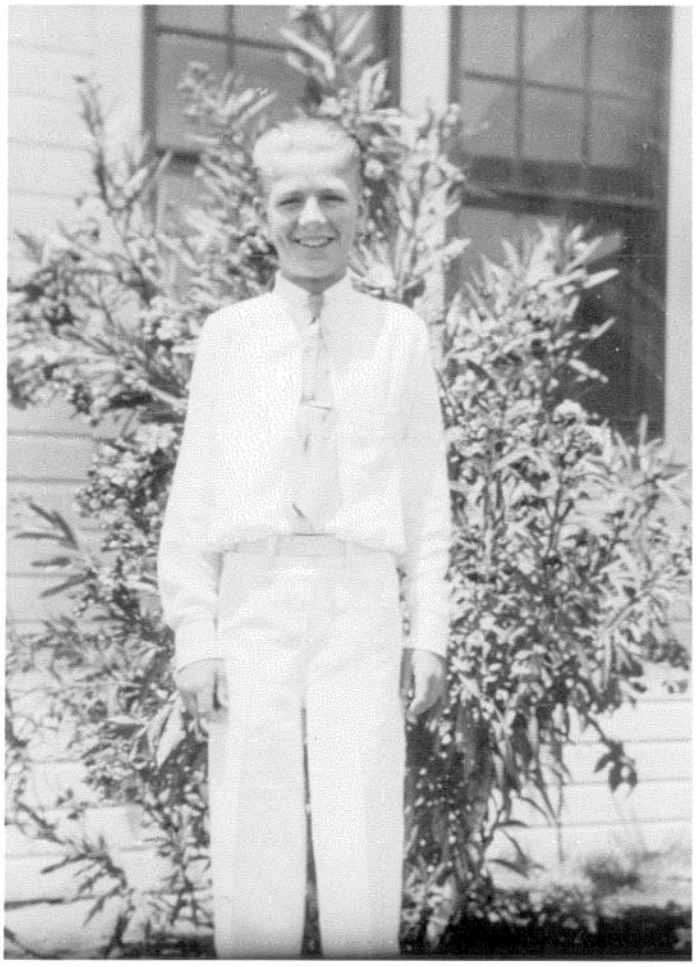

Illustration 1: Harvey Wood Boyce at home at 600 Arizona Street, Boulder City, on the day of his high school graduation in June 1940.

that trade until somebody got too big for their britches and decided that he was going to take it out on my chin, and after he done it, he decided that maybe he was 100 percent wrong instead of just 5 percent wrong, because he got himself canned for, shall we say, striking a minor, because I was only about seventeen years old then.

Drove the Cab Between Boulder City and Las Vegas

But I still drove the cab for him between Las Vegas and Boulder City.

"TWA set down in Boulder City, but they did *not* set down in Las Vegas at that time . . ."

TWA[5] set down in Boulder City, but they did *not* set down in Las Vegas at that time, and a lot of times I would have passengers who had to be got to Las Vegas to make interconnections to like San Francisco or something like that, and they could not go on TWA. So they'd get to Boulder City, and that was a transfer point. So I'd take them by cab, which was a 1935 Air Flow Chrysler, and take them to the airport in Las Vegas where Nellis Air

5. Trans World Airlines.

[Force] Base is today, and put them on the airplane, and they'd go on to San Francisco.

Roads out of Boulder City

Storey: What were the roads like at that time?

Boyce: Two lane, very rough, almost suicidal.

Storey: Were they paved?

Round Trip Boulder City to Las Vegas Was Two Dollars

Boyce: Just barely. Just barely, and that was down through Henderson. You had to go all the way in to Las Vegas to Fifth Street in order to be able to make a right-hand turn that would take you out to the airport to the north. Then a lot of times, because of different circumstance, there would be charters at night. I would drive them to Vegas to a nightclub, shall we say, and wherever they wanted to go, two dollars a pop. That's all it cost them.

Storey: From Boulder City up to there?

Boyce: From Boulder City to Las Vegas and *back* again, two dollars for the *car*. I got no

specific wages out of it. Whatever I was tipped was all I got out of it, and it was not unusual to, shall we say, to drive 'til two or three o'clock in the morning and then get back up and take the boat trip at seven o'clock the next morning. So it was not, shall we say, a very large-paying job.

Storey: What was Las Vegas like in those days?

Boyce: Well, Fifteenth Street was out of town in Las Vegas today, I mean in comparison. Fremont Street was nothing real special. There was drugstores, hamburger stands, two or three, shall we say, small casinos, because they were all small at that time. And there was nothing on the strip. There was no strip–not in those days.

"The first casino of any size was the El Cortez . . ."

The first casino of any size was the El Cortez, which was downtown– or still is downtown in the same position. I think it's on Seventh and Fremont. They, of course, have expanded now where they take up that whole city block. Las Vegas was just, shall we say, a one-horse town.

Storey: What was Boulder City like?

Arrived in Boulder City as Construction Ended at the Dam and Saw the Town Decline in Population

Boyce: Boulder City was a town that–when I came to Boulder City was just after the completion or, shall we say, they were very *near* the completion and dedication of the dam, and, of course, when everybody got to that point, they started laying people off, you know. I mean, the job had finished. It had run out. So I saw the population, housing, and like that just dwindle down to almost nothing, probably 600, maybe a thousand, people in all of Boulder City. Then it came back up again for a while, and then it went back down again as the war was over like that. That's World War II. And it went down a ways, and then it started coming back up again, and, of course, you can see the growth in comparison today. I suppose Boulder City's probably eighteen, twenty thousand now. I don't know. I don't keep track of it, I never have, tried to keep track of how much population there is.

In 1940 Went to Los Angeles to Work for Ralph's Markets

I went to work for Reclamation after my stepfather died. He died in 1940,

which was the year that I graduated from high school. I had gone to Los Angeles to work for Ralph's Markets in downtown L-A. It was at Thirty-first and Vermont. I was one of the people that handled the produce, and you were on a "will-mark system" so that your prices may change five times during a day's time, and you had to have the correct price for everything, and, of course, it was all real fresh vegetables, because they would come in with a truck, and you'd unload them and put them out, and that's the way–you know, went like that.

Mother Sent for Him to Help Her after the Death of Her Husband, Charles Kelly Sweet

Well, my brother had been working for Reclamation after Kelly died, and–

Storey: Kelly?

Boyce: Kelly Sweet, Charles Kelly Sweet, who was my stepfather.

Storey: That was your stepdad.

Stepfather Worked for Babcock and Wilcox and

Then Reclamation at Hoover Dam[6]

Boyce: Uh-huh. Now, he worked for Reclamation. He worked for Babcock and Wilcox, went on like that, and he was an electrician here on the dam.

Brother Quit Working for Reclamation and Went to Work for Standard Oil

After Kelly had died, my brother decided that it was time for him to seek employment someplace else, rather than being a plumber's helper and learning a trade. So he quit and went to work for Standard Oil. They had a Standard Oil station here in Boulder City, and he went to work for them. Well, then, in order for my mom to continue living in government housing, there was nobody working for Reclamation, so she was, shall we say, forced to leave the 600 Arizona Street address and moved into the apartments on B Street. So after I had been in L-A. for a couple of months, maybe three, I don't

6. Note that President Herbert Hoover's Secretary of the Interior, Ray Lyman Wilbur, designated the name as "Hoover Dam." Franklin Delano Roosevelt's Secretary of the Interior, Harold Ickes, designated the name as "Boulder Canyon Dam." Subsequently, in 1947 the Congress specified "Hoover Dam" as the official name. In this oral history both designations are used.

know, she came down to L-A and said, "I need you to come home and help take care of your three sisters and me."

Went to Work for Reclamation on July 18, 1941

So I said, "Fine." Well, I came back and hired out to the government on the 18th of July 1941.

Work on Construction of a Switchyard as a Laborer

I started out as a laborer working for building the metropolitan switchyards just at the top of the dam, and, basically, what we were doing, we were taking big rocks and making small ones out of them with jackhammers and like that.

Became a Janitor in the Dam

So I worked at that for a while, and it started to get cooler in the summertime going into fall, I asked for the possibilities of a job down inside the dam. Well, I went to work as a janitor down at the dam and worked some, shall we say, three or four months down there as a janitor, and from that I made application to become an electrician's helper.

Became an Electrician Helper

Well, my stepfather, having worked as an electrician on the dam and like that, it was pretty easy for me, going to the different electrician foremen, which there were several of, and applying for a job, part of it in construction, part of it in maintenance.

Well, I was hired to become a helper. I can't tell you the exact date, but it was, shall we say, a little while after December the 7th of 1941, which was Pearl Harbor Day.

Married February 26, 1942

I was working for the construction electricians at that time, and after a period of time in January, went on like that, I called my fiancee from up in–she was in Sun Valley, Idaho, working there, and asked her if she was going to come home and marry me or was I just going to go in the Navy and she could shift for herself. Well, she decided that she'd come home and marry me. So we were married on the 26th of February 1942.

Joined the Navy and Went to Electrician's School at Iowa State College in Ames

Storey: So you had decided to go into the Navy.

Boyce: Yes. I made application to go into the Navy and was accepted, and I did, after boot camp, went directly to electrician's school at Iowa State College at Ames.

Storey: Before we get into that, let's go back and clear up a few questions here. What was your dad's name?

Boyce: My father's name was Calvin [Arowett] ~~Ariot~~ [pronouced are ōit] Boyce.

~~Storey: Okay, how do you spell his middle name?~~

~~Boyce: A-R-I-O-T~~

Storey: OK. Is that a family name?

Boyce: I can't tell you. I really can't. We have done an awful lot of genealogy. As a matter of fact, my sister is the historian, and I have seen it spelt half a dozen different ways, but to the best of my knowledge that, what I just gave you, is the correct spelling.

Storey: This processing business for vegetables, were they canning them and selling them

commercially? How was that working?

Boyce: No. That was just fresh vegetables bought from the farms around L-A. or down towards Yuma and so forth and so on. They would truck it in fresh.

Storey: Into Wyoming?

Boyce: No. You said processing of vegetable. That was at a regular supermarket, shall we say.

Storey: That was *your* job.

Boyce: My job.

Storey: I'm talking about your dad and granddad and great-granddad's business.

Boyce: Oh. That was just bulk growth of, shall we say, the particular products and dry beans, peas, one thing and like that. They would harvest them, see.

Storey: Not canning or anything like that.

Boyce: No, they didn't have to do any canning. All they did was harvest them. And then they'd be hauled away by five-ton trucks. They didn't have a lot of them real big

trucks like they have today. All they had was some little old four-bangers, and sometimes you have to use three pedals in order to get that old Ford to back up the hill. But that's the way they had to do it a lot of times.

Storey: Then I take it your mother remarried.

Mother Married Charles Kelly Sweet

Boyce: My mother remarried Charles Kelly Sweet in '29, I believe.

Storey: So, when were you born?

Born September 4, 1921

Boyce: I was born September the 4th of 1921.

Storey: So about the time you were eight or nine.

Boyce: Yes.

Storey: And then you moved to Boulder City because he had gotten a job?

Father's New Wife Convinced Him to Send His Children to His Ex-wife

Boyce: No. My father married a woman who had

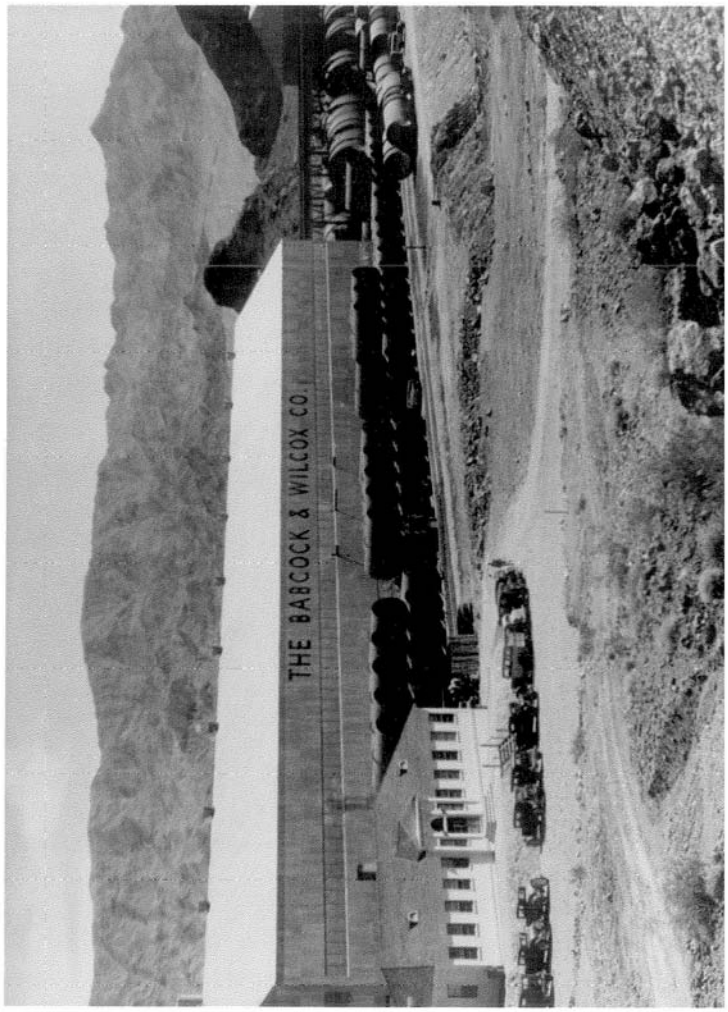

Illustration 2: The Babcock and Wilcox steel plant in Boulder City.

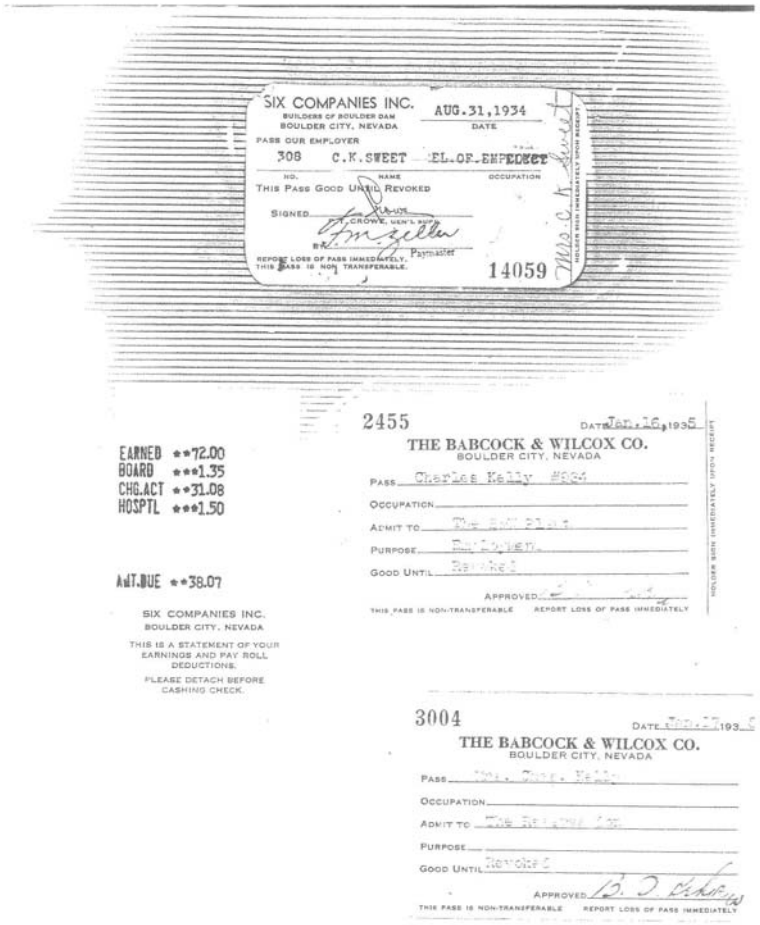

Illustration 3: Various passes issued to Charles Kelly Sweet and his wife. Pay stub from Babcock and Wilcox Company.

two children, and then, I believe, they had–I know they had three or four after that, but my stepmother just couldn't handle, shall we say, basically four of us, my sister older than me, my sister just younger than me, my brother, and myself. So she coerced my father into putting us on a bus. And without fanfare or farewell or what to do, we came to Boulder City.

"You can imagine the shock and surprise that my mother and stepfather went through on the arrival of four children that they basically didn't have room for here in Boulder City . . ."

You can imagine the shock and surprise that my mother and stepfather went through on the arrival of four children that they basically didn't have room for here in Boulder City, but that's the way a lot of things were done, I guess, in those days, I don't know. But that's how I got to Boulder City.

Storey: So you would have been about fourteen.

Boyce: I was in the seventh grade, so it was pretty close.

Storey: So your stepfather had been working here before that?

Stepfather Began Working in Boulder City in 1931

Boyce: 1931.

Storey: From the very beginning.

Boyce: From the very beginning. He helped install the telephone equipment downstairs when this building was being built, like that.

Storey: The administration building.

Boyce: Yes.

Storey: He was an electrician?

Boyce: Yes.

Storey: Did he just work in town? Where was he working?

Boyce: After the telephone job, the best I can tell you is that he went to work down at the dam, and I don't know whether he was in construction or whether he was in the maintenance of the dam, shall we say.

Sent to Sydney, Australia, to Serve in "Underwater Defense" in Task Force 58

In my later years, as I went to work for Reclamation, as I said, as an apprentice, then I went into the military and went to Iowa State College and graduated from there and became an electrician third class, and went from there to San Francisco, and from that point on to Sydney, Australia, and became the twenty-eighth person in "underwater defense" for the flag for the Task Force 58, which, if you're any buff of history, Task Force 58 was one of the prime [groups] ~~peoples~~ that destroyed the Japanese.

Storey: How did they do that?

Boyce: Flattops, submarines.

Storey: Carriers.

Boyce: I was attached to the *flag* in Sydney.

Storey: We're talking the *admiral's* flag?

Boyce: Yes, sir.

Storey: Which admiral?

Boyce: He was the only one-striper admiral in the Navy, Commodore Coleman was his name. I was attached to his staff.

Storey: One-striper meaning he was the only one with five years' service?

Boyce: I can't tell you that. I don't have any idea, but he was the *only commodore in* the Navy at that time. In other words, he was a one-striper admiral. He wasn't the second or third or fourth. Of course, at that time–they did finally wind up with a five-star, you know, but he was just a one-star, shall we say. I called him a one-striper, but it's a one star.

END SIDE 1, TAPE 1. DECEMBER 15, 1997.
BEGIN SIDE 2, TAPE 1. DECEMBER 15, 1997.

Storey: A little more about your stepdad, though. What else did he do, do you know?

Charles Kelly Sweet Had Served in the Navy

Boyce: He was very involved in American Legion 40 and 8 and like that, because he was an ex-Navy man *also* and had been an electrician in the Navy. That's really how I, shall we say, become involved in it or interested in it, shall we say. But I can't *tell* you who all he worked for, because I don't know. I don't think that it was particularly any great amount of people that he was employed by. I don't know

that. I don't think that there's a person yet alive that could even verify what I've told you, as far as that's concerned.

Storey: About him working there, you mean?

Boyce: Yes.

Storey: Well, the personnel records would say that.

Boyce: Oh, yes. But he went to work for Reclamation someplace between '31 and '35. I think '35-, '36, because, if I remember right, Reclamation really became involved in 1936, I believe.

Storey: We started building and designing '31, stripping out the keyway and everything for the dam.

Boyce: He was working as a construction electrician for Babcock and Wilcox, where the pipes were being built and so forth and so on that way.

Storey: Oh he was? Where they were milling them?

Boyce: Yeah.

Storey: Before he came to Reclamation?

Boyce: Yes. Yeah, he came to Reclamation, I would think somewheres in the neighborhood of 1934-, '35.

Storey: Didn't Harvey [Walter Boyce] tell me that there's a story in the family that he had a special job, some sort of oversight, or maybe, I ought to say, *spying*?

Believes Sweet Was a T-man Assigned to Hoover Dam to Prevent Sabotage

Boyce: He was, to the best of my knowledge, a T-man.

Storey: T-man?

Boyce: Treasury Department. He was sent here from Salt Lake. He was working in Salt Lake when the dam got started, and he was sent from Salt Lake down here to be an undercover man for sabotage, etcetera, etcetera.

Storey: What kind of sabotage? Do you know anything more about this?

Boyce: I have no idea. I really do not have any idea, but that is something that, should we say, was given to me in confidence. The validity of it I cannot tell you, but that's

what I was told.

Storey: Where'd he meet your mom?

Sweet and His Mother Moved to Kirkland, Washington, Then Salt Lake City

Boyce: In Anaconda, Montana. They, shall we say, left together and took my two baby sisters with them. One *was* a baby, the other one was about two, and they moved to Seattle, and that was where he was from. Actually, he was from Kirkland, Washington. They stayed there for a while, and then they went to Salt Lake, and then came here.

Sweet Died at the Sawtelle Veteran's Hospital, Los Angeles, California, and Was Buried in the Veteran's Cemetery There

Actually, he died in the Vets Hospital in Sawtelle, and that's where we buried him.

Storey: Where is that?

Boyce: In Los Angeles. It's on the outskirts of Los Angeles, but that was the name of the hospital *and* veterans' graveyard, is Sawtelle.

Storey: He died of natural causes?

Boyce: He died of–he had sinus trouble very bad. Mom and he and my two youngest sisters had left on vacation, I think the first week of September or very close to that particular time, and they went to Englewood–

Storey: California?

Boyce: Yes. He was operated on through the nose into the sinus cavities up over his eyes, something like that. Now, the doctor either done one of two things: he either cut too much, or he didn't cut enough. Well, in three days he was dying of spinal meningitis, and that's what he died of, about four or five days after the [surgery]–because when Mom found out what was going on, she had Sawtelle come and pick him up and take him to the Veterans Hospital, where he died, and then he was buried there.

In the meantime, Mom had come back to Boulder City and took all of us back down to the funeral services and like that. I'll be buried in the veterans' cemetery down here and so will my wife.

Trip to Australia on an Old Matson Liner

Storey: So you had decided to join the Navy, and you ended up in Sydney.

Boyce: Right. When I went over, we took an old Matson liner that had come out of the scrap pile, and it took us twenty-eight days to travel from San Francisco to Townsville, Australia.

". . . from San Francisco to Townsville, Australia. Then we left the ship . . . and took a ride on Australia's famous railroad line. You get about half way to Sydney from Brisbane, you had to unload everything from the train and carry it down to the next train. The *gauges* were different. . . ."

Then we left the ship while they *unloaded* some supplies and then traveled down to Brisbane by ship, and there we left the ship and took a ride on Australia's famous railroad line. You get about half way to Sydney from Brisbane, you had to unload everything from the train and carry it down to the next train. The *gauges* were different. They could only go so *far*. Now, this is God's truth. They could not travel. You had to unload everything from this train and carry it to the next train.

Storey: Not even a station?

Boyce: Well, I don't really recall much. It was at night. At that particular time, Australia was not a very populated place. Matter of fact, during our stay–I think we were three days in Townsville–I pulled guard duty out on some lonely Y in the road, an Army private and myself, as armed guard, just in case the Japanese decided to come on down from Cairn to further infiltrate Australia.

Took a Bad Fall on the Cruise down to Australia

From there, as I say, we went by train, and from that point we went on down to Sydney, went to what they call "the receiving station," which was actually in an old hotel, and we were, shall we say, sent out on work parties and so forth and so on like that from that particular point. What I didn't tell you earlier, that four days out from San Francisco on that slow boat that we were on–I think it could make about five knots, but they had over two thousand troops on it and some Navy people, I think it was a hundred and one of us, that they were transporting to get down there.

I took a fall at night and wound up with a separation between my fifth and sixth chest ribs. It tore the cartilage apart, and I had a tumor grew up in just a matter of days. I had a tumor sticking up in my chest like this.

Storey: The size of an egg?

Boyce: No, not that big.

Storey: Smaller than that.

Boyce: Yeah. So when we got to Sydney, I went to sick bay because there was no sick bay on the [ship]–that's where I spent all my time getting my ribs healed up, went on like that, until we got to Townsville. I went to sick bay, and the doctor who was at the sick bay, which was a Navy doctor, they sent me to the Army 116th general for observation, shall we say, and recommendation. They sent me to a orthopedic surgeon, and the orthopedic surgeon says, "There's nothing the matter with you. You can go back to duty." And here I am with this growth in my chest and some massive sore ribs. So he decided that the best thing for me to do, because I was scheduled to go to Melbourne and become part of the PT squadron at Melbourne.

Joined the Underwater Defense Group

So there was a fellow that had just joined the underwater defense group, who was an electrician, so he was transferred and I was put in his place at the Navy base. I *did* run into that man forty years later in Sydney. We were on a cruise. They were out a little bit earlier than we were, and, actually, it was the last day of the cruise that we were there, and I did run into that man, and he says, "So you're the character that took my job." (Laughter)

Storey: What did you do at the base there?

"Underwater defense was the actual demagnetizing of ships . . ."

Boyce: I received, categoried, itemized equipment for underwater defense. Underwater defense was the actual demagnetizing of ships or changing their demagnetizers while they were in port, and this was all done by, shall we say, a chart that is made for each quadrant of the latitude, longitude. There's a different setting for every section of the ship, and it all had to be taken care of. So I was one of the twenty-eight original underwater defense people.

Storey: Tell me why you care about the magnetism of a ship.

"A ship traveling through the water develops magnetism. . . ."

Boyce: A ship traveling through the water develops magnetism.

Storey: It becomes a big magnet.

Boyce: That is correct. Magnetic mines was what the Japanese used, so in order to combat the magnetic mines, they installed these coils of wire which they impressed electricity through so that they would neutralize the actual passage through water, the magnetism that comes from that. They had special coils in the forebay, in the tailbay, in the midships, and all the way around the interior of the ship. Now, I know that may sound a little bit strange, but that's an actuality.

Storey: How long were you there in Sydney doing this?

The Flag Transferred to Brisbane

Boyce: Gee, I think somewheres in the process of maybe ten months to a year. From that

point, we transferred to–and that was the *flag* itself, transferred to Brisbane. There again, as we went by railroad, we did the same thing. We unloaded *all* of the flag and transferred it over to the other train and went back to Brisbane. (Laughter)

While in Brisbane, they were putting together a Australian riverboat, seagoing. It was twenty-eight foot wide, fifty-two foot long, and only drew about five or six feet of water, but it had two big old triple steam engines, and that was our propulsion. But actually what they were doing, they were building a floating powerhouse. I was [an] electrician, basically in charge of, other than the chief, I was the next in command, and we were installing the electrical equipment as well as the storage batteries. We had five hundred and twenty submarine storage batteries, so we could use anywheres up to– 440 volts at 3,000 amps was our output. But we also had a sixteen-cylinder Leroy– that's one of them long ones, too–gasoline-driven motor generator set, which would produce the same amount of power as our battery bank. So we could hook up any kind of power, shall we say, up to 3,000 amps at 440 volts. As I say, we were just a floating powerhouse.

Actually what we would do with that is that we would connect it up to the different ships so that they could demagnetize. See, a submarine coming in off of the run, he's loaded magnetically. So we had to neutralize him.

Storey: So, Brisbane was a submarine port?

Boyce: Yes. Brisbane at that time *was* the South Pacific submarine base. There was a man from Boulder City that I knew, particularly his brother, his mother and father, like that, and he was stationed at the submarine base, so it was, shall we say, right next door.

"I was talked into changing my status from being with the flag to becoming an electrician on board that powerhouse . . ."

So at least there was somebody that I *knew* there, and, shall we say, I was talked into changing my status from being with the flag to becoming an electrician on board that powerhouse with the, shall we say, gift in hand to get me to join that, because I had to request it. They couldn't just augment me and say, "Hey, you're mine."

Storey: Not from the flag's staff.

Boyce: Not from the flag staff. No way. He said that I would get my chief's gear, the chief would be sent back to the States, and I would take over the crew and kind of like that. Well, we didn't have, actually, a skipper or, shall we say, a skipper's assistant or whatever you want to call him, executive officer. He was only an officer in charge, and his name was T. I. McGill, Timothy McGill. He was an engineer. They sold me this bill of goods, and I *bought* it, and consequently, I retired from the Navy as an electrician second class. I had taken all my tests and all my progression workbook, shall we say, like that, because that was part of the way they got the guys to train to move up.

So when the President signed the order that, after having been overseas at least eighteen months, that you could request transfer back to the States for reassignment and thirty days' vacation leave, well, of course, I put in for a thirty-day vacation. There was no getting around that. The day that I was to leave the ship, the officer in charge was standing on the forecastle with a chief's cap in his hand. He says, "It's yours if you'll stay."

I said, "You know, I already bit that

sour apple *one* time, and I'm not going to bite a second time," and I walked over the side, because he couldn't do anything about it. I had my orders. So that was a little of the stuff–you know, I mean a lot of that stuff went on in the service.

Storey: You started out as an electrician second?

Boyce: No. I started out as an apprentice electrician, fireman third class, and went through Navy schools, and I graduated fifty-fourth out of two hundred, and received my electrician third class rating. Then I left from there and picked up my second class in Australia and took all my tests and so forth and so on for my third class and chief. You didn't have to differentiate between the two– those two went together.

The base that was there, which was Seabee, they had decided that the chief and the XO [executive officer] for the Seabee base, they would be the governing body for any promotions for people like us on that YDT-5. The result of it was that they fixed up a test, all right. I took that test, and about halfway through it, I said, "There is no way that I can pass this test, and I don't think there's an electrical engineer *alive*

that can pass that test." So I made them leave all of the stuff right there on the table. I went and got the skipper of the ship, electrical engineer, brought him over and says, "All right. Now you figure that test out." In five minutes' time he threw up his hands, he says, "There ain't no way anybody's going to pass that test." But they had written it so that they could control the people on board ship, Seabee base. But that's, again, the way the cookie crumbled.

Storey: How did you get back to the States? You said you came back to the States for reassignment and thirty days' leave.

Went to Electrician's School in Virginia

Boyce: And thirty days' leave, yes. I got back to the States. I got assignment to electrician school at Camp Prairie, Virginia, and it was an electrician school. I went there, took my family with me, Harvey and his mother, and I was there, I guess about a year and a half.

Transferred to the Electrical School in Washington, D.C.

But after the first six months, I was

transferred to Washington, D.C., to the electrical school there, which was the highest one the Navy has. You actually accomplish an electrical engineer degree, even though you're still only a, shall we say, a chief electrician or first class electrician by graduating from it.

Teratoma Cyst Had to Be Removed from His Spine

I had a teratoma cyst on my spine, and I had to have it operated on, and the result of it was–it just didn't heal up the way it should and went on like that, and I couldn't sit for hours at a time, you know, in the school, and, believe me, they had the information.

"I was instrumental in getting an apprenticeship program started here on the dam [Hoover]. . . ."

After I got out of the Navy and went on like that, through the apprenticeship that you read about, I was instrumental in getting an apprenticeship program started here on the dam [Hoover]. I was the one that *forced*, shall we say, Reclamation to have an apprenticeship on the dam. They swore up and down that never on God's green earth were they going to ever have

an apprenticeship program on the dam.

". . . they weren't going to let me become a journeyman electrician just because I was in the Navy as electrician. . . ."

I went through the Veterans Administration down in San Bernardino and had taken all the tests and so forth and so on to get this thing started. I mean, they weren't going to let me become a journeyman electrician just because I was in the Navy as electrician. A man by the name of L. J. Hudlow [phonetic], who was the director of the project, he said, "There ain't no way in *hell* it's going to ever be a project," and like that.

So the Veterans Administration came back to Boulder City with me, and we had a conference, and the Veterans Administration man said, "Mr. Hudlow, are you part of the federal government?"

He said, "Yes, we are."

Feels He Was Required to Do More than Any Other Apprentice in Reclamation's Program to Qualify as an Electrician

He said, "Well, then, under Public

Law Sixteen, you *will* establish and *operate* an apprentice program on this project. Either that or you might as well draw your time. You're done." Consequently, I was the prick that created a problem, and because of the amount of schooling that I already ~~have~~ had, I was required to take an electrical engineer degree as my study course. *No one* else who has come up through the apprentice program in electricity was ever required to do any of the type of studying that I had to do. I went through ICS, and I hold three-quarters of a degree through ICS. The thing that stopped me was I was *not* able to have any lab time. In school you would have lab time. In correspondence, you do not.

Storey: ICS is–

Boyce: It's a big school system that is still in operation today.

Storey: It's a correspondence school.

Boyce: A correspondence school, International Correspondence School[s] of Scranton, [Pennsylvania].

Storey: Oh, okay. Now, I hate to appear ignorant,

but tell me what it *means* to have an apprenticeship program.

Boyce: An apprenticeship program is that in order to be qualified as an electrician, we had to qualify in *eighteen* different phases of electricity: light, power, crane operation, industrial putting in of equipment and hooking it up, and so forth and so on. So there was eighteen different degrees of schooling that I had to have. I had to have eight *thousand* hours apprenticeship coverage of *those* eighteen subjects.

END SIDE 2, TAPE 1. DECEMBER 15, 1997.
BEGIN SIDE 1, TAPE 2. DECEMBER 15, 1997.

Storey: This is Brit Allan Storey with Harvey Wood Boyce on December the 15th, 1997.

... because of the schooling you had had.

Boyce: Yeah. I was required to take this type of correspondence course as an electrical engineer. It actually states right in the agreement, and I have the original agreement between L. J. Hudlow [phonetic] and myself that it would require divisions 1 and 2 of a four-part schooling in order to be qualified. I come back to

Illustration 4: Apprenticeship graduation ceremony April 16, 1951. L. To R.:Harvey Wood Boyce, regional personnel officer H. H. Mitchell, Boulder Canyon Project Director of Power L. R. Douglas, and armature winder and apprenticeship committee member John Phillips.

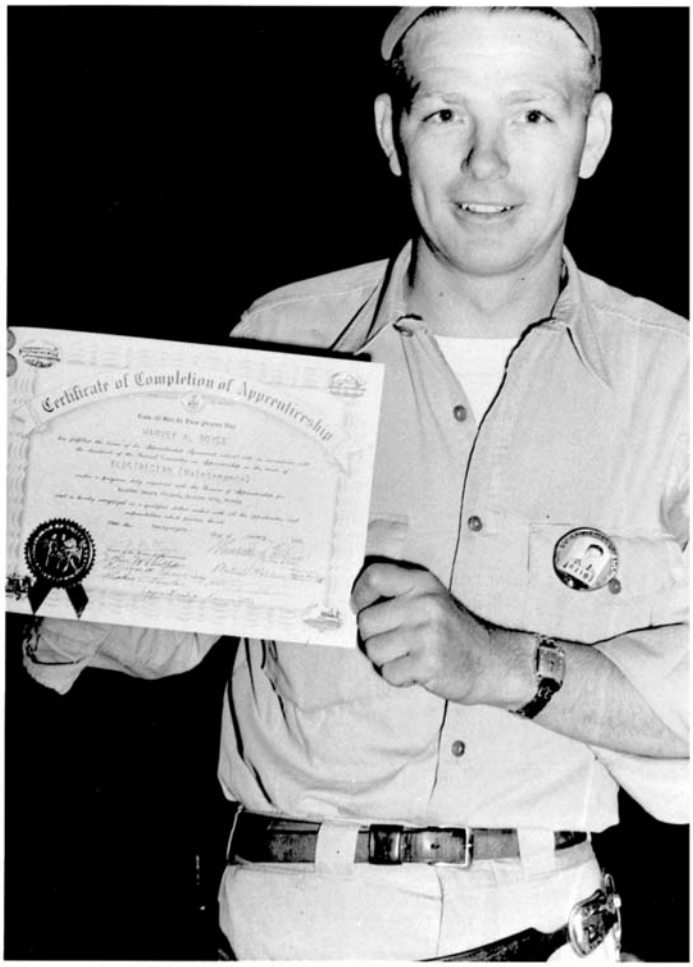

Illustration 5: Harvey Wood Boyce on April 16, 1951. Journeyman status effective on January 28, 1951.

work in ‘46. I completed the number of hours in 1951, actually earlier than that, and then they made me wait until 1951 to become certified as an electrician, as the news release states.

Storey: So that’s what it means to be a journeyman?

Boyce: That is correct.

Storey: That you’re a full-fledged electrician.

Boyce: That is correct.

Storey: Rather than?

Boyce: Rather than being an apprentice or a helper. An apprentice or a helper cannot, shall we say, *overhaul* equipment, take it apart and put it back together again.

“I stayed with the government for a total of thirteen years, and then I went to work for the City of Los Angeles . . .”

Now, in later years, I stayed with the government for a total of thirteen years, and then I went to work for the City of Los Angeles and moved my toolbox from one room to another room in the dam.

"I wound up as a working foreman for the City of Los Angeles before I retired twenty-eight years later. . . ."

I have been known to tear them big generators down and put them back together again. I wound up as a working foreman for the City of Los Angeles before I retired twenty-eight years later.

Storey: What year did you retire?

Retired May 1, 1982

Boyce: I retired May the 1st of 1982.

Storey: 1982.

". . . I was the first one in the nation to go through this apprentice program. . . ."

Boyce: Yes. May 1. As I said, I was the first one in the nation to go through this apprentice program. No one, to the best of my knowledge, has ever had to *fill* the requirements that I was required to fill in order to get this program started. And I was the no-good rat who forced something on the engineers here at the Reclamation headquarters.

Storey: Well, how would they get electricians otherwise?

Boyce: Hire them outside.

Storey: Who determines that those people are qualified electricians?

Becoming an Electrician Rather than an Apprentice

Boyce: Well, you know, the guy that was in charge, particularly of the electrical crew, who I knew, I asked him one day, I said, "When am I going to get my license and become a journeyman electrician?"

He said, "Oh, I'll get around to it one of these days. I'll write you up a test."

I said, "Okay, fine. *But* the day that you require *me* to answer that test, every other electrician in this powerhouse, *every one of them*, must write the same test I write, because I'm not afraid to put my brain against their brains."

Well, there was never a test made, I can guarantee that. But that was *my* stipulation, that if they were going to do it to me, they were going to do it to

everyone.

Storey: Just to make sure they were qualified.

Boyce: Just to make sure that they were qualified.

Storey: So you entered the apprentice program in '46?

Boyce: Yes. It was in the *fall* of '46, yes.

Storey: So it took about five years.

Boyce: Yes, which *normally* an apprentice program should take, shall we say, *normally*, about four to five years, I would imagine.

Storey: What happened when you became an electrician? Did it mean a pay increase?

Boyce: Absolutely.

Storey: Did it mean change in responsibility?

Boyce: Yes. Absolutely.

Storey: What's the difference between being an apprentice and being a journeyman in *terms* of the kinds of things?

Boyce: Well, an apprentice is a trainee. He's

learning the trade. You learn the trade by *doing* with your hands and *learning* in your brain. There is no steps or grades in electrician. In an apprentice program, by what you learn and what you do, you are given *wage* increases by increments until you become a full-fledged electrician. Now, in my particular case, I had about a year and a half [before] I was at the top of the grade. They really didn't want to give me my diploma, but there was information on the wire that someone else who had started an apprentice program after I had forced this one to be, was about to graduate.

Storey: Somebody in Reclamation?

Boyce: Somebody in Reclamation on another project. So, consequently, then they very rapidly got things straightened out, and I got my license. But that's what, shall we say, the crux of the whole thing was.

Storey: What was the difference between the kinds of things you could do as a journeyman and an apprentice? You've already mentioned taking machines down and putting them back together.

The Work of an Electrician

Boyce: That part's true, but the foreman would say, "You go to so-and-so and so-and-so and overhaul that motor, blower, whatever it happened to be, "and put it back in service again." Which you had to take your own clearances, get disconnected, take it apart, service it, put it back together again, put it back on the power line, make sure that it works. An apprentice cannot do that; he wouldn't know how to.

Working on a Heater in the Back Room of the Museum Building

Well, we had an instance of where they had air heaters in the after part of the museum at the dam. There's a diesel generator back in that back room. Also, during World War II, they kept that as a sleeping quarters for the guards on the dam. One guy took one of the heaters down because it quit working. He took it apart, and I guess they ordered the necessary parts for it, because they didn't have them. When they finally got the parts, that man was no longer at the dam. So, me being the fresh one off the block, was given this to *reassemble*, and I had never seen it before in my life. So, as a journeyman electrician, I was able to put it

back together again and get it operating, but none of the other guys in the shop would do it. They wouldn't touch it.

Storey: How many journeymen would there have been in the shop?

Electrician Staffing at Hoover Dam

Boyce: Well, let's see. We'd have two electricians and a helper or two on the elevators. There would be probably two and two on the cranes, the big cranes, the wing cranes, central section crane. There would be maybe three or four others that were, shall we say, assigned out to take care of maintenance problems or, like I said, to repair or service a motor, blower, whatever, that way, and generally every one of them would have a helper. So there might be sixteen to twenty electricians and helpers.

Storey: These were Bureau of Reclamation staff?

Boyce: Bureau of Reclamation staff.

How Responsibility and Authority Were Split among the Power Contractors and Reclamation at Hoover Dam

Storey: At the time that the generating plants were being run by non-Reclamation folks?

Boyce: That's true. They were under contract.

Storey: So *how* was responsibility and authority split up there?

Boyce: L-A Water and Power was responsible for the oil, water, gas, electrical on all of the generators on the Nevada side, *all* eight of them, including the *powerhouse* generator, NO and AO on the other side.

Storey: That's the little one that provides the local electricity.

Boyce: That's right. That's the house generator. There's one on each side. In between the two, there's a power bank that feeds off from the *bus* of the output of the big generators, all 16.5 kilovolts. We also had–and I'm talking about L-A Water and Power–we also had A1, A2, A3, A4, A9 and the house unit on the Arizona side. So I think that gets us–let's see–nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen. I think sixteen or seventeen generators. And you took care of anything–oil, water, gas or electrical.

Storey: As a Reclamation employee?

Reclamation Maintained the Powerhouse

Boyce: No. As a [L-A] Water and Power employee. Now, Reclamation, in the meantime, took care of all of the *maintenance* of the powerhouse. They took care of the *maintenance* of the powerhouse, not the generators themselves, *but the powerhouse*. That would be the elevators, the cranes, the lighting system. Everything like that was all handled by Reclamation. So they were working in conjunction with [L-A] Water and Power, not crossing each other's lines, shall we say. [Southern California] Edison Company had A5, 6, 7, and 8 out of the dam. Edison took care of those four.

Storey: Were there ever situations that you were involved in where there was confusion about who was responsible for what?

Boyce: No, no. No, no. No, that's all spelled out. It was all spelled out in contract agreements. This was all worked out ahead of time, even before the dam was built. This contract was made out that way, and they had a fifty-year contract.

Storey: And everybody understood it.

Boyce: And everybody understood it. There were no questions about it. There were never any arguments about it. It all went just as it was programmed fifty years in advance, as we say.

Storey: Now, in ‘51 you became a journeyman?

Boyce: That’s correct.

Storey: How long were you a journeyman with Reclamation?

Boyce: ‘Til ‘54.

Storey: So, another three years.

March of 1954 Went to Work for Los Angeles Water and Power

Boyce: ‘54–I’m trying to think. Yeah, it was March of ‘54 that I went to work for Water and Power.

Storey: Los Angeles Water and Power.

Boyce: Los Angeles Water and Power.

Storey: How did that change happen?

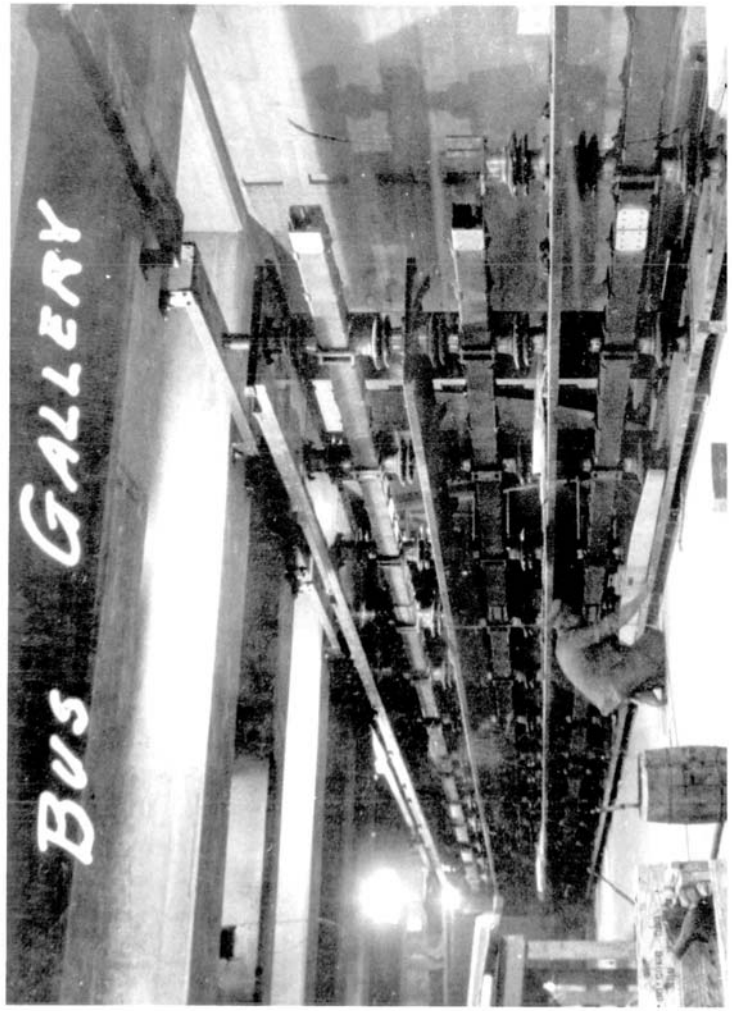

Illustration 6: Bus gallery at Hoover Dam during construction.

Went to Los Angeles Water and Power Because Housing Was Paid for There

Boyce: A bulletin was sent out by the City of Los Angeles to be posted on the labor bulletin board, whatever you want to call it, specifying that there were going to be position openings in electrical at various and sundry places. Basically, Water and Power paid exactly the same money that you did at Reclamation. Now, our housing at Reclamation, we had to pay for. All of the employees had to pay for their housing. At the particular time, I think that my biweekly, shall we say, house rent, utilities, etc., were all handled–I think I paid $54 every two weeks. So, by going to work for Water and Power, we eliminated all of that cost. So it was just like a *raise to me* of $54 every two weeks.

So I made application, took their test, and the person who was in charge of the maintenance, as far as Water and Power was concerned, came to me and asked me if I would be interested if I were, shall we say, chosen to become part of their staff. I said, "Yes." I said, "Hell, it's $108 a month money that I don't have to pay out." Because they furnished, under contract with the government, *housing*, the

power, the water, the sewer, the garbage, whatever. That was all furnished by contract. So I said, "Why not?" So it came about, and I was asked if I would accept a job. I told them, "Why not? I would."

Storey: Do you happen to recall what your biweekly pay would have been in those days?

Boyce: Oh, no, I can't tell you.

Storey: But I'm surmising $54 was a fairly major part of it.

Boyce: ~~Fifty-four dollars, well, it would probably–I might be earning as much as, maybe–as a matter of fact, I think I have at home actually my pay scales for Reclamation.~~ My wife worked for the Bureau of Mines, and that was part of her job, keeping track of the time, leave, and, you know, like that, payroll, for the Bureau of Mines. So she always kept track of mine, also. She's a retired thirty-year government employee. As I say, I had thirteen years with the government. But the extra money made a lot of difference to us.

Illustration 7: Mary Wade Boyce with son Harvey Walter.

Storey: How did your job change when you went over to Los Angeles Water and Power from Reclamation, or did it?

Upon moving to Los Angeles Water and Power "I quit working on the little stuff and went to working on the big stuff. . . ."

Boyce: Yeah. I quit working on the little stuff and went to working on the big stuff. (Laughter)

Storey: Meaning?

Boyce: Meaning the big generators, like that. Doing the service work of overhaul and maintenance of the associate equipment connected with the generators. And, now, like I said, gas, water, oil and electrical all falls in that category. But besides that, we had probably, I think, somewhere in the neighborhood of maybe 100 to 150 employees here for the city of Los Angeles.

In Addition to the Generators They Had to Maintain the Los Angeles Housing Units

Consequently, we had that many *houses* that we had to take care of. Anything that had to do with the house, electrical, we

were responsible for. As far as the plumbing and so forth and so on, that was all responsibly taken care by Water and Power.

The other trades were just as well represented the same way. The city had us overhaul the necessary equipment. Some of the wiremen and so forth that they had working for them, none of them really had any experience in the overhaul or service work of electric ranges, a lot of residential wiring and like that. Well, in my apprentice program, I went through a lot of that. As a matter of fact, at one time, right after the war was over, Reclamation here took fifty houses from Vancouver, Washington, dismantled them and sent them down here, and we put them back together again.

Storey: That would be from the shipyards, maybe?

Boyce: I can't tell you. They were, shall we say, basic to very substandard housing. There was a group of us. Let's see, there was one, two, three, four–I think four or five electricians, and me as an apprentice and someone else as a helper was working restoring these houses back to normal again.

Worked on Electric Ranges and Wiring in Reclamation's Demountable Housing and in the Los Angeles Housing

One of my jobs, because I *was* the apprentice, was to service all fifty of those electric ranges. And let me tell you, some of them fifty ranges were the greasiest, dirtiest, nastiest pigs that you ever saw in your lifetime. But I went through *every*one of those fifty units.

So as Water and Power said when they hired me, they said, "We do not have a journeyman electrician who has the *knowledge* to do house wiring, electric range repair, and so forth. That's why we want you." And it was under those terms that I went to work for them. But you can imagine setting down and overhauling fifty electric ranges in one setting, but that was part of my apprenticeship training. I installed probably 80 percent, maybe 90 percent of all of the refrigeration system wiring in all of those same houses. Some of those houses were all knob and tube, which is the, shall we say, foremost wiring system that they used in olden days.

Storey: When you say knob and tube, you mean the porcelain insulators that stand up a

couple inches and then hold the wires as it goes through and it's strung out in the open?

Boyce: Yes. Right.

Storey: With the old fabric covering on the wire?

Boyce: No. No, they didn't even have fabric covering on them. Well, they did have some. It was a black rubber with a mesh braid on them. It might be in red, white and black, and that's about the size of that. When it had to go through a *wall* or something like that, they used what they call as a tube, which was a porcelain with a little donut effect on the end of it where it could push against and, shall we say, hold still. It wouldn't go through the hole. You had to drill a hole, put it through there, and put the wire through it. The knobs were the ones that held it up, held the wire up so that it didn't lie on the two-by-fours, the rafters, or whatever the case may be.

Storey: Were you replacing all of this or what?

Boyce: No. We were adding to.

Storey: Oh, you were just making sure it was safe and adding more?

Boyce: Yeah.

Storey: Knob and tube?

Boyce: No. I didn't put any knob and tube in. By that time, we had, shall we say, BX, which was a metal clad covered wiring or, as the years went on, of course, they went to plastics, TWR or whatever, plastic stuff. In a lot of the houses that we had, there was no heat system in the bathrooms, so we put heat systems in the bathrooms. Depending on the size of the house, we put either two or three refrigeration units to cool the house in the summertime rather than using swamp coolers, which could bog down on you. Particularly in the humid time, they wouldn't do nothing. So we gradually converted all of our housing to refrigeration systems.

Storey: Now, we 're talking about Reclamation– we're talking about L-A Water and Power?

Boyce: L-A Water and Power. We're talking about the couple of hundred houses that they had here. As a matter of fact, in the lodge up here on the hill, that way on the hill, they have–

Storey: To the east of us.

Installed a Heavy Chandelier in the Water and Power Guest Lodge

Boyce: Yeah. Water and Power Lodge 1, which was a guest house that the City of Los Angeles maintained for visiting V.I.P.s, whatever, and they decided to buy a new chandelier, and I got the job of installing that chandelier with the wiring hid and connected up. That chandelier probably weighed maybe 100, 150 pounds, and I had to put that in the air on a gabled roof and suspend it from that center rafter.

Storey: Tell me what the housing pattern was like. Were *all* of the Los Angeles Water and Power houses in *one* area, or were they scattered all over or what?

Boyce: Scattered all over, wherever they could buy them. See, now, right below the administration building where we are right now, where the new post office is–

Storey: Across this little park out here.

Boyce: Across this park, right. We had housing that covered that *whole* area there down to the business houses and all the way over to the next–to C Street. From California to C Street was all covered with houses that

Water and Power had. They had bought them from B&W, Babcock and Wilcox. This is during the time of the turnover from the contractor to the government and Water and Power, because they had to take over at the same time that the Reclamation did. There was houses that were, shall we say, brick, that were purchased. There were houses that were purchased from Defense Homes Corporation at the end of the war.

Storey: That's the magnesium plant?

Boyce: No. Defense Homes Corporation was here in Boulder City and built houses to take care of, shall we say, Reclamation people. I never lived in them while they were under the government. I never lived in them while they were under Water and Power either, but I've been in every attic that there is in them, and they're still there today. As the saying goes, that's the way it went. Now, any other questions that you'd like to ask at this point in time?

Storey: Well, I've got a bunch of questions, but I don't think we have time for much more right now.

Boyce: Okay.

END SIDE 1, TAPE 2. DECEMBER 15, 1997.
BEGIN SIDE 2, TAPE 2. DECEMBER 15, 1997.

Storey: I'd like to ask you whether you're willing for information on these tapes and the resulting transcripts to be used by researchers.

Boyce: I have nothing against it in any way, shape or form.

Storey: So that's a yes?

Boyce: Yes. At the end, I would like to have a copy.

Storey: Okay. Good. Thank you very much.

END SIDE 2, TAPE 2. DECEMBER 15, 1997.
BEGIN SIDE 1, TAPE 1. DECEMBER 17, 1997.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Harvey Wood Boyce at the Lower Colorado regional office of the Bureau of Reclamation in Boulder City, Nevada, on December the 17th, 1997, at about 9:45 in the morning. This is tape one.

What Living in Boulder City Was like in the 1930s

I'd like to talk more about living in Boulder City when you moved down here from Montana. Could you tell me about that, please? What was Boulder City like in those days?

Boyce: Boulder City was a small community. The parking area for the bus was alongside of the [tourist bureau] ~~florist shop~~, which was next to the large cafe that was on the corner that was operated by Winnes. ~~That is the last name. W-I-N-E-S.~~ I can't even remember the actual name of the restaurant, but there was that restaurant there and the one across the street in the next block, which seemed to be the favorite of most of the people that were, shall we say, having breakfast *out*, or their normal meals out.

Old Nig, the Dog Adopted by the Dam Workers and the Green Hut Cafe

That's where they had– Old Nig, that was his favorite place, and maybe you don't know what Old Nig was, but Old Nig was a dog that traveled on the double-decker buses down to the dam, spent the day down there. He carried his own lunch from the restaurant. They fixed him a

lunch, a brown bag. He carried it down to the dam. When it was time for lunch, he had lunch with the crew and like that, and he was basically down there all day until the double-deckers went back home at night. But he was fed there by–I believe the man's name was Ferguson that was the owner of the Green Hut Cafe. Nig is buried down at the dam. They put in a concrete burial spot there down at the dam.

Storey: Did you know Nig?

Boyce: Yeah, I knew Nig.

Storey: What was he like?

Boyce: I suppose he was one of Heinz 57 brands. Where he came from I have no idea, but on the weekends if the guys weren't working and like that, you could always find him outside the Green Hut Cafe waiting for his meals, and he got three meals a day. But it was just one of those things. All of the construction people and like that, they petted him, and helped feed him, and like that all the time.

Cafes in Boulder City

The business district, other than the

two cafes that I've mentioned, there was a third cafe down on the corner of Wyoming and Boulder Highway, which was operated by Mrs. Ida Browder [phonetic], and they had a little, shall we say, exercise room where a lot of times in the evenings we could go down, and a jukebox [was] playing and like that, and we'd have dances. I mean, this is teenaged kids, right in that building. That was, shall we say, just across the street from the Los Angeles Water and Power Building, which is still there today.

Manix's Store

Manix's store was just about the–well, there was two grocery stores, both of them small, but Manix's store was right on Boulder Highway, and they had a meat market, as well as fresh vegetables, and all the canned goods, and like that, but it was also a clothing store–men's shop, women's shop, kids' clothes, like that, shoes, all of the few sundries that we could come up with. I was employed by them as a box boy during my after-school time and other types of activities, you know, that went on.

Storey: How do you spell that name?

Boyce: M-A-N-I-X. Manix, J. C.

Bill O'Hara's Dry Cleaners and Variety Store

Across the street on B Street was a little variety store and a dry cleaner's operated by Bill O'Hara. After school, after I got out of school and like that, I worked for Bill as the driver, pick up and delivery of the dry cleaning. People would just call in by phone and say, "Well, I have something that needs picked up," and I'd go to the house and pick it up and get it dry cleaned and pressed and like that. Then I would deliver it back to the homes and collect the money for it. I worked for him that way for, I would say, the better part of a year.

Various Other Businesses

There was a men's store in town, a drugstore on the corner, where, shall we say, B Street and Nevada Highway cross. B Street actually comes across Nevada Highway at an angle. Next to the dry cleaning shop was a Lawbeck's [phonetic], which was the recreation tavern, had pool tables, and card tables, and the bar, and like that. Of course, all you could buy was three-two beer. There was no hard liquor. It was just the beer.

Next to the tavern was a barbershop that had, I think, four chairs. A man by the name of Higgins opened a shop there and like that, and then next to that was the men's store, which was opened by Jorjeson [phonetic]. Then basically there was a gas station on the corner. Where the real estate offices are located today was a gas station– Texaco, I believe.

Theater, Sweet Shop, and Bank Owned by the Earl Brothers

Workers Sometimes Went to the Movie to Sleep Because It Was Air Conditioned

The business district of town wasn't very big. It was, shall we say, that one *block* on both sides of the street, and then turning onto Arizona Street after you got by the hotel was the theater and sweet shop. Across the street later was built the bank by Earl Brothers, who also owned the theater, and the theater where, most of the time in the summertime, because it was so hot and no air-conditioning, that the men would come in and buy a ticket to go to the movie and go in and sleep in an air-conditioned theater, just sleeping in the seats. But that was one way that they were able to get rest, because there wasn't any

air-conditioning in that particular time of this city or probably any other city. They had big swamp coolers and like that, but there was no air-conditioning, shall we say, as we know it today.

Worked as a Crossing Guard in return for a Movie Ticket and Ice Cream Treat on Saturday Donated by the Earl Brothers

When I first came to Boulder City, I had worked as a crossing guard, and Earl Brothers gave each one of the crossing guards for the school kids a movie ticket and an ice cream treat at the sweet shop every Saturday. That was your total incentive for being a crossing guard. It was at least something to do, you know. You could always go to the movie on Saturday afternoon, and, of course, we had all of the serialized little films of the Lone Ranger and Dick Tracy and a lot of those type of movies like that that were just strictly for education or entertainment, and it was only on on Saturday.

Storey: Buck Rogers.

Boyce: Buck Rogers. Well, Buck Rogers got in there a little later. (Laughter) It took a little time. The corner where the Texaco

station is today was a large restaurant, as I mentioned, that was Wine's, but underneath that, because of the angle of the street and like that, was a doctor's office and several other little apartment-type things. So it was basically a two-story building that the restaurant was the top story.

". . . there was Central Market, which was owned and operated by Stubbs. He went broke being too kind-hearted. . . ."

If you went down onto Wyoming Street, then there was Central Market, which was owned and operated by Stubbs. He went broke being too kind-hearted. He gave credit and went on like that, and people just walked out and left him after he had probably supported them maybe for a year, two years, whatever, keeping them in food. Actually, they just broke him.

But that was, shall we say, all of the town that there was. Where the Park Service building is today, the construction crews and like that built what they called the American Legion Hall, and it was a very large building with a huge dance floor and like that, and there was musicians around that came and played. They played

music, and, of course, they had their dances there all the time. But all in all, there really was not much as far as business houses, shall we say.

Sims Ely

Being a government town and like that, they had to get permission from the government in order to put in a business. Consequently, they were very regulated. If you didn't get permission, you sure didn't get anyplace. There was an old gentleman by the name Sims Ely who was the, shall we say, administrator of Boulder City, and he ruled Boulder City with an iron hand, believe me.

Storey: Did you know him?

Sims Ely Lived in a Garage Apartment after He Retired as Administrator of Boulder City

Boyce: I met him on many occasions. After he retired, he did have a house here just below the administration building here on Utah Street. He had a *house* that was assigned to him. But after he retired, he lived in like a garage apartment on the corner of B Street and Wyoming Street in back of Liza Carter's house.

Boulder City News

Liza Carter and her sister Jane Cook started what is known as the *Boulder City News* today. It was all done by mimeograph, and every Saturday morning, bright and early, I carried those mimeographed sheets of paper and like that and delivered them to every house in Boulder City, but it was done early in the morning so that you were all finished before the *heat* got on. It was the, shall we say, social news and coming events, shall we say, that they knew of, and it was all done on mimeograph. So they did have some news or physical means of getting information other than by radio. Not very many people had radios. It was, shall we say, basically before the *popularity* of radio, and it was all AM and very grainy, very scratchy, and you really didn't get much out of them.

Is that any other particular part you'd like me to refer to at this particular time?

Storey: Let's talk about Manix's some more.

Working at Manix's Store as a Box Boy

Boyce: Manix was basically just a general department store.

Storey: What did you do as a box boy?

Boyce: A lot of times I would stock. I'd bag the groceries, carry them out to the cars for the people and like that. We had a delivery service, and one of the men that was employed was the driver, and we'd haul these large orders of groceries. We'd make basically two trips a day or three trips a day, depending on how the orders stacked up. We had a one-ton van, and we had rigged it so that it was two layers, and it was not unusual to see us make two or three trips at a time, whether it was in the morning or whether it was in the afternoon or the last one at five o'clock at night. We might have to make two or three trips in order to handle all the boxes of groceries that had been purchased by the men and their wives here in Boulder City that lived here.

Storey: How did they pay for those groceries?

Boyce: Well, out of their wages. That's all I can tell you.

Storey: Did Manix allow charge accounts, for

instance?

Boyce: Yes, he did. Yeah, he had a charge account for anybody. I don't know that he ever charged any interest, but he made sure he had the business. Even the butcher shop and everything was right there in the building. When we'd take our orders out, they'd be boxed up, shall we say, on the counter right by the register with the people there present, and then when it came time, if they didn't take the meat home with them, there was a tag put in the box up on top for it to be seen that there was *meat* that had to go, and the meat would be kept in the refrigerator until such time as that order went out, and then the meat was picked up and put in the order and taken on to the houses.

". . . it seems to me I made around fifty cents an hour . . . as a box boy . . . and I'd buy my own shoes and my own clothes . . ."

I know my mom bought dresses in the dress shop and like that. Even myself, working, I don't know, but it seems to me I made around fifty cents an hour, something like that as a box boy, utility worker, or whatever you want to call it, and I'd buy my own shoes and my own

clothes and like that, just off of the money that I earned that way.

Storey: Do you remember how they kept track of the credit?

Boyce: A copy was made, a written copy, and the person had to sign what they had got, and it was a lot like a rent receipt book except that they used it for groceries, and it made a carbon copy. They took the original, and you had the carbon, or vice versa.

Storey: But they didn't list every single item; they just put a total on it?

Boyce: Basically, they put items on it. They might have two or three sheets at a time that they would fill out, and it was probably about four inches long, and it had its own basic carbon inside so that it wrote on the next sheet, like that. They were requested to sign for having received it so that they had, shall we say, a much better idea of what the merchandise was and, you know, what it was for.

Storey: And then each month they had to pay?

Boyce: Well, they had to–I assumed that they would–they may not pay it all off each

month. They might have a balance hanging on month after month, depending on, shall we say, their own established credit limit. I was never involved in any of that kind of business. That was all handled by one person, and he kept the books right there in the office of the store.

Recreational and Social Opportunities in Boulder City

Storey: What other kinds of recreational opportunities were there? You mentioned dancing, I believe, at one of the cafes.

Boyce: Yes. That was basically a teenage situation because Mrs. Browder had a daughter, and that way they could–she was not the most beautiful girl in the world–but get boys there and other girls, like that, so they could have a dance. We used to do the polkas and, you know, a lot of things like that. Normally the American Legion Building and like that, the folks, shall we say, the elder people, would have parties, card games, dinners of one kind or another or for *one* purpose or another there, and they're use it as a money-raiser, just so that, you know, they could, shall we say, add on to the building or make improvements or like that.

Storey: What about Reclamation things? Were there any Reclamation-sponsored things that your family went to?

People from the Construction Trades Built Baseball Fields

Boyce: I really don't remember. In the construction trades there was enough people that were involved, particularly in the summertime, in baseball, and we built–I say "we" because I was involved–baseball fields. We had one for softball and one for hardball. They got a league started, and they played teams from Las Vegas and Kingman or wherever the case may be, and they had some mighty fine baseball players, believe me. They were– yeah, they were construction stiffs, but they'd really come down and participate in the–a baseball game might go on until ten-, eleven-, twelve o'clock at night. They got together and put up the lighting system, and it's just like the ball field, what they call Bravo Field now here in Boulder City at the high school. They had a softball field there, and then we built a hardball. While I was serving my apprenticeship, I got all of the linemen, electricians, and like that together, and we put up all the lighting system on these

eighty-foot poles, and I was the one that coordinated and got everybody together to do the job.

Storey: So that would have been after the war?

Boyce: Yes.

Storey: What about when you were a kid in Boulder City?

Boyce: Being, shall we say, a newcomer, coming in 1935, in comparison to a lot of the others who had come there in, shall we say, '31, '32, I was not involved with the, shall we say, the clique, because there was definitely cliques in town in participating in sports or anything like that. I just don't recall any participation at that particular point in time; it really wasn't there. At the back of the school where the rec building is today, was a very large two-court tennis court, and we could go down and play tennis at night. If you were dumb enough to go out there in the summertime, you could get yourself a heat stroke, too. (Laughter) We played tennis. We played volleyball. Of course, where the city offices are today was the grammar school, and the recreation center wasn't even there to start off with. There was nothing there

other than, like I said, the tennis courts.

Storey: I guess I had thought there was a recreation center in town.

Boyce: No. They called it a recreation center. It was called Lawbeck Recreation Center, but that was strictly for beer and adults. They had pool tables, card games, and like that, but that was all that there was that way.

We had a track team up to the seventh-, eighth grade here, and it was right down here, above, shall we say, the old grammar school, which was very small. As I say, it now contains the city offices of Boulder City, but I recognize it as a grammar school, where I went to grammar school when I came here.

Storey: You mentioned cliques. Were there cliques within Reclamation kids?

Boyce: I really don't think it was too bad. They did have kind of two-caste system here as far as the Reclamation employees were concerned, like that, and most of the engineers and, shall we say, higher-educated people, they kept to their side of the street, shall we say, and the

construction workers kept to the other side of the street. A lot of that, shall we say, rubbed off on the children, so that the children kind of operated that way also. But there really wasn't a lot of things for the children to do here in town. There was not any recreation facility, shall we say, specifically other than the tennis courts or a volleyball game or something like that. That was basically all that there was–

END SIDE 1, TAPE 1. DECEMBER 17, 1997.
BEGIN SIDE 2, TAPE 1. DECEMBER 17, 1997.

Storey: What about the contractors' kids?

Boyce: I don't know. They were just basically construed as to be in construction or engineering, whatever, and they just didn't cross the line.

Storey: Tell me what you mean by construction.

Boyce: Blue-collar workers at the dam.

Storey: So this would be electricians?

Boyce: Yes. Electricians, carpenters, plumbers, whatever the case may be.

Storey: Who was your best friend when you were

in–it went up to eighth grade here?

Boyce: Yeah.

Storey: Up to eighth grade.

Boyce: Really, I was pretty much of a loner. As I said before, being, shall we say, *new* to the town, '35 and '36–in '36 I graduated from grammar school. So I wasn't here long enough to become associated, really, with many children or people.

"I was always busy wherever I could find me a job. I mean, I worked at it. . . ."

I was always busy wherever I could find me a job. I mean, I worked at it. It's down like where the new police court is now here on the corner of G Street and Arizona. A chapel for the Mormon Church was on the corner, and right next door to it was a Dr. Little. That was his home. So he was only a block, at the most, from the hospital. I got a job working for him and dug up his entire backyard and took all of the Bermuda-grass roots and like that out of it so that he could plant a clean lot. This took me the better part of a summer. So I wasn't *involved* with other kids in the daytime and like that. At nighttime you

were too damned tired to do anything.

Pushed an Ice Cream Cart Around Boulder City

Like I say, during that time, I also had a job of pushing an ice cream cart around town and selling ice cream. People wouldn't go to the store to get it, but if it was brought around by the ice cream kids, they were, a lot of times, very happy to have an ice cream or a Popsicle or something like that.

Storey: How much would you be selling those for?

Boyce: It seems to me around a nickel or a dime.

Storey: And you were working for someone?

Boyce: Yeah, a man by the name of Smaltz, S-M-A-L-T-Z. He had, I think, three or four ice cream carts, and he kept the ice cream cold by dry ice. I know I pushed that ice cream cart all over this town a jillion times, particularly up there around Colorado Street, Utah Street, up and down each one of the streets. You didn't have a bell that was ringing or anything like that. You had to hawk it yourself, calling out, "Ice cream," you know, like that, and the people became used to it, and they'd hear

Illustration 8: Harvey Wood Boyce with his ice cream cart in Boulder City.

you hawking the wares, and they'd come out and, "Oh, bring me one of this," or, "Bring me one of those," and you'd leave the cart sit in the road, and you'd toddle on up to their house. It might be some thirty, forty, fifty feet up from the street level to the house. A lot of the houses were up on, shall we say, floorings were elevated from the ground, almost like a basement, shall we say. Some of them did have basements under them, but they were private-owned houses, private-built.

Storey: They were up on pilings sort of?

Boyce: Yeah, floor joists, whatever, so that you had a firm foundation for them and like that.

Storey: Did you have an assigned territory, just go where you wanted? How did it work?

Boyce: Wherever I could sell ice cream. Now, like in the afternoons, like that, I'd cover the entire town, because Boulder City wasn't that big.

Storey: But were there other ice cream carts?

Boyce: There was two or three carts, but not necessarily in operation. So you just took

off and went wherever you felt that you could sell ice cream. As I say, we didn't get very much money for each one of those pieces we sold, but it was a means of making some money.

In Anaconda Sold Newspapers for Three Cents Each

Coming from the copper mine country up in Anaconda, Montana, like that, there wasn't any big money there either. I sold newspapers at three cents a copy.

Storey: Up in Anaconda?

Boyce: In Anaconda, yeah. Three cents a copy for newspapers.

Storey: It must have gotten awfully hot pushing an ice cream cart around.

Had a Swamp Cooler at the House

Boyce: Yes, it did. You could say that two or three times, because the weather–at 600 Arizona Street, where I lived when I came to Boulder City in 1935, and we had a thermometer, a *stick* thermometer, reading in Fahrenheit, and it would hang all the way across the length of the house from

the front of the house to the back of the house. On the back of the house was a swamp cooler, which was an eighteen-inch fan with water dripping through excelsior out into the back yard.

Storey: Sort of wood shavings.

Boyce: Yes, and drawing the air through that. And that's all the cooler that you had. One day I saw it 116 degrees hanging on the wall. Now, that's how hot it was in the house at that particular point in time. So, as you said–

Storey: *In* the house?

Boyce: *In* the house *with* the *fan* blowing from across the room all the way across. Now, if you could get into the flow of air, you could get a little bit of evaporation, shall we say, of your skin heat, but otherwise it was a warm mother.

Storey: You mentioned that you were a crossing guard. Was there a lot of traffic in Boulder City?

Boyce: No, not really, but in a sense, this is one way of Earl Brothers–of getting kids involved in doing something rather than

being hateful at going-to-school time and coming-home time, because that's the only time you were there. It took about an hour going to school and about a half an hour going home from school and like that, so you didn't have a lot of time involved. One of the first points I ever got was six points down here at Utah, Wyoming, I Street. There's three streets, and they all intersect at one point. When it was time for the kids to go back and forth to school, of course, they wanted the, shall we say, larger children to be the crossing guards to help the young ones across the street. As I said, I was in the seventh grade and eighth grade during that period of time. I was probably tall for my age. The pictures in the album shows me when I graduated from grammar school, and my brother was four years older than I. He stood six-three-and-a-half. So I was pretty close to the height I am today, and that is very near to six feet. So they just wanted the–because they would be recognizable.

"An awful lot of people had cars, but they didn't *drive* them much. If they went uptown, they made sure that they had several things to do . . ."

An awful lot of people had cars, but they didn't *drive* them much. If they went

uptown, they made sure that they had several things to do uptown before they *went* uptown, as the saying would go. A lot of the business houses, if you had three or four vehicles parked, you were busy. You didn't go and just commute about as in shopping and like that. You went and got what you had to do, and you got back home again. Of course, a lot of people were able to *walk* back and forth because it was that close to the business district.

Boulder City Schools

Storey: What about school lunches? How did you eat lunch at school when you were in school?

Boyce: Well, while I was in Boulder City I walked home for lunch. There were a few children that were brought in by a small *van* from outside of town. Like out at Railroad Pass, there was a family that lived at Railroad Pass, and there was two or three children, and they were brought into town by that, by the school. The school was all government. Teachers were hired by the government, fired by the government, whatever the situation might be. They did not, until, shall we say, after Boulder City became separated by the government, they

released, shall we say, the city, they set up a perimeter around the town and said, "Okay. This is the city of Boulder City, and it's entirely on its own now. We don't own Boulder City anymore." It became public domain.

Storey: They sold it off.

Boyce: Yeah, they sold it off. But there were not many children that, shall we say, came in by bus, and they were not connected to the Clark County school system.

Storey: Was the school large enough that each grade was separate?

Boyce: Yes. Each one had its own particular room.

Storey: Just one?

Boyce: Yes. In the seventh and eighth grade and like that, we circulated from one room to another room during our school day. The children moved; the teacher didn't.

Storey: They had an assigned classroom.

Boyce: Yeah. Right.

Storey: Do you ever remember hearing any conversation about housing and how it was assigned by Reclamation and how it was done and all that kind of thing?

Assigned a Demountable [Prefabricated, Moveable] House after the War

Boyce: No, I don't. I really don't. I do know that after the war when I come back to Boulder City, my wife and my son, we were assigned a demountable house.[7] There just wasn't any housing available, shall we say, but we were assigned a demountable house.

Storey: Which meant?

Boyce: Which meant that it was, shall we say, a bathroom, a bedroom, a kitchen, and a dining room-living room, very small.

Storey: Why was it called a demountable house?

Later Moved into a Three Bedroom Home

Boyce: Because it was not a permanent house. It could be taken down in sections and moved, sold, or otherwise. Then later on,

7. This refers to pre-fabricated houses.

the houses–as I spoke earlier of the fifty demountable houses that they purchased from Vancouver, Washington, I made application for one of the three-bedroom houses and was told, "Okay. Fine. Move."

Added a Small Room to the House

Well, I moved down there. Now, while Harvey [Wood Boyce] was–let's see. Harvey was four-, five, somewhere along in there. I asked the people that be if I could build a small bedroom right next to my bedroom that would be big enough to have a little bunkbed for my son to sleep in, which they allowed me to do. I built a bed and put it all together and like that, and I got parts and pieces from the carpenter shop and so forth and so on. I mean, they would say, "Well, I'm through with that piece of lumber," and that piece of lumber would disappear into the back of my vehicle, and I'd bring it home and I'd put it to use in building this additional [room]–and it did make it very nice for us in the fact that we had a room for him to be by himself when it was necessary, and he had his own bedroom, basically. But I was the only one that had one like that. It was all tar-papered and so forth and so on,

because it wasn't finished and painted, it was tar-paper finished.

Moved into Various Other Homes, Including a Defense Homes Corporation House

Then, like I say, I moved down there on Sixth Street, 825 Sixth Street, before the high school was built down there. Then I moved from that house into a Defense Homes Corporation house on K Street, and actually I lived right next door to L. R. Douglas, the project manager, who became a regional director. They were wonderful neighbors. Then I moved down into–they built some new houses–

Storey: When you went to the–what was it?

Boyce: Defense Homes Corporation.

Storey: That was Reclamation homes, still?

Boyce: Yes. After Defense Homes Corporation built these houses in order to help with the housing situation for Henderson as well as here in Boulder City, I can't tell you exactly *who* Defense Homes Corporation was, but it was somebody that came in and they built a lot of houses on streets that were there but there was no housing on

them because the houses had been, shall we say, torn down and done away with at, shall we say, the decline of construction. Those houses were all disappeared, shall we say, and just open dead streets. Well, then Defense Homes Corporation came in and put housing on them again. After the war was over, Reclamation just took over possession of that housing. I don't know whether they swapped dollars here or where or whatever they did, but that became Reclamation housing, and Reclamation was, shall we say, expanding quite a bit. There was so much more maintenance that was having to be taken care of and so forth that way at the dam, they needed people in order to do it.

I lived in a Defense Home Corporation house for, oh, I don't know, maybe a year was all. The government had a contractor build, it seems to me, about fifteen to twenty concrete-block houses, and I asked for one of those houses and got a two-bedroom house and like that at 632 Sixth Street, and lived in that until I went to work for the city of Los Angeles and I moved from down there to up here. That's the way it was.

Storey: So at that time all these houses were still

government-owned?

Boyce: Yes.

Storey: That would have been until about 1950 or so when you moved over to Los Angeles.

In 1954 Went to Work for the City of Los Angeles Water and Power Department and Lived in One of The City's Homes

Boyce: I moved over to the city of Los Angeles in '54. The government here in Boulder City– maybe I should say "Reclamation" rather than "government." It's synonymous. The city didn't become a private entity until after '54.

Tried to Buy One of the Reclamation Homes When They Were Sold, but Didn't Qualify to Purchase

I can't tell you just exactly when, but it was probably anywheres for maybe '58-, '59, I don't know, before the government put those houses up for sale. They were sold to the people that were living in them at the present time if that was what they wanted. My wife was working for the Bureau of Mines, but as far as they were concerned, I was ineligible to bid for one of the houses that wasn't going to be

bought, you know, that the *occupant* wasn't going to buy. That's the way they sold the houses. If they weren't sold to the actual occupant, then they were put up for sale to outside, but they tried to get them to other government employees and like that. So I made application for one, but they told me I couldn't qualify. I wasn't the employee; my wife was. So that's the way it goes, you know.

Draws Retirement from Reclamation as Well as Retirement from Working for the City of Los Angeles

Storey: I guess you would have been with Reclamation a total of about–

Boyce: Thirteen years.

Storey: Thirteen years. Did that qualify you for a pension?

Boyce: Yeah, I draw a retirement.

Storey: From the U.S. Government?

Boyce: Yes, I do.

Storey: So you didn't give that up when you went.

Boyce: I did not. My wife worked in personnel and payroll, and she was, shall we say, sharp enough to know that maybe someplace down the line it would be worth a little income. So that's what we did. When I went to work for the city, of course, I told you before that it was the same as 108-dollars-a-month raise just by moving from the Reclamation housing to Water and Power housing because I didn't have to pay rental. So, consequently, the small amount of money that I had in the government retirement system wouldn't really make a hill of beans, because a lot of my time was at very low wages.

I think when I left Reclamation, Water and Power was paying exactly the same, dollar for dollar, as Reclamation was. So, monetarily I didn't take any cut in pay or I didn't get any particular raise in pay other than I no longer had to rent a house. So, to me, a hundred-dollar-a-month raise is a hundred-dollar-a-month raise, you know.

Storey: One of the things that was going on when you first came here, the dam was still under construction, right at the end, of course.

Boyce: Just right to the end or very close to the end.

Storey: A lot of people were coming to see Hoover because it was receiving so much publicity. Were you aware of Hoover before you came down here?

When the Children Were Put on the Bus at Anaconda, They Thought They Were Going to Their Mother in Salt Lake City–Then They Had to Proceed on to Boulder City

Boyce: No, not really. Not really. When my sister and my brother and I left Montana, we were only going to Salt Lake, and that's because that was where my mother and stepfather, I'd last heard from them. They were in Salt Lake. We got to Salt Lake, and they weren't there, so then we continued on from there down here because somebody somewhere told us where they were, and then we came on to Boulder City. As I said, Las Vegas wasn't a very big place. It was a wide spot in the road.

Storey: Did you see any visitors of note that you remember?

Notables He Saw Driving the Cab in Boulder City

and Las Vegas

Boyce: If you're referring to people who came here to visit, Frances Dee, Joel McCrea, Donahues [phonetic], who was a professional photographer, Kate Smith.

Storey: That's a name from back in my memory.

Boyce: Right. I hauled her in my cab from the hotel down to the lake and put her on the boat and like that, picked her up at night, and brought her back here. These are people that I met as a cab driver, shall we say. Of course, I was only a kid, seventeen, eighteen years old, but I was driving cab for Grand Canyon Boulder Dam Tours.

Storey: Any others?

Boyce: Not that I can readily bring to mind. I'm sure that there *were* more, because they'd come up by plane and land at the airport, and I'd go pick them up and bring them up to the hotel. What they did from there, a lot of times, I suppose, they had made arrangements for a vehicle of some kind, but a lot of times, also, they made arrangements for me to haul them to, shall we say, Las Vegas and take them to

whatever there was there and then bring them back to Boulder City again. The names don't stick in your mind like–a movie star is a movie star, you know, and so I became quite acquainted with those because they were around several times. But other than that, I just don't remember anybody, the names.

Storey: After you got out of high school, you went to L-A, then you came back.

Boyce: Yes, I went to L-A. I was only gone about two or three months.

Storey: Then you came back, and then the war broke out.

Boyce: Yes.

Storey: What kinds of things were going on in Boulder City when the war broke out? What happened?

Camp Williston Was Established in Boulder City When the War Broke out

Boyce: Boulder City very quickly became a

military base. We had Camp Williston[8] here in Boulder City. We started out with basically all white soldiers, and they were here as a guard, convoy and like that for the dam and the facilities. Then they changed it to all blacks–well, all but the officers. I don't think there was very many black officers. They were still all white, but it's, shall we say, kind of a raw spot for some people. Having colored people around was something that had never bothered me, because, living in Montana, there was a lot of colored people that worked on the smelter, as my father did. So I've stood toe to toe and nose to nose, knife in hand, with Negroes, myself.

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Storey: This is tape two of an interview by Brit Storey with Harvey Wood Boyce on December the 17th, 1997.

Boyce: So, as I say, I've stood nose to nose and toe to toe with them.

Storey: Yeah, but was there a lot of tension in Boulder City?

8. Also known briefly as Camp Sibert,

Boyce: No, no. The military were forced, shall we say, to keep their distance. Actually, before the military got here, they had C-C-C [Civilian Conservation Corps] camps. There was a C-C-C camp here in town. They did a lot of building of the parapet walls down to the dam and like that. As you see the rock, it's all been fixed at the side of the road. When they had a parapet wall, that was basically built by the C-C-C boys.

Storey: They would have been about your age as you got older.

Boyce: A little bit older than me, probably, a matter of probably no more than three to five years. I know one of my four sisters became quite attached to a young soldier. They never did get married, but they were quite attached with each other.

Storey: When you say Camp Williston was here, how large are we talking about? Where was it?

Boyce: It was below Fifth Street, out into the desert, like going on down to Adams Street now. That was where the Williston base

was. It seems to me that there was, shall we say, their headquarters unit, there was probably eight two-story barracks.

Storey: So we're not talking thousands of people here.

Boyce: No, no, no, you're talking maybe of close to a thousand soldiers. And they, shall we say, they kept theirselves isolated as well from the people of Boulder City. Yes, there was several girls that met several of the C-C-C boys and married them and raised their families here when they got out of the C-C-C camp.

They were basically construction people. I know one in particular, he pops in my mind that he was a cat skinner. He later went to work for Reclamation as a D8 cat skinner or like that, and he worked for them for years and retired.

Storey: A Caterpillar operator.

Boyce: Yes, a D8 cat.

Storey: "Cat skinner." I haven't heard that for a long time.

Boyce: You know, I'm not that much of an

educated person. I've had a lot of schooling, as far as that's concerned, some college courses, but it's just a slang name, shall we say, that you associate with different trades.

Storey: When did you go to college? When did you take college courses?

Boyce: Right here in Boulder City. I have a college course in fire-fighting, under the government. We had an instructor come from Flagstaff, came over, and would put on a fire-fighting school and like that. I have a certificate saying that I had so much credit for college course. Basically that's where I– there was several things, and I can't, for the moment, think of what they are.

Storey: Day before yesterday, we talked about your transition over to Los Angeles Water and Power. How long did you work for them altogether?

Worked for the City of Los Angeles for Twenty-eight Years, 1954 to 1982

Boyce: Twenty-eight years.

Storey: So from '54 until what's that?

Boyce: ‘82.

Storey: You were an electrician.

Boyce: That’s right.

Storey: How long were you an electrician? Well, let me put it differently. How long until you were promoted? Because you mentioned you became a foreman.

Worked as a Foreman for Four or Five Years Before He Retired

Boyce: I became a working foreman in 19– I was going to say 1980, but it was before that, because I retired in ‘82, and I was a working foreman for quite some time, I think probably four or five years, before I retired.

Storey: How did that transition come about, from being an electrician, was that it? Were there different levels of electrician in L-A Power?

City of Los Angeles Promotions Required Written Tests and Interviews

Boyce: Yeah. If there were a group of electricians working on one particular project, not

being a massive project, but a small project where there were required–a lot of times in wiring a building you might have four-, five, maybe more, electricians plus their helpers, and one person would be in charge of that group. In other words, he's a *sub-foreman*. For the city of Los Angeles, everything is done by a test that is given with a proctor for, shall we say, the ability to do that job, and it was a two-part test, because after you had passed the written part of it, you had to have a *personal*, face-to-face interview with a group of three to five people who were in the trades.

I've had engineers from the R-K-O Studios, movie theaters, different construction companies in different parts of L-A or its suburbs. The city would hire them for a day, two days, no matter how much time it took to personally interview. Actually, what I had to do was you go in there and you have to sell *yourself verbally* to those people so that they would say, "Well, yeah, I'd hire that guy for this particular job." So this is, as I said, this was something that I saw the bulletin board for the city while I was working for Reclamation where it said that they were looking for electricians. Well, I was pretty cocky because I have had *a lot* of electrical

education. So I said, "Well, hey, I'm going to take that test just as a lark to see what I can do with it."

Well, I took the written exam and I was sent notification that I would have an oral interview in Los Angeles at such and such a time, such and such a day. So I went to it. Well, there were some 200 or so electricians that took that written examination, and I think I came out something like about number eight or nine out of that group of people. The result of it was, in the oral interview either I was well loaded and could really rattle my teeth, because I drew the highest rating of *all* of them verbally. They might ask you any question in the world.

Storey: Where was the written exam given?

Boyce: The written exam was given here in Boulder City.

Storey: *And* in Los Angeles?

Boyce: And in Los Angeles or several other places at the same time. All of the tests were written the same day, the same time, no matter where they were. They might be in Inglewood, they might be in Glendale,

Hollywood, downtown.

Storey: But then when it came to the verbal–

Boyce: You had to go downtown to the City Hall, and they had a conference room set up, microphones in the ceiling and everything like that. Everything was copied; everything was taped. Not one exam that I took–and I have taken *a lot* of them in twenty-eight years–after the first four years, I started taking promotional exams, and each one of them I qualified for orals because I was never beaten on my oral. I always came out the top. So, like I say, I mean I either had a good line of something that I could sell myself.

Storey: Tell me about how you progressed through their hierarchy. You first job was as an electrician.

Boyce: Then my next job was as a working foreman.

Storey: This is sort of the sub-foreman.

Boyce: Yes.

Storey: And then the next?

Boyce: No. That's as far as I went. But I took these exams every year or every two years, whenever they came out, just because any test that you would *take* and try to get a promotion out of, you had to be ready for it when it came out, because there was no given day that you knew that it was going to be. It was strictly when *they* decided that they would go ahead and put out a call, "We need to hire so many electricians." Well, you'd just better be ready to take the test when it came. But I always took the tests and like that.

When the affirmative action came out, I was number two on the list, promotion list, for a full foreman's job. You might be over maybe twenty-five or thirty people, different projects and like that. In the case here at the dam and like that, it was a pretty fixed, shall we say, routine, and everything was basically programmed out in front of you when you started out, that what needed to be done, you know–if it was today you remove, overhaul, and return the P-M-G off [of] A-5 or N-1 or whatever.

Storey: What's a P-M-G?

Permanent Magnet Generators and Governors on

Boyce: Permanent magnet generator.

Storey: What does that do?

Boyce: It produces the power that is used to actuate the governor.

Storey: A lot of power?

Boyce: No. No. Very low voltage, D-C.

Storey: Tell me more about that. You mentioned yesterday P-M-Gs, I believe.

Boyce: Well, as I say, a P-M-G is a permanent magnet generator. The generator part, the turning of the water wheel causes it to turn, and the voltage that is produced is transmitted to the second floor of the dam, where the governor is. Now, the governor, through the speeding up or slowing down of the water wheel, the oil pressure, which is basically 300 pounds to the square inch, to *move* the actuator arms of the wicket gates, and that's how it's regulated, is through that P-M-G. That's the little culprit.

Storey: I believe you talked about the P-M-G, but

after we were off tape yesterday.

Created a Tester for the Permanent Magnet Generators While Working for Los Angeles Water and Power

Boyce: Yes. Well, I said that a machinist assisted me in *building* a P-M-G tester, because, under normal conditions, up until that time, a P-M-G must be put back on the unit and the unit started in order to regulate how the governor would react. Well, I figured that if I could produce some force to drive the P-M-G at the required speeds, that we could accomplish it so that you didn't have to run the generator, waste the water. You do it by the tester that I built. I had it so that you didn't have to *spin* the *magnet* itself. All you had to do–see, the magnet inside the housing is a very *huge* magnet.

Storey: On the stator arms.

Boyce: On the rotor. (Storey: Okay.) The field is on the outside. But if you didn't have to spin it, you don't have to spin it. So by taking it apart and building this machine, I could get the *control* down where I could attach a half-inch drill motor, a portable half-inch drill like you'd go to drill a hole in the wall, and using a variac to vary the

speed of that motor, I could vary the speed of the driving spindle. By controlling the speed of the driving spindle, and they *are* required to turn at specific R-P-Ms–I can't think of the exact R-P-Ms, the different ones right now, because most of them are different depending–it's depending on the voltage that is being produced by the generator itself. But by varying that, like that–and we had a voltmeter attached to it so that we knew *exactly* when we got to the *exact* desired speed that you had to have in order for that generator–like one of the house units, I think it's 300 rpm that you have to be able to get to in order to get that P-M-G set to work at its required speed. It's the same on all of them, but, well, the main generators are 180 rpm. The A-9–

Storey: This is the ninth generator on the Arizona side?

Boyce: Yes. That's the ninth generator on the Arizona side. It seems to me that it was two and hundred forty-three and a half rpm. Well, if you don't have something that you can regulate up or down, you're not going to get to that desired speed. It's going to turn only at the fixed speed of the drill or whatever, or, by the same token, by the water input through the whole

generator. So I don't know whether Reclamation uses that tester down there anymore today or not. I have no idea what they do.

Storey: So you created this working for Reclamation?

Boyce: No. I created it working for Water and Power.

Storey: Because it was work on the generator, and that was a responsibility of Los Angeles Water and Power.

Boyce: That is correct.

Storey: You mentioned, day before yesterday, that one of the primary differences between working for Reclamation and Los Angeles Water and Power was that you got to work "on the big stuff." Could you talk more about that? What was your first big project?

Nature of the Work for Los Angeles Water and Power

Boyce: Well, generally on about a month to two-months basis, you were required to check and test the pressures of the carbon brushes

that slide on the collector rings to feed the power down into the generator, and that's coming from the pilot exciter and the main exciter above. The P-M-G, as I said the other day, is isolated so that it only produces power *for* the governor. That's *all* it does. Then a voltage is impressed on the pilot exciter that can be varied, and it's done by a resistance adjustment. It produces down at 125 volts D-C to the main exciter, which is 250 volts D-C, which is *also adjustable*. That, in turn, goes down and feeds to the coils on the rotor, and then the rotor produces lines of flux that are cut by the field on the outside for the production of power at 16,500 volts. So you're talking about going from nothing up here, starting with a battery bank to produce power to the pilot exciter at 125 volts, from thence to 250 volts, and then from 250 volts to *16,500* volts.

Now, we would have to overhaul the oil pumps that the governor system uses, and each pair of generators is connected to two consecutive governors so that they can be cross-fed from one to the other. You don't necessarily have to have all of the P-M-Gs doing all of the different things at all the same time.

"It's a very large education to take apart generators . . . where you take the *rotor* out and set it in the floor, and this is in excess of 600 ton . . ."

> It's a very large education to take apart generators, and I mean you take them right down to where you take the *rotor* out and set it in the floor, and this is in excess of 600 ton that you're moving at a time, and going in and, shall we say, re-wedging, repairing *coils* or replacing coils that might have become *damaged*–you may have had a flashover–then putting it all back together again. It's a tremendous education, particularly a person of trades that is required to work on this stuff. It's not something that you just walk in off of the street and do. You have to learn it.

Storey: What goes wrong with generators? You mentioned "flashovers."

Boyce: A flashover, yes.

Storey: What's that?

Flashovers Can Occur When Insulation Deteriorates in Generators

Boyce: Insulation breaks down on the winding. If

the insulation breaks down, it'll flash over to ground, and actually it will start a *fire*.

Storey: Did that ever happen?

There Is a Fire Suppression System on the Generators

Boyce: Oh, yeah. Oh yeah. But you have your own CO_2 [fire suppression] system. You've got banks and banks and banks of CO_2 systems that, if something goes fault, it automatically–

Storey: It automatically fires the CO_2.

Boyce: The CO_2. Right. Bus [bar] goes to ground. It's happened.

Storey: Does it happen a *lot*?

Boyce: No. No, it doesn't.

Storey: Why?

Boyce: Because of the insulation factor.

Storey: Is that because the O&M is done in such a way as to avoid those kinds of problems?

Boyce: That's what you do them for. You're

looking for those kind of problems *before* they happen.

Storey: So how often, for instance, would Los Angeles Water and Power take apart a generator to rewind it?

For the Large Jobs on Generators Los Angeles Would Send in a Special Crew

Boyce: Only with the agreement of Reclamation on the replacement schedule. Generally a generator would not come down for re-wedging or something like that anywheres from, I think, probably five to seven years, something like that. Then Los Angeles would bring a crew in from L-A and take them apart and put them back together again after the work was done.

Storey: This is where you have to pull the rotor.

Boyce: Uh-huh.

Storey: So it was a fairly common, routine thing.

"They generally came in and did overhauls once or maybe twice a year they would bring the big crews in. . . ."

Boyce: They generally came in and did overhauls

once or maybe twice a year they would bring the big crews in.

". . . using the air impact wrenches to undo coupling bolts and . . . things that have to be handled with fifteen-ton cranes . . . just to hold the machinery in position . . ."

You know, you start talking about using the air impact wrenches to undo coupling bolts and like that, you're talking about things that have to be handled with fifteen-ton cranes or something similar in order just to hold the machinery in position to be able to put the air pressure on it at 125 pounds per square inch to undo these couplings, and they take it all the way down. See, a lot of times, because of the water wear, they will have to repair the wicket gates or they will have to repair the *bottom* of the water wheel. Well, they won't necessarily take the *rotor* out, but they'll take the intermediate shaft out and then take all of the bottom works, and it just goes down until it's just nothing but a steel slide right out to the river. It's sometimes a very scary but enlightening situation when you open up the scroll case and go down inside the scroll case and walk around where the water comes in out of the great big penstock pipe, thirteen foot

in diameter, throwing water at you, and they, a lot of times, leak and leak quite badly. They have to go in there with wetsuits and adjust those wicket gates. A lot of times they are able to schedule down a penstock, a whole penstock, and then they can do a lot more, shall we say, massive overhaul of equipment in the scroll case, which would be–

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Boyce: ...bring them into the machine shop, chuck them up on the big lathe. Actually, they call it a boring mill. It's nothing but a lathe turned on its *bottom*. You say you're going to turn a sixteen-foot-in-diameter piece of steel that might weigh, oh, probably thirty, fifty tons, and you cut it, machine it, weld on it, do whatever you have to do. So there's a lot of heavy equipment involved.

I know they've had the old boring mill out and have just got it back in service again down there now. Harvey was telling me that they had got it back into service. There are only three boring mills of this size on the entire West Coast: one here at Hoover, one in L-A, and one in Bremerton,

Washington.

Storey: At the naval shipyard, I'll bet.

Boyce: I would believe so. That's the only place that there is equipment that big, big enough to handle, shall we say, water wheels, wear rings, and like that.

Storey: But that kind of stuff doesn't sound like an electrician's responsibility to me.

Boyce: No, that part is not. The electricians' responsibility, of course, would be in the windings, the field pieces.

Storey: When you say it's overhauled, does that mean it's *completely* rebuilt, *completely* rewound?

Boyce: In some instances it has been. I mean, you're talking about the ultimate. But N-8, that's Nevada Number 8, which is the last one in the Nevada wing, I think they have probably rewound it twice. Once was part of the upgrading, but the first time that it was rewound, it was because of a failure. The winding failed. N-8 is an oversize unit, but it just wouldn't produce, shall we say, on a long sustaining run the power output that the others were producing.

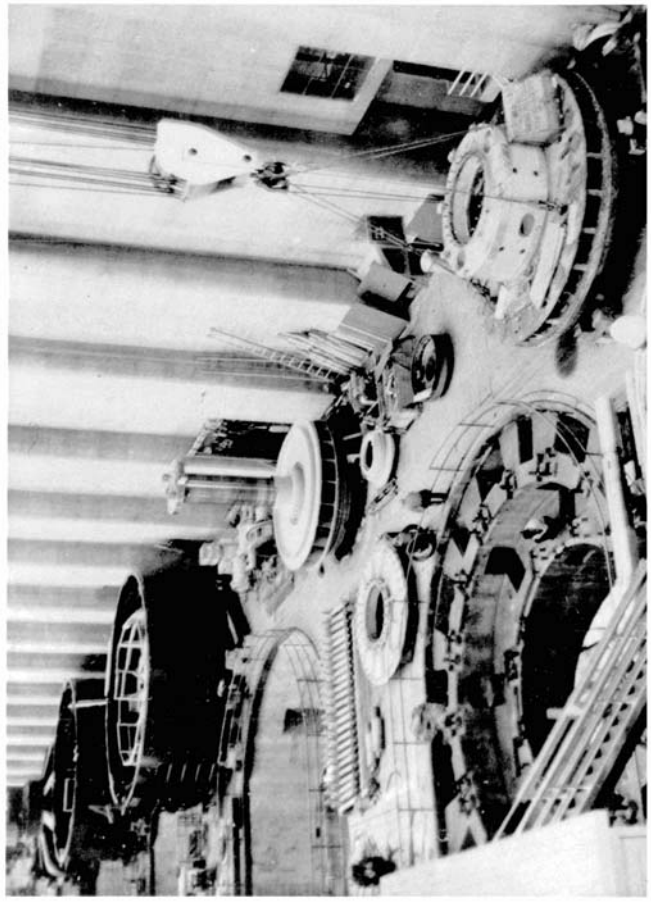

Illustration 9: Powerhouse floor at Hoover during construction with two water wheels on the right, two stationary winding housings to the upper left, and wicket gates staged to the left of the rear water wheel to which the stub shaft is attached.

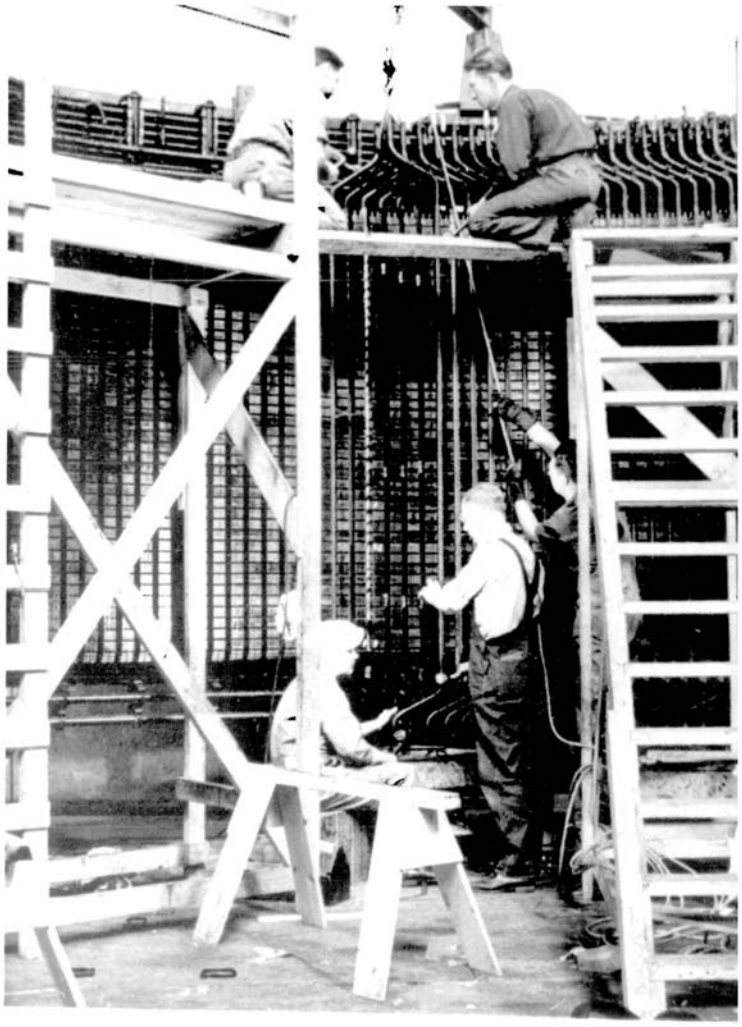

Illustration 10: Installing stationary windings in their housing at Hoover Dam.

Like in the case of Arizona 3 and Arizona 4, I think they rewound *them* twice, and it's a situation there where it went phase-to-phase ground, come in and strip it out and start over again. One of them, I think they got to the point where they even unstacked the *core* iron of the rotor, put it all back together again.

Storey: Did you work on that kind of work?

Boyce: To a point. I worked on the electrical part of it, but there's all kinds of machinists and heavy gang workers, and they're probably in the machinist trade, that were involved in the actual mechanical parts.

Having One Screw Missing During Routine Maintenance Can Cause Serious Problems

Just as a silly for-instance, somehow during one of the nighttime service jobs that the operators did, when they went to put the screens back over the air spaces, they found that they were one screw short for all of the screws that go in to hold these, shall we say, like a louver screen, air louver, but one of those was missing. That generator cannot run. It's shut down. It's locked out. With the crane operator, I was in charge, and we disconnected the P-M-G

up on top, took the outer housings off all the way down to the thrust bearing, they had people searching all of the deck spaces, all of the floor. It was finally found on the floor, that screw. Then we put it back together again.

Storey: Explain to me why.

Boyce: That one item–

Storey: This was a little screw maybe an inch and a half long we're talking about?

Boyce: Yep, yep. With a wing nut on it so that you could hold it to thread it into the–it might be a half-inch, thirteen thread, where it goes into the housing. You've got to be able to turn it so you weld a wing nut onto the top of the thing so that it can thread *in* and *hold*. But if that were to get caught in the winding, magnetically it would pick it up [pop sound] just that quick. And then just imagine what kind of damage that it could do in *one* revolution.

Storey: See, I don't know. Tell me.

Boyce: It could tear a winding apart. It could short them out. It could, shall we say, basically totally disintegrate the use of that generator

until it could completely be rebuilt back to normal. But that's just a for-instance. *That did happen*.

Changing out the Transformers on the Powerhouse Deck

Now, the huge transformers that were out on the ramp, 179 ton, we had changed them out one by one. It might be one here and maybe a month later or two months later you'd put another one in, or maybe that one back into another hole and reconnect it to the bus, put it back in operation, but you'd have to take one out, to get it out of the way *first*, bring the other one, bring it back, put it back in the hole, put it back together again. As a working foreman, I've changed out a whole bunch of them, and I knew my crew well enough that I could get the cooperation and change one of them out in about fourteen hours. Normally it would take two to three days. A waste of time, but we got it down to a point where we'd start at about the crack of daylight, and we'd be back in service, heating the iron up, like that, five-, six o'clock at night. But no one ever had changed out a transformer that way in the length of time that I could get my crew to do it. Other people had tried it, and it

would take them anywhere from two to three days.

Storey: Now, when you became a working foreman, how many people were you supervising?

Boyce: Five journeyman wiremen and two helpers.

Storey: Were there a *lot* of crews like that?

Boyce: No, that was all there was here.

Storey: So you were *the* foreman.

As a Working Foreman [Sub-Foreman], His Official Title Was Senior Electrical Mechanic

Boyce: Well, they call them a senior mechanic. Now, the official rating is an electrical mechanic. All right. An electrical mechanic for the city of Los Angeles requires that you be able to work on anything oil, gas, water, *or* electric. So then, when you're promoted to, shall we say, working foreman status, you're actually a senior mechanic. In other words, you're one cut above the normal mechanic, but you work just the way *they* work, and you do the supervising of that

group while you're at it. It's just added responsibilities.

Consequently, you get paid more money. But from there you went to the full foreman if you had two crews, three crews, something like that, you would have a senior mechanic over each one of these crews, see?

Storey: Did you become a senior mechanic?

Boyce: No, no, never did. I *was* a senior mechanic, yes. I *was* a senior mechanic and was paid for it, but I never did become a full foreman in that sense of the word.

Storey: Did you *work* for a full foreman?

Boyce: Yes.

Storey: Who was that?

Boyce: There was about four or five at different times, because they would transfer someplace else. Or for some reason they'd retire.

Storey: We're talking about Los Angeles personnel here.

Applied to Reclamation for a General Foreman Position, but Was Not Selected for the Job

Boyce: Uh-huh, we are. I did, at one time, make application to come back and go back to work for Reclamation. They had a G-F, general foreman, who was retiring, and I made application for it. I felt that my experience working with the generators, which *they never did*, would be advantageous to the Reclamation to have, shall we say, a G-F that had this additional education and information. I submitted my papers, and like that, and they decided that they would promote in-house and not hire me back, which was fine. It didn't work too bad for me. I got out anyway.

The Units at Hoover Dam Operated by Los Angeles Water and Power

Storey: Los Angeles Water and Power, which units did they operate?

Boyce: Nevada, O Unit, which is the house, 1, 2, 3, 4, 5, 6, 7, 8. Arizona, A-1, 2, 3, 4, 9. Those between, 5, 6, 7, and 8 were operated by [Southern California] Edison, and we took care of the Arizona house unit the same way, A-O.

Storey: Were there any major accidents while you were working down at the dam?

Does Not Recall Any Accidental Deaths While He Worked at Hoover Dam

Boyce: I don't recall. I don't recall any.

Storey: No accidental deaths?

Boyce: No.

Storey: No accidental injuries?

Boyce: Oh, there were some accidental injuries, yes. But as far as deaths were concerned or, shall we say, a major mutilation or something like that, I don't recall any. One guy lost a finger off of his hand. He was a rigger, he, shall we say, got it in the wrong place at the wrong time, it was just pinched off by a heavy piece of equipment.

Storey: What's a rigger?

Coordinating the Work of Two 300-Ton Cranes to Lift Heavy Pieces

Boyce: A rigger is a guy that does the attachment of the cables to, shall we say, to turn a piece of equipment over or to pick it up

and put it on the boring mill or put it in the *lathe*. That's his job. He has a crane operator up here. He does all the signaling and regulating how it's picked up, turned over, whatever happened to be and that way. Like I say, I've seen an awful lot of equipment, large equipment, picked up and moved and no one get hurt. It's really quite a feat, to me, to see all of this–now, if they were going to pull a rotor or pull the housings and like that in order to get deeper into an overhaul or something like that, I, a lot of times, was assigned to, shall we say, just be on standby to make whatever corrections or whatever situation might be in case of problems. The government would have at least one, generally two, electricians up on the cranes, the big cranes. Them are 300-ton. There would be one man on each crane because they *have* to *operate* in *unison*.

As a matter of fact, when they're going to make a major lift, like a rotor, like that, they time the operating relays to make sure that they are *perfectly* in time because they work in steps–bang, bang, bang, bang, bang (clicking fingers with each "bang"), just like that. Everything is 100 percent operation or 100 percent stop, and all of those time relays have to pick up in

sequence or they throw it out of balance. If it don't work together, it ain't no good.

Storey: So, picking something up with the crane is pretty complicated and delicate.

Boyce: It is a major . . . Yes. Like I say, when you say you're going to pick up *600* ton *besides* the lifting beams, the main lifting beam itself weighs in excess of 60 ton. The saddle that pick up the lifting beam to *hook* to the main crane units, they're some sixteen, eighteen ton each. The lifting *collar* might be eight ton. So you add of all them tons up, and you're talking about– actually, you're lifting in excess of probably 700 to 800 ton.

Storey: And you were saying it's a 300-ton crane.

Boyce: It's a 300-ton crane.

Storey: So you have to *use* two separate cranes?

Boyce: And you have to use *two separate hooks* also. That's why you use a bridging beam to hook the two together. Both of those 150-ton hooks have to work in unison coming down and coming back up again.

Storey: Otherwise you unbalance your connection

and whatever you're lifting.

Boyce: You can believe it or not, there's a guy up there with an instrument *level*, and he checks–that's how close it's checked that it is perfectly level. And when they go to lift, you have two operators.

Storey: In two different locations?

Boyce: In two different locations, one in each crane, one in each bridge, and every operation is 100 percent on or 100 percent off, and let the time delays do all the work, time-delay relays, and that's where you get your lifting power. It is really an interesting major feat.

Storey: When you say that you have time delays, how long are these delays? Are they like seconds apart?

Boyce: Just seconds apart.

Storey: Minutes apart?

Boyce: No, seconds, just seconds.

Storey: So it lifts a little bit then it stops?

Boyce: No, it does not relax. It keeps increasing

in speed as it comes up, see. That's the way they click. They just click just like that. You can be down on the floor and you can hear them (makes finger-snapping clicking sound) just like that.

Storey: What kind of a mechanism is used?

Boyce: It's a mechanical device. They're called a mercury time delay. In other words, it is the amount of liquid mercury that will travel through a certain orifice to a reservoir, and that's how they time it.

Storey: And how do they connect it together so that they'll both . . .?

Boyce: I would hesitate to try and tell you how many relays there are in *each step* of the pick-up. I don't know, but there's several in each level. There's not just one part. There are maybe eight, ten, twelve different relays that are allowing power to surge on into the resistance banks as it comes up in speed. It's not just one; it's *several*. And that's on *each hook* in four positions, and those are operated by *one guy* who's generally the rigger foreman. Two riggers in the cranes, crane operator, and you might have two or three or four down on the floor. Like I say, *it is* a major feat.

Storey: It sounds very complex. One of the things, you've mentioned that they send in an outside crew to do major overhaul work.

Boyce: Heavy-duty maintenance work was part of the contract between Reclamation and Water and Power. Water and Power had a contract to maintain the overhaul, the servicing, all of the equipment in the dam that was pertinent to the dam. The auxiliary equipment to that, the motors and blowers and lighting and this and that and the other thing, like that, is all handled by Reclamation as *their* part of the contract, but the other–it's just like there was a fence drawn down there, and you're on this side and I'm on that side. You didn't overlap into other people's property or care.

Storey: When these crews came in, were sent in by Los Angeles, were they Los Angeles employees?

Boyce: Employees. They worked for the city in the city, possibly on steam units.

Storey: How was *responsibility* then split up? Who had *authority* for overseeing the overhaul and that sort of thing?

The Overhaul Crews Imported by the City of Los Angeles Were Supervised by an Electrical Engineer and a Mechanical Engineer

Boyce: There was an electrical engineer and a mechanical engineer on board.

Storey: At the dam?

Boyce: They were brought here to take care of their crews, and they made the assignments.

Storey: So they came with the crew that came in. They weren't permanent staff at the dam.

Boyce: They came with the crew. No, no, not at all.

Storey: They knew what they were supposed to do, and then they had full responsibility.

Boyce: That's exactly right.

Storey: Did they ever come to you and say, "We need you to work on X," or did they generally stick to their own crews?

Boyce: They stuck to their own crews.

Storey: Interesting. So they would come in from

L-A, Los Angeles.

Boyce: Oh, yeah. They might have maybe thirty-, forty people that they would bring in.

Storey: And how long would they be here?

Boyce: Oh, they might be a month. They might be two months, three months.

Storey: It just depended.

Repairing the Steel in Wicket Gates and Water Wheels

Boyce: Depended on what they run into. In a lot of cases, they might have to do welding repair on the wicket gates, they might have to do a lot of rot. The water wheels, particularly like the one that's right down the hill down here, if you could look at it closely, you'll see that there's big divots of steel that's just torn out. It's done by water. They have to go in there and cut that all out, either air-arc it out or they use a chipping gun, air-operated, and just chip it out with a chipping gun, like that, until they get down to *raw iron* or *steel*, and then they completely refill and regrind until they get it all smooth, back up again.

Storey: That one's pretty obviously been repaired.

Boyce: Many times. And those, unless they run into trouble, are done normally probably on about a five-year basis, for a water wheel. But they're inspected, generally, once a year. *We* did the inspection.

Storey: When you say "we," you mean yourself personally?

Boyce: No. They would send an engineer in, but we would unwater, open up the scroll cases, and so forth and so on, and then he would go in and make his analysis. Then that would go back into the file, so forth and so on, the work that is programmed to do at such and such a time.

I have got to go to Las Vegas in just a little–

Storey: Since you have to leave, let me ask you again whether or not you're willing for the information on these tapes and the resulting transcripts to be used by researchers.

Boyce: Oh, absolutely.

Storey: Great. Thank you very much.

END SIDE 2, TAPE 2. DECEMBER 17, 1997.
BEGIN SIDE 1, TAPE 1. DECEMBER 18, 1997.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Harvey Wood Boyce on December the 18th, 1997, at about ten o'clock in the morning in the regional offices of the Bureau of Reclamation in Boulder City, Nevada. This is tape one.

You know, in that picture album you showed me, you had a pay stub from Hoover Dam.

Boyce: From Babcock and Wilcox.

Storey: From Babcock and Wilcox. Tell me about that, if you would.

Babcock and Wilcox Pay Stub of Charles Kelly Sweet

Boyce: This pay stub was a receipt of earnings for the previous week and what charges were taken out from it before the final payat the bottom–his take home pay. It listed it for hospital benefits. I believe it was a dollar and a half for hospital benefits, and that covered the entire family at the government hospital over here on the side

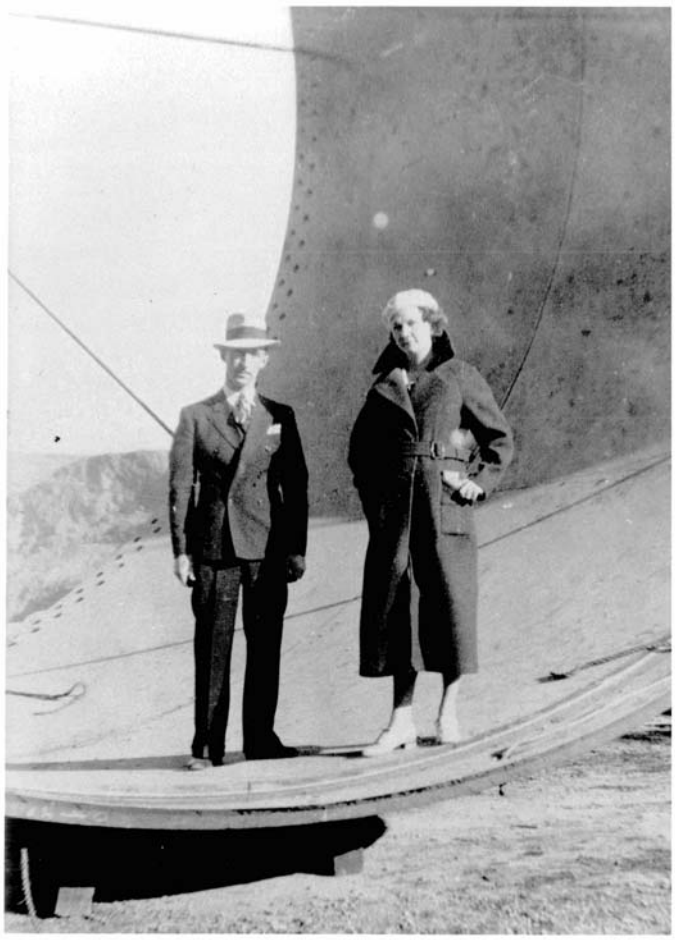

Illustration 11: Mr. and Mrs. Charles Kelly Sweet standing in a 30' diameter penstock section ready to be moved via cableway for use at Hoover Dam.

of the hill. That belonged to Charles Kelly Sweet, who was my stepfather, and he came here to work on the dam in 1931, was employed by Babcock and Wilcox.[9] I don't know, I think there was another company, for Six Companies, Incorporated, that he actually worked for before going to work for the Reclamation project, which I think started in about '34-, '35, when they started taking over a lot of the work in the dam. You know, when the contractors was finishing up.

Storey: What about the program for the dedication? Whose was that?

Boyce: That was brought home by my mother or my stepfather because they were in attendance.

Saw President Franklin Delano Roosevelt Arrive at the Train Station in Boulder City, but Was Not Taken to the Dedication Ceremony

I was *not* in attendance at that thing, although I was down at the railroad station here in Boulder [City] and watched the President [Franklin D. Roosevelt] and everything like that coming off the train

9. See the pay stub in the illustration on page 22.

and being transported to the dam for the dedication and like that.

Storey: So he came out in a train.

Boyce: Yes, he came out in the train.

Storey: To the dedication. Did you see him get into his car?

Boyce: Not on the return trip, no, or even on the departure there. They brought him off the train and on like that, and they could come off, shall we say, at *dock* level, and then they had a ramp down so they could get down to the vehicles.

Storey: Was he walking?

Boyce: I just don't recall. I just don't recall. It seems vaguely that he was in a wheelchair, being escorted down the ramp, shall we say, so that they could put him in a vehicle to go to the dam.

Storey: Was there a lot of activity in town for the dedication?

Boyce: Well, there seemed to be a lot of *people*, but, after all, Boulder City was, shall we say, a very small, government-regulated

town, and there was not a lot of things to do or people to see or anything else, as far as that's concerned.

Storey: Was there a particular reason you didn't go to the dedication?

Boyce: It wasn't my mother's and stepfather's desire to take me. Actually, by the time of the dedication, I was just starting my eighth-grade year. My wife came with a–from St. George, Utah, by five-ton truck. A bunch of kids from the high school and college in St. George transported down to see the dedication at the dam itself, but I was not part of it.

Storey: You mentioned that your family was an LDS family.

Boyce: That's true.

Storey: Did you remain LDS?

Boyce: Yes.

Storey: What part did–what is it, a stake here? What part did the LDS church play in the community here for you all?

Boyce: It was, shall we say, a small community of

people. Of course, as a very early teenager and like that, I wasn't really interested in any church, really, as far as that part's concerned, but, yeah. we went to church on Sundays, and we went to primary, as they call it, during the week on Wednesdays in the afternoon after school. That's just basically the sum and substance of it at that particular time.

Storey: So there wasn't a lot of social activity around that church?

Boyce: No, not really. Now, the old chapel house, the meeting house, was trucked into Boulder City and set down on the corner there at G and Arizona and Utah. In later years, it was sold and was trucked *back* to Las Vegas and is in operation in Las Vegas in some other church association affiliation, not Mormon.

Storey: It's not LDS any longer.

Boyce: Uh-huh. But that was after they built the large chapel at Fifth and G. I can't tell you just exactly when it was put in operation. I know at the time that it was built and like that, that I was [an] electrician and I donated a lot of time to assisting the wiring and on like that at the church. It was

donated, shall we say, time in lieu of money. But an awful lot of church buildings and on like that were made by that kind of a situation where it was donated labor in lieu of cash.

Storey: Los Angeles Water and Power, did they have social activities among their employees here?

Los Angeles Water and Power Had Occasional Social Activities for Employees and Families

Boyce: Only maybe once, maybe twice a year. Yes, if somebody was retiring or *leaving*, shall we say, and going back to service in L-A, they might have a little party. Each year they would have what they called a picnic, and it consisted of horse rides for the young children, different feats of skill, horseshoes, all different games, driving nails, women particularly driving nails to see who could drive one down the quickest. And fly casting or bait casting like if you were going fishing, and horseshoes. These went on all afternoon, and there were prizes for the winners of each one of these different events.

When I was a working foreman, I organized and was the chairman of the

picnic and dance and everything like that, that was put on one particular year, matter of fact, in 1976. At night they would hire an orchestra, and be dancing, and they would have a midnight buffet, and it was all handled and paid for by the Employees Association out of Los Angeles. They still do it in Los Angeles, but they don't come up here and do it anymore.

Presence of Los Angelenos in Boulder City

There's not that many–yes, there's quite a few retired L-A people, not just Water and Power, but police departments and fire departments and like that. There are lots of them in the Las Vegas metropolitan area. Even after we were all retired and like that, they used to have one here.

Now, Water and Power has active employees, I don't know, maybe ten, fifteen employees, still in Boulder City. Some of them live in Henderson or some of them live in Vegas or they live in Boulder City, and they travel the power lines and do the maintenance and upkeep of the power station down at what they call McCullough, and the marketplace is the other one. There are two different main switchyards down there.

Storey: Would Reclamation employees be invited to these also?

Boyce: Certain ones would, yes, the project manager and their spouse, I mean certain, shall we say, key people. They would not normally be blue-collar. They were invited by the Department [of Water and Power] to come and participate and enjoy. . . They'd have, shall we say, a barbecue dinner about 3:30-, 4:00 o'clock, and everybody was invited to come. They would have drinks, Coca Cola, Pepsi, or like that, a little three-two beer and the likes of that. That was basically on all afternoon. You could go get a beer to cool off, because it was on the little triangle property as you go down Nevada Highway, just across the street from the Water and Power building that's still here.

Dancing in the Los Angeles Water and Power Building

The dance and everything was held in that building. It has a nice parquet floor and a little, shall we say, alcove for orchestra to be out of the way, and a lot of meetings were held there. As a matter of fact, I used the building as a teacher of Red Cross lifesaving school and like that, which I

carried a emergency supply kit in the trunk of my car for a good many years to render emergency aid in case of an accident or something like that, but I also taught the first aid class.

Storey: Did you socialize with any Reclamation folks besides at those kinds of events?

Boyce: No.

Storey: Besides your son, maybe.

Boyce: No. He probably a lot more than me. My wife worked at the Bureau of Mines, and we became quite friendly with one of the engineers, and I can't tell you whether he was a physicist, a chemist, or what he was, but he and his wife. We a lot of times would go out on picnics on a weekend and one thing and another like that, but once in a while we'd get together with several of the guys that *I* worked with, and we'd go to a show at the hotels in Vegas or something like that. The sorority would put on a spaghetti dinner or something like that, and everybody would be sitting there with white shirts on and trying to make sure that you didn't get any red sauce on your shirt. (Laughter)

Storey: The sorority?

Boyce: Beta Sigma Phi Sorority. They had a group of it here in town, and my wife belonged to it. This was a favorite sport, to get everybody all cleaned up and then feed them something like spaghetti, so easily wind up with little red spots all over your shirt.

Interactions with Reclamation Employees at Work

Storey: What about when you were down at work? Was there a lot of interaction with Reclamation employees?

Boyce: No, not really. Now, I *knew* an awful lot of them. A lot of the other guys that worked for Water and Power maybe did not know them. I knew them for having worked with Reclamation thirteen years, and they were never associated with them. You know, they'd say hi or, you know, they knew them in *that* sense, but they didn't ever socialize or have activities outside of work. Even during work time, yes, if they came in the shop, they'd be checking the electrical equipment in our shop, and we would be, shall we say, in and out getting different tools or whatever it happened to be that we needed at that particular point in

time.

Storey: You were together but not together.

Boyce: We were together but not together, right.

Storey: I'm a little confused about the steps that you went through when you were working for Los Angeles Water and Power. You started as an electrician.

Boyce: That is correct.

Storey: Then you mentioned a sort of an intermediate step where a person would supervise maybe four or five people, as I recall.

Boyce: Yeah, or it could even be more than that.

Storey: Did you move up that step?

Boyce: I moved up that step.

Storey: And was that a promotion?

"At one time, in the changing of foreman at the dam, they didn't change one for three months, and I operated the maintenance of the dam for that three months. . . ."

Boyce: *That* was a promotion. It generally, probably, maybe a dollar an hour more money than the other guys received. But you took on the responsibility of *supervision*. If the foreman was off, you filled in. You took over his job. At one time, in the changing of foreman at the dam, they didn't change one for three months, and I operated the maintenance of the dam for that three months.

Storey: Oh, you mean one left and he wasn't replaced?

Boyce: He wasn't replaced for a period of three months. So I had all the experience, shall we say. I bid the equipment out to do the maintenance work on it and on like that, and we had special forms that we had to make out, and they had to go through the chain of command and be signed and so forth and so on.

Storey: What was the title of that position?

Boyce: Senior electric mechanic.

Storey: How many senior electric mechanics were there?

Boyce: One.

Storey: So there was only one crew of four or five people.

Boyce: I think we had a machinist and six or seven electricians and two helpers, and that was the size of the maintenance crew.

Storey: Then what did the foremen supervise, besides that crew?

Boyce: He would be over the top of me and everybody else in the shop. That's all.

Storey: So that would be the machinist and–

Boyce: Yes, and the rest of the electrical crew.

Storey: And there wasn't an intermediate step between that senior position and the foreman position.

Boyce: No, there was no intermediate step.

Storey: When did you become the senior electric mechanic, was it?

Boyce: I believe that it was in '78. There's two different things that are in my mind, and actually I want to say February the 8th of '80, but, actually, that's the date my brother died. But other things happened to

me on that same particular day that were momentous, you know, in my lifetime. I can't say definitely that it was *not* that particular point in time that I was made a senior mechanic.

Storey: I'm a little confused, because a few minutes ago you said in '76, when you were foreman, you supervised the picnic.

Boyce: When I was a working foreman or senior mechanic. It's synonymous.

Storey: Okay. Then you became a full-fledged foreman?

Boyce: No, never did.

Storey: You were a working foreman through your career, then.

When He Decided to Retire He Was Asked to Become Foreman at the Castaic Powerplant

Boyce: Throughout the rest of my career, yes. When I had made out my retirement papers and like that, the power engineer from L-A came and specifically asked me if I would take a job as foreman at the Castaic

Powerplant[10] and take care of all the maintenance at Castaic Powerplant.

Storey: What's that?

Boyce: It's a reservoir-type powerplant. They discharge the water from the lake above down through the generators in order to produce power. At night, when the power load is down, the demand, they pump it back up the hill and put it back in the reservoir.

Storey: Where is this?

Boyce: At Castaic. C-A-S-T-A-I-C.

Storey: Okay. It's another L-A facility?

Boyce: It's another facility in L-A, yes.

Storey: I believe you told me you retired in '82.

Boyce: '82. May 1, '82.

Storey: Why did you decide to retire?

He Wasn't Paid for Serving as Foreman of the

10. The powerplant is located north and slightly west of Los Angeles and the San Fernando Valley.

Shop and Decided to Retire When He Reached the Point His Health Insurance Would Be Paid by Los Angeles

Boyce: After having, shall we say, serving that particular for three months' period of time, and I was not paid any extra money for the three months that I covered the foreman's job. The situation, to me, became a little bit unbearable, and at the time of my retirement, there was an economic step where my health insurance is paid for by the city of Los Angeles today, and once I met that plateau, which was twenty-eight years, then I could retire, and I retired with 59.9 percent of my base salary, base salary being the neighborhood of twenty-seven-, twenty-eight hundred a month. I had just finally got to the point I was fed up with everything, and I decided I wanted out. This put me forty-one years working in the powerhouse. So, I felt that, you know, that's a lifetime of work–forty-one years.

Storey: Plenty of time to put in, huh.

Boyce: That's right. So I do draw a small retirement from Reclamation. Of course, your retirement at, shall we say, the 60 percent bracket, just about per month you would draw the equivalent of about two

weeks' pay that you would normally earn, and, unfortunate, for me, not being aware of what was going on in the sense that they were bargaining for wages, the first of July they got a 10 percent raise and the following year they got a six and a half percent raise. So if I'd stayed on another three or four years, I would have monetarily have boosted my salary quite a bit.

Storey: If you'd stayed on five years, you would have run up against the end of the contract with Los Angeles Water and Power.

Boyce: That's true. Right.

Storey: Did you have any contacts that gave you insights into the way Los Angeles Water and Power reacted to not being renewed, to that contract not being renewed?

Believes That Los Angeles Did Not Want to Continue to Operate the Powerplant Units it Had under Contract

Boyce: The only thing that I know is that it was mentioned around in the crew that someplace down the line, Reclamation is going to be back asking us [meaning the City of Los Angeles] to take it back, which

I believe actually happened, but they said, "No. We're fed up with it. We don't need it any longer, and we'll buy our power at the power station."

Storey: What else do we need to talk about, about your career with Reclamation and [L-A] Water and Power?

Boyce: I don't really bring anything to mind that would be something that you would desire to have on tape. I can't think of anything right offhand that I ought to get on record.

Storey: It just occurred to me, you ran the taxi service.

Boyce: Yes.

Storey: Did you ever taxi any of the Reclamation or the construction people like Frank Crowe?

Boyce: No. That was in 1940-'41 that I did that. That was before I went to work for Reclamation. I went to work for Reclamation–

Storey: So it was too late.

Boyce: Yes.

Storey: You wouldn't have gotten somebody like Brig Young.

Boyce: No.

Storey: Okay, did you ever meet any of those folks?

Boyce: No.

Old Nig

Storey: You told me about Nig yesterday. What was he like? Was he a really friendly dog or what?

Boyce: Very friendly, and there was not a man that was on any crew that didn't basically, shall we say, love that dog. They always made sure that he had gotten his lunch and got on the double-decker and down to the dam or coming back again. He was not boisterous, was not an agitating type of dog. He was very quiet. [He] knew everything that was going on, but he was just a quiet dog. He never barked at people or anything like that.

Storey: He didn't roam around town a lot, stuck right around that café?

Boyce: Stuck right around the Green Hut Café.

Storey: Well, if you don't have anything further you want to talk about–

Boyce: At this point in time I really *don't* remember anything, you know, that we haven't discussed.

The Ceremony They Had When He Graduated from Apprentice to Journeyman Electrician

Storey: I have another question I want to ask you. Did they have a ceremony or anything when you graduated to be a journeyman?

Boyce: Yes.

Storey: What was it like?

Boyce: It was a situation where the regional director, the project director, and some other people besides the crew and the foremen and mechanics and–I'm talking of all different trades–all met on the balcony on the Nevada wing, and the presentation was made by the director.

Storey: The regional director.

Boyce: Yes. L. R. Douglas. That was all handled

at that particular point in time, it was something that went on, probably, for half to an hour of time. It was very interesting for me, I mean in the fact that I was the recipient. It gave me a lot of pride that I was being recognized for the effort that I had put in, in getting it accomplished.

END SIDE 1, TAPE 1. DECEMBER 18, 1997.
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Storey: You were very pleased with that.

Boyce: Oh, yes.

Storey: What other avenue would you have had to become an apprentice and then a journeyman if you hadn't had this formal program within Reclamation?

How You Would Become a Journeyman Before Reclamation Created the Apprenticeship Program

Boyce: The normal procedure up until the starting of the apprentice program was a man would hire out in the electrical crew and become a helper and, shall we say, basically learn the trade from the mechanic that he was working with. The apprentice program did provide, shall we say, a better-trained electrician than you would

normally run into, because they would only be working in, shall we say, one particular type of work at a time, where the apprentice was required to cover eighteen categories of the telephones, cranes, lighting, like that, so that you had the theory behind it by correspondence school, and you got credit for the hours that you put in in that category, and it was the foreman's responsibility to make sure that you got in all those different categories, and you worked with whoever *he* felt was the best qualified electrician to teach you.

Storey: Now, you got this program going?

Boyce: Yes.

Storey: Were there other people who then got into the program at the same time you were in the program?

Boyce: They got into the program probably within a matter of six months to a year. They got into the program, but mine was the only one to start off with that was–and they decided that they needed to have machinists, plumbers, carpenter, automotive mechanic the same way, because they had, shall we say, the old garage, the government garage, they had,

shall we say, maybe twenty-five, thirty, maybe more, vehicles that were picked up and used every day and then brought back, and they were serviced at night, and the likes of that. If it broke down someplace, they went out and took care of it and got it back going again.

Storey: So it sounds to me as if they saw an advantage to using this apprenticeship program.

Boyce: Yes, because it gives them basic better trained people.

Storey: Because they can insist on the qualifications.

Boyce: Right, and the schooling that you had to have in conjunction with the actual work, normally, the Electricians Union in Las Vegas, they had an apprentice program going. Almost every union shop in the nation has an apprentice program, but Reclamation never had any. As I said in the previous record, I forced it to be.

Storey: Say you had used the traditional route to become an electrician. Who would then have decided that you were an electrician, sort of given you your *flight wings*, as it

were?

Boyce: It would probably be–the foreman would talk to the electricians and on like that, "Well, how's he doing? How's he qualified in this particular phase of the work? Does he know enough to go on to another part?"

My sojourn in the military, I went to electrical school at Ames, Iowa–Iowa State College–and graduated fifty-fourth in a class of two hundred and two. Then, after being overseas for eighteen months and more, I came back and went back to another electricians school, and from that one, which was a preliminary to the, shall we say, the master's school at Arlington, Virginia. And basically you were taking an electrical engineer degree in nine months, and let me tell you, they just almost open the head and pour it in, because it is tough.

Storey: They pushed on it, huh?

Boyce: Oh, yes. So when I got the program started here, I had to, shall we say, get copies of my hours of training and so forth and so on from the Navy Department to give to Reclamation, and it was my

responsibility to do it, not theirs, at least that's the way it was put to me, and I had to go to the Bureau of Naval Personnel in Washington and get copies of my record. So actually, as I said before, the amount of hours in training was eight thousand hours. Well, the schooling that I had had and the other work that I had done as a helper and like that all counted against that maximum timeframe. So I think that I had somewheres just over three thousand hours that I actually had to complete in order to have my apprenticeship time in.

The apprentice program got started, I believe, in 1946, or if not '46, it was started in '47, but I believe it was '46, and after even I completed the amount of hours, they wouldn't promote me up, they just held me in the 90 percent bracket until, shall we say, basically they were forced to do something about it, because another ~~agency~~ [office] of Reclamation was about to graduate somebody else, and that would rob them of being the first in the nation to accomplish this.

Storey: When you became a journeyman, did you get a promotion?

Boyce: Oh, yes.

Storey: And a pay increase?

Boyce: Yes.

Storey: So your title went from–

Boyce: From an apprentice to a journeyman wireman. I am a qualified journeyman wireman. Now, a journeyman wireman is allowed, through, shall we say, the union to work in construction *or* maintenance, either one. Now, most of the apprentices in electricity that came behind me, they were not required to take the study courses that I took. They were allowed to take, shall we say, powerhouse electrician schooling or something else, but they did not basically cover the schooling that I covered.

Storey: Um-hmm. Were you a union member?

Joined the Union in 1948

Boyce: Yes.

Storey: When did you join the union?

Boyce: 1948.

Storey: So that would have been after you came

back to Reclamation, a couple years or so?

Boyce: Yeah. Because I came back in–I think it was November of ‘45.

Storey: What union did you join?

Boyce: I-B-E-W.

Storey: International Brotherhood of Electrical Workers.

Boyce: Local 357.

Storey: Did you *have* to join that union?

Boyce: No.

Storey: Why did you choose to join that union?

Wages at the Dam Were Lower than “Working off the Bench” at the Union, but the Work Was Steady

Boyce: I don’t know. Almost everybody that was in the electricians’ shop *all* belonged to the union. Shall we say, I think that my union dues were something like four dollars a month, and it does carry an insurance coverage as well as retirement. Having worked the required time and worked in maintenance, you draw a different

retirement income than you would if you worked as a journeyman wireman outside. The wages at the dam was always lower than they were working off of the bench in Las Vegas or going to the test site or something like that. You paid a lot higher *dues*. You also receive a much higher pension.

Storey: When you say "working off the bench," you mean–

Boyce: That's in, shall we say, union vernacular. If you're on the bench, in other words, you're sitting on a bench waiting to get an assignment for somebody who calls in and wants to hire a journeyman wireman. So if you were on the bench, you were unemployed. You were there to, shall we say, to get a new job.

Storey: So they got better pay but not as steady, I guess.

Boyce: That's right. I had several opportunities to go to the test site as an electrician. I said, "Well, there's one thing about this, it might not pay as much as you guys get, but I get the *same* check *every* month. I'm not on the bench, off the bench, on the bench, you know. I get the same amount of

money no matter what. Yeah, I pull overtime and like that." But that's the way I felt about it, that I would take the lesser pay and I could survive with it, shall we say.

Storey: How did the union affect your work for Reclamation? Or how did the union interact with Reclamation maybe is the way I ought to put this.

How the Unions Worked with Reclamation to Establish Salaries for the Trades

Boyce: The union and Reclamation would put together a "wage board," and then they would meet and adjudicate the possibilities of a raise or whatever conditions that they were, shall we say, working for. Other than just strictly the adjudication of, shall we say, job conditions and the likes of that, that's where it was all handled. It was handled through a "wage board."

Storey: Were there other unions represented at Hoover?

Boyce: Oh, yes, Teamsters, Plumbers and Pipefitters. There's the possibility that they had one in the Rigging and Crane Operators and like that, and they had to be

certified, so they were generally all union people.

Storey: How did the unions decide or demarcate who did what and who didn't do what?

Boyce: I don't know. I do not know, but it was something that they would sit down and arbitrate, you know, shall we say, in a meeting right here or maybe in the Bureau of Mines conference room or maybe some hotel in Las Vegas or some place where they could have enough space to handle the–because internationals would send representatives as well as the *local* representatives, the business agent and generally the president.

Storey: I keep hearing scattered stories around Reclamation about fairly complex projects where you have different unions involved and, you know, it's a matter of–

Boyce: Jurisdiction?

Storey: Yeah. Did those kinds of things come up?

Boyce: Not in any way that I know.

Storey: Tell me about overtime when you were working for Reclamation.

Boyce: Working for Reclamation, now, in most cases the overtime was not–because you had an electrician and a helper on duty twenty-four hours a day. So we worked three shifts, eight-hour shifts, so if there was something of emergency nature or something like that, then you might work some overtime. But it was *not* a very common thing *with* the government to work overtime. I worked hundreds of hours for Water and Power in overtime.

Storey: But not for Reclamation.

Boyce: But not for Reclamation, no.

Storey: If you did work overtime for Reclamation, were you paid for it?

Boyce: Yeah, one and a half times your pay.

Storey: Do you remember any specific situations where you worked overtime?

Working Overtime at Reclamation

If a Generator Broke down the Resident Crew at the Dam Did Work Preparatory to Arrival of the Crew from Los Angeles

Boyce: I was trying to run that around through my

skull here. Sometimes when you would have a generator breakdown, you might pull some overtime then. Sometimes it might be the fact that the breakdown occurred, shall we say, in the afternoon. Well, you just don't shut everything down at four o'clock and go home. You keep on going until you, shall we say, get down to where–by the same token, something like that with Water and Power, they would immediately have a crew on the road, and that crew would be here in Boulder City in one eight-hour day, they would be here ready to go to work, and then they would just take over. All you were doing as a Reclamation employee was assisting them until their arrival. There were certain things that they knew that they could do. The electrician for Water and Power would do the disconnects for them and like that, and they could go ahead and start taking the generator down.

Dealing with the Bearings on A-3 and A-4

There was a problem with the start-up of A-3 and A-4, and, matter of fact, they wiped a lot of bearings. I don't know whether it was a bad mix or what, because the bearings had to be poured and then machined.

Storey: Poured and machined.

Boyce: Yes. Liquid. It was put on the bearing base so that the bearing would run on a runner plate. It is delicate enough you only touch it with a Kleenex tissue. You don't rub your hands on it. You don't use a rag on it. It is a very precision piece of machinery. We had a lot of trouble wiping out bearings. They were working on A-3, and Water and Power was in charge of the oil filter system. They set up a filter for Reclamation, and at four o'clock they shut down. I was called, and they asked me if I would come down and take over the filter press and operate it for a few hours so that they could get ready to kick the generator over and let it run with oil being filtered out and back in again to see if they would pick up any metallic or anything like that out of it.

". . . between A-3 and A-4, I spent six months of working anywheres from four to maybe sixteen hours a day. An awful lot of that was overtime . . ."

Actually, between A-3 and A-4, I spent six months of working anywheres from four to maybe sixteen hours a day. An awful lot of that was overtime, just operating that

pump, filter press.

Storey: Come down and help us out for a few hours.

Boyce: Um-hmm. Yeah. Even on my wedding anniversary date, I had made a date with my wife to go out, and I told my boss, who was Water and Power, that I was going to take off, I'm going to go home. I said, "I'm not getting any rest. I'm just too tired to rest, and I'm going to take her out for dinner." By the time I got home from dinner, they were on the phone. They wanted me back down at the powerhouse again. I went down and worked another eight-hour day. All of that was overtime.

Had to Work on the Oil Filter Press to Stop Leakage as Work on the Bearings Proceeded

I mean, I drew some tremendous checks, believe me, but it was a real struggle in the end before they finally got where they decided that they could leave–we had a Kingsbury man right here in the powerhouse keeping track of everything, and he told them, after I had–the filter press operates at a pretty good pressure, so oil will leak very easily, and when I came down to start operating

the filter press for them, there was oil leaks all over everything. Well, you can't have oil leaks all over the steel decks and like that, and you've got to move around and keep track of things. I told the man from Kingsbury, I said, "You say I can't shut this thing down, I've got to keep it running." I says, "I'm going to shut it down." I said, "I can't have all of this oil leaking around on the floor or on the deck of the generator and like that. It's got to be cleaned up. It can't get *into* the generator, because it would just foul everything."

He said, "Yeah, I can understand that." He says, "Well, go ahead and shut it down," which I did, and I repiped it, put it back together again, and I had no leaks. So his decision was, from that point on, "If there's any overtime going to be done, you're the only one that's going to do it." And that's why–I mean, I couldn't even have one of my own crew or the other crew that was working to come over and relieve me. They had to take care of everything else, and I had to take care of that filter press, and it run, shall we say, twenty-four hours a day.

Storey: What's a Kingsbury man?

Boyce: The bearings that the generator runs on, which is 800 tons of mass riding on one-eighth segment of the bearing, and that bearing is made by Kingsbury. That's why I referred to him as the Kingsbury man. He was the engineer that was here *for* Kingsbury proper to oversee the work that was being done.

Storey: For instance, you said you repiped this machine.

Boyce: Made, shall we say, basically all new connections. These are steel hoses, and they're put together with union couplings.

Storey: But, that sounds like a plumber's job instead of an electrician's job.

". . . you take care of oil, water, *gas* on the generator. Oil, water, gas. . . . that was why the rating, instead of being just an electrician, is electrical *mechanic*, because you took care of the *mechanical* . . . *parts* involved with the generator. . . ."

Boyce: That is one of those things that where it says you take care of oil, water, *gas* on the generator. Oil, water, gas.

Storey: I see. So there *are* responsibilities that

look like they overlap into other trades.

Boyce: Oh, yeah. But that was why the rating, instead of being just an electrician, is electrical *mechanic*, because you took care of the *mechanical* end or the mechanical *parts* involved with the generator.

Storey: Was this when you were a working foreman or was this when you were . . .?

Boyce: This was when I was just a electrical mechanic.

Storey: So you were not technically an electrician; you were an electrical mechanic.

Boyce: That's right. My badge, going back and forth in the dam and like that, it was labeled right on my badge and my pass that I was an electrical mechanic. Well, I might be electrical mechanic, but I'm a journeyman wireman before that, first and foremost.

Storey: Uh-huh. Tell me about shifts during your Reclamation period.

Shifts While Working for Reclamation

Boyce: Well, I worked ten on and four off, ten on

and four off, and whatever shift you were assigned to, you might work that for three months, and then you would rotate ahead one notch, whether it was from swing to days or whether it was from swing to graveyard, you know, but you worked these periods, and basically about half of the crew was tied up with these ten and four schedules while the other guys were working a normal work week of Monday through Friday with Saturday and Sunday off.

Storey: What's a ten and four schedule? This means you work ten days in a row?

Boyce: Ten day on and four days off. That was for the upkeep, and as I said, you have to be there twenty-four hours a day in order for the, shall we say, the overlaps of the crews going from one section to another section and on like that. They did it all on a ten and four schedule.

Storey: Then what were the hours of the three different shifts?

Boyce: Normal shift was from eight o'clock to four o'clock.

Storey: That was eight in the morning 'til four in

the afternoon?

Boyce: In the afternoon, and the same for–from four o'clock until midnight, and from midnight to eight o'clock.

Storey: And *everybody* was rotated through those shifts?

Boyce: At one time or another. There would only be so many allocated. There would be four journeymen and four helpers and a shift foreman. Your normal twenty-four-hour day, the day shift man was responsible for everything that went on, but the swing shift and graveyard shift foreman, yes, he was responsible for everything that was going on, but he had no people. If something broke down, then he had the authority to call somebody to cover that situation.

Storey: Sort of a skeleton crew.

Boyce: Yeah.

Storey: And then most of the work done during the day shift?

Boyce: Yes.

Storey: So the swing and graveyard shifts were the

. . .

END SIDE 2, TAPE 1. DECEMBER 18, 1998.
BEGIN SIDE 1, TAPE 2. DECEMBER 18, 1998.

Storey: This is an interview with Harvey Wood Boyce on December the 18th, 1997.

Boyce: Refresh me what we were talking about.

Storey: We were talking about the difference between graveyard and swing and what was done during the day shift.

". . . graveyard and swing people, as far as electricians were concerned, checked the maintenance or the movement of equipment . . ."

Boyce: Well, the graveyard and swing people, as far as electricians were concerned, checked the maintenance or the movement of equipment–it might be a pump. it might be a blower–during the off hours. It amounted to almost a *five-mile* trip covering the penstocks and everything else in the dam that had rotating equipment running.

Storey: So you mean they would walk around, make sure everything is doing what it was supposed–

Boyce: Everything.

Storey: –that they could see it. It's going around the way it's supposed to, that kind of stuff.

Boyce: And with your hand you would check the temperature of the bearings and on like that to make sure that they were not overheating, because if they were overheating, then it needed to be taken out of service so that they could work on it the next day on day shift, say. You spent probably two to three hours just doing the check-up. We had lights on the ends of the wings in the powerhouse on each side, and you had to go down and *physically* turn them on at night as it got dark, and then, as it got daylight, you had to go back and turn them off if you were on the graveyard shift. They were started on swing shift and they were shut off on day shift, or regular shift. And you traveled the penstocks. That's before they ever had the alarm systems in there for water and like that now, as they do.

Storey: You mean you walked along the catwalks?

Boyce: Walked the catwalks.

Storey: Kept you in good shape, I'll bet.

Boyce: Yes.

Storey: Was this one person or a group of people?

". . . the mechanic or electrician. That was the first thing that he did . . . you started making your rounds, and you covered every floor, every blower, every air-conditioning system, anything, no matter what it was, as long as it was rotating electrically . . ."

Boyce: *One person*, the mechanic or electrician. That was the first thing that he did right after he got into the shop, put his lunch away, and you took off and you started making your rounds, and you covered every floor, every blower, every air-conditioning system, anything, no matter what it was, as long as it was rotating electrically, the pumps. You checked all of them pumps, and there's a lot of them.

Storey: Yes, I guess there were. Did you ever find a problem?

". . . the idea being it is *good* preventative maintenance. . . ."

Boyce: No, but the idea being it is *good* preventative maintenance. It isn't saying that there might have been problems that

someone else run into. I didn't say that. But I never did run into a problem that had to have an emergency take-care.

Storey: When you were with Reclamation, did you draw an unusual number of night shifts or graveyard shifts or anything?

Everyone Rotated Through the Various Shifts

Boyce: No, no, no, it was strictly a balanced time schedule. Six months of the year you would be on the ten and four schedule and six months of the year you'd be on the regular day shift schedule. So, shall we say, everybody in the shop went through it.

Storey: Everybody rotated through it.

Boyce: Um-hmm.

Storey: Was there a similar system for Los Angeles Water and Power?

"Los Angeles Water and Power only rotated two [eight hour] shifts, and you would work six day shifts and four graveyards. . . ."

Boyce: Los Angeles Water and Power only rotated two shifts, and you would work six day shifts and four graveyards. This was

established, shall we say, during the war because they could get some of the units off the line, and they would be there for service work, for servicing the brushes and blowing them out, checking what could be done in, shall we say, a normal eight-hour day. You did an awful lot of work in the eight-hour day, but it was, shall we say, a graveyard shift. So you'd work six days double back.

Storey: What does "double back" mean?

Boyce: We got off of work normally, the day shift, at four o'clock. You were back on by midnight. That's a double back.

Storey: So you were still on a ten and four schedule.

For a Time Los Angeles Water and Power Allowed You to Take Only One Day of the Weekend Off, but That Changed over Time

Boyce: Still on a ten and four schedule. At one time, Water and Power would only allow you one day of the weekend, Saturday or Sunday–Thursday, Friday, Saturday, ~~Sunday~~, or Sunday, Monday, Tuesday on the other side. In two years' time after I went to work for them, they agreed to let

us have the full weekend off so we'd have Thursday, Friday, Saturday, Sunday off. Sundays, you'd always go back Monday morning on the normal day shift and go six days, and then you would finish up with the four graveyard.

Storey: When you say they only ran two shifts, does that mean two twelve-hour shifts a day?

Boyce: Two eight-hour shifts.

Storey: So there were parts of the day when they weren't–

Boyce: Not with Water and Power. They were not down there.

Storey: They weren't there, and what were the hours for those shifts?

Boyce: Eight o'clock until four o'clock, and twelve midnight 'til eight o'clock, but there was no swing shift.

Storey: So there were eight hours when there weren't any–but they were always on call, I presume.

Boyce: Yeah. Always on call.

Storey: Interesting. Well, I'd like to ask you whether or not you're willing for the information on these tapes and the resulting transcripts to be used by researchers.

Boyce: Yes. That's perfectly all right with me.

Storey: Good. Thank you. I appreciate it.

END SIDE 1, TAPE 2. DECEMBER 18, 1997.
END OF INTERVIEWS.

Appendix 1: Reclamation Press Release about Harvey Wood Boyce Completion of Apprenticeship Program

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Region 3
Boulder City, Nevada

R3 51-9

For Immediate Release

BOULDER CITY, Nev., April 16--Harvey W. Boyce, Boulder Canyon Project Electrician, became the first Bureau of Reclamation apprenticeship graduate in the Nation this afternoon when he was presented his "diploma" in a brief ceremony at Hoover Dam.

At the same time, Mr. Boyce was handed his promotion from apprentice to journeyman by Director of Power L. R. Douglass, of the project. Mr. Douglass announced that the Boulder Canyon Project had scored two firsts in connection with the training of apprentices for journeyman status in the six basic crafts--carpenter, automotive mechanic, machinist, painter, plumber-pipe fitter, and electrician. Moreover, the project was the first throughout the Bureau of Reclamation to establish the apprenticeship program. A certificate of registration for the apprenticeship course was issued to the Project by the United States Department of Labor on August 1, 1949.

John H. Phillips, armature-winder at Hoover Dam and a member of the apprenticeship committee, presented to Mr. Boyce the Certificate of Completion of Apprenticeship for Electrician which was signed by Secretary of Labor Maurice J. Tobin, effective January 28, 1951. Joining in the presentation ceremony was H. H. Mitchell, Regional Personnel Officer, who is chairman of the apprenticeship committee.

Mr. Boyce went to work on the project as a laborer on July 18, 1941. He was promoted to Electrician Helper on January 16, 1942, and served in that job until November 13, 1949, when he became an apprentice trainee. He completed the course in record time because of prior work experience gained on the project and by reason of a correspondence course in Electrical Engineering which he had substantially completed.

Mr. Boyce served in the Navy from late 1942 to early 1945 as an Electrician Mate, second class. He and his wife Mary, live in Boulder City at 825 6th Street. They have two children, Harvey, Jr., age 8 and Wade Frederick, age 5 months.

"You have set a fine example through your ambition and unusual effort to become a specialist in your field of occupation," Mr. Douglass told Mr. Boyce. "You are the calibre of public servant that has made the Bureau of Reclamation the greatest engineering organization of its type in the world. We are indeed proud to confer on you the distinction of being the first Reclamation employee throughout the Nation who has completed the apprenticeship course. You are well deserving of this promotion."

Mr. Douglass recalled that many of the Bureau of Reclamation's top craftsmen, engineers and other specialists had come up through the ranks. The fact that they have done this is proof that man enjoys the freedom of opportunity under the United States' democratic form of government, he declared.

At present there are 30 Reclamation employees in Region 3 enrolled in the apprenticeship course. The region comprises mainly southern California, southern Nevada and most of Arizona.

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