"Pioneer Memory Days"
Pioneer Village
Transcript - Bureau of Land Manangement Personnel

INTERVIEWEE: ESTEL CAMPBELL

INTERVIEWER: CHARLOTTE TORREY

SUBJECT: HIS WORK WITH THE TELEPHONE COMPANY

DATE: OCTOBER 30, 1977

C. T: This is an interview with Estel Campbell for the Oral History of the Southern San Joaquin by Charlotte Torrey at the Museum on October 30, 1977 at 1:55 P.M. Mr. Campbell, I have a few questions or else anywhere you'd like to begin. Where were you born?

E. C: Porterville.

C. T: Porterville. When were you born?

E. C: December 10, 1910.

C. T: When did you arrive in Bakersfield?

E. C: In November, 1936.

C. T: Why did your family move to Bakersfield?

E. C: I was with the telephone company and we transferred from Porterville to Bakersfield.

C. T: By what means? How did you manage to get here?

E. C: We drove down here in our car from Porterville?

C. T: Were there few people in your group?

E. C: Just family. My wife and daughter, Sue.

C. T: How long did the trip take you?

E. C: It took a little over an hour.

C. T: When you arrived in Bakersfield, what area of town did you live?

E. C: We lived at 1310 Palm Drive on the east side.

C. T: Were there very many buildings around there at that time?

E. C: The edge of town at that time was just beyond the Horace Mann School. From there on was generally vacant land.

C. T: Would you give us a description of your house and possibly the neighborhood?

E. C: Well, the house is just north of Niles Street. In fact, it was on the back of a lot that faced on Nile and it faced on Palm. It was a real small house probably six hundred or eight hundred square feet.

C. T: How many rooms did it have?

E. C: It was a living room, combined kitchen and dining room, and two bedrooms.

C. T: Did you have a phone service in your house?

E. C: Naturally.

C. T: What kind of neighborhood was it? Did you have any real close neighbors?

E. C: Yes, Dorothy lived in the house just next to us. I think she still lives there.

C. T: Was she related to the telephone company?

E. C: No, she used to be an operator but she's been retired now for about fifteen years I thinK.

C. T: I'd like to ask you some questions on your work experience or if there is any part that you'd like to start like why did you become a telephone worker?

E. C: I was just out of high school. I tried to join the Navy and hadn't made it. They were looking for employees and they went to school and I was recommended so I went down there for an interview and was hired.

C. T: What type of training did you have to go through to become a telephone worker?

E. C: At that time, all the training you got was really just on-the-job training because you went right to work.

C. T: You didn't have to go to school or anything? Would you tell us a little bit about some of the learning sessions you went through? They just put you there and say do it?

E. C: At that time, there was just a wire chief and two men working the plant department. I believe it was probably about twelve or fifteen operators. At the beginning I was a central office repairman, take care of the switchboard and run the jumpers and we did all of the work then because, I made the assignments on the service orders, ran the jumpers and tested the orders out, work in the store room, got the sets ready, charged the batteries, ran the generators, did all of the work. One outside man did all of the installing and trouble-shooting. Later--golly, it was two outside men. Later, the Depression come on and they laid off one man and we all took turns at being installer and finally it got to the point where we had eleven what they called AR days, absent retention, days off without pay. You stop to figure if you were working half time and you take eleven days off, during the Depression we fluctuated. We started out at two or three days and got up as high as eleven and gradually diminished as the Depression eased to about five days and was finally eliminated absent days. We also did all cable trouble-shooting because there wasn't any splicers in Porterville. Splicers would have to come up from Bakersfield. We'd go out and locate

the trouble and cut the shoes open and with a chipping knife and drive the trouble out and tape it up and the splicer would fix it when he'd come to town. We also would set poles, the two of us, and dig a hole for the pole and a trench down to it from an angle so that you could lean the pole up and finally just stand it up to pipe level. The two of us also strung open wire and in those days it was real crude. I can still remember one time I would string a quarter a mile of wire and I'd tie a shovel handle in the wire, the end of it, and just got a hold of it and went back and plowhorsed that quarter mile and pulled the wire out and walked back and got the next wire and pulled it out and laid it up on the poles and put on the brackets and glass and the whole works. It was a little different. I think originally at that time Porterville had about twenty five stations at the beginning of the Depression. We lost about half of it during the Depression but it later grew back up to quite a bit larger.

C. T: Did people have problems getting a phone during the Depression?

E. C: I think the only problem they had was money because with the telephones as many as there was being removed there was plenty of facilities in generally every place. So, if they had the money they could get a phone.

C. T: Did the Depression cause any problems as far as getting people off due to telephone service?

E. C: No, everybody was looking for a job then. In fact, working half-time you were really rolling in wealth.

C. T: What kind of work did you do in Bakersfield and Walker Basin?

E. C: In Bakersfield, you mean at the time in Walker Basin?

C. T: Whatever you can tell me.

E. C: Well, I came down to Bakersfield originally as a PBX repairman. Because Porterville only had two PBX's I didn't know much about them, so I didn't last too long as a PBX repairman and I was changed over to a station installer. I was station installer probably about two or three years then I became a PBX installer and installed PBX's for about five years. During that five year period I was a PBX repairman to begin with probably a month. Then I was a station installer for a couple of years. Then I became a PBX repairman. In those days, they had what they call a cook repairman. He's a fellow that walked to job to job locations downtown. He carried two of these black suitcases of tools and spare parts. He'd go from place to place, walking territory was generally from Mercy Hospital to the Santa Fe depot and a couple miles to the circle. Then we'd go east as far as 1500 'S' Street so we'd go about that far east and then west to--downtown business district, didn't go very far west--the Standard Oil building and the professional buildings were on 19th Street and that's about as far as we had to go west and, of course, down Chester. After that I became, I was involved in the Wasco cutover.

C. T: What year was that Mr. Campbell?

E. C: Let's see, Wasco was cutover in '39, so that would probably be in '38 or '39. Couldn't be because I didn't come down here until '36. Bakersfield cutover in July of '41. It took a year to do it. Yeah, it was '39. Wasco cutover I was kind of a helper. The man that was doing the cut was Harry Bottle from Sacramento.

C. T: When you say cutover, what exactly does that mean?

E. C: At that time Wasco was magneto, had crank telephones and we changed it from magneto to dial. A new office was installed, dial telephones were installed next to the magneto telephones. Then, at certain times which was around eight or nine at night something, we would switch it from the magneto office to a new office and all the telephones would be dial. We made another trip around each house and took out the old telephone.

C. T: Did you actually put any of the equipment in or lay the lines or whatever?

E. C: At that time I did the PBX installing for that job. I put in the--crewman was the only big job over there. I put in what they call a 750 PBX. After that cutover I came to Bakersfield and worked as foreman for the outside station job in Bakersfield for awhile. Then they needed a cutover supervisor in Weed, California. So, I was sent up to Weed from October of '40 to March of '41. Then in March of '41 that job was cutover from magneto to dial. I came back to Bakersfield and I found a PBX cutover and a pay station cutover an equivalent cutover 1520-20 to 1980 1/2.

C. T: Did you experience any particular problems in your work or was there any particular story that might stand out that might have happened at the time you were doing any type of project or maybe something happened co-worker wise?

E. C: I remember one incident they sent a lot of people down from San Francisco, in fact, this cutover. Because San Francisco was short of work and we needed help so they sent some of the San

Francisco people down here and they wanted to go home each weekend. The Santa Fe Chief left at 4:00 which was before their time to get off work. We usually let them off on Friday at 4:00 or in time to catch the train. That one fellow he needed a lot of time to get ready to catch the train. He usually took off at noon which didn't make me very happy. I talked to him pretty strongly on the fact that they could catch the 4:00 o'clock train if they left at 3:00 o'clock or 3:30. Some of the San Francisco workers were real good and some of them they should have kept them in San Francisco.

C. T: Was that here in Bakersfield that they came down to help out?

E. C: Also, on the Weed job I had three men from San Francisco up there. One fellow was on a liquid diet. I'll always remember him. I got reports from the customers that he smelled of liquor when he came in a place I still don't see how that guy kept alive. Breakfast, lunch and dinner was all alcohol.

C. T: Did you have any personal hazardous moments when working while you were doing some particular job?

E. C: Well, I remember one. I was out of Fruitvale Avenue and was shooting line trouble. We had a phone alright. It sounded noisy. As I was driving down the road I saw one of the wires was down off of the glass laying on the cross arm. I thought, "Gee, that shouldn't be. That might be where the noise is coming from". So, I went over the pole to climb it and I saw that there was power being inducted into the circuit some way because I could hear it snapping up there. So, just to be safe I climbed up on a fence post next to the pole and I jumped over

the pole so I wouldn't be grounded out and I climbed the pole and I really didn't think how scary it was until I'd lifted that wire off the cross arm and it drew a spark about an inch or so long. Then I knew that I had some high voltage around there somewhere that was coming into that circuit. So, I tied the circuit to the arm and came down. Again I jumped off the bottom of the pole rather that down onto the ground. So that one was a little scary.

C. T: What kind of a pole did you have to go up? Was it square or round?

E. C: It was a round pole. In fact, it was a joint pole. The PG&E was on the top part of the pole and we were underneath with this cross arm of open wire. I expect it had a leaky transporter up above because we called the PG&E and told them to come out and find out where it was coming from.

C. T: Did they do that a lot in those days? PG&E joint poles?

E. C: Joint poles, yes.

C. T: When did they discontinue that, do you know?

E. C: It's still is going on.

C. T: It still is, I see. What...

E. C: It cuts down on the number of pole lines and cuts down on the number of each company; it's an economy measure.

C. T: What kind of equipment did you wear to climb up that pole? Was it anything special at that time?

E. C: We had the regular climbers and a safety belt the same as they use now except nowadays they usually use motor driven basket to take them up.

C. T: Did you use the spike shoes that you had to stick in?

E. C: No, the climbers got a spike on the side he was climbing. That's the iron that straps on their legs and the stirrup on the bottom and a spike sticking in the side just about level with their ankle.

C. T: Would you tell us something about Walker Basin? Did you work on Walker Basin?

E. C: Yes, I was cutover supervisor on the Walker Basin job, there was two of them. In fact, I was cutover supervisor for--from 1946 till I quit in 1970 or '71.

C. T: Was that the year you started that you were involved in Walker Basin?

E. C: No, the first cutover was the East Office, Empire. We cut that over I believe it was 1946. Then, later we cut over, at that time, the Thomwall office which was called the Fulton office. When I first come on it was Fulton office and they changed it to Thomwall later. Then we cut in the Export office next. It was Columbus up north of town. Then, we also put offices in Lebec and Frazier Park. Originally Frazier Park was served out of Lebec. We were big enough by then to put an office in up there. Cut in the Mettler office and went, soon as Mettler got to pull through easy and eventually too many customers for the cable was serving there. When I first moved inside which was 1950, I became a supervising Wire Chief. At that time there was, let's see, we had fifteen offices. But on the Walker Basin office, the original Walker Basin office was cut in in 1962 and it was what we call a CX60. CX60 is an office that's all relays and

has been connected by a prospective company. But it has limitations. You can't increase the size of the office, you can't add to it. In 1964 we replaced the CX60 with a CX200. Before that, before the CX60 was cut in Walker Basin was served by two toll stations. The toll stations were Caliente Star, the toll station and the post office. Then, there was a toll station at Havilah, somewhere between Havilah and Caliente. I remember putting it in alongside of the creek and it was a house there. There wasn't anything else around. That was a farmer line serving Caliente and Canyon toward Loraine. I believe it was probably eight or nine stations there and eventually it was cut into the Walker Basin office. So, then we got that CX200 that we got--had been stored in Sacramento. It came from Stinson's Beach up around Sacramento. It had been sitting out in the yard so long it had corroded. The proper contacts had been corroded. We were quite worried about what kind of office we'd get. The Western had to increase their budget and clean all of the contacts and clean all of the switches that we hoped would be in good condition. The building was a twenty six feet long by nine feet wide building which had been placed near the Empire office. They did all of the installing right there in the entire office to save all that time. When the Western had their office all installed in the building, Dye's Transfer loaded it on a truck and hauled it up to Walker Basin and set it down beside the existing Walker Basin Office that had the CX60.

C. T: What year was that?

E. C: 1964. 1962 we put in the original office. It didn't last. It only lasted about two years and it outgrew the office so we had to put in a larger unit. We put in a CX200.

_____ Young lady, you got to let people know who you are. Are you Estel Campbell?

E. C: I sure am.

_____ You are.

C. T: What exactly, Mr. Campbell, is a toll station?

E. C: A toll station is a pay station that's a magneto station that you have to crank it and get the operator. It's put on a tur-line between Walker Basin and Caliente. It's kind of a party line deal but it's a pay station that's out in the middle of nowhere.

C. T: You just lift it off and crank it and the operator came on the line. Did you have to put money somewhere?

E. C: You had to deposit. It's just like the regular pay phone except that it was magneto instead of dial or dialamatic.

C. T: What exactly is a farmer line?

E. C: A farmer line is a line that's owned and maintained by farmers. They meet the telephone company at what's called the base rate areas, BRA, which is a point which the telephone company maintains a line up to that point and from that point on the farmer maintains his own line. He builds it, sets the poles, takes care of his trouble and everything. They were put in originally because it cost so much to build the lines out in rural areas. This rate was established where the farmers could build their own lines.

C. T: If he needed any advice did he check with anyone?

E. C: He'd call in and we'd test the line and we usually attached a wire from the base rate area point and opened it up and proved that our line was good to that point. We'd test and tell him what we thought was the problem. Some of them had regular repairmen that they hired--like the oil company had lots of farmer lines. They were called farmer lines but they were owned by the oil companies. I remember going up to Glennville, there used to be a lead going up there, two arm lead. The oil company, actually one person, owned the pole line and he leased to the oil companies, to the farmers and also to Pacific Telephone. That CX200 that was put in last at Walker Basin, didn't have facilities for DDD, direct distance dialing. They couldn't be called and they couldn't call out on a DDD basis cause they didn't have all the equipment. So that existing CX200 was replaced with the Number Three Cross Bar. This was done in May of '75. The CX200 is the one that's out here at the Museum now at the telephone exhibit. Originally Walker Basin was served as a Kellogg K31 carrier. That carrier both served the trunks and served the stations out of Walker Basin to save tremendous strings of copper wire. So, the seven carriers, I think, had five channels to a carrier system, Bodfish, in fact, was served with two carriers, two carrier terminals to serve the Bodfish area. So, we got several stations of several lines just by carriers. A carrier is an electronic means of serving more than one line on an open wire cable, just like another radio channel.

This Number Three Cross Bar was built as a unit by the Western Electric. Then there was a hole left in the wall up at Walker Basin and this new building that they built for us Number Three Cross Bar. This thing was all built in one unit and they just came in and hauled it up there and slid it through the hole in the building and set it up. It saves a lot of traveling time because it takes over an hour to drive to Walker Basin from Bakersfield.

C. T: When they moved this building up there and put it in what did you have to do to hook it up?

E. C: The Western had to do the hooking up. Actually what the telephone company does is we establish a percent of these into the building and away from the building. The Western put the building--put the equipment all in and they test it out with their test to be sure it's working and then we do what's called an acceptance test. The telephone company takes the equipment and we test all of the features it's suppose to have and it's a joint deal between traffic. Traffic had what they call operating instructions. They told us what the office was suppose to do--we were suppose to get back a busy tone if the line was busy and that particular office wouldn't give no such number tone that told you if you dialed the wrong number--the number wasn't in service. They told us how--what kind of alarms we should get and how the alarms should appear. In other words the traffic brought up what they wanted in the office in their traffic order and we were to test the office to see if it did what the traffic order said. Also, we wanted to be sure that all the line

relays, operated and you could get a dial tone on every line and that the reading equipment rang the right codes to fit the numbers because that particular office the last digit determined the ring. So, we had to be sure the equipment was wired properly to get what kind of a ring.

C. T: Exactly what is Western Electric? Do they--what exactly do they do for the phone company?

E. C: The Western Electric is a subsidiary of the American Telephone and Telegraph. Originally when the telephone business was real young it was owned by what they call Gray Bar. Two men has a manufacturing business, they manufactured telephone equipment for Alexander Bell. He originally had hired, had put out the bid to make this telephone. These people did a real good job for him. So he had hired them and they formed the company called Gray Bar. This eventually grew into a large company and the telephone company purchased Gray Bar and called it Western Electric. At that particular time in history there was a lot of competition by companies to get the telephone business. So there were several electric companies competing. After they got the Western Electric originally manufacturing out of the office, I remember when I first started in, the Western Electric didn't install...on the job in Porterville this equipment installer came down from Sacramento to install the equipment in the office. The same thing happened in another office. These men would go from town to town and they'd install new central office equipment. It finally got large enough that the Western Electric then put an installation branch in. They installed

equipment in the telephone company central office. They'd manufactured it, ship it in and they'd install it. We accepted it after it's installed.

C. T: Could you give us some description of some of the offices here in Bakersfield that are some of the first offices you worked in?

E. C: The first office I worked in was the toll office downtown. At that time that was the only office in Bakersfield. I came down here in '36 and we cut Fairview, the dial office, in '41. So, from '36 to '41 that was the only office we had. The basement was the power, the first floor was the business office, the second floor was the toll office. By toll office I mean the toll equipment in these days it was carriers and repeaters and amplifiers that toll people worked on or transmission men. The third floor was the operators. There were two lineups of switchboards, one was a local and the other board was, the other lineup of switchboards, was the toll operators. The town had grown large enough by 1941 to have what they call the AB board. That would be if the operator couldn't reach all of the numbers, they couldn't get all of the numbers in front of an operator. Normally an operator works the two panels straight in front of her and one panel to her left and one panel to her right. So, she in reality works two full positions. But they couldn't get all of the numbers to appear before her becasue they had so many by that time. They added what they call the AB board. This was a board the operator could plug in to and it would trunk over to another operator and this operatore just handled the larger numbers that the original operator couldn't reach. When it got

to the point where it was getting too big to be handled that way then they switched over to the dial office. They cut the dial office in with nineteen thousand stations.

C. T: The operators, what kind of equipment did they wear to plug in? Were they quite heavy?

E. C: Well, they were a lot heavier. The breast plate when I first started was kind of like a wish bone. It came up each side and the operator had a neck strap around her neck. The transmitter was round about as big as a powder box where you keep your powder in. The horn came off the top of that and they had separate earphones to separate receiver and a headband over their head, a wire-hidden headband. Later that was reduced down to a much smaller breast plate. It was triangular. The first breast plate was probably about eight inches across; this one was about four inches across. It was a lot lighter. The receiver was a lot lighter. Nowadays, I understand they have something like a hearing aid which is all in one and light, too, it only weighs about two or three ounces.

C. T: I wonder how much those weighed hanging around their necks?

E. C: Well, they weren't what I'd call heavy, of course I didn't have them around my neck. They were, I'd say they might weigh a half a pound. They probably weighed about eight ounces. Each operator had a number and the headset number was her number. As a central office repairman, I'd have to repair each one of these sets, take the mouth piece off and dip it in alcohol to kill the bugs I had to check the set out to see if the transmit received

all right. Cords were worn, wrapped it up and put it back in her headset cabinet because the headset had a separate part to be plugged.

C. T: At that time how many numbers did a person have in their residences for their company number?

E. C: You mean how large a number?

C. T: Yeah, two or three digits?

E. C: Well, let's see. Porterville, when I was up there, I lived out in the country farmer line that was 47. Jewel's number was 227N. The hotel was 800. Porterville got up to 1200. So, they had 1,200 numbers. Bakersfield, when they got up to 5,000 they had to turn over to the next board. They must have had eight or nine thousand numbers in Bakersfield at the time of the cutover.

C. T: What exactly is a central office: You mentioned you worked in a central office.

E. C: Central office is where they switch the calls from one person to another. You have to--from the beginning you had to be switched. Originally you were switched by the operator getting an incoming call. The farmer lines were magneto even in Porterville which was magneto-farmer lines and a common battery for the city lines. The magneto line is one that you turn a crank which rings a bell. In the central office where the switching is done, drops, what we call a drop--a little metal gate that was about three fourths of an inch wide and maybe a half an inch high was held up by a little trigger. When you cranked it you vibrated the trigger which allowed it to release this drop and it dropped on down. And the drop being down told the operator

that there was a call on that row. So, she'd plug in to it with her answering call-back call. She'd say, "Number, please", and then that person would tell her what number he wanted. In front of her was all the numbers from 0 to 1200. They were in banks. We had what they call a style strip. Beside each position was a thing called the style strip and in large numbers on that strip was the first digit, if it was a zero on it there'd be a zero. From 100 to 199 it would be one. 200 to 299 it would be two. They were in groups of 100 jacks. She would look to the style-strip and see the hundred and then over to whatever jack she needed in there. The jacks had little dots in every fifth jack so you could kind of tell where they were. You had a real small number embedded in the surrounding there to tell you what the number was but you'd have to have glasses to see it. They got to the point where, it's just like a typist, just about a spear a number without even looking.

C. T: What exactly is a manual office?

E. C: Originally the offices were magneto. That meant that the operator had to crank when she called you and you had to turn a crank when you called her. If you wanted to call somebody on your home line, you could turn a crank and get people on your own line and that was called magneto office. In fact, I remember I was down the Terra Bella office one day which was all magneto. The magneto had gone on on the fritz. Sunday afternoon, the husband of the wife that was running the office had decided the magneto needing oiling so he'd oiled it and that oiling finished

it off. Her name is Jenny Stingby. I was called out to complete the calls for them. What we'd do was we'd patch them into a booth to do the ringing on the line and then come back to complete the call by switching the cords on the board. I had a heck of a time with that. I'll always remember that magneto because when you put the oil in it, there is very little clearance between the armature and the core of the magneto. A magneto is something like a generation. It's got a core which you turn...an armature that you turn inside of a cage and the clearance was so small, this oil had just got it so it wouldn't turn. I had to take it apart and clean it without getting it wet and put it back together. Then the next is what we call the common battery office. The reason they call it a common battery office is that the battery in the office supplied all the telephones. Originally each telephone had three dry cell batteries, large dry cell batteries in a box somewhere near the tower. So when they went to common battery the office battery supplied all of the stations, by putting battery out on the line they were talking on. That was a common battery office. You could get the operator just by lifting the receiver because when you did that you put a short on the line and the short put on the light underneath the jack which we called the answering jack and the operator could plug in to the answering jack. The switchboard was designed with answering jacks on the bottom portion and the calling jack at the top portion of the board cause the answering jack could be any number, any number. At that time the chief operator had a number that she would push in a little hole

underneath the answering jack which would tell them what number what it was that was calling. They didn't have a numerical sequence at all. They didn't need a numerical sequence because they had to plug into that one jack with the light on and answer the call on multiple appearances. The calling jack which repeated every two positions, one and a half positions the numbers started over. So your common battery office had a common battery in the central office. The common battery went to dial offices and the dial office was designed originally, I read, by an undertaker named Staylger because he thought the operator was listening on his line so he invented a system to do away with the operator, of course that's been seventy some years ago that he invented the..Staylger's step system. So it went from common battery office to dial office mainly because you just couldn't get enough people to handle the calls. As the office increased in size you run into a problem where the operator couldn't reach all the numbers and she would have to plug into a trunk and trunk it over to another operator that could reach the number. So, we come up step by step dialing...switch. This switch only handled ten stations. The telephone eventually this switch was designed so that it handled hundred of calls, steps. That's what they call step by step office because you went from one of these numbers to another. Every number you dialed the number would take it from one switch to another until you got the number.

C. T: In your career with the telephone company were there any disasters here in the area that interferred with the telephone service you were involved in?

E. C: Yes, we actually had a flood here. I think it was '47. The flood came down Kern River and washed the toll line out that went across, at the time, went across the river. In fact, we had--took this rowboat and rowed out there to the line to work on it, had people out there. The flood went way west of town. It washed a lot of the lines out out west of town. Course it didn't last very long. I'd say the water receded, probably, two or three days and then we could get in and actually fix the line. All we did orginally was get them so they'd stay and keep working, on the Santa Fe Bridge. We went out on the bridge and lashed the poles to the underfitting of the bridge to keep the poles from being...The poles had already been washed out. But they were laying down so we just stood them up and lashed them to the bridge. Of course we had that earthquake in '52 which was quite a disaster because it covered so much territory. At that time, I remember I was an installation foreman but we all, everybody worked. I was walking up toward Kernville, no, toward Mojave we followed the Mojave toll gate. We walked along there and shook out the shorts there. The earthquake at the same time had knocked down--actually what happened it rocked the pole and the open wire just tangled up. The only way you can clear it was just walk down the lead and look up and see where the wires were twisted. And either throw a rope up there and dislodge them or you had to climb the pole adjacent to the thing and take the short out. We walked from Bakersfield to Tehachapi. I was walking in that piece there and we did what we call leap frogging in those days. Two people were on a truck. When they got

to the work location one man would get off and the other one would drive up either to where he could get in to the lead again. He'd drive a half a mile or a mile and he'd leave the truck and he'd start walking. The first one when he finally got to the truck he'd go ahead of the second man and he'd park the truck and he'd start walking. They just kept on doing that until they covered all the leads. In the earthquake we also had the Arvin office, the top was shaken off of it. We got the carpenters in there and put a thing to hold the building up. The Tehachapi office--the Arvin office had one earthquake and a month or so later the Tehachapi office was shaken down. So we had to convert those to dial so it had--Arvin was lucky because the building had already started to convert that office to dial in the process started. But the Tehachapi we hadn't been ready for it yet. So they had to build the building and convert the office to dial and put in the office equipment in and the whole thing after the thing started to fall down.

C. T: Did it take very long to get things back to normal?

E. C: Well, in a way it did. I'd say, I don't know how long "long" is. We were working on the damages of that first quake probably three or four days before we had service restored there. But even if we had service restored there we still had lots of damage that we had to fix up, poles that were broken because they got to rocking and snapped at the ground line. Cable had been severed and damage of that sort. It did something that I wouldn't of believed. You ride along and you could see these transformers sitting upon a pole or hanging up there. Out in

the Arvin district I don't know how many humdreds of transformers were shaken off of the poles because the pole rocked and that snapped the transformer off and fell on the ground. That astounded me.

C. T: These was pretty big?

E. C: Big transformers.

C. T: Huge.

E. C: See any around here. But you see them up on the pole. They weigh probably four or five hundred pounds and it just shook them off and they fell down. So, for some of our work we had to wait until the power company could get their transformer and their service back in before we could work with it. That held up some of the work. I'd say all the service stored about three days. Probably two or three months before they got this and that.

C. T: We're sitting across from the Telephone Pioneers of America of Bakersfield Council Exhibit. Could you give us a description of that equipment there?

E. C: That's what they call the CX200 built by North Electric. CX200 means it can handle two hundred lines or trunks cause it was the design of the office every time you take a line for trunk. A trunk is some way that you get from one town to another. You have to reduce it by one line to service subscriber. It's an all relay office. All of the switching is done by relay. It isn't done by step by step switches or nothing electronic. That office had a twenty four volt battery to serve the office itself and I believe it had a one hundred thirty volt battery to serve

the carriers. The carrier is something that you get anywhere from ten to twenty individual lines on one pair of wires. Walker Basin originally was served with open wire and later with carrier. Later we put in the cable from Caliente to Walker Basin so it is served now by cable and not carrier.

C. T: I guess there has been a lot of change in the technology over the years since you've been with the telephone company.

E. C: When I started out we had no dial offices. Fresno...yes, there was one. Fresno was dial when I started to work. It was the only dial office down in this end of the valley. Porterville was a common battery office with magneto farmer lines. Porterville had--entirely. Bakersfield, at that time, Delano was magneto. Wasco and Shafter were magneto. Mojave was magneto. Tehachapi was magneto. And there wasn't any office at Lebec and Frazier Park. Delano was the first office in Kern County to actually go dial. It went dial way before Bakersfield. They put in what they call 35A97 which is a type of step office but it is considerably different from the other step offices in that it was trunk.

C. T: Do you know what year that was?

E. C: It was probably around 1935 because I worked in Delano as a relief vacation relief from Porterville. Charlie Sands, the man that was handling Delano, he took care of Delano, Wasco, Shafter, Earlimart and Pixley. So when he went on vacation I had to go over there and all the offices were magneto at that time. Now most of them are step by step offices. Walker Basin is the Number Three Cross Bar which is a lot later in the cycle because it's all electronic switches.

C. T: Thank you very much, Mr. Campbell, for the interview.

E. C: You're welcome.