

**ORAL HISTORY INTERVIEW
ROBERT AUSTIN**



**September 29, 1999
Boulder City, Nevada**



**Interview Conducted by:
Wm. Joe Simonds
Historian
Bureau of Reclamation**



**Bureau of Reclamation
Oral History Program**

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Simonds: ...Reclamation history program. It's
September 29, 1999, and I'm talking with
Mr. Robert Austin in his home in Boulder
City, Nevada.

Okay. I guess the first thing to start
off with is just some general stuff. Where
were you born and raised and what's your
background?

Austin: I'm Robert Austin, and I was born in a little
farm town in the Central Valley of
California near a place called Keyes. I grew
up on the ranch there and went to Keyes
Grammar School, Turlock High School,

Modesto Junior College, and the University of California-Berkeley.

After the university, I got several jobs. I worked for a while for the State of California at the Highway Laboratory in Sacramento, and then I moved up to Redding, California, to take a job with the WPA [Works Progress Administration]¹ as a project inspector on the works they were building. I worked there for quite a while, was transferred to their field office at Oroville, California, for a while, and then back to Redding again.

Then along, I think it was in about

1. Materials included in parentheses are actually on the tape. Materials in brackets have been added by the editor.

1938, I went with a classmate of mine for a ride and we ended up in Yuma, Arizona.

We were just going through to visit with some of our classmates and talked to the head man there, and he said he'd give us a job.

Simonds: The head man with--

Austin: [Grant] Bloodgood.

Simonds: For Reclamation?

Austin: With Reclamation. He sent me up to where they were building Imperial Dam, and John Rohr [phonetic] was in charge of operations then. I worked at the Imperial Dam, in the office. We had some good contractors. Morrison Knudsen was one of them. I

worked there until they were just about finishing up the dam and then moved along [to work on] the All-American Canal. I just kind of followed the construction of it.

Moved down to Yuma, worked in the office there a while. Worked on inspection of structures on the All-American Canal. As worked progressed, I went down to Calexico, and I was working at Calexico and up on the Coachella branch of the All-American Canal system until 1941, and the draft board got after me. The war was getting a little hot in the east. They were looking for draftees.

I got married when I was at Calexico

and moved up to Brawley for a while. The draft board was still after me, so I took a little vacation trip, went up to San Francisco and talked to some friends. They said, "Well, if you get drafted, you won't like it." But I had no choice. But they recommended I go to the recruiting office in San Francisco, show them my degree in engineering. I went over there and showed them my degree, and they gave me a commission as an ensign in the Navy, Civil Engineer Corps.

Pardon me. How much of this do you want to know?

Simonds: This is great. Just continue. This is fine.

Austin: It wasn't very long after I got my

commission I was ordered to active duty. I ended up in Newport, Rhode Island, in the public works department doing practically the same kind of work I'd been doing all the time, concrete construction. It just so happened that they were building a fuel depot with pre-stress concrete tanks and a number of other buildings. Before we got through there, I worked on a PT boat training base, dug out a lagoon for the boats to play in, and built a mess hall and barracks for the Navy. I was in the Navy, too, but I was in public works department up to that time.

I stayed in Newport for three years,

three cold winters. The bay froze over while I was there. When salt water freezes, you know it's getting cold. Then a fellow I'd worked for, a commander who had gone out with the amphibious forces, heard I was becoming available. I'd finished work up there pretty well at Newport, so he had the admiral request I be transferred out to the amphibious forces.

So I took the train and my family and checked out and we rode the train to San Francisco. I saw my family there, and then I reported in to the Navy Department at San Francisco. They flew me to Pearl Harbor, and then I got on a ship, AGC-11, which

was Admiral Turner's flagship, amphibious forces.

I was with that to the end of the war, had a few interesting experiences. We did amphibious landing exercises at Saipan and Samar, and then we went up and invaded Iwo Jima and came back and were in Manila Bay. Then we went up to Okinawa on that invasion, and I saw all of the operations that I wanted to see. (Laughter) I was working with the Seabees that were putting in landing wharfs, landing [wharfs] for the trucks and the Caterpillars and the bulldozers and the tanks, and I would go ashore every once in a while to check with

my Seabee groups to see how they were doing and what they needed.

After that, the ship went back to the Philippine Islands and we were anchored in several places. We were at Guam for a while, just went where they were establishing an amphibious base, a Navy op base. Then on the ship we went over to the Philippine islands and were in Manila Bay. We were making up plans to invade Japan, and we were getting ready to take [General Douglas] MacArthur up there so he could finish conquering the east coast.

They dropped the big bomb in ~~'41~~ [1945], and that ended all our operations.

Then the ship hauled me back to San Francisco and I was released from the Navy. Went back to stay with my family a while there back East. My dad and mother were still living there.

I had re-employment rights with the Bureau of Reclamation. So I went back to Yuma, and at Yuma we were just working on the distribution system for the Mesa, the Yuma Project, and I stayed there for quite a while. Then we started planning for the Wellton-Mohawk Division, and I worked on preparing plans for that. They were building the canal up to the Wellton-Mohawk Division, Wellton-Mohawk Canal and its

tributaries. I was in charge of the construction division there and administering the contracts for the building of the pumping plants on the Wellton-Mohawk Canal and out to the Wellton area and then working on the distribution system to the farms and the rest of the area around there until they got into the construction on that.

Then I was back into the office at Yuma for quite a while, and we were rounding up doing the work on the Mesa distribution, the Wellton-Mohawk, and when we finished up the work on that, I stayed there quite a while, quite a few years,

until they were practically finished with the work on the Wellton-Mohawk.

A job opened up here in the regional office, so I moved up here, and that was--I have to refresh my memory. I had a piece of history here. Just a second. I can't find it. I'm a little hazy on the dates. Maybe you all--

Simonds: I don't have anything, really.

Austin: Anyhow, I moved up to Boulder City in '57. I retired in '75. I had a newspaper article that had the whole thing. I don't know why I can't find it.

Simonds: Well, we can come back to that, if you want.

Austin: Anyhow, I moved to Boulder City in '57 and

worked in the design office, engineering, the Office of Engineering. At first when I came up, I worked for Hank Pelham [phonetic], and he was in the planning office. After a little while, they had a reorganization and shifted me over to the engineering division, and I was chief of the Engineering Branch. At first I was under Paul Oliver. He's dead. And then Jack Shanklin [phonetic], and finally worked up to being Regional Engineer. As Regional Engineer, I scouted around the country quite a bit, went down to Phoenix when they were starting to build the branch of the canal down to Phoenix, and helped put together design data, and made a

few trips up to Denver to help coordinate the design work on the work that was going on to Arizona.

Simonds: That was the Central Arizona Project?

Austin: And then when they got to awarding contracts, why, I was always in on review of contracts and working with the contractors on any changes. At that time, they were also building the Southern Nevada Water Project, and our office coordinated work on what the Bureau had to do with it and administered contracts, worked with the contractors on orders for changes and different work there.

Now, what specifically would you

like to know?

Simonds: You began your career with Reclamation in 1938?

Austin: Yes.

Simonds: And then you took some time off for the war?

Austin: Yes.

Simonds: And returned in '44 or '45, probably?

Austin: Yes.

Simonds: When you returned, had the regional system been put into place already?

Austin: Yes.

Simonds: You worked for Reclamation in the time before the regional system was implemented and after.

Austin: Yes.

Simonds: How did that go over with people?

Austin: Well, the field offices stayed quite independent, and the regional office would help us out if we needed help, but we didn't need much help. It worked out all right, so long as they didn't try to boss us around too much.

Simonds: So as far as the field was concerned, not much difference, really?

Austin: No. (Doorbell rings. Tape recorder turned off.)

Another question.

Simonds: So the changes from the system prior to the regionalization didn't seem to have much

affect that you could see in the field offices?

Austin: No. No. Not a great deal. Not a great deal.

We were quite independent in the field offices.

Simonds: I'm curious. You said you grew up in

Central Valley in California.

Austin: Yes.

Simonds: On a farm? A ranch?

Austin: Yes.

Simonds: Was it an irrigated ranch or farm?

Austin: Turlock Irrigation District. Yes, it was all irrigated.

Simonds: And, of course, that was before the Central Valley Project.

Austin: Yes.

Simonds: So those issues didn't apply so much then.
The Central Valley Project hadn't been
initialized by that point?

Austin: Central Valley Project was just getting
started. A lot of our fellows that worked at
Yuma and on the Wellton-Mohawk
transferred either to Central California. I
know Clyde Shields did. He did a lot of
work up on the--well, he went to work for
the State of California on the water project,
and some of our other people went to Glen
Canyon Dam and on up to the other projects
in Colorado.

Simonds: Did you have any involvement in the
construction or activities at Boulder

Canyon?

Austin: No.

Simonds: Was that wrapping up pretty much by the time you joined?

Austin: That's right.

Simonds: Down on the Yuma Project, what was your position down there? What was your role?

Austin: On the Yuma Project?

Simonds: Yes.

Austin: Well, I started in as an inspector, you might say, and then in the office I was chief of the Construction Branch until I moved out of Yuma.

Simonds: Who was in charge of that office?

Austin: In charge of that office was--well, shucks.

Simonds: That doesn't matter that much, really.

Austin: If I could find what I was looking for, I had
it all down.

Simonds: You mentioned that in 1938 you and a
buddy went driving, ended up in Yuma.

Austin: Yes.

Simonds: And you talked to the head person there,
who was Grant Bloodgood, is that correct?

Austin: Yes.

Simonds: He was in charge of the office at that time,
in '38?

Austin: Yes.

Simonds: How long was he there after you arrived?
How long was Bloodgood at the office there
after you arrived?

- Austin: Bloodgood? Oh, I think he left about the time the war started, about '41, so far as I know. And he went up, you know.
- Simonds: What were your impressions of Bloodgood to work for? Did you really work for him or under him?
- Austin: Well, he had a number of subordinates, and we all got along all right. As long as we did our job and everything was clicking, why, it was really a, more or less, pleasant organization. (Visitor interruption. Tape recorder turned off.)
- Simonds: Who was the Commissioner when you returned from the war? I really should know this, but, unfortunately, I don't.

- Austin: Commissioner?
- Simonds: Yes. Do you recall?
- Austin: I guess it was [Floyd E.] Dominy.
- Simonds: Dominy would have been become the commissioner in, I believe, '59.
- Austin: '59?
- Simonds: Yes. Well, again, that doesn't matter.
- Austin: I don't remember.
- Simonds: When you came to Boulder City, who was the Regional Director then?
- Austin: Arlie West.
- Simonds: How was he to work under?
- Austin: He was a good man to work under, very pleasant.
- Simonds: Who are some of the other folks you recall

from that period?

Austin: Well, I was working mostly with Henry Pelham in planning, and then with Paul Oliver, Jack Shanklin. Shanklin was the last Regional Director I worked for. I mean Regional Engineer. When he left, Paul Oliver was Regional Engineer for a while. He wasn't healthy. He went to the River Division and worked around. After Shanklin, I became Regional Engineer.

Simonds: And you served in that capacity until your retirement?

Austin: Yes.

Simonds: Now, you were primarily in the Concrete Division, is what your area of expertise was,

was concrete construction?

Austin: In the beginning.

Simonds: In the beginning?

Austin: Construction. There was a lot of other things going on, and installation of pumps, big pumps in the Southern Nevada Water Project, and tunnels. They were working on tunnels and canals.

Simonds: So a bit of everything.

Austin: And pumping plants and distribution system for the farms. It was interesting to watch the distribution system being developed and the attitude of the farmers. There was some humor in there in the Wellton area. A bunch of farmers were working down there, and

water was real salty that they were using, pumping well water. And then we turned into fresh river water. One of those farmers told me, "It's amazing what that water does to us." He had cotton that was little, and when he turned that water on it grew up big. You could hardly get into the fields, they grew so big. I thought that was one of the most interesting comments I got delivering water to a farm, that it made the crops grow so much better.

Of course, it was interesting to watch the development of the Mesa area and the whole area from sagebrush, nothing on it, into grapefruit orchards and vineyards and

lots of alfalfa land. And, of course, they were growing a lot of Bermuda grass for seed, and a lot of other crops in the valley there, what they called the Dome Valley near Yuma. It was really an experience that gave you a feeling of accomplishment to see what had been developed, to go from practically hardscrabble farms in the Wellton-Mohawk into farms that were really producing alfalfa fields and orchards, vineyards, citrus orchards. It made you feel like you'd really accomplished something for the country.

Simonds: How is Reclamation viewed by the farmers and the water-users?

Austin: How was Reclamation used?

Simonds: Viewed by the water-users?

Austin: Oh, viewed.

Simonds: Yes. Was it a positive relationship?

Austin: They were all for it. It was money in their pockets to get the land into good production and make some of the land they owned that was—

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BEGINNING SIDE 2, TAPE 1. SEPTEMBER 29, 1999

Austin: They wanted the water and they were happy to work with anybody that would provide it, and Reclamation was the organization that did it. They were happy to have us there.

Simonds: On the Yuma Project again, were the water-

users primarily folks who had established farms, or was there a lot of new settlement that went along with the project as it developed?

Austin: Well, the Yuma Project was an old project. It had been there for years. They'd gone through flooding of the Salton Sea and all of that, and the earthquakes that had destroyed some of the canals and everything. They were glad to have Reclamation come in and help them out in restoration of the facilities. And a lot of the Yuma farmers were old Reclamation employees.

Simonds: Oh, really?

Austin: Yes.

Simonds: Settled there after?

Austin: Yes.

Simonds: So there weren't too many issues regarding acreage limitations or things like that?

Austin: Well, I can't say that I got in on any of the legal arguments or the court actions and the water-allocation business. That was handled by the attorneys in Los Angeles. Yes, everybody's fighting for water, and they're getting their share down there. So they're really content with it. The only worry they have is when California tries to get more of it. They don't want to give up any of what they have.

But most of that is to come up later,

argument about how much water the states will get and how much the projects will be entitled to. It keeps interest in Reclamation up insofar as possibly improving the systems, lining some canals, saving water that way. And I expect as time goes, why, it will just work along that way. The farmers will be content as long as they can get their water, and if any of the allocations of the Colorado River are changed, if they have to limit their use, why, there will be some arguments about that. So far, I think it looks like everybody's going to get all the water they want, if they keep having floods up in Colorado. But the farmers and the districts

have worked hand in hand with the Bureau of Reclamation. They've had agreeable relations. Agreeable.

Simonds: Upon the Wellton-Mohawk, I don't think this to be true, but in what little time I've been with Reclamation and have heard, I've gotten the impression that the Wellton-Mohawk Irrigation District is quite a powerful entity. Is that true? In many cases they would often dictate to Reclamation how things would be rather than--

Austin: Yes. They had their ideas of what they wanted. They worked with Reclamation on it, and they weren't backward about making recommendations and telling the Bureau

what they liked and what they weren't too content with. But it all worked out.

Simonds: It was generally a positive relationship, you would say?

Austin: Yes. Yes. We worked together. They had their Project Manager, their manager of the district in the Wellton-Mohawk, and he was a good fellow. We enjoyed working with him. He went into the Bureau office in Washington, one of their managers.

Simonds: Became a Reclamation--

Austin: Ernst.

Simonds: Ernst?

Austin: Do you know Ernst?

Austin: The name is familiar, but--

Austin: Roger Ernst.

Simonds: He came to Reclamation from Wellton-Mohawk?

Austin: Yes. He was working with the Wellton-Mohawk people and went into the Department of Interior.

Simonds: What were some of the big issues that you had to contend with down in that area when you were working down through there? Did you have any experience working with Indian tribes or on Indian lands?

Austin: I wouldn't say we had any real conflicts, main issues. They wanted the project, and we were building it. The only issue was we were going too slow. (Laughter) "Let's get

it done." Of course, we were limited by appropriations. We couldn't build anything unless we could pay for it. That depended upon Congress appropriating the funds, and that's the way it went. They kept pushing on their congressmen to get the thing done, and we were happy to have them help politically and show that they were approving of what we were doing, but wanted it done quicker, and that was all right with us.

Simonds: From listening to you, it sounds like your work was mostly involved in waterways, canals and waterways.

Austin: Yes.

Simonds: Did you do work on dams proper?

Austin: No. No, not after we finished building the diversion dam, Imperial Dam. That was the last dam I worked on. When it was finished, I went down the ditch, down the canal.

Simonds: And you mentioned, too, that you worked on pumping plants and so forth. You worked on pumping plants, design and--

Austin: Oh, yes. There are big pumping plants on the Wellton-Mohawk system, and there's power drops on the All-American Canal. Yes, I was in inspection primarily on the All-American Canal, inspecting the concrete work and the contractors' work. On the Coachella, why, they were digging the ditch with the big drag lines, and that was an

interesting development, when they brought in those big Mulligan drag lines to work. Incidentally, when they started the All-American Canal, they helped out the local economy, the farmers, by letting them come in and do a lot of excavation work with slip scrapers and mule teams and horses. Of course, they went out when they brought in these big Mulligan machines, big drag lines. That was the end of the horse-drawn era. The Coachella Canal, it was all done with the big Mulligan canal diggers.

Simonds: I've seen the pictures of the mule teams working on the All-American Canal. It's always amazed me how much was

accomplished by using horses. What were some of the more notable technological advances that you saw during your career?

Austin: I think the introduction of the Mulligan drag line was the most influential thing.

Simonds: How about in designs of canals and waterways? Was there anything there?

Austin: Well, they were pretty much standard. Most of the designs for the canals were done in the Denver office. They prepared the specifications.

Simonds: And so then in the field, what was your--

Austin: Will you excuse me a minute? I want to see--

Simonds: Sure. (Tape recorder turned off.)

Okay. Now, you were saying that the design work, for the most part, was done in Denver. Then what would be your role in the field?

Austin: My role in the field?

Simonds: Yes.

Austin: When I was an inspector?

Simonds: Yes.

Austin: It was to see that they were ready to place concrete, had the steel reinforcing in place, and then when they were placing it, to see that they were doing a good job of putting the concrete, putting it in there. And we made test cylinders to send to the laboratory to see if they broke and had the right

strength, and worked with the contractors' head people. In general, just watched to see that things were going according to specifications.

Simonds: Did you ever have problems with contractors, who would try to cut corners or--

Austin: No, I never had any serious problems. They were usually agreeable. If you saw something that you didn't think was quite right, you told the foreman and he took care of it. We had good contractors.

Simonds: It seems from what I've seen that a lot of the contractors, they worked on a lot of different jobs and you see a lot of the--

Austin: Yes. You've probably got statistics from the Denver office of who the contractors were and how many dollars were being spent and what year they started and what year they finished up.

Simonds: Just from project to project you see the same companies, the same handful often.

Austin: Yes. They kept working down the river.

Simonds: Now, with the design work being done in Denver, quite a distance from the field, did you ever have to make many changes or modifications in the field in the design?

Austin: Very seldom.

Simonds: Very seldom?

Austin: Very seldom. No. They have good people

up there, too. You know Pete Terrill
[phonetic]? Worked with him quite a bit.
And Cecil McLaurin [phonetic] was up in
the design office. He's down here now.
Have you talked to him?

Simonds: No.

Austin: Put his name down. Cecil McLaurin. He
came down here and retired from the Bureau
here. If you want to call him on the phone, I
can get his number.

Simonds: Let's see what we can do. We can get that in
a bit. That's fine.

(Static on tape begins.)

Austin: In Denver, when I first went up there on a
liaison trip, and then later on he transferred

down here, worked at the Bureau. He was in the River Control Office. But he can tell you all about the design connections up at Denver.

Simonds: The folks up in Denver (unclear)?

Austin: Oh, yes.

Simonds: So then they had an idea of what (unclear)?

Austin: Oh, yes. Yes. Pete Terrill came down a few times. I guess he was the only one. There were others (unclear), too, on occasion.

Simonds: (Unclear)?

Austin: No. No, they pretty well coordinated. Pretty well. Very well, I would say. They prepared the specifications and we built what they prepared.

Simonds: (Unclear)?

Austin: Primarily just profiles where a canal ought to go, topography sheets and (unclear) information on the soil conditions, what it was we were working in. They'd go from that. Primarily all they needed was profiles and land acreage, maps.

Simonds: (Unclear)?

Austin: Yes.

Simonds: (Unclear)?

Austin: I was in the office all the time I was up there. Confirmation of payments primarily and (unclear).

Simonds: (Unclear).

Austin: Well, it was all (unclear) work, yes. I wasn't

in charge of the office. Worked for a fellow by the name of Lillard, Oliver Lillard [phonetic). He was the office engineer in the field office (unclear) moved from that office down to the Yuma office doing the same kind of work, quantity estimates, did a lot of (unclear) for making reinforcement charts, (unclear), location, quantities of concrete, quantities of earth work, all those little things.

Simonds: (Unclear).

Austin: Just from this office they were getting ready to build, and we had the field crews down there making the surveys. As far as the regional office was concerned, we didn't do

a great deal in connection with what they were doing, except to see that they were doing it. We'd go down, (unclear). But usually when I went down it was in connection with something else which I was also doing inspection (unclear), assessing structures of dams on the river down there in Arizona, down the river, Colorado. Just routine inspections to see that the operating agencies were maintaining and whether they had any problems. They probably had accident reports we sent to Denver.

Simonds: (Unclear)?

Austin: Yes. Well, I'd go down sometimes, and sometimes we'd send somebody else for

inspection of structures, inspect the dams,
Hoover Dam and the rest of them.

Simonds: (Unclear)?

Austin: No. They're doing this primarily to see that
the operation of the design section,
construction branch knew what they were
doing and [that they] were doing it. They
supervised the (unclear). Once in a while
(unclear) to work on and take care of, had to
interview people that were looking for jobs,
talk to contractors' representatives about
what they were doing, any problems they
might have, and kept the thing moving
along.

Simonds: (Unclear)?

Austin: There were so many people coming in and out that I really don't remember all the names of all of them.

(Static on tape ends.)

I would say Grant Bloodgood was the first one. Arlie West was the last Regional Director. They were all good men.

Simonds: Was there anybody you recall as being particularly difficult?

Austin: I never got fired.

Simonds: (Laughs) That's good. Anybody as being particular difficult?

Austin: No. No. Well, some of them were a little more irascible than others. Wade Taylor. You know Wade Taylor. He became

Regional Director after Arlie West. But we got along. Had to.

Simonds: Are there any incidents or events during your career with Reclamation that stand out as significant, either in your career or in the--

Austin: Well, one of them was the big flood they had down--flooded some of the pumping plants down on the Wellton-Mohawk Canal. That was one incident that remains in my memory, and they had a lot of repair work to do. But mostly it was just day-to-day routine going along. No big problems. Nothing that we couldn't take care of right away.

My Reclamation experience was all rather pleasant and enjoyable. It was interesting work going on all the time, until the last few years we kind of got into doldrums with not much to do. Ran out of projects. Then there was always a new one that would come up, like the Southern Nevada Water Project.

Right now it's mostly in a status of operation and maintenance. I don't know if there will be any more major construction for some time. If there is, it would probably be in the field of conservation of water, like lining of canals. The Coachella Canal was never lined, and they keep talking about

lining it, which would probably be quite a project. It would probably involve building a parallel canal. But things are picking up now with the construction work in the Arizona Project.

Simonds: Back to the Yuma Project again. What were the conditions like out in the field?

Austin: Living conditions?

Simonds: Yes.

Austin: Most of the workers, Reclamation fellows, lived in boardinghouses. Climbers [phonetic] was the name of the big boardinghouse at the beginning. Had long porches with people sleeping out on the porches. Put wet sheets over you to cool

off. And "Ma" Climber was pretty good. She'd make sack lunches for the fellows to take out. If you could stand the heat, why, you got along all right. A lot of the fellows didn't like it too much. It was too hot. It was something to put up with the weather.

Simonds: Did the conditions have any adverse effect on your equipment?

Austin: No. They kept working. That was the time they developed the swamp coolers, and that made things a little more pleasant for sleeping conditions. Then a little later they began to get into the mechanical air-conditioning systems, which made it delightful in the dormitories, barracks.

Living conditions were pretty rough, pretty rough, in Yuma. Some of us were quite fortunate in finding a good boardinghouse.

Simonds: Did they construct any camps down along there?

Austin: They built the Wellton-Mohawk camp out at Wellton and moved all the people that were working on the Wellton-Mohawk Project into housing out there. It was good housing, good conditions. But they never built anything in the Imperial Valley or Coachella. Of course, they built Coachella office. But I don't think there was any housing built by the government. Mostly they were living in motels. Of course,

Coachella had lots of motels, golf courses.

Simonds: So it was pretty well developed at that point?

Austin: Yes.

Simonds: Now, I think I asked, I don't know if we touched on that or not, about working on Indian projects or Indian reservations or with any of the Native Americans down along in the Yuma and down in that area. Did you work at all with any Indian tribes, any groups?

Austin: Indians?

Simonds: Yes.

Austin: No. Never.

Simonds: There was nothing involved there?

Austin: No.

Simonds: Back up to the Central Arizona Project.

Again, I had people who have told me about how initial plans for various canals were drawn up, and that because of the various delays that were involved with that project, there had to be a lot of redesign done. Are you familiar with any of that?

Austin: No.

Simonds: That by the time that they got the go-ahead to do the construction, where they had planned to put a canal had become a housing development or something like that.

Austin: Well, it wasn't built as rapidly as they would have liked to have seen it built, and they

have had some later difficulties with some of the work, the siphons. Probably you are familiar with some of the big pipe siphons that failed.

Simonds: I'm not. I hadn't heard about that.

Austin: Well, that was after my time. That's just in the last couple of years. But you have troubles occasionally. Things don't work quite like you expected them to. But they get fixed.

(Telephone rings. Tape recorder turned off.)

Simonds: I don't have any more questions. Is there anything that you would like to add?

Austin: Well, I think we covered the ground pretty well.

Simonds: I guess the only other thing I would have,
would you have any objection to researchers
or anybody using the information from this
interview?

Austin: No.

Simonds: Okay. Well, then, I guess, unless you have
anything you'd like to add--

END OF INTERVIEW.