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## Interview no. 115

Fred W. Bailey

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UNIVERSITY OF TEXAS AT EL PASO

INSTITUTE OF ORAL HISTORY

INTERVIEWEE: Fred W. Bailey  
INTERVIEWER: Robert H. Novak  
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BIOGRAPHICAL SYNOPSIS OF INTERVIEWEE:

College of Mines, Class of 1920.

SUMMARY OF INTERVIEW:

Early days of the College of Mines; experiences with the mining industry in México; the Mexican Revolution.

2 hours (1 7/8 tape speed); 40 pages.

connection with the hydraulic mining operations of Gold Hill (on the back of the hill) and the dredging operations in Culebra Cut (on the canal side of the hill). He was a machinist by trade, but took a course in Marine Engineering at Stevens Institute of Technology in New York, enabling him to serve in the United States Navy during World War I with the rank of Ensign and Lieutenant Junior and Senior grade.

N: Would you like to tell us a little bit about your pre-college education?

B: My elementary schooling originated in Philadelphia, Pennsylvania, and terminated on the Canal Zone, where I also completed my secondary or high school education, graduating from the Canal Zone High School at Balboa in 1915. Incidentally, my senior year at high school coincided with the first year of the opening of the Panama Canal to through traffic. It was officially opened August 15, 1914, although it took several months before uninterrupted traffic was established.

N: What made you decide to come to El Paso? What was your reason for coming to the School of Mines here?

B: I think my brother had a great influence on me in my selection of mining engineering for my college education and eventual life occupation. I had just about decided to apply for admission to Rensselaer Polytechnic Institute at Troy, New York to study electrical engineering, but after many conversations with my brother, I became

convinced that mining should be my field of endeavor. After having seen many phases of the excavation of the Panama Canal, I became entranced and thrilled with the idea of the extraction of minerals from the earth, and with the apparent glamor and adventure that appeared to be closely associated with such an occupation. I have never regretted the decision. The glamor and adventure were certainly present on many occasions, some beautiful, some humorous, some hazardous and hair-raising, but all taken together, I have lived a very interesting life, traveling to and living in many regions in the United States and México.

Another decision made at that time was the selection of the school I would attend. A real estate salesman had been traveling all over the Canal Zone before the completion of the canal, trying to sell to the Canal Zone employees an area that has become a large residential section of Houston, Texas. My parents had purchased some building lots with the intention of settling in Texas when they left the Zone. It was therefore almost a natural conclusion that I should go to the University of Texas at Austin. I applied for admission and was informed that instruction in mining was being discontinued, and I was directed to the State School of Mines and Metallurgy at El Paso. Admission was granted, and I started preparing for my first trip away from home. It was indeed a long one, from the Panama Canal Zone to El Paso, Texas.

I thought at the time that the selection of a school in El Paso

would be very desirable, because when my parents settled in Houston I could very easily spend my weekends at home. It so happened that my parents never did move to Texas; they went to South Carolina. However, I soon learned that Houston and El Paso (especially in 1915) were not next door neighbors, that they were many wide open "Texas Miles" apart.

My high school graduation present from my parents was a gold case, open face, 17 jewel Hamilton pocket watch (I still have it) and a trip from the Panama Canal Zone to Pennsylvania and Ohio to visit relatives, then continue to El Paso, Texas. The train stopped at Texarkana early one morning. At last I was in Texas, and would soon be in El Paso. Although I had traveled long distances on the ocean by steamship and had passed through several states on this train trip, I apparently had no concept of geographical distances. I thought we would never get across Texas and arrive at El Paso. I have heard many times and know now that Texas is big, but somehow that "bigness" was a new dimension I had not realized could exist.

Eventually I arrived at El Paso, traveling over such a vast expanse of wide-open, apparently unoccupied and unused land that I could not help but wonder what I would find at the end of the journey. However, the vast wide-open spaces began to change; mountains appeared on the horizon, then Mount Franklin and then El Paso. I had arrived.

El Paso in 1915 had a population of about 60,000. San Jacinto Plaza, with its alligator pond in the middle, was just about the center

of the downtown section, as it still is; however, the alligators were removed several years ago. My recollection of the buildings around the plaza includes the Mills Building and the St. Regis Hotel on Oregon Street; the Crawford Theatre and the Angelus Hotel on Main Street; the United States Post Office, the Federal Building, and the Sheldon Hotel on Mills Street; and the Orndorff Hotel on Mesa Street. I think the Paso del Norte Hotel, built in 1912, and the Mills Building, also built in 1912, were probably the tallest buildings in the city.

Since that trip taken about 59 years ago, I have become acquainted with much of the history of Texas, geographical, geological, and historical. I now realize that the Mount Franklin I saw as I approached El Paso is the same mountain that the Spaniards first saw about 400 years ago when they approached the same El Paso area from México (at that time called Nueva España). I came to receive an education, they came to advance the frontiers of New Spain, to search for gold, to christianize the Indian and teach him the Religion of the Cross.

After arriving in El Paso, I followed the transportation instructions as outlined in the school catalogue. I went to San Jacinto Plaza, took the electric street car marked "Fort Bliss," and told the conductor to let me off at the School of Mines. He told me that we would go to Fort Bliss at the end of the line, and then he would tell me how to get to the school. I mentioned the "bigness" of Texas as viewed from a train;

now I was seeing the "bigness" of El Paso as viewed from an electric trolley street car.

Once more, as on the train, I thought my journey would never end. I do not remember exactly how long the trip took (probably about an hour); however, I suppose I was restless, because several times I asked the conductor how much farther we had to go. We finally arrived at the end of the line, and there was Fort Bliss, a lot of residences on one side of an enormous parade ground, and on the other side a long line of red brick two story barracks buildings. The conductor told me to walk across the parade ground, pass beyond the barracks and the stables, and I would then see the school in the distance.

Before starting the trek, I took note of my surroundings and saw that the Fort Bliss Post Office was located at this point. It was mentioned in the school catalogue that mail for the school went through this office. This was one of my landmarks. Then with a violin and a suitcase, I began the last leg of my journey from the Panama Canal Zone to the Texas School of Mines. It was only about 5/8 of a mile, but walking on a sandy desert road loaded with luggage was not easy.

I could see some people moving around and when I arrived three people met me. They were students doing some work for the college, preparatory to opening the fall term. They were Lloyd Nelson, Vere Leasure, and Clyde Ney, who comprised the first graduating class from the school at the close of the 1915-1916 academic year. They greeted

me enthusiastically and made me feel like I would really be a member of a mining student group.

N: Who were some of the professors or administrators that you remember from the School of Mines?

B: Well, let me tell about some of the buildings as well as the professors. There were three buildings that had previously been used by the El Paso Military Institute: the Main building (a three story building, two above ground and a very high basement partly below and partly above ground), the dormitory (a three story building, two above ground and the same type high basement as in the Main building below ground). This building had 25 rooms, kitchen and dining room, as well as toilets, wash rooms, and showers. There was another small one story building that was used for assaying and ore milling instruction.

The school had opened the previous year, the 1914-1915 academic year, with 27 students and three members of the faculty. They were Stephen H. Worrell, Dean and Administrator of the school and also Professor of Mining and Metallurgy; John W. Kidd, fondly known as "Cap" Kidd, Professor of Engineering; Arthur K. Adams, Professor of Geology and Coal Mining; and Vere Leasure, who as an advanced student was Student Assistant in Chemistry.

I enrolled for the second year of the school operation, the academic year of 1915-1916. There were 41 students, five faculty members, and two advanced student assistants teaching chemistry and Spanish. There



was also a Registrar. There was only one course of instruction prescribed at that time, and it led to the degree of Mining Engineer (E.M.). It consisted of Mathematics (Algebra, Geometry, Trigonometry, and Calculus), Hydraulics, Thermodynamics, Inorganic Chemistry, Assaying, Engineering, Drawing, Physics, Mineralogy, Geology, Mining and Ore Dressing Metallurgy, as well as a course in Spanish and Surveying.

We were few in numbers, both students and faculty, but this enabled us to be a closely united group, and our instruction was direct and personal. I think our small number was an advantage to the student, and I think we were very well taught the basics or fundamentals of an engineering profession.

During this, my freshman year, H.D. Pallister had replaced Arthur K. Adams as Professor of Geology, and the faculty had been increased by the addition of F.H. Seamon, Professor of Chemistry and Assaying; T.J. Dwyer, Athletic Coach and Instructor in Engineering; and R.R. Barbarena, an advanced student as Instructor in Spanish.

The third academic year (1916-1917) was an eventful one in many respects. Earlier that year in 1916, and during the unsettled political and revolutionary activities in México, Pancho Villa had raided Columbus, New Mexico, and Brigadier General Pershing, then Commander at Fort Bliss, was sent into México with several brigades of cavalry and a few battalions of field artillery to get Villa and his gang. Because of the revolutionary activity that had been

going on for a few years, there were many concentrations of American troops on the United States-México border, and at this time there was assembled at Fort Bliss an army of about 60,000 troops of Militia. Pancho Villa was not captured, but the large massing of troops here was perhaps the beginning of Fort Bliss becoming a large training center in preparation for World War I, and the sending of troops into México was excellent field training for that event. A city of tents adjoined Fort Bliss, through which the students and others had to pass going to and from the school to the street car. This influx of the military was just about equal to the population of El Paso at that time.

The school enrollment this year was 39, lower than the preceding year, but it included two girls, our first co-eds. They were Ruth Brown and Grace Odell, who entered to take a two year academic course, with the privilege of taking the full mining course if so desired.

The event that really rocked the school was the fire that occurred early one Sunday morning in October 1916 and completely destroyed the Main building. I was awakened from sleep and saw the fire. Many of the soldiers were also awakened and came over to help put out the fire. They joined with the students in forming a bucket brigade, but could not save the Main building. However, the dormitory was saved, and the bucket brigade received credit for this. It was quite a shock and a terrible loss. The building was really the school. Gone were the classrooms, all the laboratory equipment, the surveying instruments, the mineral collection, and all the school records. There was some

demoralization among the students, and some left for home, some to look for work in the Arizona and New Mexico mines, but most of them remained. They were encouraged by the good intentions and statements of the faculty that we would be back on course within a few days. The fire could easily have become the swan-song and death of the School of Mines. However, we survived, and with a dedicated faculty, an interested city of El Paso, financial help from the Board of Regents of the University of Texas, and several businessmen of El Paso, the school acquired a new location and has grown from the small School of Mines on the desert to become Texas Western College and now the University of Texas at El Paso.

After the fire, the dormitory students were moved to the second floor, and the first floor was turned into classrooms. A framed corrugated iron building was quickly built in front of the dormitory to be used as the Chemistry laboratory. Classroom instruction had only a slight interruption, the assay and mill building was not affected by the fire, the school activities were soon in full swing again, and the academic school year completed and finished on time.

While the fire was not the swan-song or the demise of the school, it was the reason and afforded the opportunity to look for a new location more strategically situated, so the academic year 1916-1917 was the last year the school operated east of Fort Bliss. The city of El Paso, the Chamber of Commerce, and the citizens had now become accustomed to having a college (the School of Mines) and once again showed plenty of

interest. They offered help, land, and money. The present location became the new school site and the nucleus of the wonderful school we have today.

The building of the new school started in June 1917. The buildings were not ready for occupancy for the fall semester 1917-1918, so an arrangement was made to hold classes at the Temple Mount Sinai located at Oregon and Montana Streets. The Main building and the Chemistry building were ready a few weeks later, as was the power house, but the dormitory was not ready until close to the end of the year.

There were 61 students enrolled for the year 1917-1918. I do not remember numbers, but probably about 8-10 of them were girls taking an academic course.

The United States entered World War I on April 6, 1917. Some students joined the military service before school opened, and when it did open, the war was one of the main topics of conversation. It seems that the students went through periods of military preference. Sometimes we all favored the Navy, then other times the Army, the Air Force, or the Marines. It must have been Navy month when the urge to go was too strong for me to resist. I joined the United States Navy in April 1918. My father had joined the Navy also, and I suppose helped me in my decision. I was sent to Mare Island Navy Yard in California for training. A few months later I applied for entrance to an Officers' Training School. I was accepted and sent to a school in Chicago for training on the Great Lakes. I was later sent to a

training and finishing school at Pelham Bay, New York and received a commission in the United States Naval Reserve Force as Ensign. I returned to El Paso for the opening of the 1919-1920 school year and with four other students graduated in May 1920 with a degree of Mining Engineer.

There was a total enrollment that year of 135 and about 30 of them were girls. The faculty had been increased to include Howard Cromwell Taylor, Associate Professor of English and Economics; Emmet A. Drake, Instructor in English; Arthur Pearson, Instructor in Physics and Mathematics; Jules L. Henry as Instructor in Modern Languages; Alice Morris as Librarian; and Ruth Munro Augur as Registrar. William Henry Seamon, brother of F.H. Seamon, had replaced H.D. Pallister as Professor of Geology and Mining.

My long range (over 50 years) recollections of the faculty are beginning to grow dim, but these memories are all pleasant. "Doc" Worrell with his trim goatee was always immaculately dressed and very distinguished looking. He and his wife always tried to make the students feel like a united group, and succeeded very well. The Seamon brothers (F.H. and W.H.) had a lot of practical experience and were able to impart much practical knowledge to the students. Their homes were always open, and the students were made welcome on many occasions. I consider "Cap" Kidd and Tommy Dwyer as builders of character while being builders and educators of men. I think they made the longest lasting and most favorable impressions on me. This was

probably because I seem to have been with them a lot. While Dean Worrell was head of the school and naturally handled all the legal and financial matters, it was always "Cap" Kidd who appeared to be (at least physically) the "king pin" in charge.

It was "Cap" Kidd who took over the surveying, lay-out, and supervision of the building of the new school; and it was "Cap" Kidd who had charge of the hundreds of activities around the school, such as operation and maintenance, heating and lighting, the building of pipelines, power lines, machinery installations, as well as the general overseer of athletes; in fact, everything that happened on the campus. I worked with "Cap" earning extra money and learned plenty.

Tommy Dwyer also remains bright in my memories, because in addition to being my college instructor, he was also the Chief Engineer of the same company for which I worked, on my first job after graduation from school. He was also best man at my wedding a few years later. I also learned plenty from him.

N: Could you tell us a little bit about student life and activities at the College of Mines?

B: Yes, I have not yet mentioned student activities; let me do so now. The Main building at the Fort Bliss location had a rather large assembly hall or auditorium, probably with a seating capacity of about 300 people. I do not remember how often we held dances at the school, but there were a few. They were held in the assembly hall and comprised most of our social activities.

There was a lot of interest in football, baseball, and basketball; however, we were so few in numbers that it was necessary that almost the entire student body participate. Financially we were not able to travel, and from an athletic point of view we were still unknown. Our main activity was football, and while at the old school we played only local teams, El Paso High School and many teams representing various units of the Army. There were a great number of Army teams, and we had all the competition we could handle. However, sometimes we had no substitutes and our coach, Tom Dwyer, quite often played with us when we played the big bruiser Army teams—especially when one of us needed a rest. All our games were played at the Río Grande Baseball Park located at Wyoming and North Walnut Streets, just four or five blocks east of Cotton Avenue.

Towards the end of the 1915-1916 school year, the School of Mines along with other southwestern schools received an invitation to send some students to a field day event to take place at the University of Arizona at Tucson. Tommy Dwyer, the coach, told us about the invitation and told us all to line up at one end of the football field; and at a signal from him, we were to test our running ability by running the length of the field. I won that running event, and with no more practice than that, a few of us were selected to represent our school and were sent to Tucson. I was the only person from our school to win a medal. I came in third in the 100 yard dash.

After we moved to the new school location, we started to enter into

annual competition in all athletic events with the New Mexico Aggies, the University of New Mexico, Roswell Military Institute, and the University of Arizona. We won a few football games, but I think we lost most of them. However, we were able to hold our own in baseball and basketball.

During the 1919-1920 year I believe we won two and lost four football games. We won seven and lost six basketball games. I do not remember the outcome of the baseball activity.

The Scientific Club was formed in December 1915 and has been an active organization to the present time. A Dramatic Club was formed in December 1917 under the direction of Professor Fielding. The Prospector, the school paper, was first published in early 1915 and is still being issued. However, at that time it was primarily a magazine in format, while at the present time the publication is more of the newspaper type.

The faculty usually joined with us in all our social events, which usually consisted of dances. While at the old school and before the fire, they were held in the large assembly room or auditorium of the Main building. After we moved to the new school location, they were held at the University Club on the top floor of the Roberts Banner Building at Stanton and Mills Streets, or in the main ballroom of the Paso del Norte Hotel. Other gathering places in those days were the Sheldon Hotel Dining Room on the first floor and the ballroom on the mezzanine floor, the Modern Café in the basement of the Mills Building,



and the Elite Confectionary at Mesa and Texas Streets.

N: Do you have any other memories of the city of El Paso, anything about politics or society that you'd care to tell us?

B: Well, as an out-of-town student with non-voting privileges, I really had no reason for political or business contacts. The people I best remember were Mr. and Mrs. C. H. Brown (Brown Welding and Machine Company), the parents of Ruth Brown, one of the first co-eds at this school; Mr. and Mrs. A. O. Wynn, parents of Fay Wynn, who became the wife of Lloyd A. Nelson (a student and for many years a professor at this school); and Mr. and Mrs. P. C. March, parents of Josephine March, a former student of this school and who later became my wife. The homes of these people were always open to me, and the home and family atmosphere helped me to adapt myself to living so far away from my own home.

As I have already mentioned, before coming to El Paso I lived in the Panama Canal Zone. The Canal employees lived in rather medium sized communities where everybody practically knew everybody else. The people came from many parts of the United States, and in fact from many parts of the world. I was accustomed to living with more than one culture. The children went to school together and played together. The adults worked together and socialized together. However, blacks and whites did have separate living conditions. In general there existed a friendly atmosphere.

I found a similar state of affairs in El Paso, a new fast growing

city with many peoples from different parts of our country and the world, with two predominating cultures, the Anglo and the Mexican, and a delightful blending of both of them. This also resulted in what I considered a very friendly atmosphere, a mutual feeling of working and living together, naturally to better themselves, but with a combined result of bettering their city. I think this same atmosphere has continued to the present day, with the city spreading out immensely acreage-wise and the population increasing about six or seven fold in the last 59-60 years. I liked the people, the general average climate (even with the wind and sand storms), and I think I very quickly became an El Pasoan. I think our general atmosphere, socially, politically, educationally, and climatically would be hard to beat.

N: Mr. Bailey, what sort of a job did you get after you graduated from the College of Mines?

B: Just before graduation I was offered two jobs, one at the iron mines in Minnesota and the other in the silver-gold mines close to Parral, Chihuahua, México. I did not have enough money to pay the transportation to Minnesota, where I really desired to go, so since transportation into México was paid for me, I accepted the México job. During summer vacations I had worked in New Mexico as miner, assayer, and surveyor, but now I was entering the business world as a mining engineer. It was during the many periods of revolutionary activity in México. The trains ran only during daylight hours, and

sometimes not at all, if the revolutionists had been active in destroying railroad tracks and bridges. We traveled only as far as Chihuahua the first day. The train we were on was the first to leave Juárez for several days, and it looked like about half the city of Chihuahua came to meet that train. We, a group of 12 Americans, were met by the American Consul who entertained us that evening in the Chihuahua City Foreign Club. We left Chihuahua the following day enroute to Parral in the same state of Chihuahua. The entire trip from Juárez to Parral took five days. It can now be made by automobile in about 10 to 12 hours. Several bridges had been destroyed both to the south and to the west of Jiménez, a small railroad junction town. We were obliged to remain in Jiménez three days along with a large number of Federal troops, who were also awaiting transportation from that place. We occupied ourselves playing poker and drinking tequila.

We eventually left Jiménez on the first train headed towards Parral in over a week, and this was a freight train. We were permitted to travel in one of the empty box cars, which like all the other cars on the train was loaded with soldiers and their families. They rode wherever they could, both on top of the cars and underneath on the rods, where boards had been fastened securely to make a sort of platform.

A rather embarrassing but somewhat amusing experience or episode happened to me on this trip. The train was traveling very slowly

because there were so many small bridges that had been destroyed and replaced with cribs made of ties, and also because many of the rails were probably held in place with the minimum amount of spikes. At any rate, another person and I were sitting on the floor of our side door pullman with our legs dangling outside. Disregarding the inconvenience and hardships of travel, it was really a beautiful sun-shiny day, with not a rain cloud in sight. Nevertheless, a few drops started to fall, and as I held out my hand to catch or feel them, I said, "My gosh, it's raining." The fellow sitting next to me scrambled back into the car and said, "Hell, that's not rain.

A soldier on top of the car is satisfying the call of nature!" Well, imagine my embarrassment, chagrin, and mortification; I had just been unintentionally baptized by the Mexican Army.

I had been hired to work for The Alvarado Mining and Milling Company located near Parral, Chihuahua, México. This company no longer exists, but one of the operating mines was the famous old Palmilla mine, where Don Pedro Alvarado previously had made his fortune. Other mines were the Alfareña and Preseña, all shut down now, but in their heyday all very good producers of gold and silver ore. At one time they were operated by the American Smelting and Refining Company, along with their Veta Grande Mines near Minas Nuevas, a town about five miles from Parral.

My principal activity or occupation as a mining engineer on this job was mine surveying and sampling, and here occurred the first incident

and personal experience worthy of comment.

I was setting up the surveying instrument in a mine tunnel where there was a rather strong air current. I was very new at the game and had not yet learned many of the tricks and techniques of setting up an instrument, especially when the plumb-bob location or survey station was over the instrument in the back of the tunnel, instead of under it on the ground. At any rate, on account of the strong air current, I was having a hard time keeping the plumb-bob still long enough to center the instrument, adjust the screws, etc., and I kept talking to myself saying, "Oh hell, damn this breeze, damn this and damn that, and I suppose damn everything." I was really angry at myself, at the air current, and at the world in general, and I suppose (but I must state with no intention of sacrilege or irreverence) I probably also used the Divine name along with the angry invectives. My helper was waiting at the last station so I could take a backsight. He was a much older man than I. He had a rather bushy and unkempt growth of beard and mustache that gave him a belligerent looking and unwashed bandit appearance. He could talk no English and I could talk very little Spanish. I suppose he wanted to know the cause of my many outburst of anger, so he walked up to where I was and said, "Señor Bailey, ¿por qué tanto goddamn-me?" Well, talk about a feeling of inadequacy (in this case the language barrier), and thinking that he was angry at me, I had a hard time convincing him that he was in no way implicated in my angry and vulgar denunciations.

México during the revolutionary period was not all revolution and demoralization, and while a lot of it existed, the social life of the country was by no means halted. It was the custom in those days, and still is in many places, to have a band concert in the main plaza of the city or village in the late Sunday afternoon. This was the custom in Parral. Practically the whole town would appear for these concerts, especially the young people, and a lot of people from the various mines around Parral would also be in the city to take part in and enjoy what was usually a rather gay and festive occasion. The band would be in the band stand in the center of the plaza. The elderly folks or chaperones, would be occupying the numerous benches around the plaza, and there would be alternate rows of girls and boys, young ladies and young men, the girls in pairs or groups walking in one direction, probably clockwise, and the young men, also in pairs or groups, walking in the opposite direction, counter-clockwise. In this way everybody passed and saw everybody else as the walk continued around the four sides of the plaza. I do not know whether you would call that glamor, but at my then young age, it was most certainly lots of fun. As the laps or walks around the plaza continued, it was also the custom to spot the girl of your choice, and each time you passed each other, the young man would smile, tip his hat, and greet her with the usual "Adiós." After a few greetings of this nature, if the return acknowledgement of the young lady was warm enough, if the charm and twinkle of her eye was coquettish enough, the young man would gather

up his courage and join her. In this way many young ladies and young men would pair off, and probably the pairs would work into groups, and the amorous spirit of love, mixed with music would be in the air. After the band concert, the groups would either gather at a place for refreshments or perhaps gather at the home of one of the girls, everybody and everything properly chaperoned, of course, as was also the custom in those days.

It was during one of these Sunday evening concerts that word was received of some bandit activity on a road from Parral leading to one of the mines. Our General Manager, who also was at the band concert partaking of the festive spirit, started rounding up all the men from our camp so we could go home together. He sent word to our camp for some of our mounted and armed watchmen to start towards the city in order to escort us home. The distance to the camp was about four or five miles. In the meantime, the military headquarters had also been notified of the bandit activity, and a detachment of soldiers had been sent out on the road we were going to travel. The soldiers started ahead of us and did not know that our mounted watchmen were coming towards them, and of course our watchmen did not know that the soldiers were also enroute traveling towards them. It was too late to notify either group, so it was up to us to get moving, overtake the soldiers and notify them about our watchmen, then keep going and notify our watchmen about the soldiers before the two groups met head on. It was very urgent that we do this, because our mounted guards did not look

any different than the mounted bandits would look like, and a clash between soldiers and watchmen could easily have occurred. We were traveling in automobiles, so we caught up to and passed the soldiers, but on a rather sharp curve, and about this same time our guards came around the other end of the curve. Before either group could be notified, they all started reaching for their rifles, with us in the middle. Fortunately, notification and recognition was made before any shots were fired, and the story had a nice ending. It sounds nice now, but at the moment of the meeting it was somewhat of a hair raiser and thriller.

There was a lot of bandit activity in the Parral district during 1920 and 1921. It was the home ground or headquarters of Pancho Villa, and while a lot of crimes were probably not committed by Villa and his men, he received credit for all of them.

Practically all of the mines were silver and gold producers. The milling system was cyanidation and the concentrate was melted into bullion. It was not uncommon for bandits to appear and take the bullion, because it could be easily disposed of or sold.

Two of my classmates had hair raising experiences which I think are worth mentioning. They were Rolene Tipton and Walton H. Sarrels. Tipton and I were working as mill shift bosses for the San Patricio Mining Company. The mine and mill complex was in a rather isolated place about 30-40 minutes walk over the mountain from the headquarters camp where we lived. On this certain day, I was on second shift and



Tipton on grave yard. He relieved me about midnight, and sometime after I had left, he was approached and surrounded by a group of bandits who demanded the key to the bullion melting room. We had just melted the previous day and the bullion was to be shipped out after sun-up. He figured that discretion was the best part of valor and so delivered the keys. He was marched up the hill to the melting room. He was able to witness the loading of the bullion on the pack animals, and when the bandits left, he was locked in the room. The mill crew had been placed under guard during the robbery, and they afterwards sent word to the headquarters camp about the hold-up. Tipton was eventually released from his temporary prison.

The experience of Sarrels had an amusing ending. He was in charge of a small mine near Jiménez. Most of the mines in those days had lots of horses, mules, etc., as the main means of transportation. One day a large group of armed horsemen arrived at the camp and demanded to see the Jefe. When the Jefe (Sarrels) arrived, he was amazed and somewhat dumbfounded, as was the head bandit or revolutionist, to find that they had been schoolmates at the Texas School of Mines. This man, who had become one of the leaders in the Villista movement or revolution told Sarrels that he meant no harm to anybody. He just wanted food and horses, which he could take if not freely given. He completed his mission in a friendly atmosphere, and so there was no unpleasant aftermath or consequence.

I was employed by the American Smelting and Refining Company in 1922

as assayer and chemist at their Veta Grande Unit near Parral, Chihuahua. August 12 of that year I was married in El Paso to Josephine March, who had been a student at the School of Mines during the 1917-1918 school year, and later had been teaching in the elementary schools of El Paso, Texas and Hurley, New Mexico.

Later that same year I was transferred to the mining department at that same unit, and became a mine shift boss at one of the mines. This was a heavily timbered mine and used the square-set system for ore extraction.

It was during this time, after many years of revolutionary activity, that stability in government was making headway and labor unions were beginning to feel and exercise their power in the interest of the laboring man. A 45 Colt was, and still is, a very good badge of authority. The labor leaders wore them all the time, in the streets, at their meetings, and also on the company property during negotiations, which at that time were daily affairs. I have now become somewhat accustomed to seeing guns. On some of my later jobs, especially in far away places, I also took up the necessary custom of carrying a gun. It also gave me a badge of authority. However, in those early tenderfoot years, it was not very pleasant to deal with a labor leader and his assistants, all well armed.

I tried to be observant, being a young and aspiring mining engineer, and I learned a lot about labor relations, mining, and milling. It was while working as a mine shift boss that I learned something about milling.

The mine superintendent, a very good miner and labor man, had the custom of looking at the mill bins (the fine ore bins) on his way to the mine every morning. If the bins were full or nearly so, then after seeing the mine shift go down and after lining up the mine bosses for the day's work, he would get a lot of pleasure by putting a cigar in his mouth and returning to the mill. He would casually saunter up to where the mill superintendent happened to be, and in a joking manner, but with a lot of personal pleasure in the telling, would remind him that the bins were full, and if he did not speed up the milling process and lower the ore in the bins, he would be holding up the mine production. This is not the way to influence people in the making of good friendship and brotherly love, especially love between departments. However, when the ore bins were not full, and quite often they would be more empty than full, the mine superintendent would be hard to find. It was on one of these "low ore bin" occasions that he said to me, "Fred, go to a certain numbered stope and give her hell. I want a large tonnage increase from that stope today." Well, this certain stope had a lot of very good grade ore in it, and it also had a lot of very good clay as well, good for molding purposes but terrible stuff to put into a mill circuit. It was in an area where a lot of ground movement (faulting) had taken place, and if a pick was driven into the clay, it was quite a chore to pull it out. An increased production of ore meant an increased production of clay as well, and people who are acquainted with ore milling procedures know what that

means. The crushers would stick, the solution tanks would slime, milling would slow down, and the ore bins would fill up. The mine superintendent would again make his pilgrimage to the mill with his cigar in his mouth and a happy smile on his face. I personally do not recommend this system of enabling the mine to get ahead of the mill. The most appreciated method is to break more ore, good milling ore, and keep the bins full in that manner. However, I mention this because it was part of my practical education.

Before leaving the Parral district discussion, I want to make a few other remarks. After Pancho Villa terminated his revolutionary activity, he was given, and lived on, a good sized ranch not far from Parral. The government, so it was said, paid him a fee for as long as he kept the peace. I am not sure of the amount, but I think it was one million pesos per year, which at that time was five hundred thousand U.S. dollars. I am also not sure of the year, but I think it was in 1923 that my wife and I, along with other foreigners, were invited to attend a very large party or dance at the Parral Foreign Club, given in honor of Pancho Villa and General Martínez of the Mexican Army, who had come to Parral to make the first payment. I mention this incident just to show the possible mental strain under which Pancho Villa lived, even under peaceful law-abiding conditions, especially when in large crowds.

Pancho carried two guns on his belt, one on either side, with the belt full of bullets, and there were several of his heavily armed escorts around the dance hall. As I recall, he only danced one dance, and while dancing

remained on the edges of the dance floor with his back to the wall, facing always to the people or dancers and the inside or center of the room. He never rotated or turned while dancing, and never ventured into the middle of the dance floor. If anybody had any ideas of taking a shot at him, he was at least going to face them and not be shot in the back. Also, his dance partner was in front of him.

I was still living in the Parral district when Pancho Villa was killed, while riding in an automobile on the Parral city streets.

I suppose the name of Pancho Villa, bandit, revolutionary, a Robin Hood to many people, a killer and enemy to many others, who almost became President of México and who has unintentionally caused his name to be deeply inscribed in México's history, will be a long time remembered, and probably never forgotten.

In 1959 I revisited Parral, the first time in about 35 years. Parral had changed a lot, as most growing cities do, but the little town of Minas Nuevas, close to the abandoned Veta Grande mine, where I had worked was really a ghost town. Around 1920-1930 the town probably had a population of around 4000, and now it had less than a dozen people in it. I have heard of and have seen many abandoned mines and mining communities, but to see a ghost town which had been a thriving community, and where you had been a part of it, does give you a rather peculiar feeling.

There was one time when I was doing considerable traveling on mine examination work. There was one place where I was sent to examine a

mine that was quite a long distance up in the hills above the Sonora River in the state of Sonora, México. There were a few old adobe houses in the neighborhood, and very few people. Of course, the mine had been shut down for many years, and anything and everything we did had to start from scratch and be done the hard way, such as getting around the mine on ropes or climbing on old primitive notched pole ladders. Most of the examination, which lasted several days, consisted of sampling, with a little surveying and geologic study.

I arranged to stay (sleep and eat) at one of the homes of the men I had hired to help me. The man's wife was very, very pregnant and also very sick.

While doing the sampling (cutting samples in the mine), a piece of steel broke off of one of the cutting moils and imbedded itself in the eye of one of the men. It must have been extremely painful, and after several people had tried to extract it and failed, the man was brought to me. It would have been a very long horseback ride or hike to get to the nearest doctor, who was probably 25 or 30 miles distant, and so being the Jefe, and the man to whom all eyes were turned, it was up to me to do something, and I did. I do not know what gave me the idea; I suppose necessity breeds invention. However, I went to one of the horses and yanked a hair from the tail. I made a loop in the hair and dragged it over the eye so that it caught on the piece of steel, and a nice easy pull brought the piece of steel out. I was very fortunate, and so was the injured man. I suppose that our steel sharpening ability

was not of the best, because another piece of steel chipped off a nail and lodged in a vein on a man's arm, who bled like a stuck pig. I fixed him up, and by that time I had acquired the title of doctor. The man whose wife was pregnant and sick with other ailments came to me and asked could I do something for her.

I always carried with me a thermometer, a good supply of aspirin, and quinine. Aspirin as a rule is good for most any sickness, and I carried quinine because I was subject to malaria fever, and quinine was good for me.

In my best professional bedside manner, I took the woman's temperature and pulse, diagnosed the case as "flu," and prescribed both aspirin and quinine for her. I thought everything was under control. Her temperature and pulse were better, and she was resting easier and more comfortable. However, her husband approached me one day and said, "Señor, I am worried. Would you please look at my wife again? There is something wrong, because the baby, which had been doing a lot of moving and kicking, is now very quiet." That called for another diagnosis, and I remembered that I had read that quinine should not be given to pregnant women. I therefore eliminated the quinine from the prescribed course of medicine, but continued with the aspirin. Sure enough, the next day the baby was again moving and kicking, the patient was almost back to normal (as regarded the "flu"), and everybody was smiling and happy, including me. I had scored again.

Well, to bring this short episode to a close, the mine sampling and

and examination was finished, and I notified the men the job was finished and I would be leaving the following day. Before turning in that night, the husband of the pregnant woman came and asked me if I could stay a few more days, as the baby was about to arrive and he wanted me to perform the delivery.

I once read a poem outlining the requisites of a mining engineer, that is, the difference between one with and without practical experience, or what is necessary to earn the applause and acknowledgements of his fellow engineers. One is to make a survey in a mine and then successfully direct and connect two headings, horizontal, vertical, and inclined. Another was to prepare an injured man with perhaps a broken leg for transport from the mine to the hospital, and probably set the broken bone. Another was to know ore when he sees it, sample it, mine, mill, and refine it at a commercial profit, and among many other things, to deliver a baby, at which time he could then really and truly say that he had passed the test and was now an accepted mining engineer.

I suppose if I had stayed I would most certainly have become a qualified mining engineer, able to fill all the requisites of the profession, but I did not stay long enough to graduate. I suggested that he get one of the neighbors with children to be the midwife, or partera, as they are called in México, and I left on schedule.

I also worked at another mine close to the Sonora River and a town called Huepec, about 100 miles east of Hermosillo, México. There was



another mine close by and supposedly containing tungsten. I had nothing to do with this mine, as it was on another property and controlled by a different company than the one for which I worked. A small amount of work was being done at the mine. A mill was being built and a water well was being drilled. One day on my way to work, I passed by the mill, the water well, and a group of workers. I stopped to talk to the man in charge. It was Welsh McGuire, whom many "old timers" will remember. I said, "Welsh, what are you doing?" His reply has been in my memories for many years. He said, "Hell's fire, Fred, I am laying a six inch pipeline from a well that has no water to a mill and mine that have no ore."

From about 1935-1940 I worked with the Peñoles Company as mine superintendent at the Achotla Unit in the state of Guerrero, México. The best and most positive method of travel was to go by rail from México City about 150 miles to the town of Balsas at the end of the railroad, where previously arranged and awaiting us would be a flat bottom boat about 7 X 14 feet with four or five boatmen, ready to transport us down the Balsas River about 75-100 miles to the neighborhood of the mine. These river boats carried supplies down the river and brought the milled ore concentrate up the river for rail shipment to a smelter. In dry season the trip down the river would take 15 to 20 hours, and in the rainy season when the river was high and the water current faster, it would take from 7 to 10 hours. On the return trip the boatmen would walk along the banks of the river pulling the boat

with long ropes. The return trip usually took four to eight days, also depending on the season, wet or dry, and the flow of the river, fast or slow.

People who have driven by car from México City to Acapulco will probably remember passing through or around the town of Iguala. Well, Balsas, the end of the rail line and the start of the river trip, is about 50 miles south of Iguala.

The river trip, exciting and adventurous during the heavy rainy season, when the river was high with rapids and whirlpools plenteous, was rather tiring during the dry season, when the river was low and the travel very slow. However, if the trip could be made at night, under a full moon, I do not think a more beautiful, tranquil, and peaceful journey could be taken anywhere.

The trip ended at a small village called Santo Tomás, where the boats would be landed at a small sandy stretch of beach, from which place there was a short auto trip to the mill camp, then about a three hour horse-back ride up the mountain to the mine.

Most of the people in that part of Guerrero, in fact practically all of them, have what is called "Pinto." It is a disease which causes a change in the color of the skin, and in most cases a depigmentation of the skin. It leaves a sort of mottled or patched-like appearance. Some people have dark purple patches, some have pink patches, some have white patches, and many have patches of several colors. The natural color of the skin is a light to dark brown, so in a large

group of people, perhaps you can imagine the color schemes. At first they look rather scary and terrible. You hesitate to touch them, to shake hands with them, but you soon learn that the condition is neither infectious nor contagious, and then you get accustomed to seeing them, being with them, and eventually think nothing of it.

These people were very backward, rough, wild, sometimes very mean, and thought nothing of murder. That was a way of life, and almost everybody went armed, either with guns or machetes. Hold-ups, robbery, and murder were almost a Saturday night or weekend assured fact or happening.

There were many robberies and hold-ups in connection with the killings. There was one time when I received word through my confidential grape-vine that the company store and pay office were to be robbed, and perhaps I would be taken along for ransom. Vegetation such as bushes, small trees, and other things grow very fast and also very thick in that part of the country, which is in the tropics. As a means of preparation and so as not to be taken by surprise, I arranged for a large area around my house to be completely cleared of all kinds of brush and vegetation, so I would be able to see who and what was coming up the trail to the house. Several company officials from El Paso and New York paid us a visit while this clearing was taking place. Fortunately nothing happened while they were at our camp, but a few days after they left, there was an unsuccessful robbery attempt made. However, we had been warned and we were prepared, so nothing of serious

consequence happened.

I want to bring my wife into this narrative of reminiscences. During most of our married life she has traveled with me. Whatever the mode of travel, automobile, train, cargo carrying airplanes, boats, horses, mules, or burros, the hardships, the joys, the sacrifices, and even glamor has always been considered as part of the "expected" in the life of a mining engineer, and we shared them together.

I think she had an experience worthy of comment. It was while working with the Peñoles Company in the state of Guerrero, México, in fact on the job I have just been discussing, that after thirteen years of marriage we found we were going to be blessed with a baby. The company doctor took very good care of her, but told her that she should go to a place where there was a larger hospital, and better equipped for delivery of children, than our small camp hospital. She wanted to stay as long as she could and promised that she would leave whenever he gave the word. Her time was almost due when the word was given. The doctor had decided that she must be carried down the mountain on a stretcher. A group of eight men was organized to work in two groups of four each, and to relieve each other at suitable wide places on the trail where she could be easily and comfortably lowered from their shoulders to the ground to rest a while before being raised to the shoulders of the other group to continue the journey. While on the stretcher, on the shoulders of the men, and what must have been a very hard and wearisome trip -- during the dry

season in the tropics, you very seldom see clouds, just a solid blue sky, so the only view she had was the vast expanse of the blue canopy of Heaven, with an occasional buzzard flying around looking for a meal. The journey down the mountain took about three and one-half hours. After an overnight rest she was transported by special plane to México City and after another overnight rest she went by train to San Antonio and Dallas, Texas to await the birth of our child. A few months later she and the baby were back at the mining camp with its hardships and joys already referred to.

N: Are there any other personal experiences that you'd like to tell us about?

B: Yes, I worked at a few places in the United States in between my many trips to México. During the latter part of the 1920's and the early part of the 1930's, I worked with the McAlester Fuel Company of McAlester, Oklahoma, in their Oklahoma and Arkansas coal mines; and in the East Texas lignite fields at Rockdale, Texas; and at Malakoff, near Athens, Texas. The lignite field at Malakoff was thoroughly surveyed and drilled. The lignite tonnage was calculated. The lignite seam was well surveyed as regarded top and bottom of seam elevations. Underground or shaft mines were laid out, as well as a large open-pit stripping operation. As a result of this project, the Texas Power and Light Company of Dallas, Texas, built a large power plant at Trinidad, Texas, using the lignite in pulverized form as the fuel.

I was in charge of the drilling operations during the project: hole

location and logging, as well as the topographical layout of the surface, the lignite seam, the underground mine layout, and the location of the railroad entrance to the open pit. I was later named resident engineer, cashier, and assistant manager of the operating company.

During the early part of 1943, I accepted work with the Fresnillo Company as mine superintendent of their mines located at Fresnillo, Zacatecas, Mexico. The company had other mines located at Sombrerete in Zacatecas; at Naica in Chihuahua; and at Zimapan in the state of Hidalgo. The minerals produced from these mines were gold, silver, lead, zinc, and copper.

I remained with this company until 1962, when I retired from active work and settled in El Paso. During my service with this company, I was promoted from mine superintendent, to general superintendent of the Fresnillo unit, later to assistant manager of the company, and when I retired, I held the post of general manager.

During my last 20 years in México from about 1942 to 1962, labor relations had changed considerably, compared with those experienced in the 1920-1940 period, especially the early part. Following the revolutionary period, schools, which had become non-existent outside of large cities, began to mushroom all over the country. People again were being properly educated, learning to read and write, and live peaceably with their fellow man. They had learned to read their labor laws and understand them, as well as how to properly negotiate with

company representatives. Education has progressed tremendously, wage scales and living standards have been raised to much higher and more satisfactory standards than previously existed, and the importation of foreign technical help such as engineers, technicians, managers, etc., is no longer necessary. México most certainly has taken her place with other nations, politically, educationally, and industrially.

Concerning labor relations, I have a point I would like to mention at this time. It was while working in the East Texas lignite mines that I learned a lot about labor relations. The manager, a man named Mr. W. D. Puterbaugh, made a lasting impression on me in his handling of labor, and instilled in me the concept or belief that labor, no matter how important or unimportant the case may be, had a right to be heard, and have an audience with management if necessary. Whatever the grievance, small, imagined, large, real, or unreal, to him, the worker, it was important and very real. In my dealings with labor-management relations, I have always tried to carry out that belief, and it has paid off in good relations between the working man and me, and between the labor union and the company. It will also pay off in good relations for everybody. It does not mean that labor must always win its point or grievance, but labor should be heard, otherwise friction and trouble begin to take root.

N: Mr. Bailey, could you tell us about some of the activities you've been involved in since your retirement?

B: After retiring from active money earning work in 1962, my wife and I

decided that we did not want to live a rocking chair retirement or existence, so we have both become very active in church and community affairs.

We were already members of The Church of St. Clement (Episcopal) at El Paso, Texas, so now we became active workers in the church, helping wherever and whenever we were needed. My wife was active in the women's organizations, and I helped as usher and campaign pledge worker. I am at present a member of the Vestry, which is an elective body administering the business affairs of the church.

We also joined the El Paso County Historical Society, in which I have become a very interested and active member. The purpose of this society, in addition to historical research, the gathering and preservation of documents and other historical objects of interest, etc., is to develop public consciousness of the rich heritage of our historical background. I have served as director, vice-president, and president of this society, and I am now serving as curator.

I was also a member of the Lloyd A. Nelson Memorial Professorship Committee to establish a chair in Geology at the University of Texas at El Paso in honor of Doctor Lloyd A. Nelson. This committee had its first meeting March 20, 1965 and was chaired by William Orme-Johnson. There were present at the first meeting five members of the faculty, including the president of the college, Dr. Joseph M. Ray, and eight graduates from the school; one from the class of 1920, one from the class of 1929, two from the class of 1933, two from the class of 1935,



one from the class of 1940, and one from the class of 1950. One of the five members of the faculty present was also a member of the 1926 graduating class. Later, other graduates who did not appear in the picture taken at the first meeting also participated on the committee.

The objective of this committee was to raise \$100,000 to be placed in an endowment fund to establish a Memorial Professorship in Geology, to honor Dr. Lloyd A. Nelson. The interest from this endowment will be at the disposal of the person appointed as the Nelson Professor of Geology to be used as a supplement to the salary, or for other purposes as he may decide. The fund raising for this endowment reached a successful termination about the end of 1970.

During Dr. Nelson's college days, as well as a large part of his teaching career, he was lovingly and admiringly known as "Speedy." He was a person one could easily call a friend, and his friendship was spontaneously and helpfully given. We became friends very quickly, and remained very close friends over the years. While in school and during holidays, he would invite me to go with him to visit his foster-parents in Santa Rita, New Mexico. I worked with him during two school vacation periods, helping as an assayer and a land or claim surveyor. I learned much from him and was very fond of him, and while I never took any in-school classes under his teaching, I understand that he was very well liked by his students, who greatly admired him, both as a professor and as a friend. I think the Memorial Professorship in Geology honoring Dr. Lloyd A. Nelson was a very worthy project, and in honoring him, this memorial also honors the University of Texas at El Paso.

## APPENDIX

The members of the Lloyd A. Nelson Memorial Professorship attending the first meeting were:

Dr. Joseph M. Ray  
Dr. Howard E. Quinn  
Dr. William N. McAnulty  
Dr. William S. Strain  
Professor Eugene M. Thomas '26'  
Fred W. Bailey '20'  
Hugh McGaw '29'  
William Ben Boykin '33'  
Jerry M. Faust '33'  
William H. Orme-Johnson '35'  
R. H. Whitlock, Jr. '40'  
Woodrow W. Leonard '50'  
Robert M. Condon '50'