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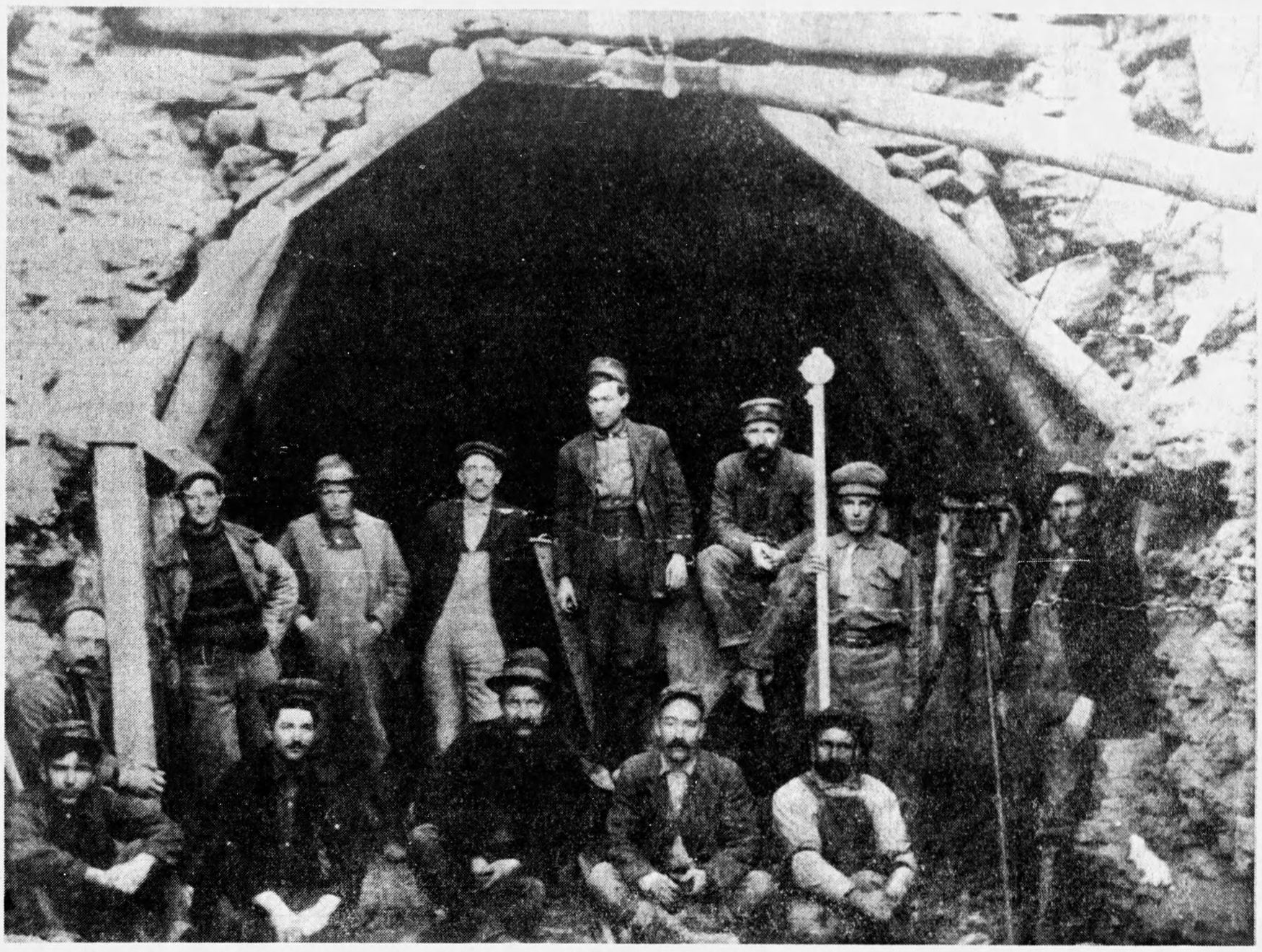

W. R. Bandy, far right, with Wyoming's Wiley Project work crew

Ghosts Took Over the Tunnel

Editor's Note: For 50 years W. R. Bandy was an engineer and surveyor in Montana and Wyoming, working most of the time as a Department of Interior employe. He began his career in 1905 at Garland, Wyo. Before retirement in 1955 he was engineering staff officer for the Bureau of Land Management office in Billings. He is now a practicing consultant engineer in Helena and is a life member of American Society of Civil Engineers.

By W. R. Bandy

Special for The Gazette

HELENA — The West has lots of ghost towns, many well known. But—how about ghost tunnels? Some old abandoned irrigation tunnels such as the Wiley project in Wyoming's Big Horn Basin.

These could well be favorite haunts of a whole flock of ghosts. . . . The dynamiters, the muckers, the loaders, even the horses that worked along the sage-covered slope of Carter Mountain's foothills.

Once those diggings were the scene of beehive activity. Now, just a few who roamed the Basin at the turn of the century still have vivid recollections of seeing groups of overall-clad workmen, armed with picks and shovels, up there darting like ants in and out of those holes in the hillside.

Back of that activity was a scheme devised by S. L. Wiley, public spirited resident of the Basin, to irrigate and develop large tracts of desert lands in the Dry Creek valley.

The general plan was to bring water from the South Fork of the Shoshone River by means of a 60-foot canal for a distance of more than 30 miles to the Oregon Basin. There it would be spread upon the land. Along this long canal were to be four tunnels cutting through high boulder-strewn spurs and ridges. Work on that canal and the four tunnels was just getting underway when I arrived on the scene in the fall of 1907.

Now, on my occasional visits to Cody, Wyo., the old familiar scars on the foothills to the south remind me of days long ago when as a young surveyor I had the good fortune of playing a small part in the construction of those tunnels.

First Tunnel Job

This was my first job on tunnel work. I was on my own, with major responsibilities.

I stumbled onto this job through George W. Zorn, then chief engineer for the Wiley outfit. The company was officially known as the Big Horn Basin Development Company, with headquarters at the Wiley Ranch on Sage Creek south of Cody. My duties included doing survey work on the tunnels during construction. My headquarters were at the main camp at the east end of No. 2 Tunnel. To reach the camp from Cody I caught a ride on the freight wagon. The road was long and dusty. It led southwest across Irma Flat and wound up over the hills at camp. The trip of about 15 miles took most of the afternoon. The camp was approached by going down a steep grade on the east side of a ridge to the head of a gulch. I still remember the grade because we often had to push Wiley's automobile up the grade a few chugs at a time to get him started off for Cody.

My first view of camp, which was to be my home for two years, was from that ridge. It was a thrilling sight to see new buildings spread out on the sagebrush slopes below. The fact that they were constructed of rough, undressed lumber covered with tar paper failed to dampen my enthusiasm. They were such an improvement over the flapping, dusty tents that had been my shelter the past summers in the desert. The camp structures were grouped around the two main buildings, the combined cookshack and dining room and the office and commissary. The stables and powerhouse were situated down the coulee.

I was gratified to learn I would have a 12 x 16-foot shack all to myself for an office and living quarters. In it were a homemade table, two stools, a flat topped coal stove, with bench and waterbucket close by. After putting up my cot and rolling out my bedroll I had all the com-

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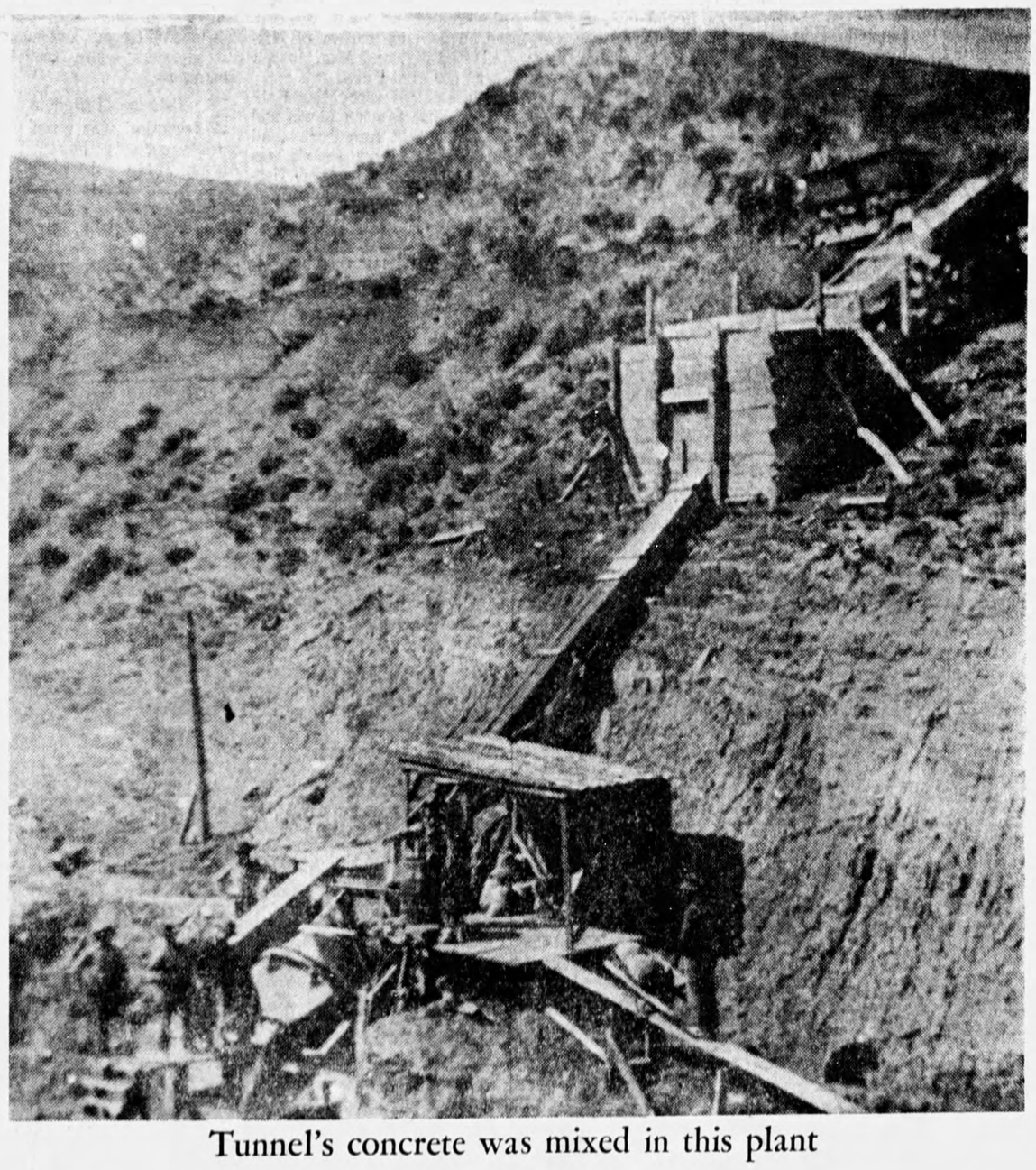
Bandy's office, second from left



Tunnel's concrete was mixed in this plant

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Ghosts Took Over the Tunnel

FROM PAGE 1

forts of home, luxurous in comparison with the dirt floored tent and sagebrush stove I had been sharing with two other boys on the survey. Electric lights replacing the tallow candles were added blessings.

A. L. Phillips, the superintendent, was a dynamic person with forceful personality. He understood all phases of the work and ran a very efficient camp. William B. Edwards, a likeable young fellow from Chicago was chief clerk, and was in charge of the commissary. Billy, as he was affectionately called, has remained a close friend of mine over the years.

Around the Clock

The tunnel excavation was carried on 24 hours a day at each of six headings. We worked three eight-hour shifts. At height of activities an average of 250 men were employed at the various camps. In addition to the tunnel camps, other camps were maintained at a coal mine on Sage Creek; a sawmill on Carter Mountain; near a ditch crew on Sage Creek and a steam shovel on South Fork.

During winter months the camps buzzed with activity. Carpenters busy with ax and saw lined the tunnel excavation with timbers to hold back slacking shale and rock.

Clank-clank of blacksmiths could be heard as they sharpened drillers' steel. A steady stream of muck, shale and rock poured from the tunnel mouths in horse-drawn dump cars. Arriving daily were freight teams drawing wagons laden with supplies from Cody, lumber from the saw mill, coal from the company's mines on Sage Creek.

Electric wire was continuously extended as tunnel headings advanced with 200 sweating miners working around the clock blasting their way through the mountains. In addition to the crews, each camp had its quota of cooks, flunkeys, stable boss, camp-tender, time-keeper, and "crumb boss" who looked after the muckers' bunk houses.

Compressed-air drills and dynamite were used in the tunnel excavation. Mucking and loading the dump cars was done by hand. The tunnels were horse-shoe shaped in cross section. The finished inside diameter was 12 by 13 feet, making it necessary to excavat a hole about 16 x 17 feet. The grade was a drop of three inches per 100 feet. Two of the tunnels were approximatle one-half mile in length, while the other two were a little over 400 feet long. The two long tunnels had curves at each end so one could not see out after the first 400 or 500 feet under the ground.

By mid-winter three of the tunnel crews were working beyond the sharp curves, thus placing the entire dependence of alignment upon proper calculations by trigonometric formulas.

This being my first first experience with underground work caused me some sleepless nights, with much turning and tossing in bed as I reviewed my procedures. I was well aware that a misplaced decimal point might prove disasterous, not only to my reputation, but also to my employer.

To make matters worse for me when the two opposite headings began to approach each other within 200 feet or so, the sound of blasting on the opposite side seemed to come from the side of the tunnel instead of directly ahead, there was some good natured ribbing from the crews and the suggestion that the other crew might be bypassing us. I put up a brave front. But when the break-through did occur I revealed my true feelings or lack of complete faith, by being the first one to look through the hole, although it meant staying up all night on the graveyard shift.

Before the break-through occured at No. 2 tunnel, preparations were begun for lining the tunnel with concrete. Suitable concrete aggregates were found in deposites of gravel on top of the bench above the west end of the tunnel. A mixing plant was built where the material could be screened and placed in bins on the edge of the bench. Then it could be moved by gravity as needed down chutes to the mixer at the month of the tunnel below. Concrete forms were made by bending dump-car rails to the desired shape. Placing the freshly mixed concrete behind the forms in the top segment of the tunnel roof was accomplished by hand shoveling, a rather crude arrangment in comparison with modern methods.

The Break-Through

The break-through on No. 2 tunnel finally came the morning of April 12, 1908. For a month the drilling crews had been hearing the shooting on the opposite side. They knew they were getting closer and closer together. But the tension did not get high until I told them on April 11 that the crews were only 12 feet apart. From then on they raced to see who could be the first to break through. The night of the 11th I stayed up with the crew on the east side, thinking they would break through when they dynamited an hour before midnight.

However, they failed to break through. So I decided to stay on with the graveyard shift until they shot at 7 a.m.

Mike Flannery, a big irishman was boss on the graveyard shift. About 25 to 30 holes were drilled in the heading and bench of the face of the tunnel during each shift. Those were loaded with heavy charges of dynamite. It was set off by an exploding cap placed on the end of the old fashioned fuse and stuck into the charge of dynamite. The fuses were lit by hand. They were cut long enough to allow time to light all of the 25 or 30 and run to safety before the first explosion.

I helped Mike ignite 28 fuses for the shot at 7 a.m. Hand lighting so many fuses takes considerable time, even with two working at it. The first ones continue to spew sparks, and smoke around one's feet while he is lighting the remainder.

It was hard work for me to keep my mind on my business with a dozen or more fuses spewing around my feet. I was ready to run for it when Mike said "That's all" and started to yell, "Fire! Fire!"

Running down the tunnel out of range of flying rocks we crouched behind some posts and counted the shots as they exploded. Finally Mike said that was all. We rushed back into the smoke and gas to see if we had broken through.

We had missed count!

Just as we approached the heading another charge exploded in front of us. Fortunately, it was a lifter down deep in the muck and did not throw rocks on us.

Waiting a few moments, we climbed over the loose rock. We could hear voices ahead. We knew the break-through had occured. By that time we were choking on smoke and gas. We stuck our noses down into fresh air pouring through a small opening in the face of the tunnel.

A few questions put to the opposite crew assured me that we had struck headon. My worries were over.

Throughout the winter and spring of 1907-08 all phases of the work progressed satisfactorily.

Accidents were few and minor, with the exception of one fatality among the ditch crew working Sage Creek. When they were cutting through a 20-foot ledge of sandstone, using hand steel and black powder an accident occured. While loading a 20-foot drill hole by pouring powder into it the powder clogged in the hole part way down.

A workman picked up a steel drill instead of a wooden stick to clear the hole. A spark touched off the powder sending a piece of sandstone weighing several tons rolling over the man.

Fight in Camp

Occasionally, personal altercations between workmen enlivened the camp. One morning the fat Chinese cook and the big white flunky got into a fight over who should fill the hot water tank on the back of the range. One using a cleaver and the other a heavy iron dipper, they made quite a mess.

The fight broke up when the Chinaman bit a chunk out of the flunkey's leg. The Chinaman came running toward the office with his bloody apron wrapped around his head and neck. At first glance it looked like his head had been cut off. To top it off, our pet coyote, sensing something wrong, set up an awful howl.

Another time a chainman flipped a steel tape against the wet trowser leg of the electrician while the electrician was standing on a wooden box as insulation while holding two hot wires. Fortunately, the electrician's wild leap when the shock hit him broke the contact, without serious results.

Cody was booming during the winter of 1907-8 and the spring as a result of the many men employed on different public works projects in the area.

In addition to the Wiley Project were the Shoshone Dam above Cody, the Corbett Tunnel and the Shoshone Project irrigation canals. Among Cody's principal stores were the Cody trading Company, managed by Sen. Jake Schwoob, and Dave Jones' store, the "Outfitter for Men and Boys."

Seven saloons on Main Street supplied refreshments while Etta Feeley's night club provided entertainment.

Things were flying high during the summer of 1908 until hard times struck. Money for public works became tight. The management of Wiley Project decided to try to raise more money to continue the work by advertising a big land opening to prospective farmers.

Special trains brought hundreds to view the lands. To carry the visitors over the area and to make a showing of prosperity, the company imported six big red touring cars from Chicago. They were about the first cars of that size to hit the Basin.

The young drivers of the cars, also imported from Chicago, had a lot of fun before the crowds arrived by racing the cars over dusty roads, scaring teams and killing farmers' chickens that wandered into their paths.

The prospective settlers from the east looked over the sagebrush and saltsage flats, dry as a bone and with promised water ditches far from complete. They shook their heads and returned home with their money in their pockets. The big land sale was a complete flop.

Shortly after that all work on the irrigation project stopped. Creditors swarmed in and, by means of mechanic liens, salvaged what they could from the equipment.

Workmen Leave

The workmen scattered to seek their fortunes elsewhere. Being footloose and free, I departed for my old home in Missouri for an extended vacation and to look over the new crop of girls.

It was more than 50 years later and I again visited the old abandoned construction sites. That was in 1959 with one of those Missouri girls as my wife.

Picking up Billy Edwards and his wife, Alice, at their Emblem, Wyo. home, we drove up to the old Wiley Project, tramped around the old campsites and tunnel mouths.

With mixed emotions we viewed the old caved in tunnels we had at one time been so proud of. Thoughts of bygone days haunted us as we viewed familiar landscape.

What changes had taken place.

The most impressive factor to indicate the lapse of time were six-inch pine trees growing in the bottom of the old canal! Nature had done its best to heal the scars by grassing over most of the slopes. But the ragged banks of the tunnel portals could not be healed so easily. Broken and rotten timbers hung from tunnel tops, piles of slacked shale all but blocked the tunnels once so spick and span.

Bats and wild animals now shared the dark caverns with the tunnel ghosts. From the ridge above the camp, familiar land marks were pointed out to our wives. South, on the north face of Carter Mountain, I could spot where I had felled my first buck as he bounded across open slide-rock. Northeasterly were the reddish, pink badlands of McCulloch Peaks bringing memories of thirst, sweat and toil as I surveyed that waste land. Northward was the dark grove of timber on the tip of Hart Mountain, pinpointing the spot where in 1911 I established an iron post section corner for the U.S. General Land Office.

Leaving the tunnels and their ghostly inhabitants to their accustomed peace we drove to Cody where the hustle and bustle was a welcome change.

Gone from the streets, however, were the 10-horse freight outfits with their jerk-line driver, heading for such faraway places as Meeteetse, Thermopolis, or perhaps the Kirwin mines up on the shoulder of Frank's Peak. Gone were Tex Holm's four-horse Yellowstone Park stages. Missing also was the prancing buggy team sometimes seen in front of the Irma Hotel impatiently waiting to take Col. W. F. (Buffalo Bill) Cody to his plush T E Ranch at the close of a show season.

At end of our visit, Bill and I both agreed our experiences on the Wiley Project had been a valuable part of our education, and added to our stock of tall stories to tell our children and grandchildren.

TALENTED

HOLLYWOOD (UPI) — Buddy Ebsen, co-star of "The Beverly Hillbillies" on television, has had 18 songs published.

KID CAST

HOLLYWOOD (UPI) — Five year old Kym Karath has been cast as Jack Lemmon's daughter in "Good Neighbor Sam."

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