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RDC ROUNDUP —PAGE 19

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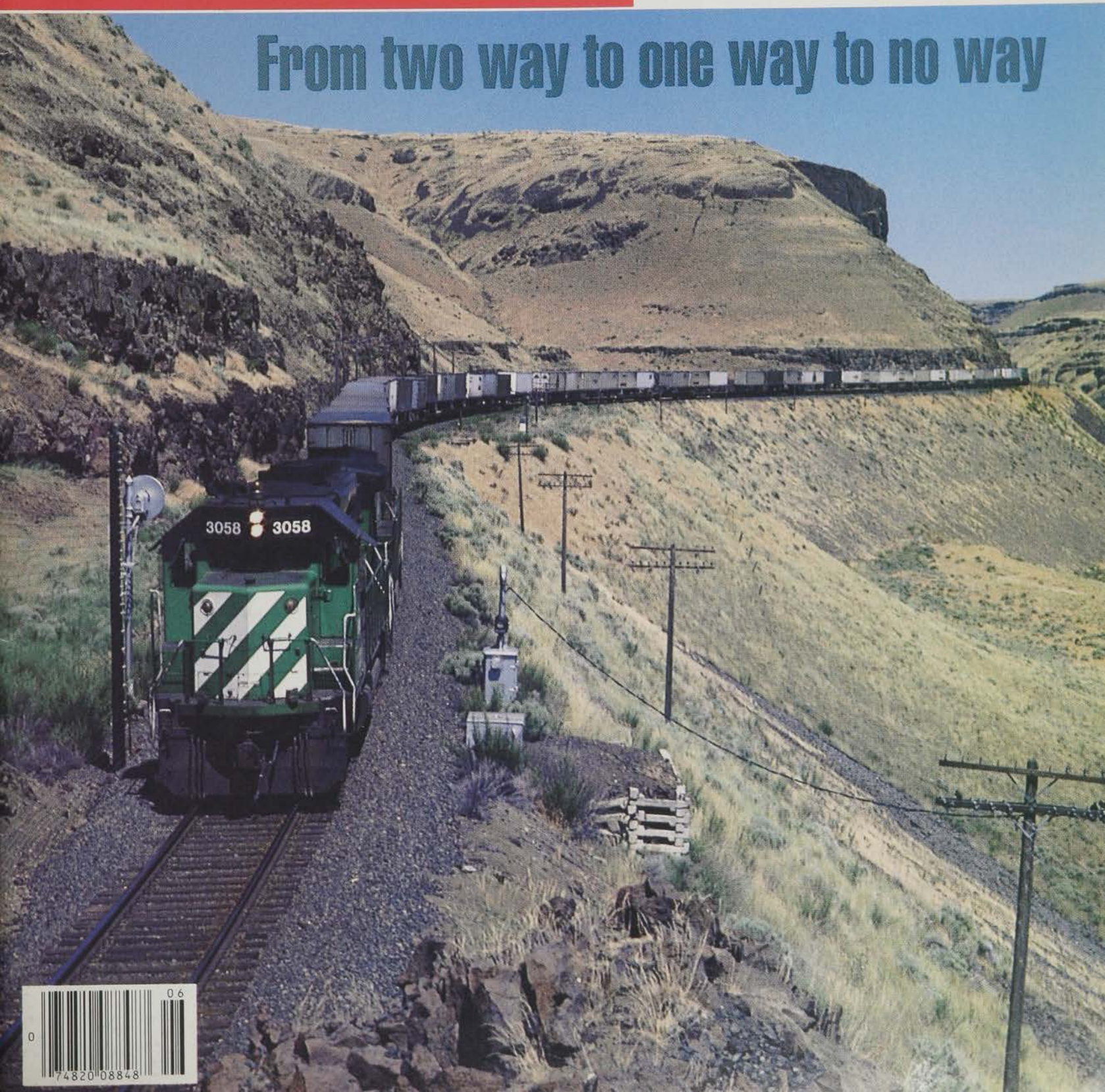
Trains

THE MAGAZINE OF RAILROADING

BN's HIGH LINE:

From two way to one way to no way



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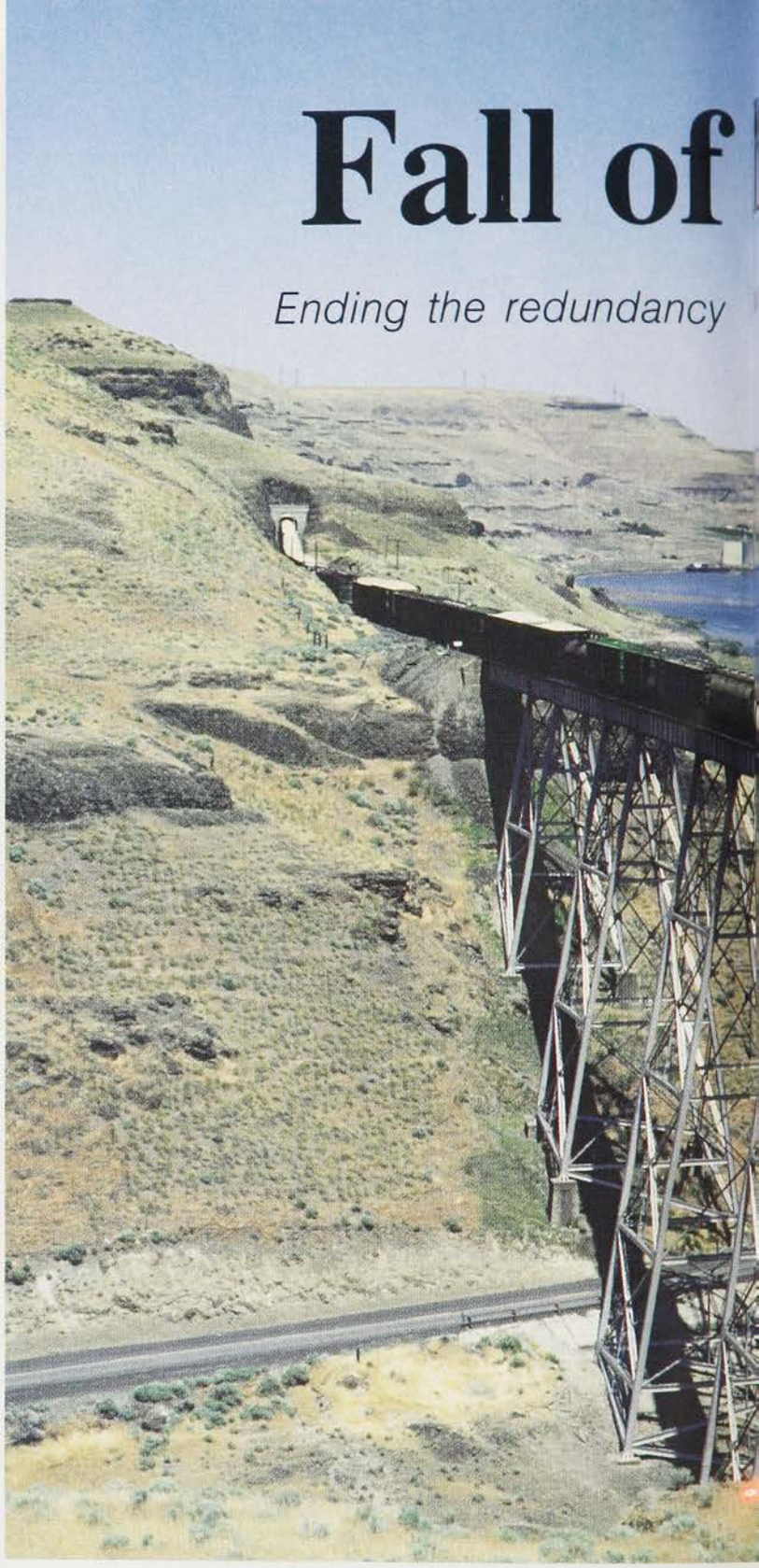
BURLINGTON NORTHERN'S ONE-WAY RAILROAD—1

Fall of

Ending the redundancy

BRUCE KELLY

PHOTOS / **THE AUTHOR**



THE Battle of the Gorges between James J. Hill and Edward H. Harriman began with Hill's announcement at the 1905 Lewis & Clark Exposition in Portland, Ore., of his desire to "help in the development of this great state." Already entrenched throughout much of Oregon with his Southern Pacific and Union Pacific, Harriman immediately arranged for every defense against Hill's intrusion. Despite the acquisition of a bankrupt Northern Pacific, Hill still had no direct access to Portland for his Great Northern. Thus from necessity was borne his *north bank road.* The Oregon Railway & Navigation Company's line along the south bank of the Columbia River (sold to UP in 1910 and later extended up the Snake River to Spokane, Wash.) took advantage of a wide shelf between the water's edge and the towering walls of the gorge, but the boon would go bust each winter when the sun's low angle left the south bank shadowed and snowbound. Hill's plan called for an all-season railroad to follow the north bank of the Columbia and the Snake in linking Portland with the GN and NP at Spokane. Between Wishram and Vancouver, grading expenses were extremely high. The only way to proceed was through the sheer basalt cliffs that rose straight up from the riverbed—12 tunnels in all, ranging in length from 122 to 2381 feet. Harriman's attempts at blocking the north bank construction with phony paper railroads failed, but to the south, he won the fight against Hill's Oregon Trunk by snatching a precious plot of real estate in the narrow bowels of the Deschutes River canyon. Stopped in the race for San Francisco, the OT bargained for a right of way as far as Bend, Ore.

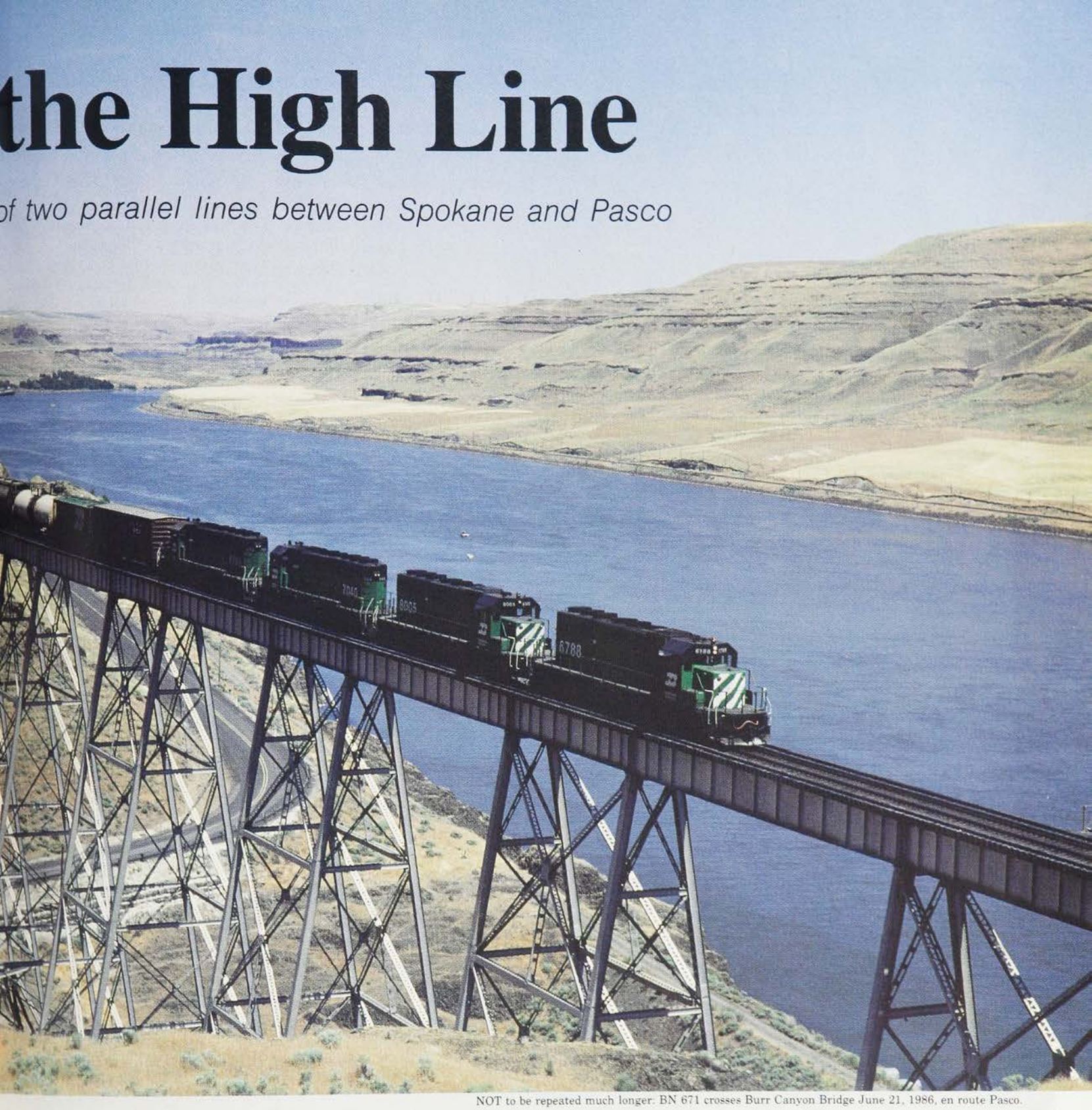
(The Oregon Trunk eventually obtained its desired Inside Gateway through 75 miles of rights on SP south from Chemult, then 90 miles of its own track to reach the Western Pacific at Bieber, Calif. Today the OT is the 4th Subdivision of Burlington Northern's Portland Division, and its connection at Bieber, ironically, is now the UP.)

Without ever reaching Seattle, Hill's Spokane, Portland & Seattle Railway commenced operations in May 1909—a course for overland transport whose fixed plant approached comparison with the Pennsylvania's self-proclaimed status as Standard Railroad of the World. Maximum curvature on the 370 miles from Vancouver to Spokane was 3 degrees. The segment east from Pasco represented the grandest of SP&S achievements: a 125-mile ascent of not more than 0.4 per cent, slicing and tunneling through ridges of volcanic rock and soaring over canyons and valleys on five immense steel viaducts, 27 wooden trestles, and millions of cubic yards of fill, then downward on a 0.8 per cent maximum to cross into Spokane on the Spokane River Bridge of parent GN. With neighboring NP slogging up and down from Pasco on undulating 1.2 per cent grades, the parallel route of SP&S earned the enduring title of "The High Line." Chief Engineer Ralph Budd's Latah Creek Bridge—designed to carry SP&S trains across Hangman Valley toward NP's viaducts in downtown Spokane—might have been the crowning touch, but it would not materialize for 60 years.

On March 2, 1970, SP&S contributed its immaculate railroad and fleet of Alco and EMD locomotives with the properties of the other Hill Lines to become an integral part of Burlington Northern. The Latah Creek Bridge finally took form ["Crossing a Creek in Style," pages 31-33, March 1984 TRAINS], followed by the destruction of the GN and UP spans and Fort Wright Junction. In combining rail routes through Spokane in preparation for Expo '74, only the NP's elevated corridor on the south side of downtown escaped the bulldozers and wrecking balls that wiped out yards and two passenger terminals. Spokane's business district emerged

the High Line

of two parallel lines between Spokane and Pasco

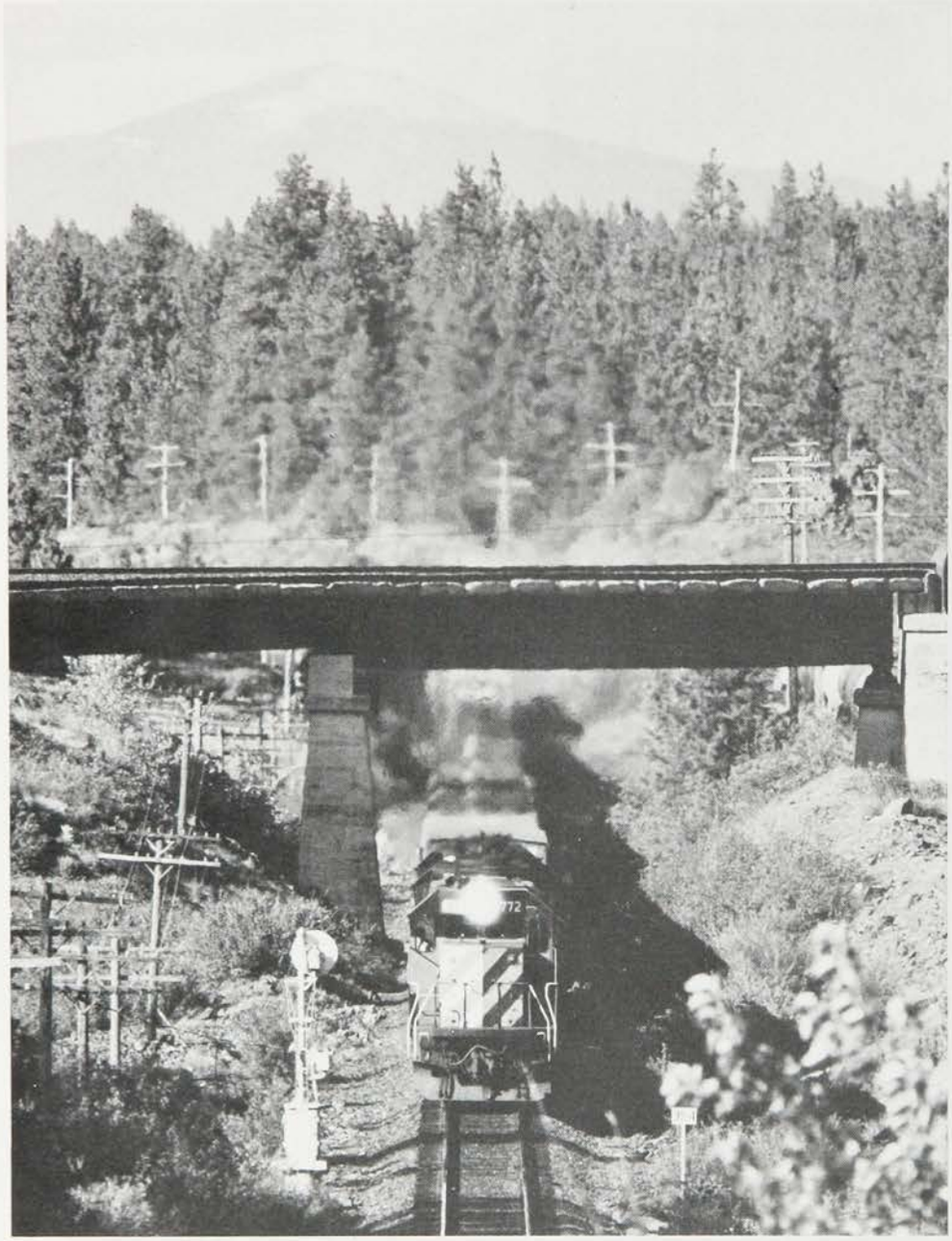


NOT to be repeated much longer: BN 671 crosses Burr Canyon Bridge June 21, 1986, en route Pasco.

the better for it. Union Pacific freights destined for Hinkle, Ore., had little choice but to ride west on BN's Latah Creek Bridge and the former SP&S to regain their company's trackage at Fish Lake, Wash.

The redundancy of two parallel lines between Spokane and Pasco didn't go to waste with Burlington Northern. Initially, westbounds followed the old NP through Sprague, Ritzville, and Connell, while eastbounds took advantage of the gracious profile of the former SP&S, the High Line. With the continued rise in import oil prices through the 1970's came extensive studies of locomotive performance and fuel consumption, which resulted in the reversal of traffic on BN's Spokane-Pasco routes. Intermodal cargo tends to be heavier on the eastward runs, but the *real* tonnage in eastern Washington is grain, lumber, and woodchips, which flow steadily downriver and downgrade to Portland, San Francisco, and other destinations. The former SP&S grade seems perfectly suited for westbound trains carrying these bulk commodities. Between Spokane and Pasco, this obscure 5th Subdivision of Burlington Northern's Portland Division has remained somewhat of a secret. Come along as we explore it and learn why it now must vanish.

Head start for Marshall Canyon



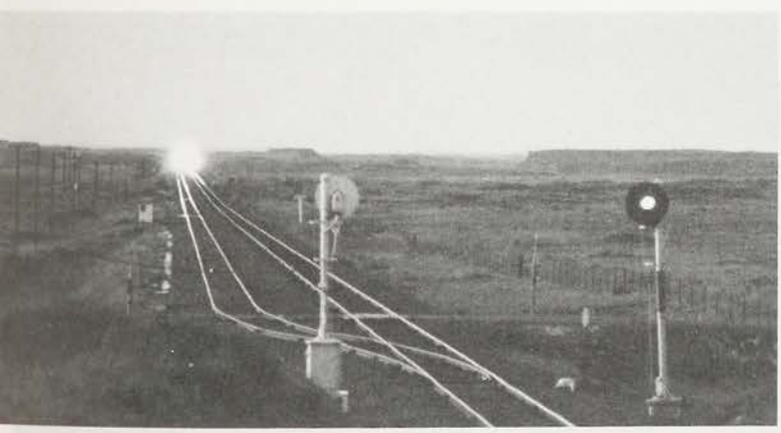
BN's completion of the Latah Creek Bridge in 1972 adhered to the original SP&S philosophy of minimizing gradient regardless of even the worst terrain. From its east end, the bridge assumes the same maximum 0.8 per cent grade as the pre-existing SP&S line west into Marshall Canyon. In the vicinity of Overlook siding, 5th Subdivision crews can look down into the valley to see the 1st Subdivision's (former NP route) crossing of Hangman Creek at Empire. Gradient decreases to 0.4 per cent west of Overlook, and at Scribner the High Line is parallel to—yet still above—the 1st Subdivision. From the east switch at Scribner, a track peels off from the main, passes over the abandoned Union Pacific/Milwaukee Road right of way, and descends to a 1st Subdivision junction at Marshall. With occasional set-out and pick-up visits at Scribner, trains 101 and 121 retrieve loaded grain hoppers which originate on the Spokane Division's 7th Subdivision branch and are hauled (by a local turn) through the crossover from Marshall. With the worst of Marshall Canyon behind them, westbound grain symbols and local tonnage drag 671 typically shed any excess road and helper power at Scribner. Two miles farther up the canyon at Fish Lake, UP's Spokane Subdivision of the Oregon Division diverges to carry its owner's trains to Ayer Junction, Wash., and Hinkle, Ore. In the next five miles, BN's 1st Subdivision and the UP track manage to bridge themselves over the High Line and reach summits just west of Cheney. Fifth Subdivision trains, meanwhile, continue with their 0.4 per cent progress through deep rock cuts and swampy grounds. The railroad doubles as a canal during the spring months when runoff flows heavily in the ditches along the right of way . . . even washing against the crossties before emptying into the oversized frog pond at Fish Lake. The annual woes of the "wet line" have helped roadmasters and corporate management agree on writing off the 5th Subdivision for eventual abandonment.

AT Milepost 364 (top) between Fish Lake and South Cheney and against a backdrop of 5869-foot Mount Spokane, train 671 comes under the 1st Subdivision. Where the High Line ducks under the UP (left), the High Line's nickname "Wet Line" is in evidence.

Over the top

Near Milepost 358, at an elevation of 2334 feet, is a little-known summit, surrounded on all sides by the Turnbull National Wildlife Refuge. Trackage to the east descends at just under 0.4 per cent toward South Cheney, soon dropping into Marshall Canyon at 0.8 per cent. To the west is an arrow-straight, 0.4 per cent downhill slide. Mock siding, MP 354.3, had been the determining factor for tonnage ratings between Spokane and Pasco when SP&S Alco diesels ruled the High Line. A four-unit consist of FA's was deemed equal to the task of hoisting 8000 tons from Pasco, or 6400 tons up Marshall Canyon from Spokane. The same number of second-generation units from BN's contemporary EMD/GE fleet can balance a 10,000-ton heavyweight like train 671. Beyond the crest, westbounds encounter arid lava fields and countless miles of sagebrush—elements of the desert southwest many outlanders may not realize are also found in the Evergreen State.

TWO miles from the crest, cowl F45's and SD45's on 101 enjoyed a last fling in 1986.



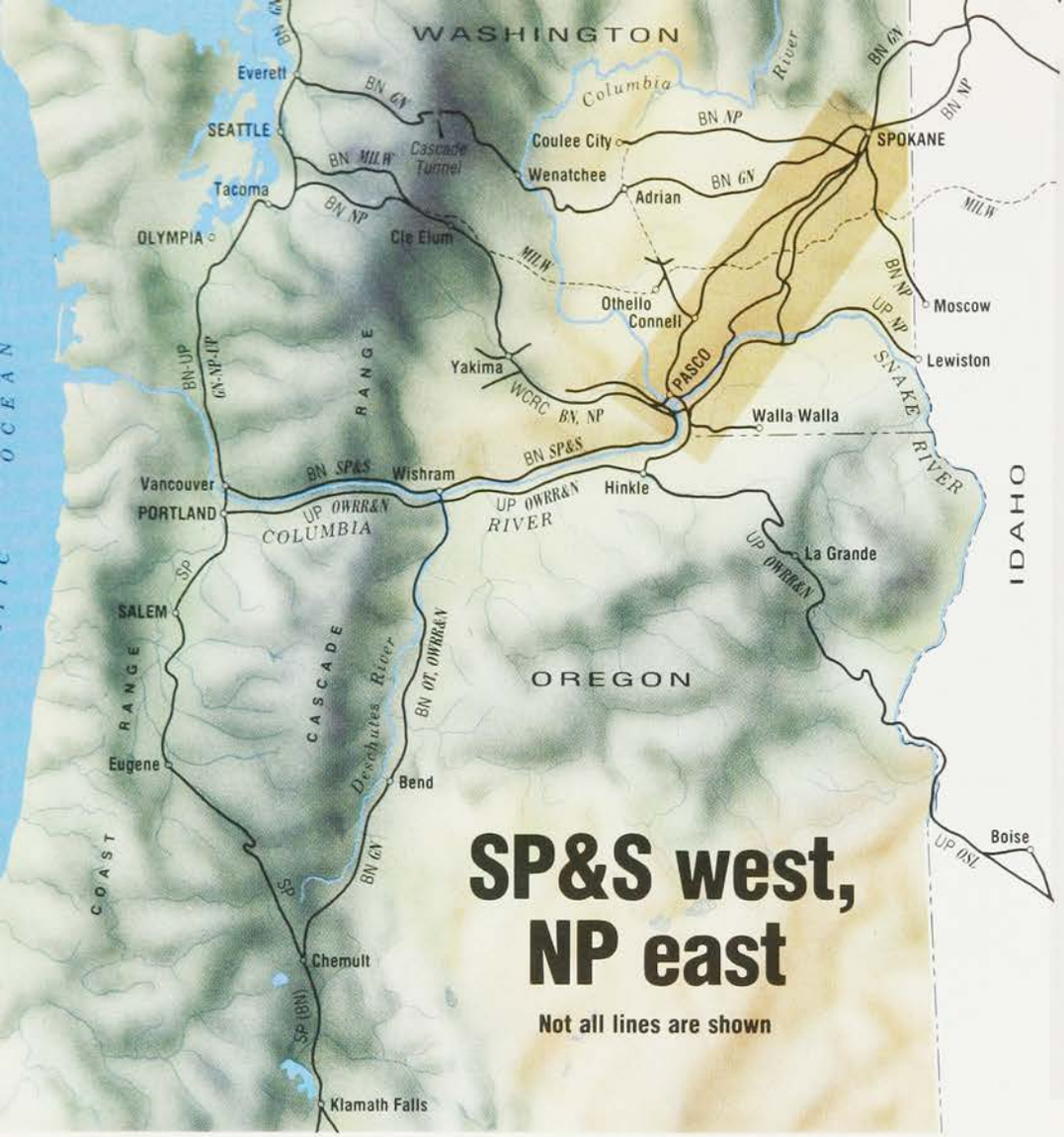
AT 8:57 p.m., May 18, 1986, train 1, bearing down on new signals at 55 mph, is the only sign of life on Columbia Plateau at Macall siding.

BETWEEN Rodna and Lamont near Milepost 342, train 671 rides across a high fill built around an old wooden trestle.

An unlikely desert

Forests and marshes recede from view along the High Line at Amber, giving way to pea and wheat crops and grazing land. The silos at Rodna (MP 343) and Lamont (MP 335) fill an occasional truckload, but the siding rails wear a heavy coat of rust from their inactivity. Even the Lamont depot is dormant—no agent, no passengers to board SP&S No. 3, no livestock being loaded. Coasting downhill from Mock, BN westbounds gain speed on the 115-pound jointed rails, looking like Randall Caprine's Silurian beasts ("Night Dragons and Geeps," July 1983 TRAINS, and "The Hill," February 1985) as they pass mounds of broken basalt at 50.

Prehistory never really ended on this portion of the Columbia Plateau. This is a strange, desolate land which must be crossed in going from here to there, land where the solid mass of volcanic rock extends 10,000 feet below the earth's surface. Even six years after the eruption of Mount St. Helens, volcanic ash becomes airborne anytime the high winds blow, resulting in a gray, choking cloud that blots out the sky in all directions. At night, the suburban glow from Sprague and Ritzville brightens the western horizon, while to the east are the dark and virtually unpopulated hills of the Palouse. BN's 5th Subdivision between Rodna and Benge is railroading on the fringe of reality, across a desert you never heard of.

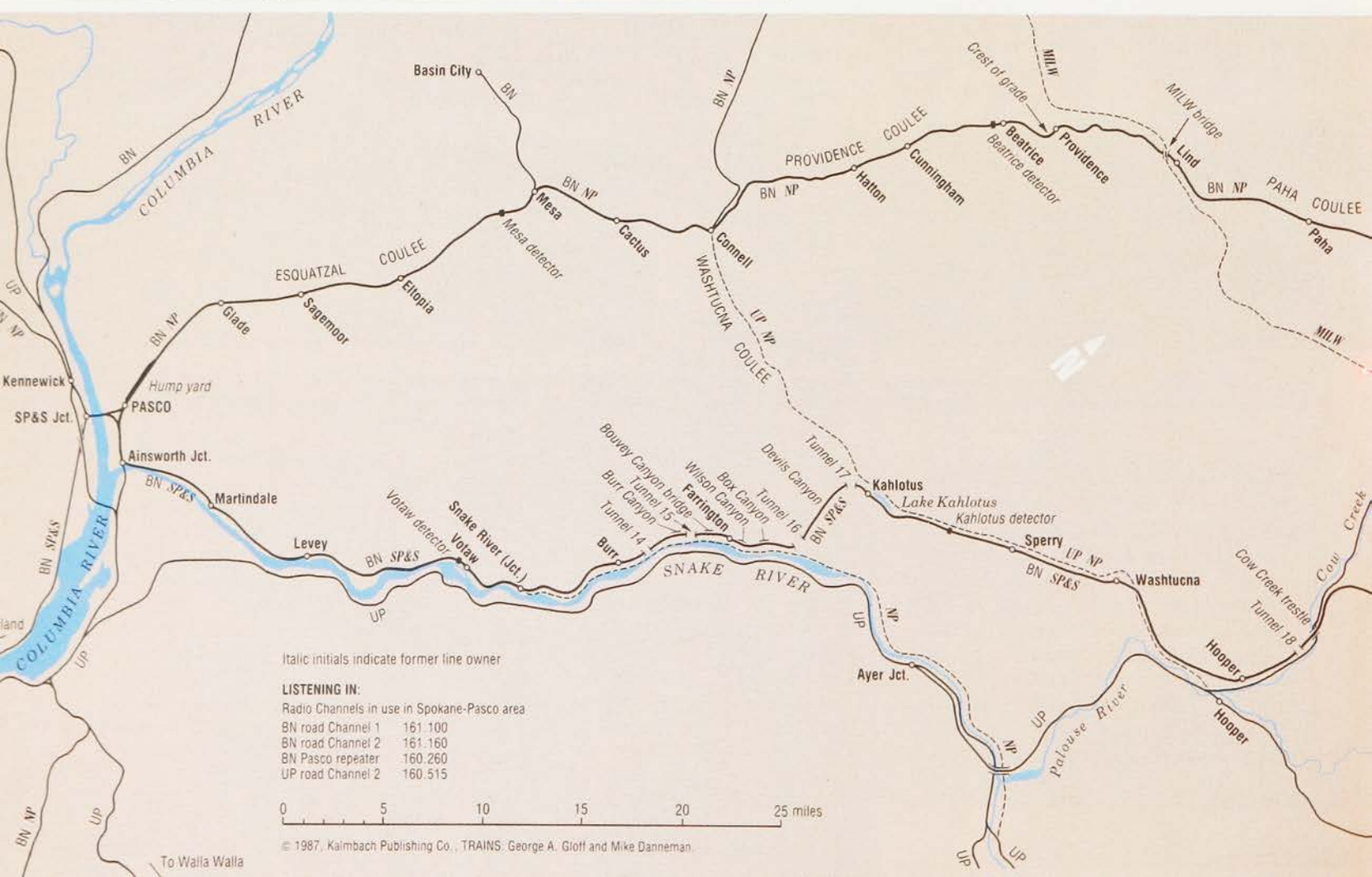


SP&S west, NP east

Not all lines are shown

UNDER high morning clouds on February 8, 1986, woodchips, grain, and trailers on 671 rumble across the big bridge. When the caboose hits it, diesels will be in Tunnel 18.

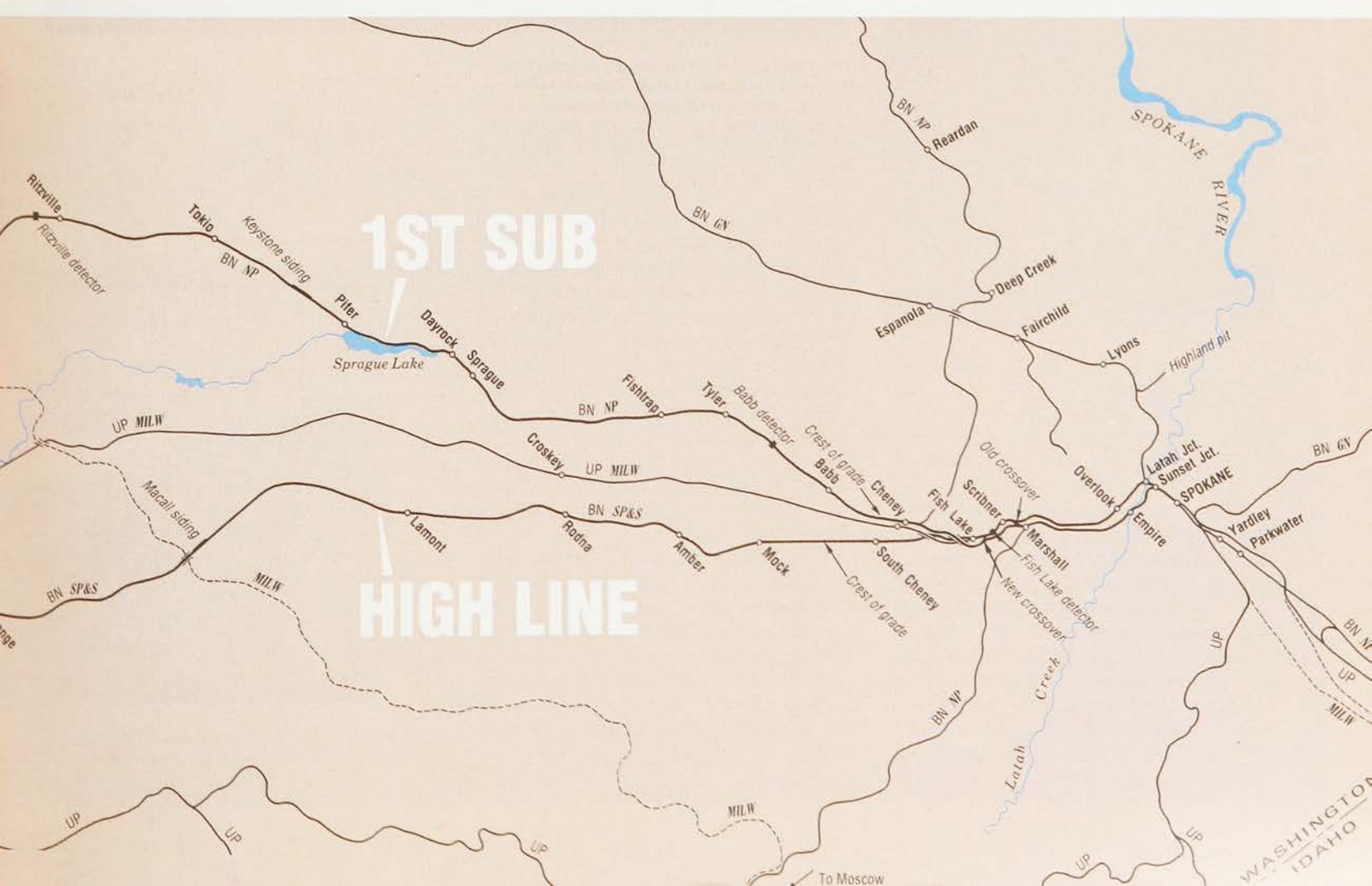
Cow Creek Trestle

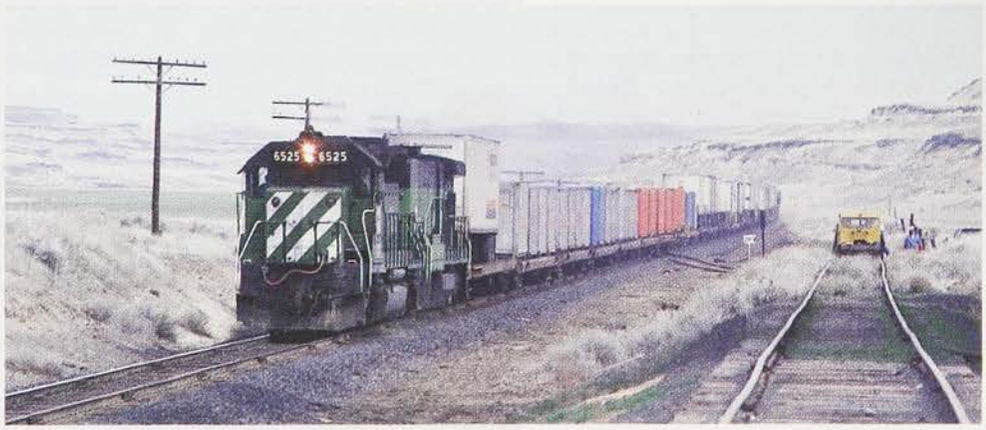


Drive north through Washtucna, Wash., early on a Sunday morning amidst dust-sparkled rays of orange sunlight. The populace sleeps deep after last night's down-home recreation at Sonny's Tavern and McKenzie's 7-C Drive-In. Breakfast consists of yesterday's store-bought cookies (trying to pass themselves off as homemade), washed down with lukewarm water from the canteen—consumed en route to Ankeny on the Benge-Washtucna Road. Just past the intersection with Gray Road, park the Datsun in the clear and load the bicyclist's backpack with lenses, remote release cords, a notebook, and enough snacks and pop to suffice till noon. With cameras, tripods, and a scanning receiver, hike toward the warming sun, but keep alert for unexpected minefields of cow stuff.

The landscape observed from the rocky hilltops resembles the grassy African plains portrayed in *National Geographic*. Not so well publicized is Burlington Northern's long steel viaduct across Cow Creek. In the creek swim surprising numbers and sizes of catfish and sturgeon. (*Don't eat 'em . . .* pesticides and herbicides contribute greatly to the local food chain.) The cows of Cow Creek? They graze at the trestle's concrete footings. Union Pacific's Spokane Subdivision rejoins the High Line here, coursing down the valley floor and tunneling beneath BN's 5th Subdivision at the trestle's west abutment.

A distant, muffled rumble and the distinct tune of air horns spilling over Coyote Butte from the northeast signal a westbound's approach from Benge. Cow Creek Trestle stands ready. For too long this incredible silver landmark has eluded the scrutiny of all but a handful of photographers. How long now before it joins the trackless ranks of other abandoned Columbia Plateau routes: Milwaukee Road's 3rd Subdivision, Coast Division; Union Pacific's Connell Branch out of Hooper; Northern Pacific's Snake River line to Riparia? The list keeps growing.



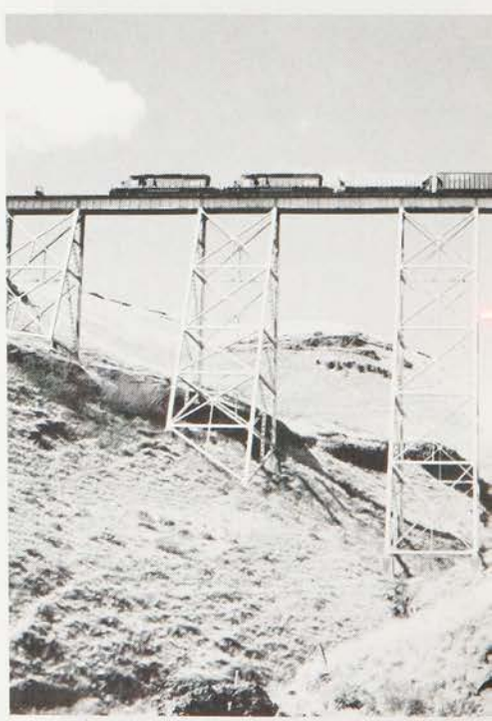


AGAINST backdrop of Lake Kahlotus (top), train 101 pulls out of Kahlotus to start into Devils Canyon. At Sperry Spur (above), Milepost 285, track crew steps aside to let train 13 by at 12:09 p.m. In June 1986, train-order signal at Washtucna (left) meant something.

"No defects; transmission over"

These are pleasant words to any westbound BN crew. At Milepost 281, the Kahlotus wayside detector checks moving trains for dragging equipment or hot axle bearings, after which a synthesized voice broadcasts its findings over Road Channel 1 (161.100). Air-conditioning protects the vital electronics inside the metal shanty from the hot (105 degrees-plus) summer sun. BN's Kahlotus detector appears out of place on the broad floor of the Washtucna Coulee (KOO-lee: a deep gulch or ravine, usually dry in summer—*Webster's*), but those High Line grades can be deceiving. Hooper siding on the 5th Subdivision clings to a mesa several hundred feet above its namesake town. Eight-and-one-half miles downhill to the west, westbounds continue on high ground through Washtucna. A drop of 200 feet in 22 miles at better than 50 mph can inspire all sorts of gremlins within 10,000 tons of wood chips, grain, and lumber.

Beside its immediate purpose, the Kahlotus detector assures engineers of their trains' readiness for the tough geography ahead. Nobody wants half his lading to wind up on the bottom of Lake Kahlotus, or waffled against the east portal of Tunnel 17. They needn't worry when Mr. Transistor at Milepost 281 is doing the rollbys.



AT 10:27 a.m., June 22, 1986, train 13 starts down the canyon (left). On December 29, 1985, 1st 671 rolls west at Tunnel 17 (above).

Devils Canyon

At the top: Tunnel 17, 2220 feet long. At the bottom: Tunnel 16, 2494 feet—longest bore between Portland and Spokane. In between: 5 miles of alternating welded and jointed rail, flanked by 4 miles of slide-detector fence. Protection: automatic block searchlight signals—two westward, two eastward—plus trackman's block occupation indicators. Gradient: 0.4 per cent descending westward. It's a soundless void whenever trains aren't near, broken only by the whine of tires on Devils Canyon Road, or the eerie, reverberating calls of swallows nested in the basalt formations. Absence of an apostrophe belies any implications of ownership. It's a rugged, remote, unremarked railroad paradise.

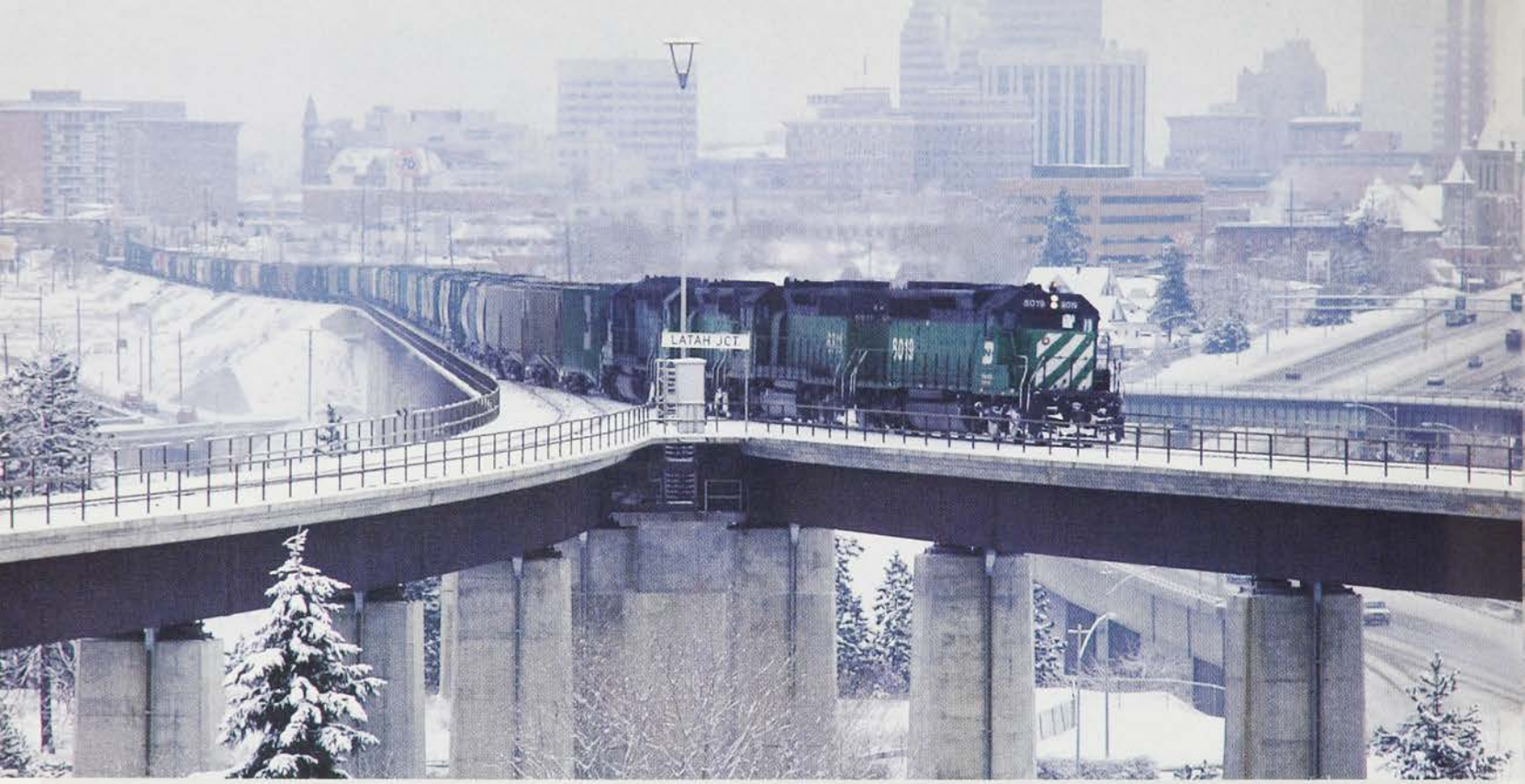
TRAIN 121 thunders across 250-foot-high Box Canyon Bridge east of Farrington.

Gracefully down to the Snake

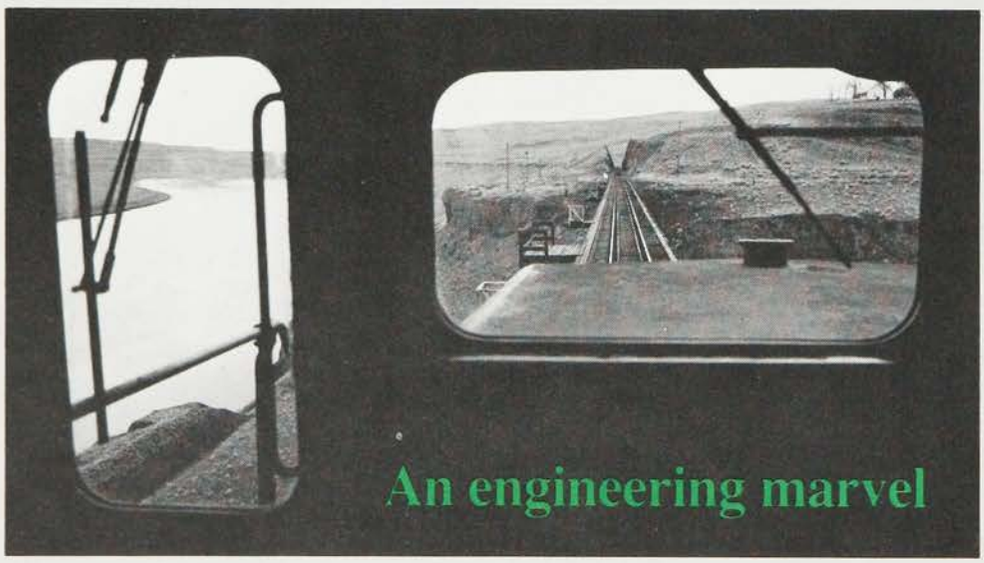
Emerging from Tunnel 16, High Line trains ride way above the calm, navigable waters of the Snake River. Four steel trestles make possible the continuous 0.4 per cent descent. The tallest bridge—250 feet—spans Box Canyon (left), yet the most famous of the four is Burr Canyon Bridge (pages 24-25), site of many a publicity photo during SP&S years.

Unlike the aged Consolidations and Mikados handed down from parents GN and NP, the Z-6 and Z-8 Challengers proved to be just the right stuff for freight service on the SP&S. With their 4-6+6-4 wheel arrangement, these 900-series simple articulateds could drag 5400 tons from Pasco to Spokane unassisted. Their one drawback was an enclosed, weather-proof cab that all but baked engine crews in summertime.

Summer once meant taking on water at Farrington station for the climb up Devils Canyon. In 1986, the hillside tank remains in place, but the trackside reservoirs are dry and the standpipe is gone. Consists of GP50, SD40-2, and cabless B30-7A diesel-electrics, usually linked with fuel tenders, whip right by with trains 1 and 13. GP30's, 35's, 38's, and 39's handling the low-priority drag freights add or subtract empties stored on Farrington's 4462-foot siding, in direct response to the prevailing economy and seasonal demands of grain shippers. Hard and changing times upriver at Lewiston, Ida., drove the NP's north bank branch out of the Snake River Gorge; its abandoned right of way now serves as an access road to the BN 5th Subdivision between Burr Canyon and Snake River Junction. If all goes as planned, section crews will no longer venture down that dusty grade after 1987. BN plans to have the High Line out of commission by then.



GRAIN EXTRA exits Spokane over Latah Creek Bridge January 3, 1986 (above); view from cab of SD40-2 leading westbound train 1YA on Burr Canyon Bridge (below) includes Snake River.



An engineering marvel

Perhaps the greatest admiration for the High Line's fine physical qualities comes from the BN crews who pilot the half dozen or more daily trains from Spokane to Pasco. Even those who logged mileage with the NP or GN in premerger years consider the 5th Subdivision to be operationally superior to the twisting, up-and-down 1.2 per cent grades of the 1st Subdivision. On March 27, 1986, train 1YA (a Spokane-to-Portland symbol split from train 91 at Yardley in Spokane) demonstrates that operational ease with a pair of SD40-2's in charge of a respectable string of highway trailers and auto racks. As the units roll out onto Latah Creek Bridge, the hogger shoves the throttle into Run 8. Past Latah Junction, 1YA settles into a 25 mph climb, the ammeter peaking at 600. After South Cheney, speed picks up and power is eased off a notch, finally going into dynamic near Mock. From here it's basically downhill to Pasco. Every automatic block signal shows green—no worry of opposing traffic on this westbounds-only main line.

A 35-mph order is obeyed on the approach to Cow Creek Trestle. Minutes later, the conductor radios "over the bridge" to the head end, to which the engineer replies with a gentle kick of horsepower. What used to be a 79-mph railroad has in recent years been downgraded to 50, but some stubborn hoggers seem to know the track's limit better than the Seattle Region timetable. They leave law-abiding motorists on Highway 260 behind.

All eyes focus on the trackage and signals ahead as 1YA descends the 0.4 per cent through Devils Canyon and along the bluffs above the Snake. This is landslide country, especially in late winter when frozen moisture expands within the canyon walls, dropping splinters of basalt upon the railroad. If the slide manages to take out a detector fence, the resulting red block requires trains to proceed at a painfully slow speed . . . not the best of circumstances on those nights when thick fog rises up from the river, cutting visibility to less than 30 feet.

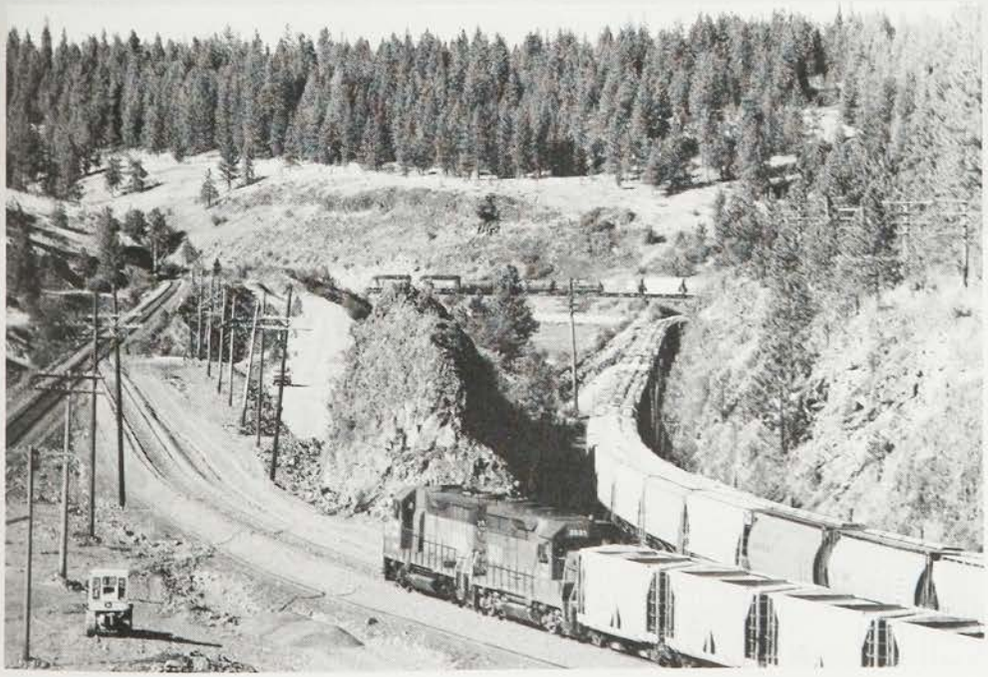
This passage of 1YA goes without incident—the UP's line on the opposite side of the Snake hasn't offered so much as a speeder car to break the monotony. Into the home stretch, the engineer calls Pasco for permisison to enter the APB territory east of Ainsworth Junction. 1YA changes crews on the fly outside town, then negotiates the Columbia River Bridge and SP&S Junction to continue its north bank journey to Portland. Their 4-hour workday complete, the Spokane crew members will lay over in Pasco—lodging paid for by BN—then return home with a 1st Subdivision eastbound the following morning. Tomorrow's battle of the grades to Providence and Babb will make for hard-earned pay and a longer day compared with today's leisurely trip down the High Line.

The beginning of the end

By the first week of January 1986, Steelman-Duff Inc. of Portland, Ore., had finished the general grading for BN's new Fish Lake crossover at MP 366 on the 5th Subdividion—the only point where the SP&S, UP, and NP grades shared a common elevation. Sometime during the removal of rock obstructions, a misguided blast shot upward beneath the 1st Subdivision main line and heaved the track out of alignment. With the entire plant frozen in winter's grip, the kink couldn't be ironed out for months. Under the hot sun of July 7, 1986, the scene looked far more optimistic as Roadmaster Cruz Nicacio and Superintendent of Roadway Maintenance Ralph Knutson inspected the newly laid crossover and its manual switch connections to the 5th and 1st Subdivisions. Between Latah Junction and Milepost 366, section gangs had already installed the same 132-pound rail as that used for the crossover; 115-pound rail still accounts for most of the trackage west of Fish Lake. The first train to tread the crossover was Work Extra 2530, which hauled ballast down from the Highland pit (MP 1487.1 on the 2nd Subdivision, Spokane Division) on July 11. After a second ballast dump on the 17th, the first phase of BN's plan to divert westbounds off the High Line was complete.

Ahead lies the monumental task of upgrading the 1st Subdivision to a bi-directional super main line. Sidings are being expanded to accommodate today's longer trains, since meets will soon become commonplace. And the 126 miles to Pasco will get wired for CTC, replacing the upper-quadrant semaphores and many of the solar-powered three-light signals now governing the 1st Subdivision. Because it lacks CTC turnouts, the Fish Lake crossover remains out of service for the time being. Pasco- and Portland-bound trains still hold to the 5th Subdivision as they pass Milepost 366, counting down to the day when they will no longer receive a high green for the High Line at Fish Lake. On that day—projected for this coming summer—a unique segment of American railroading will die, and another chapter of western history will fall to the wayside. It might ease the conscience to foresee the future scheme of things at Ritzville, or on the 1 per cent slopes of Providence Hill, or in the Esquatzel Coulee canyon. Expect Burlington Northern to write some dramatic history of its own in the months ahead. The curtain may be closing now on Cow Creek Trestle and Devils Canyon, but the Big Show is only just beginning. T

HIGH GREEN for the High Line at Fish Lake, where UP diverges, will soon be no more.



GP35'S with ballast train tread new Fish Lake Crossover to the 1st Sub as symbol G3GPS heads down the 5th Sub, the High Line. Old UP-Milwaukee grade is visible in between them.

NEXT MONTH

We've had a smooth ride west from Spokane to Pasco down the gentle descent of BN's 5th Subdivision, the former SP&S. Next month, Bruce Kelly takes us back east to Spokane on the roller-coaster 1st Sub, the old Northern Pacific, which soon will host all the action. Ride along, in July TRAINS.