

EAST ANACONDA YARD. Locomotive and coach head for meal stop after having cut off train from Butte. Three-unit electric is used only on Mondays

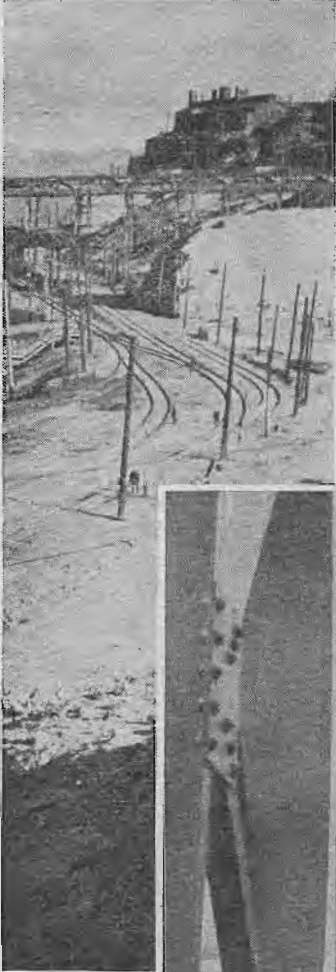
By **DONALD SIMS**
Photos by Author

IT LOOKS perfectly simple to you, standing there in the Milwaukee Road station at Butte, Montana. Underneath the schedule of the Milwaukee's *Olympian Hiawatha* and *Columbian* the white initials BA&P stand out against the black of the bulletin board with train number listed for departure at 9:53 A.M. standard time.

Somewhere in the back of your mind you have an idea that the Butte, Ana-

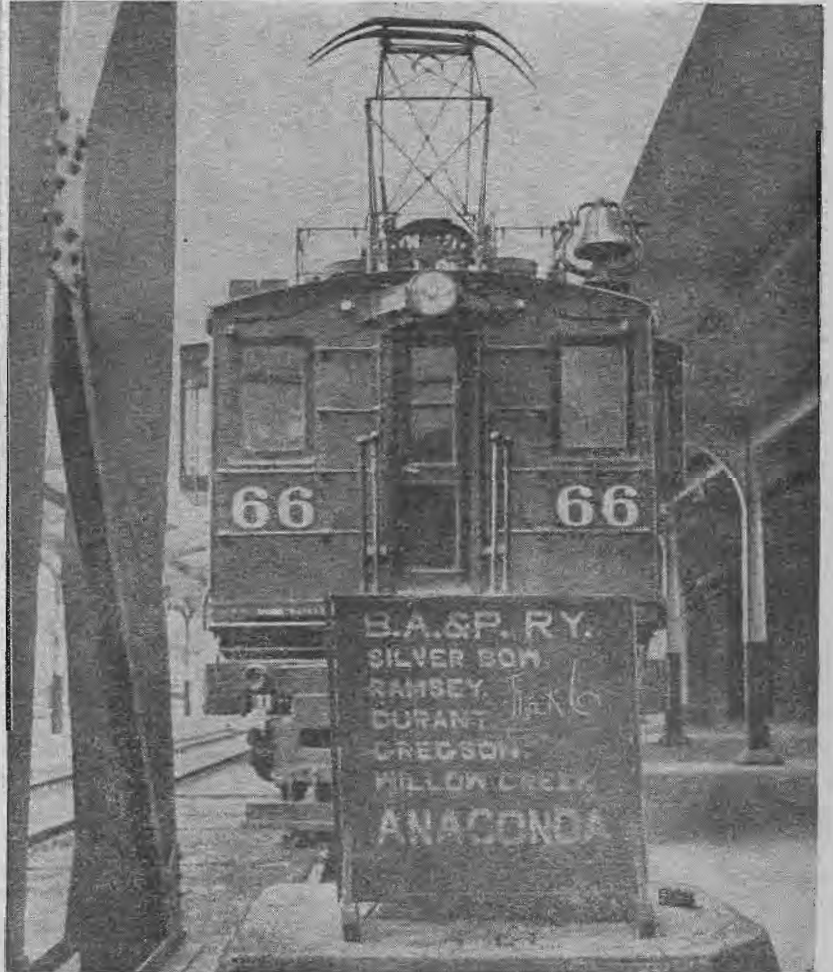
conda & Pacific still runs an interurban along with its ore-hauling freight business and this is as good a time as any to find out about it. So you walk over to the ticket agent's window, with the intention of inquiring if the BA&P passenger is an interurban.

LISTED as a passenger train, BA&P's 66 discovered, somewhat to its surprise, one satisfied customer—the author



COPPER HAULER

*Nothing About CA&P's Passenger
Resembles a Streak of Varnish,
Except Its Franchise*



An incredulous look comes over the agent's face. "You don't want that thing. Better take the bus—it's much faster. Besides, that train to Anaconda is really a freight."

Who can resist a challenge like that? So it isn't an interurban—it's still listed as a passenger. You reach down into your pocket and come up with a couple of silver dollars which will more than buy a round trip from Butte to Anaconda. By this time the agent is curious, so you explain that riding a train is the best way to see any railroad, and if the trip is slow, so much the better for sightseeing. When at last he slides the ticket across the counter he has been converted, and agrees that maybe you aren't too peculiar after all.

"Just a moment," he calls as you turn to leave. "The train doesn't leave Anaconda until ten in the morning so it will be around noon before it leaves here instead of 9:53." By way of explanation he informs you that the BA&P has been doing this for some time but hasn't gotten around to changing the timetable officially.

Pocketing the piece of paper which stamps you as a paying passenger, you head for the hotel, convinced that tomorrow's trip should prove interesting, if not a record-breaker.

Winter comes early and stays late in the Northwest and there's plenty of snow on the station platform in the morning. A large sign identifies the BA&P track in the depot. Otherwise you couldn't distinguish between that road and the Milwaukee, for Butte is well into CMStP&P Rocky Mountain Division electrified territory. The heavy catenary overhead all looks the same, but you later find out there is a difference. On the Anaconda line 2300 volts is the standard, while Milwaukee Road electrics draw 3100 volts from the copper wire strung overhead.

While you're idly pacing the platform, waiting for Number 1, the westbound *Columbian* backs into the station. On the head end of the string of orange cars is the multi-wheeled electric motor E-10. All the Milwaukee trains back into Butte over a wye located to the west of the

depot. BA&P's passenger trains head in and then back out, according to the station-master.

Amidst the hustle of station activity connected with the *Columbian* the sound of an unfamiliar whistle attracts your attention. Looking down the platform you see a two-unit electric trailing a bright orange combination car. As the dark green electrics, bearing the numbers 65 and 66, pull to an easy stop, a rather unusual feature of the combination car presents itself. Besides the regulation passenger and baggage compartment, the car carries a small bay window on each side, typical of the latest style in cabooses.

You walk over to the rear of the combine, grab the handrail and swing aboard. Going through the platform door, you fumble around for the ticket, finally come up with it, and hand it to the conductor. You just about have time to get settled, when a slight jerk indicates that train Number 1 of the BA&P has started its run to Anaconda.

Backing slowly out of the station, Number 1 passes by the *Columbian's* motor, whose steam boiler is sending a white plume of steam into the cold winter air. A quick glance at your watch shows the hands pointing straight to twelve. Well, you were warned.

Just outside the station limits the train comes to a stop. Both the head end and rear end brakemen get off to line up a route into the West Butte Yard, lying parallel to and above the Milwaukee Road station. Having lined up a route and given the engineer a come-ahead signal, the brakemen climb back aboard as the two electric units move forward into the yard.

In the middle of the yard, the motors cut off and head to the east end. Just as soon as they clear, another electric heads down your track and couples on to the car. This one bears the number 48 on the side and might be described as one and one-half engines, for it has a four-wheeled truck with traction motors hooked to it. A big slug of metal to add weight completes this ingenious homemade switcher.

Taking you in tow, Number 48 eases



YOU MIGHT call Number 48 one and one half engines. Two units are too much to use in switching service, one would not be enough, so four-wheeled truck with traction motors add just enough power



REGULAR brakeman supervises the throwing of a switch by understudy at Milwaukee Road depot entrance



ELECTRIC SWITCHER passes Milwaukee Road station, heading for West Butte yard to pick up some interchange cars

the combine onto a string of hopper cars that are loaded to the rim with copper ore. Meanwhile the road engine has run around these cars and is cutting onto the head end—and you have one of the most novel types of passenger trains running anywhere, one that hauls a long string of copper-laden ore cars and a combination car.

WHILE THE air is being pumped up you alight and watch Number 48 go about its switching chores in the snow-covered yard, while a short distance away the *Columbian* silently glides out of the station, headed for Seattle and Tacoma. By the time you climb back aboard, the air pressure needle is pointing to the proper figure, and two short whistles indicate the head end has seen the conductors' highball.

With hardly a jolt the motors start twenty-three loads, four empties, and the combination car. But this is only a starter. At Rocker Yard, three miles west of Butte, 1 is scheduled to pick up more

cars to fill out the tonnage rating of the electrics. West Butte is the gathering point for loads coming from the mines right around the city, while loads coming from the hill mines above Butte are marshaled at Rocker.

The BA&P runs its so-called passenger trains only to hold a franchise. This isn't the first road ever to find itself doing so, and though this is usually a costly operation from the standpoint of efficiency, it never fails to add a bit of the unusual to the scene. On the BA&P there are twenty-eight electric motors like the ones on the head end, but the real surprise comes when you learn the road owns 1400 ore cars. This is a big operation in every sense of the word.

As the noise of wheels passing over rail joints quickens in tempo, Number 1 swings alongside the single iron of the Milwaukee's Rocky Mountain Division. The two roads' electric operations give the appearance of a single double-tracked railroad, but appearances are deceptive, for there is a big difference in the current

running in the respective wires. This difference makes it practical for The Milwaukee Road juice jacks to use BA&P steel in time of emergency, but prevents the latter road from using the former's because it would burn out the motors in a flash.

So close are the two roads at this point that it is necessary for them to place their block signals, governing movement in both directions, on the outside of the two mains. One of the unusual sights is that of block signals placed back to back on one side of the tracks.

Ignoring the TRAIN MEN ONLY sign you slide over and sit in the small bay window on the engineer's side. To the north the Montana School of mines perches on a hill. You may catch a glimpse of an electric ascending the hill behind the school, trailing a string of ore cars. This is the hill line, officially known in the timetable as the Rocker Line.

Coming into the yard at Rocker, the train slows down to a walk and, as Num-

ber 1 passes by the station at the east end of the yard, the operator throws the train orders aboard. This is accomplished by the time-honored manner of opening the baggage compartment door, and dates right back to the era of slow-speed rail-roading.

Trailing through the lead track, the combination car is cut off and comes to a quick stop as the air goes into emergency. The angle cock on the ore car ahead has been turned so the electric motors and the train continue on down the track to the bottom of the yard. The engine then backs the train onto another track where more loaded cars are waiting, while motor Number 40 takes your car and hooks it on the rear of the same string. This operation saves both time and motion.

"Probably be here at least twenty minutes while the inspectors go over the train," the conductor tells you, adding that there will be plenty of time to look around the yard.

The BA&P maintains its electrics, be-

CONDUCTOR catches up on paper work as train heads back to Butte. The interior of the coach is divided into a passenger, baggage and mail compartments. Lighting is by kerosene lamps





TWO-UNIT electric puts passenger car on the rear end of string of empties bound for Butte. Engine will couple coach on, then other end of the train

tween assignments, at the engine house behind the train order office. Because of the high volume of traffic, however, the motors don't spend much time in the sheds.

Walking back to the train you notice that the Milwaukee is still right alongside, although at this point it is elevated above the BA&P main. Then you notice another track a few hundred feet away across Silver Bow Creek. This is the main line of the Northern Pacific passenger line through Butte, and also carries Union Pacific trains into the mining city. Sometimes the trains of all four roads can be seen within a few feet of one another.

A little more than an hour and three miles out of Butte you finally get going with the full allotment of tonnage. Enough cars have been added at Rocker Yard to make this a seventy-six car train. If you want to get technical about it, that makes quite a long passenger train, for that's what the BA&P calls it. Whom they're fooling you don't know, but they satisfy the technical requirements of the franchise.

A profile map of the main line between Butte and Anaconda would resemble the letter U. It runs downhill about halfway from Butte to Anaconda, then uphill the rest of the way. The U is uneven, though, and is steeper on the leg nearest Butte, whose elevation of 5,331 feet is about four hundred feet above Anaconda. In following the canyon of Silver Bow Creek the roadbed dips way down, then has to climb back again to the smelter at Anaconda.

Tonnage ratings reflect the difference in the grades on each leg of the U. Westbound to Anaconda, two units can handle up to 5,600 tons, but eastbound the same two units can only handle 2,000 tons. For three motors hooked together the tonnage ratings are 8,400 and 3,000 tons. The difference in train lengths is not so apparent, however, for eastbound runs haul mostly empty ore cars back to Butte for refilling. Another arbitrary limit restricts any train to not more than eighty cars regardless of the tonnage.

PERHAPS that descending grade westbound out of Rocker Yard accounted for the smooth start out of the yard. It's pretty hard to be gentle with a passenger car located behind seventy-five freight cars, so when you saw the electrics start out on the curve at the lower end of the yard you braced for a shock—that never came. We went out as sweetly as a board of directors special.

You don't have to worry about the cold weather outside with a big coal stove going full blast at each end of the car. Relaxing, you watch the mountainous scenery glide by. The snow has all but disappeared from the ground at the approaches to Silver Bow, the next siding beyond Rocker. This is train-order territory, the only block signals on the main line being located between Butte and Rocker Yard.

One mile west of the Silver Bow station is an important interchange point for the BA&P—connections with the adjacent Milwaukee Road, the Northern Pacific, and the Union Pacific are made here. At this point UP rails take off from the Northern Pacific and head south to Pocatello, Idaho, over the Idaho Division.

There is an interlocking system protecting the BA&P and Milwaukee that allows the former road to cross over to the UP and NP. Blocking this crossing is a big red and white contraption that looks like a giant semaphore signal. This is known to the operating crews of both roads as the "Smash Board." If a crew forgets about the interlocking plant and attempts to cross the Milwaukee Road main without first swinging the board aside they run into it, causing protective signals on the Milwaukee. It's been done too, though how anybody could ignore a signal that size strung across the track amazes you.

Heading west past Dawson, the walls of the canyon the railroad has been following close in on the BA&P, and the other two roads. BA&P rails bear off to the right and climb over the main lines of the Milwaukee Road and the Northern Pacific. Crossing over these two roads puts



REAR BRAKEMAN walks along train, inspecting the air couplings and journal boxes. Locale is West Butte yard, where the Anaconda-bound train picks up initial tonnage, later filling out the train at Rocker

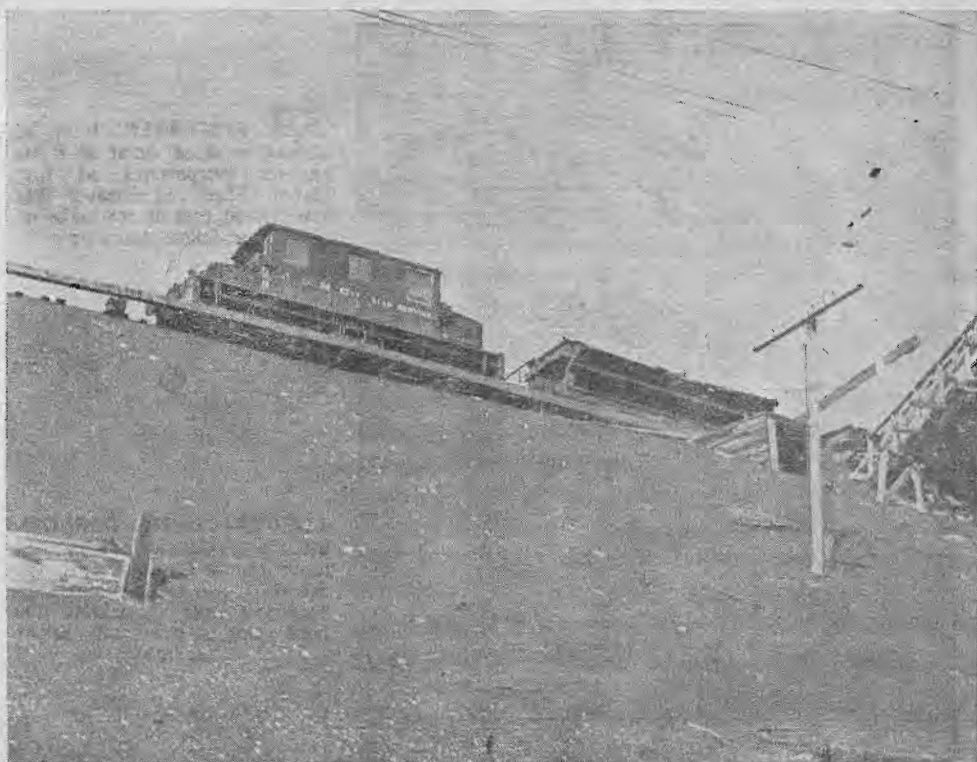
IT ISN'T all riding on the BA&P. Conductor Hernan writes car numbers down in his book before leaving West Butte yard. Every time train picks up additional cars this must be done. Chore requires walking the length of the train

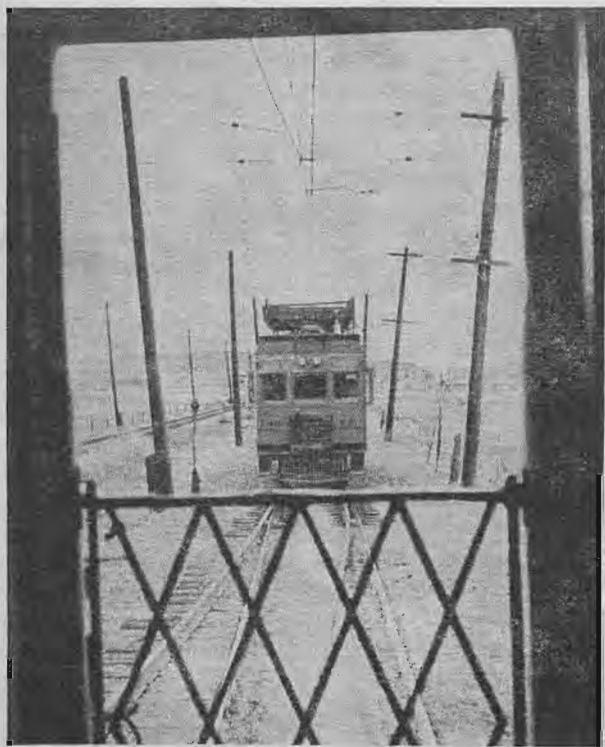


SNOW-COVERED hills are all but invisible against the sky a mile out of the East Anaconda yard. Turn-off to the left leads to slag piles, used to bolster parts of the mine in danger of collapse



THIRD RAIL electric of the smelter line rides the crest of slag from smelting operations over a period of years





BA&P PASSENGER train at Milwaukee Road depot at Butte appears overpowered at first glance. Then you discover that seventy-odd cars of ore make up your fellow travelers

ELECTRICIANS' DARLING. BA&P's gas-electric-powered M-10 tower car is modernized to the extent of two sealed beam auto headlights, and is painted the same color as the coach, bright orange

Number 1 on the other side of the narrowing canyon, climbing upwards towards Anaconda. Looking ahead you can barely make out Number 65 and 66 heeling to one of the now numerous curves up ahead. The canyon has narrowed to the point where there is barely enough room for the roadbeds of the three railroads.

At the east end of Durant lies "Duffy's Curve." The story is that, back in 1912, just before the BA&P was electrified, a large fire broke out in Butte. Anaconda was called upon to supply fire equipment and loaded same on a string of BA&P flats. The railroad gave the special the road, and the train was making a record run until it hit this curve. The engine tipped over, killing the engineer. His name? Why, Duffy, of course.

Up till now the brakeman has been pretty quiet, but the memory of Duffy helps to loosen his reserve. He explains that he helped pull the hogger's scalded body from the wrecked locomotive that fateful day forty-one years ago. Forty-five years with the Butte, Anaconda & Pacific have left him with a lot of memories.

Passing the Gregson siding the train is high enough on the hillside for you to look out over Deer Lodge Canyon, whose green floor stretches away to the right, carrying the rails of the Milwaukee Road and the Northern Pacific westward. You have come out of one canyon only to enter the widening mouth of another, and climb its south rim under an umbrella of low-flying clouds and through patches of sunlit earth. The canyon widens suddenly past Durant and continues to Deer Lodge where the Milwaukee has its shops for the electrics that ply the Rocky Mountain Division. The NP takes the low line out of the canyon mouth, while the *Olympian Hiwathas* have to take the high line on the north side of the canyon.

Coming out of the shadow of a sharp curve you see, ahead, a large smokestack rising high into the winter air. This stack locates the site of Washoe Smelter at Anaconda, the largest in the world. Even though the train is still ten miles from

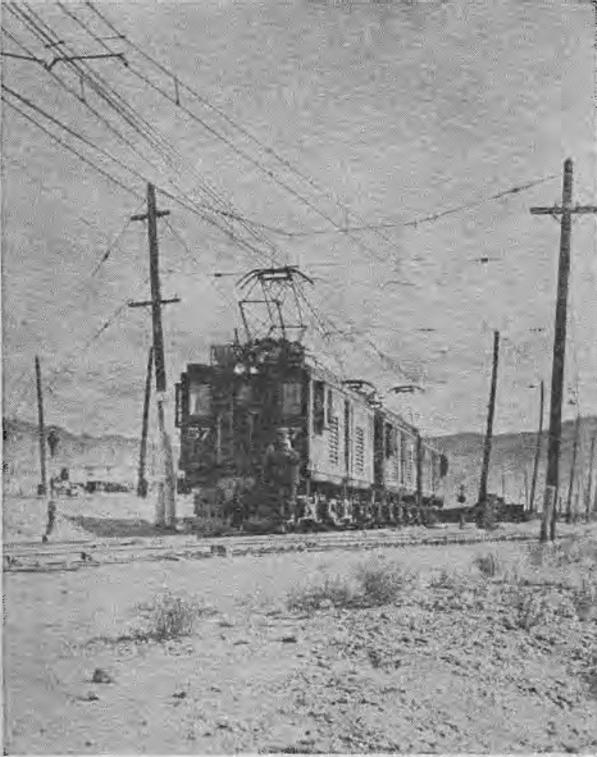
Anaconda the stack appears impressive, and well it might, for it rises vertically a distance of 585 feet, and is one of the man-made landmarks of western Montana.

The electric motors up ahead have slowed down to about eight miles per hour now, as they approach Staton, about five miles out of the East Anaconda Yard. On either side of the track green- and white-striped flanger signs dot the roadbed, locating the points at which the blade must be pulled up. With the slack stretched out on the hill the combine rides smoothly on its four-wheel trucks, although the brakeman tells you the bay window cabooses operated by the BA&P ride better than the combination car.

Must be a train going up the hill to the smelter from the yard, remarks Conductor Hernan by way of explanation for the slow progress. When there are too many trains on the line at the same time on this end of the railroad the juice is cut down, slowing all the trains accordingly.

About four miles out of East Anaconda block signals loom up again. Passing by one you look to the rear and see the block for the track behind go from red to yellow indication. You ask the brakeman if there is something following number one. He explains they used to have a cautious official on this road, and he decided there should be only two indications on the block signals, red and yellow. Smash boards, throwing train orders aboard, and now this. Admittedly standardized procedure means very little to the BA&P.

PPULLING INTO the yard at East Anaconda through mountainous piles of gray slag is an experience not soon forgotten. Everywhere you look there is evidence of the reason for the BA&P's existence. High above on a hill the dozens of buildings that make up Washoe Smelter are visible through a murky atmosphere of haze and smoke. Crossing over the roadbed are dozens of flumes carrying waste water to the sludge pools below the yard, while above the train on the right a third



FRANCHISE DETOUR. After dropping eastbound Number 2 in West Butte yard, electrics head back to pick up combination, run it to Milwaukee Road depot to satisfy franchise requirements. After momentary pause, business is resumed



CROSSING GUARD flags down automotive traffic to let two-unit motor by. Scene is at east end of West Butte yard



TWO UNITS start a string of loaded dumps for the twisting line that goes up the hill to the smelter from East Anaconda yard



BA&P "PASSENGER" heads across the rolling hills toward Rocker and Butte. With thirty-five cars, it is certainly one of the longest passengers in the country

rail electric bearing the legend, ACM Company Slag Service, is busily engaged hauling two carloads of red-hot slag to be dumped on the ever growing gray mounds.

As far as the railroad is concerned, East Anaconda is the hub of operations. From this point the loaded ore cars are taken to the smelter, where a giant unloader, capable of picking up an entire car and its contents operates. Empty cars coming back from the smelter are marshaled here until a string long enough to make a train-load is gathered. Then the BA&P high-balls them eastward to the mines, to be loaded again with tons of copper-bearing ore. All the regular freights end their runs at East Anaconda, but Number 1, to satisfy the franchise requirements must continue on to Anaconda itself, two miles beyond the yard.

Your car is cut off at the east end of the yard while the engines continue on into the yard with their load. While waiting for Number 65 and 66 to cut off and come back for the combination car two trains take off from the yard. One heads

for Rocker with a long string of empties bound for the mines. The yellow caboose of the first train hardly clears the yard when the second train passes by and heads off to the left on the line that runs up to the smelter. Sixteen loaded ore cars is the limit on this line, due to the heavy grade encountered. This highline twists and turns on a series of tortuous switch-backs before finally reaching the smelter.

Coupling on the combine after dropping the loaded ore cars, the motors head for the station at Anaconda. Time for putting on the feedbag the conductor says, and looking at your watch you see it is three o'clock. It's taken exactly three hours to come from Butte, twenty-six miles behind you. But you have been so busy talking and discovering new things to comment on that it seems more like thirty minutes.

During the half hour that the crew takes to eat, you decide to nose around the station. During this time a workman is going over the engine. While you watch he raises and lowers each pantograph, checks the bell on the units, then the brakes, and



MILWAUKEE ROAD'S Olympian Hiawatha stopping at the Milwaukee station in Butte

finally inspects the sand level in each motor. Although the BA&P does have some peculiarities of its own, it nevertheless is an efficient outfit. Reflecting back on the short journey just completed you can see that having a switcher ready to hook the combine on the train was a smart move. This plus the attitude of the road towards maintenance of their equipment shows that the BA&P is big time in every respect, except from the standpoint of mileage. Heavy catenary construction and 100 pound rail graces every foot of the main line between Butte and Anaconda.

An inspection of the builder's plates on the sides of the electrics reveals an amazing fact. These electrics that are thought of so highly by the railroad and crews alike were built over forty years ago. Number 65 bears the Westinghouse builders plate number 3832 and the date December, 1912. The 66 was built one month later with builders plate number 3833. Forty years from the date they were built these amazing electrics are still go-

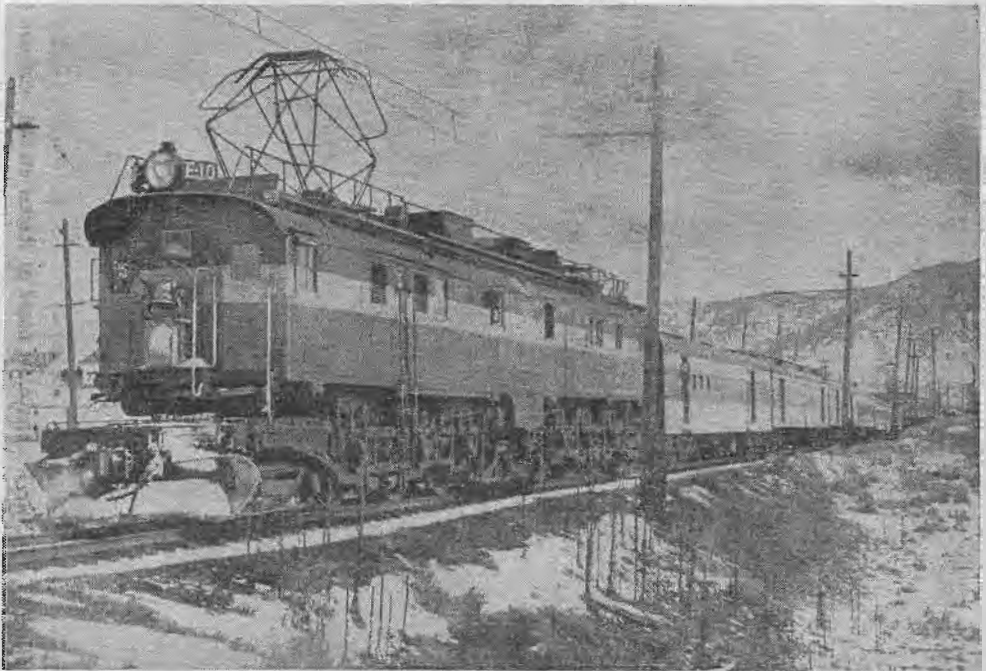
ing strong and operating every day in the week.

Heading back to East Anaconda after the meal stop, Number 66 is performing the lead chores. Slipping into the west end of the yard under a pall of smoke, the motors switch out the combine and place it on the rear end of fifty-five cars, most of which are empty hoppers.

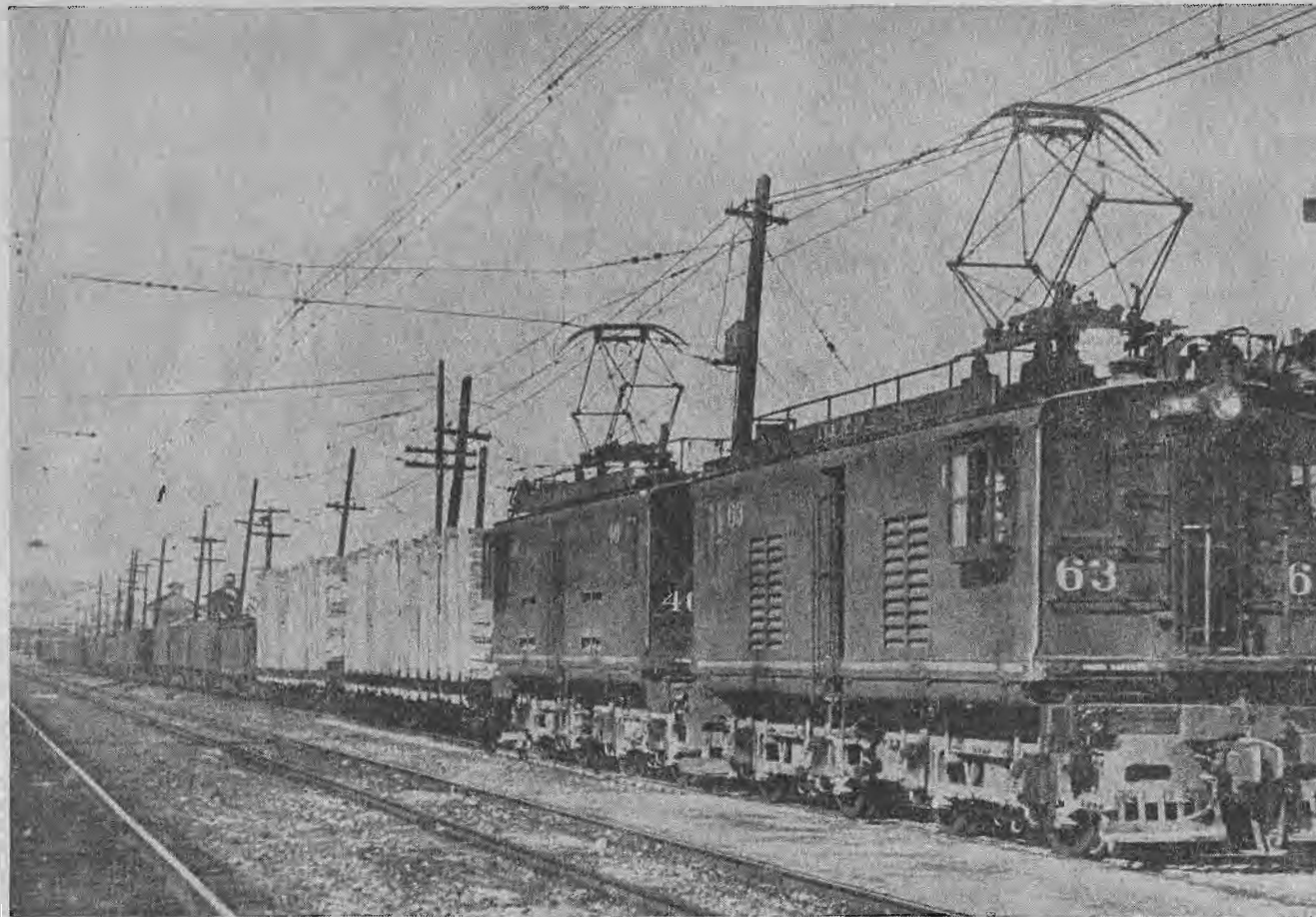
The engine then heads for the east end of the yard to couple on additional cars and pump up the air for their return trip.

Looking uphill towards the smelter you notice a dozen or so old cars of the Anaconda Street Railway barely visible through the smoky haze. It wasn't so long ago, either, that these same cars were plying the streets of Anaconda, carrying workers to and from the smelter. They seem to have once been painted orange, but its pretty hard to tell because they are covered with layers of dirt from the smelter's exhaust.

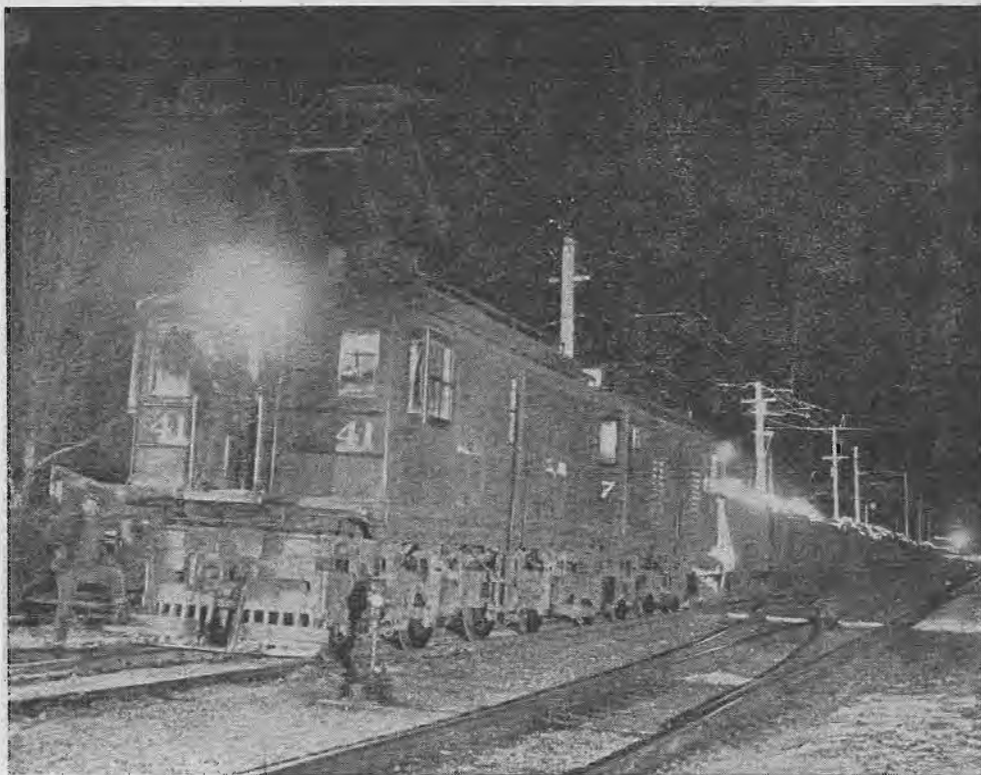
East Anaconda Yard has ten tracks, with a capacity of 512 cars. On the aver-



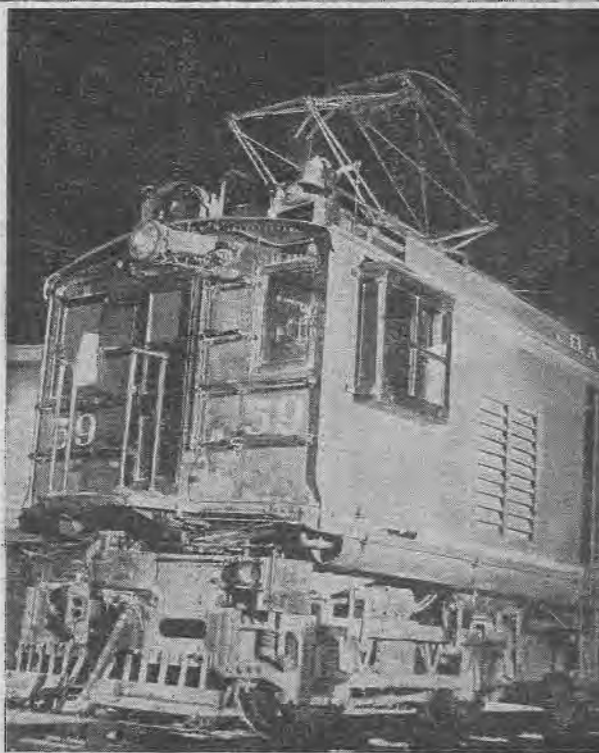
MILWAUKEE'S Columbian at West Butte yards. All Milwaukee trains back into Butte. BA&P's passenger trains head in, back out



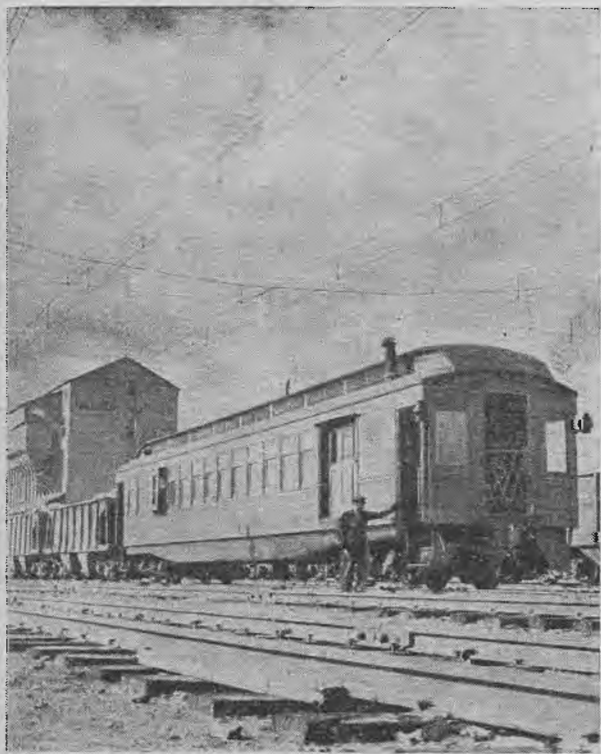
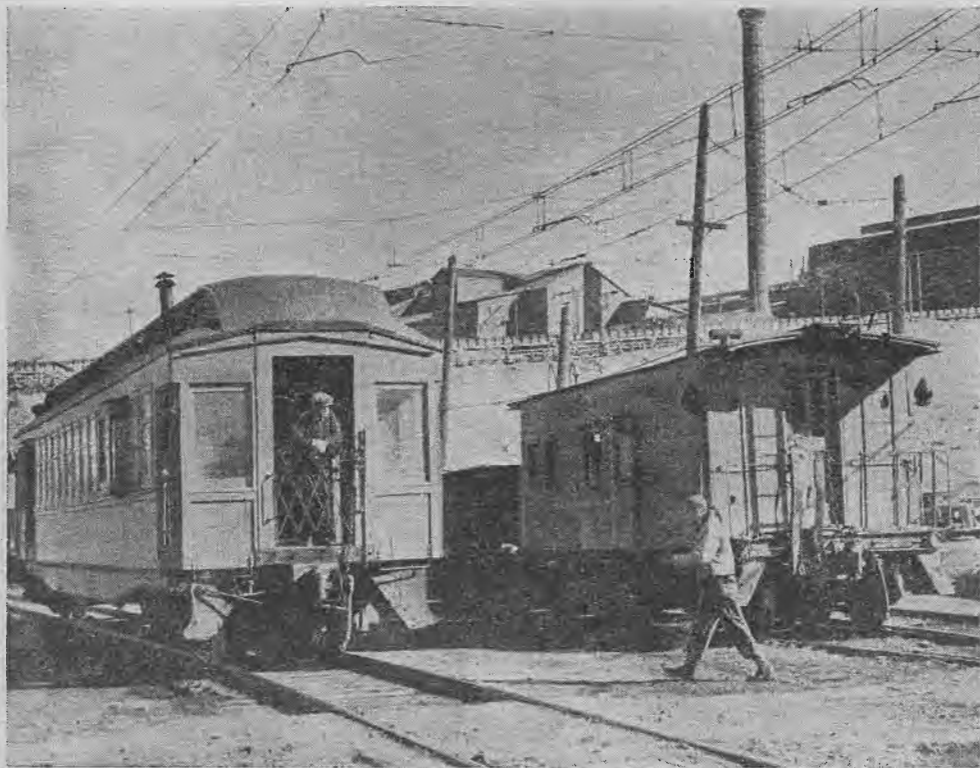
TWO-UNIT FREIGHT passes order board at Rocker station, eastward bound for the mines above Butte and the Hill yard at the



ORE FOR the smelter at Anaconda moves night and day. Track in foreground is the main line of the Milwaukee Road. Rear headlight of engine shines back over copper ore loaded in hopper cars



GLAMOUR SHOT. Motor 59 poses at Rocker yard. The twenty-eight electric motors used by the BA&P were built 1912-1914. Pantographs run on heavy catenary construction all the way between Butte and Anaconda



BAY WINDOW caboose of east-bound train clears crosswalk in the yard, next to your coach. The head brakeman is walking over to the car. Engine, meantime, has cut off the head-end and is coming down to pick up Number 11

CARMAN CLIMBS aboard the coach in the West Butte yard to check air gage. The train is inspected in this yard and at Rocker on westbound trips. Eastbound BA&P passenger train gets inspected at East Anaconda

age about 375 loaded cars of copper ore are hauled into the yard each twenty-four hours. Add to this an equal number of empties eastbound, plus many boxcars carrying ore concentrates and you can see that East Anaconda is a busy place. In fact, it is so busy that the BA&P has found it necessary to enlarge the capacity.

The bang of ore cars being switched rises over the yard as the car inspector lifts the blue flag from the rear end of the combine. It is 4:05 P.M. when the dark green electrics start wheeling the tonnage eastward to Butte. On this trip the train is known as Number 4.

Clearing the yard limits sign, the engineer lets the train roll lazily down the hill towards Butte at about twenty-five per. Walking over to the conductor's desk near the baggage compartment you look over his shoulder as he makes out the wheel reports. While engaged in this he hands over Number 4's single train order for inspection. It's not very complicated as train orders go. It simply instructs Number 4 to wait at Ramsay until 4:50 P.M. and at Rocker until 5:01 P.M.

Having talked yourself out on the way up you now decide to make an inspection of the combination's interior. In the little-used baggage compartment you discover an old hand-crank type telephone mounted on the bulkhead door. This is an ingenious forerunner of today's train radios and is used as follows: In case of an emergency the crew takes a long wooden pole with two wires attached, hooks the wires over the dispatcher's wire that parallels the right-of-way. The two wires are then hooked into the phone and the trouble is reported to the OS.

The hollow rumble of empty cars passing over a trestle attracts your attention as the train lurches to a curve just beyond. Down at the narrowing mouth of Deer Lodge Canyon you see the west-bound *North Coast Limited*, pulled by a three-unit diesel. The dark green of the Northern Pacific's pride and joy blends in with the green of the valley floor so that the outline of the hurrying varnish in the distance can just be made out.

That lower altitude business gets to you. It was your impression that Anaconda was much higher than Butte, and when you find out differently it is hard to believe. Topography can be deceiving to the uninitiated.

Settling back in a seat with the conductor's timetable you come across this gem, listed on page 3 under Number 4's schedule. It says: "Trains 1, 2, 3, and 4 have right over each other between Milwaukee Road Depot, Butte and Anaconda." The reason for this confusing rule is that theoretically, since one train runs all four schedules it would be possible for one run to get on the schedule of another, and end up in a siding waiting for itself.

This time you don't stop at Rocker Yard because all the cars are destined for West Butte. Past Rocker block signals loom up again, their yellow aspect indicating "proceed," standing out brighter now in the slowly failing daylight. Soon a shower of sparks ahead indicates the pantographs on the motors are threading their way into the yard at West Butte. The combination car is cut off just after entering the yard, coming to a quick stop when the air hose parts. While waiting for the engine to come and get the car the apple of the Milwaukee's eye backs into the nearby depot. From the *Beaver Tail* observation and full length dome car to the *Little Joe* electric on the head end, the *Olympian Hiawatha* is a thing of splendor.

It's quite natural then for talk to turn to the "*Hi*" as you head into the station alongside it, having dropped twelve loads for the Great Northern, four loads for the NP, and thirty-nine ore cars for the mines at West Butte Yard. In a joking manner one of the crew remarks that number four isn't quite as classy as the nearby *Hiawatha*, but it does use the same station, and the track it uses is just as wide.

Rising to the occasion, as you step down to the platform, the conductor announces in his most formal voice, loud enough for the "*Hi's*" conductor to hear, "Last stop, Butte."