The Tale of the Blasting at Cape Horn

Puff of smoke goes up when the dynamite went off and the rock came tumbling down at Cape Horn.

(Reprinted from the "Steward's Scene," newsletter of the Pacific Northwest River Basins Commission, February-March, 1978.)

Elton Troth, editor of "Tanspo News", monthly publication of the Washington State Department of Transportation, writes in the December issue of the November 1927 blast which was needed to complete construction at the Washington State Highway 14 segment at Cape Horn, a few miles west of Beacon Rock and about 25 miles east of I-5 at Vancouver.

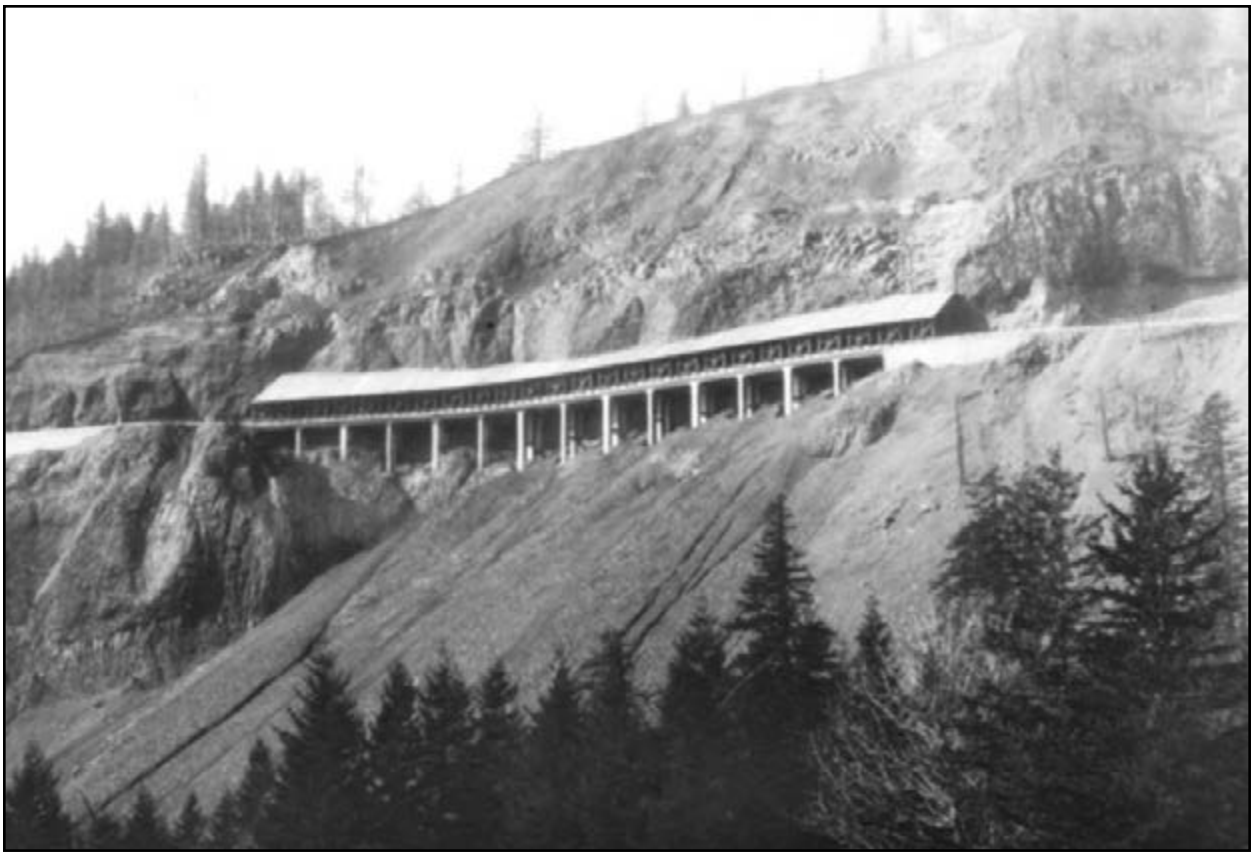
A total of 74,000 pounds (37 tons) of dynamite was used, yet no one had predicted that something might go wrong as a result of the gigantic

Puff of smoke goes up when the dynamite went off and the rock came tumbling down at Cape Horn.

explosion. Unfortunately, the subcontractor had miscalculated the power of the powder set of by the firing sequences of delayed action fuses. A roadbed section to-be came tumbling and hurtling down — leaving a deep chasm that later had to be bridged for nearly 500 feet to complete the highway.

When the explosion occurred, engineers and other observers exclaimed, “It seems like half the mountain is disappearing.” Far below, the speeding disintegrated basalt chips and debris buried a 600-foot-long section of the SP&S railroad tracks up to 15 feet deep near the railroad tunnel. The avalanche smashed barns and dwellings on one farm property, buried a year-around spring and road that served another and reportedly killed six hogs on one of the farms.

No human lives were lost. However, a near tragedy was averted when an unknown man was warned to leave his “observation post” in a culvert moments before the blast was set to go off. He took the advice just in time and watched the culvert buried under 30 feet of rock.



View of Cape Horn and its wood covering from the farm below, 1950.

An engineer's report had emphasized that the "sloping operations in connection with the cliff section presented an extraordinarily difficult and hazardous problem" to all concerned. The subcontractor on the cliff section constructed a trail about four to five feet wide around the face of the cliff, which permitted his men to work the section ahead for grading and loading.

To prepare for the big blast, holes were drilled 100 feet apart at right angles into the cliff from the planned center of the new roadway. Experience "powder monkeys" filled the holes with dynamite. As the well-publicized moment neared, hundreds of spectators gathered at various vantage points to get the best view possible of the event.

Weather was favorable. The sun was shining in a normally moisture-laden November. There was no wind. A hush seemed to prevail over the entire Columbia River Gorge. The river far below was moving silently. Then a second whistle was heard. "Here comes the blast," an observer shouted.

The gigantic vertical columns of basalt appeared to buckle. Then suddenly they were shattered as they roared out into space. Engineers guesstimated that millions and millions of rocks were hurtling at fantastic speeds toward the river — some as large as houses. Spectators compared the roar of the avalanche with a series of rapid-firing thundering cloudbursts. The avalanches continued unabated over 10 minutes. Then the event was all over — long to be remembered by the witnesses.

Several months after the explosion and after highway construction plans had been revised, it was determined by Highway Dept. engineers that a lot more than just the roadway section has been severely weakened, so that additional work had to be performed under contract to bring the highway up to safety standards for protection of the traveling public. Engineers were forced to redesign the lost section to include a full two-lane bridge nearly 500-feet long. The work was finally completed on December 15, 1930, with the bridge and highway being opened for public travel the next day.

SKAMANIA COUNTY PIONEER, FRIDAY, NOV. 25, 1927

Blast Buries Farm and Railroad

Tuesday afternoon about 1,000 people gathered on the vantage points around Cape Horn to see Contractor G. M. Hazard shoot one of the largest blasts ever touched off in this state.

The blast was used to blow off a portion of the bluff overlooking where the North Bank Highway is being built to connect the finished work on either side.

Promptly at two o'clock the switch was thrown that ignited the powder that men have been working for weeks to pack into the "coyote" holes in the face of the mountain. A thrill of excitement held the crowd as the hands of the watchers crept toward the appointed hour and all eyes were glued to the face of the mountain about a thousand feet above. "There she goes." The first appearance of the bluff after the charge was that of a large swelling — as one said like that pert of the world had a tooth ache. The great mass of rock and earth seemed to hold for a second or two then great seams opened, out of which puffed clouds of black smoke.

Then, the whole side of the mountain seemed to simply jump away and settle down. More and more, wider and wider sped the crumbling bluff until the final crash when the mass struck the first ledges below. Gigantic fir trees many feet in circumference crumpled up and were devoured in the mass of rock. Now and then a big tree, as if unwilling to give way, clung for a moment then would rise and ride the downpour only to be ground to chips a minute or two later.

On swept the mass — 200,000 yards of earth and rock grinding, roaring, groaning in its haste to reach the levels about a thousand feet below. Nothing could stop it. People were held spell bound and even those over a mile away stood for a moment or two as though dazed.

A few moments after the first mass reached the bottom, the Columbia Gorge was rent with a mighty roar which echoed and re-echoed from the Oregon hills a mile across the Columbia River. Then came shouts of "Look at the waves." It took several minutes for the significance of this remark to be understood. Then it was realized that the giant force had loosened many times the amount of rock the mean had intended and this material had rushed over even the lower and less precipitous slopes, over the farm below sweeping everything in its path into the Columbia and causing a wave several feet high to sweep across to the Oregon shore.

On reaching as near the mass of debris as the engineers would allow, as great quantities of rock were still breaking away and coming down with tremendous force, the full significance of the wave of rock cold be seen. The home, barn, out buildings, orchard and two springs of M. B. Stevenson had vanished. The S.P.&S. track and roadbed for about three hundred feet had also gone into the river and in their stead was what had been the face of the mountain a few moments before.

There were 48,000 pounds of black powder which cost about $7,000 used in the shot. The engineers had hoped to move about 90,000 yards of rock, but the blast undershot and took out much more than they had intended and this was what caused the wreckage of the Stevenson farm and the railroad. There were seven holes drilled into the side of the mountain and each one of these "coyote holes," as the engineers call them, had two large pockets into which the powder was placed and then the holes packed as tightly possible to give resistance and give force to the explosion.

Mr. Hazard estimates that the damage to the railroad will be around $5,000 and he would not put an estimate on Mr. Stevenson's loss as he said he did not know what it would be. Both the railroad and Mr. Stevenson will be reimbursed, we understand.

Mr. Stevenson has lived there for many years and his father settled on that spot about seventy years ago. Two splendid springs were buried in the mass, the barn and house were swept into the river or crushed beneath the tons of rock and earth. The charge was about 1,000 feet above the farm and probably several thousand feet back. The engineers, it is said, did not anticipate any harm being done to the farm or the track.

G. F. Brelin's pretty bungalow was just outside the path of the slide and escaped unharmed. The debris plunged into the Columbia where the old dock was and made a bank that the high water will not harm as it was always doing to the railroad grade. The county road leading from the high water to the track was obliterated and will have to be rebuilt.

That the blast was an unusual occurrence was noted by the number of engineers for the state highway the Oregon State highway, the S.P.&S. railway, Department of Agriculture, the

Pioneer Cape Horn settlers George Breslin's home before 1917. His home was just ouside the path of the rumble coming down from the Cape Horn blast and was not damaged. The house still stands at the end of Cape Horn Road.

Steamer "Dalles City" gets ready to pick up passengers at the Cape Horn Landing in 1910. This dock and the railroad track was destroyed in the aftermath of the Cape Horn blasting.

Forestry Service, and private and county engineers. There was also a vast throng of people from all over southwest Washington and portland, most of them gave advice freely as to what the charge did and what it did not do.

Mr. Hazard informed the Pioneer that both he, and the sub-contractor, Mr. Avery, were well pleased with the result with the exception of the damage to the farm and railway grade and track.

For some time to come Cape Horn will be in the movies because there were camera men present from the International News service, and the Paramount News service, besides numerous private operators and amateurs, all risking their necks while they calmy cranked away at their machines within a few feet of the mass sweeping past them. One of the operators got a very good picture of the explosion, its sweep into the river and was the first to notify the crowd of engineers that the farm and track were gone. The films will be shown Friday night at the Rivoli and if they can be secured at the Wigwam later.

While the track was out rail traffic was routed over the O.W.R.&N. on the other side and crossed the river at Wishram. Mail was handled in the same manner.

Within a few hours after the track was wrecked steam shovels were working on both ends of the slide and traffic was resumed late Thursday night.

SKAMANIA COUNTY PIONEER, FRIDAY, DEC. 19, 1930

Cape Horn Bridge Finished Evergreen Highway Open

With fully five hundred people from all parts of the Columbia Gorge congregating to celebrate the opening of the Cape Horn sector of the Evergreen Highway, Tuesday marked the greatest day in road history of Southwest Washington.

After the visitors inspected the gigantic engineering feat and marveled at the awe inspiring view from this point, they came to Stevenson where they attended a turkey dinner served at the Hot Springs Hotel.

After dinner was over they assembled in the Masonic hall where President A. C. Sly of the Stevenson Chamber of Commerce presided over the program. The first speaker was harris G. Burnham, publicity chairman of the Vancouver Chamber of Commerce who drew a picture of Southwest Washington and showed the location of the old and new Evergreen Highways.

Engineer Walter A. Schwarz, district engineer of the Washington State highways, was introduced. He gave a very interesting history of the early thought, attempts and action in years gone. He said the beginning of the highway, whose completion was celebrated Tuesday, had its birth away back in history in 1850 when a party was chosen to view the route from Vancouver, then called Empire City, to the east. These men, after a trip over the mountain faces and through the

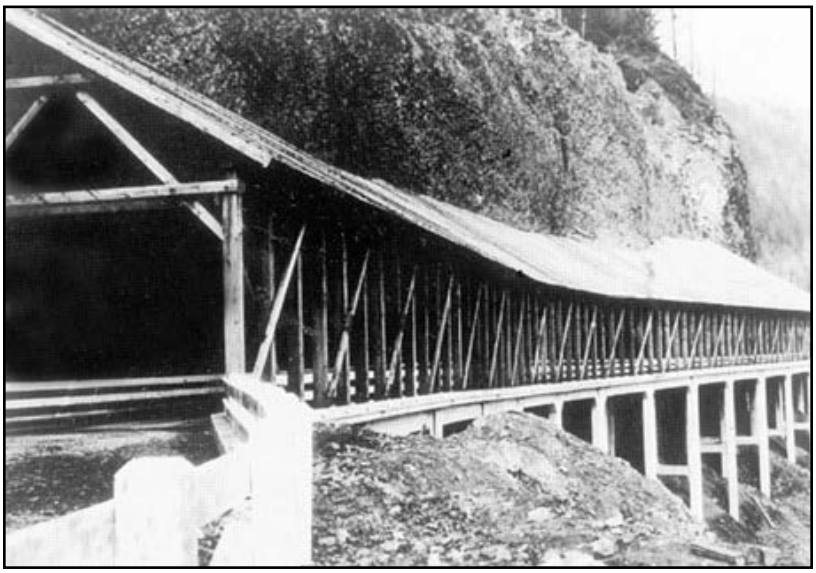
The "shed," as it was known locally, sheltered the bridge crossing the face of Cape Horn above the Columbia River. It was placed over the structure to prevent rocks from falling on the highway. The shed was replaced with wire fencing over the cliffs in the 1960s.

From the collection of Bill Koitzsch

VANCOUVER COLUMBIAN

75 years

State Highway 14 was chiseled from muddy, primitive origin



Wood cover to protect automobiles from getting hit from falling rocks on Highway 14 at Cape Horn in Western Skamania County. The state erected screens to divert the rocks in the 1960s.

By MARK E. PARSONS

State Highway 14, through the Columbia Gorge between Vancouver and Pasco, is 75 years old this month.

Originally known as the North Bank Highway in 1907 it never equaled in notoriety the El Camino Real, the Blue Star Highway or the New Jersey Turnpike. But when the highway finally connected Vancouver with Eastern Washington that summer, it was heralded as this state's answer to a nation's call for a transcontinental road system linking every city in the Union.

The idea for the road came after the Indian Wars of 1856-1858. It was decided by the government to build a military road between Fort Vancouver and Fort Walla Walla, where there was still Indian unrest.

A survey was made in the 1860s but there was little construction after that. A few short sections were built but never maintained and they soon became overgrown. There were no bridges. Rivers and streams were forded at one's own risk. Wherever terrain became too rough, the road ended.

The military road advanced east from Vancouver and west from Walla Walla with little sign of it between.

Most road existing along the Columbia before 1900 only led to the steamboat landings below the little communities.

Almost all travel through the Gorge

was on the great steamers paddling up and down the river between The Dalles and Vancouver.

Initially, they stopped only if signalled. But as shipping and passenger traffic increased, they began making regular stops. By 1907, the river had all the traffic it could bear.

Homesteaders were flocking to the new state and legislators saw the need for more roads.

About the same time, across the country, there was a call for improved roads and highways which would link the nation.

Money was set aside by the state and a road system was born. As work started on the North Bank Highway it was soon found the old Military Road's orignal path was inadequate. Many changes were needed. There was no longer a need to run the road to Fort Walla Walla so Pasco became the eastern terminus.

Teams of men with picks and shovels hacked their way through the sides of hills. Small ravines were filled from horse-drawn skids of rock. Trees and stumps were removed.

At last the scrapers, pulled by as many as six horses, smoothed the surface. The bridge sections were fabricated and shipped up river by steamer. The bridges were erected on the site with steam-powered winches and wooden cranes.

The North Bank Highway and its bridges were never intended to carry the traffic it was to carry in the next 75 years. A small reminder of this fact was to be seen in the steel bridge removed just last November from over the Washougal River along the original roadway. It was said to be the oldest steel bridge in the state and its inability to handle two trucks at once attested to the exectations at the time.

The first roadway was bumpy rock studded and narrow. It was also crooked, dangerous and often too muddy to travel.

After the automobile's advent, tire chains were common in both summer and winter after a rain.

Although the highway was completed in 1907 it wasn't until June of the next year that an automobile traveled for any length on it. That year, Ned Youman, of the Youman-Simpson Lumber Company of Carson, made a name for himself by driving his new automobile from Vancouver to Stevenson.

The new "horseless carriage" did not have the headlights which were becoming popular for night driving, and he and his passenger became lost in the logging roads near Cape Horn. They found their way into Stevenson navigating by the stars.

The problem existed all along the route as logging roads and the highway was sometimes one in the same.

The era of the automobile brought about much outcry for improvements.

As the speed of the automobile increased the road's corners were straightened. As trucks traveling the highway became wider, so did the highways and its right of way.

In the 1930s, the first blacktop was spread on the highway.

As the North Bank Highway took on a new look, it also took on two new names. It became known as State Road 830, or, more lovingly, The Evergreen Highway.

Later, old Highway 830 would be shortened to State Highway 14 in a state wide numbering system.

swamps along the Columbia River returned with the report that a road could not be built, except to the flats of the river, where Washougal is now. That only a crow could make its way up the north bank. Later Mr. Schwarz said, a winding country trail was built by Clark County to Cape Horn. Still later a surveying crew, under the leadership of Engineer Cook, established the road up the Washougal canyon.

The Skamania County people bonded the county and built a road across the county, which in reality was the beginning of the Evergreen highway and probably did more to cause the road to be built than any one thing.

The state legislature then enacted a law creating the highway department and in cooperation with federal aid laid its plans for the construction of that great arterial highway that is now considered one of the most important roads in the state, if not in all the Pacific Northwest.

Mr. Schwarz told briefly the struggle, the superhuman task of building the Cape Horn bridge after the fatal shot of 1927 that blew the face of the mountain into the Columbia River, and delayed the completion of the Evergreen from Washougal to Stevenson almost three years.

Mr. Schwarz then introduced Harry Kline, resident engineer for the state who worked out the survey of the road from Mt. Pleasant to Stevenson and who, in cooperation with the state engineers, devised a plan to make a cement bridge to replace the face of the mountain where the road was to be built. Engineer Huber of the Union Bridge Company, whose company did the actual work, was also introduced.

After these men spoke, President Sly introduced Fran J. Terrace of Orillo. Mr. Terrace was the personal representative of Samuel Hill, the father of good roads in Washington and Oregon. Mr. Terris simply thrilled the audience for almost an hour telling the early history of good roads in this state and in Oregon where he and Mr. Hill have labored long and hard in the interest of roads. He paid a high tribute to Mr. Hill and urged greater speed in road building as a developer of the country, the farms, the markets and of civilization. His remarks were intersperced with interesting stories and droll bits of humor, but his talk inspired his audience.

A telegram from Mr. Hill, who is now in New York, was read at the meeting by Mr. Swartz. Mr. Hill complimented all who were connected with the road and urged Washington to open her roads to north, south, east and west.

Completion of this link now opens the entire stretch of the Evergreen Highway from Vancouver to Stevenson making what is known as the century drive. It saves the motorists about three miles over the wining loops around Cape Horn and in time saves about half an hour bringing Vancouver within about an hour of safe driving from here.

The view from the new bridge shows an expanse of river and mountain scenery that is unequaled in the west, a view that will bring hundreds of people through the county during the summer months.

The bridge is about 400 feet long and is covered with a network of heavy timbers supporting a plank roof to protect the people from falling rock from the face of the cliffs above. The roadwork at this point is 870 feet above the river.

Letter From Elmer Crispien to Sharon Tiffany, Director of Columbia Gorge Interpretive Center

3376 "G" Street
Washougal, WA 98671-2959
June 30, 2002

Dear Sharon:

After your phone call to Doris about a Cape Horn Bluff, I strained my memory, talked to my brother, Bill, and to a few other people in regards to their memory of the area.

We think the Belle's Bluff referred to could be named after the Belle Center Road that went up over the Cape Horn Bluff.

At Cape Horn, a rock point extended into the Columbia River. A tunnel was punched through for a railroad prior to 1908. Skamania County had a County Road built along the bluff to a Stevenson, Anderson, Elliot and James settlement. This was on a flat, just before reaching the Columbia River.

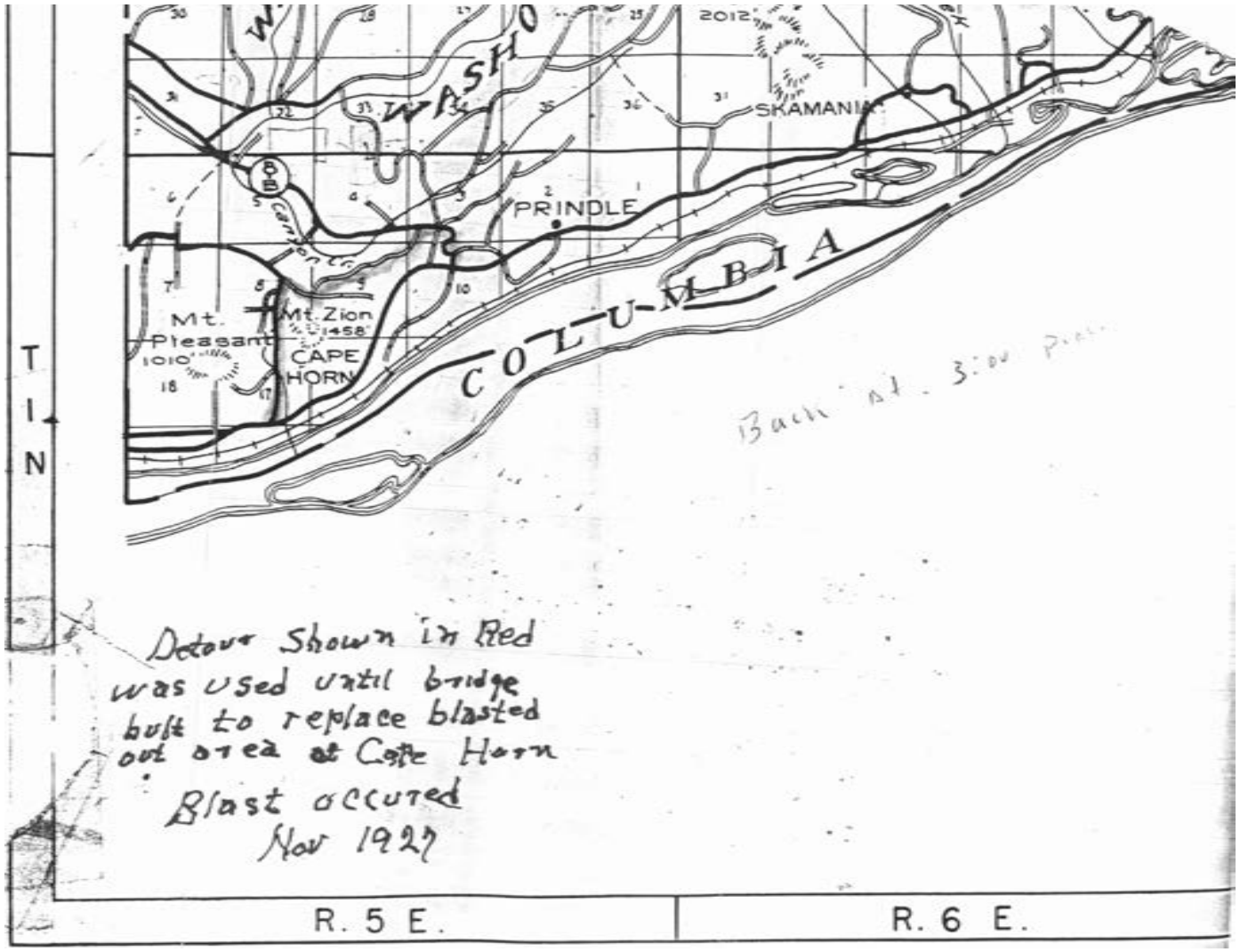
When a new highway from Camas to Prindle was built, to follow the Columbia River instead of the Washougal River, contractors blasted one hillside which covered John Stevenson's cabin, Ben Stevenson's home and farm buildings, a section of county road, 600 feet of railroad track and the old Cape Horn Boat Landing. (The Breslin home is still standing and livable). A bridge had to be built to cover the blasted out section, is order to join the east to the west parts of the highway. During the time the bridge was being built, the highway detoured from Belle Center Road. Coming east from Washougal, the Belle Center Road started near the L. B. Johnson place, went up a hill past the old Mt. Pleasant Grange, which was on the North side of the road, (this detour was on the left side of Mt. Zion, also known as Biddle's Butte), up over the Cape Horn Bluff and down past Cape Horn Dump to the Cape Horn crossroads. You no doubt have most of this history, but hope this may be of some interest.

Sincerely,
ELMER CRISPIEN

E C/D Crispien

Some information from my brother Bill:

In 1840 or 1860, John Stevenson (father of Ben and Emery) homesteaded 160 acres on the east side of the bluff. He built a log cabin and later moved his family to more level land near the river. In the early 1920s, Bill and three of the Stevenson grandchildren attended the old Cape Horn Grade School. The teacher took them to this old homestead, which made a lasting memory.


WASHO
SKAMANIA
PRINDLE
COLUMBIA
Mt. Pleasant
1010'
Mt. Zion
1458'
CAPE HORN
T. 1 N.
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R. 6 E.
Detour Shown in Red
was used until bridge
built to replace blasted
out area at Cape Horn
Blast occured
Nov 1927

1927 Construction Disaster: Huge Explosion Ripped Cape Horn on Historic Highway Project

Camas Post-Record - June 26, 1974

(Editor's Note: This is the first in a series of articles looking back to the later 1920s and early 1930s when the highway over Cape Horn, and more specifically the Cape Horn Bridge, overcame many difficulties and one major disaster on the way to completion. We offer many thanks to the Washington State Highway Department and District Engineer Dick Carroll, who provided the photographs; to L. H. Bode, highway engineer who worked on the project in 1929 and 1930 and who is now a resident of Vancouver, and to accounts of the effort in "The Camas Post." Without this assistance, reconstructing the story of the project would not have been possible.

By Bill Mackey - Post Record Editor

Scenic and spectacular Cape Horn, the sheer rock face rising up out of the Columbia River east of Washougal and climbing hundreds of feet above the sometimes placid, sometimes boiling waters, has not always been a tourist attraction and a part of the "Evergreen Highway."

Until December 23, 1930, when a large crowd gathered for ribbon-cutting ceremonies to open the new section of highway, traffic bound for the interior of the Columbia Gorge had to wind its way up the Washougal River and across behind Cape Horn, or cross the river at Vancouver and travel up the Oregon side.

Prior to 1927 when construction actually began on the stretch of road across the face of The Cape, engineering studies determined that this route was possible, but that a roadbed would have to be blasted in the face of the cliff to support the road.

The Camas Post, in the October 28, 1927, issue, details the planning for the huge explosion:

"As a thoroughly reliable forecast, preparing for the inevitable upheaval, this section of the terrestrial globe is due for an earthquake in the very near future. The exact date, it was learned Sunday night by *The Post* inquisitor, is to be given out to some at least by the earthquake manufacturers.

"The most that is now known it is that it is surely going to happen, and that the

seismic disturbance will center at Cape Horn mountain and along the route of the North Bank Highway.

"A few of the details were learned by John Karnath while at Cape Horn last Saturday. The power behind this earth tremor is blasting powder which is now being stowed away for the final electric spark touching off the blast.

"Some idea of the magnitude of the force to come is gained when it is known that it will require 60 tons of explosive, or two railway car loads. The tunnel receptacle is being now drilled through a distance of 300 feet in the solid mountain rock.

"When all is ready the shot will be fired and the vibrations felt.

"Blowing off the entire hill top at one shot is part of the constructive program of the contractors on that section of the highway, as it is the quickest and least expensive way for getting a roadbed foundation at that point.

"It is not expected that this blast, though an immense charge, will provide greatly spectacular. Powder men who know their job, prepare the shots according to the results desired. In this instance the earth surface will probably merely lift up, rent asunder and turn over.

"Some local people, however, plan to be near the scene when the shot is fired."

It's particularly interesting at this point to note the casual confidence of the planners in describing the proposed explosion and the eventual result, especially with the result of the blast that was touched off the last week in November of 1927.

First reports in the *Camas Post,* December 2, 1927, describe it this way:

"The highway department engineers, contractor and sub-contractors, connected with the road construction job on the North Bank Route on Cape Horn have insisted from the first that the 50-ton powder blast exploded last week gave results particularly satisfactory for improving the highway past the precipitous bluffs at Cape Horn.

"The feature of it that was not anticipated, much less desired, was the considerable damage that occurred when the ponderous mass of earth, rock and forest trees tobogganed towards the Columbia carrying the Stevenson family home, and some livestock into the river burying the farm under tons of crushed stone, and taking along several hundred feet of S.P.&S. railroad track and grade.

"The latter has since been repaired so the trains, operating on slow orders at that point, are making scheduled time. Relative to the future course of action along that unit of the highway grade, no expression had been ventured by the contractors early this week, it was learned through a department employee."

The above story carried in the *Camas Post* under the headline, "BIG POWDER BLAST JUST RIGHT," brought Ben Stevenson, owner of the farm buried under the avalanche of stone and debris, storming into the newspaper with his eye-witness account of the shot.

"If they call that a 'successful' shot, I'll be durned if I care to see one of their failures," was a laconic ejaculation of Ben Stevenson in commenting on the 40-ton (note the changes in the size of the powder charge as the story goes on) powder blast touched off at Cape Horn Tuesday."

"Stevenson, who was in this city at the noon hour, spoke in the above vein after reading a brief dispatch in a morning paper under at Camas dateline, to which it was given out that the big shot results were just about what the contractor wanted and planned.

"According to Stevenson's temper, it was all and a good deal more than the contractors and anybody else wanted, and it is his estimate that the shot will yet cost the state a half a million dollars.

"However that may be, different ones in the contingent of visitors from this city have expressed opinion that Cape Horn is wrecked and ruined, and its once scenic beauties have been obliterated through the explosion of the forty tons of powder."

The story goes on to provide additional information on the preparations for the blast and the reasons for the failure.

"The shot appears to have been very much farther reaching than was anticipated. The original plans were to drive the 'coyote holes' about on a level with the grade for the North Bank Highway bed, and shoot the strata loose. Instead of accomplishing that purpose, the force of the blast is said to have been downward and outward, shattering the entire bluff side to the base and tearing loose an estimated amount of 200,000 yards of broken rocks and earth.

"One party declared there is enough rock in the debris to rock all the the roads in Clark County. The reason assigned for the shot taking this course is that the bluff deposit is what is known as cube rock. Had it been of a more solid nature, the results expected would have been realized, it is claimed."

Final damage reports show that the barn, dwelling and some livestock of the Stevensons had been buried or carried away by the debris from the blast that thundered down the hillside, between 500 and 1,000 feet of railroad and grade was ripped from its location and hurled into the Columbia River, and the dock and water works at the Geo. Breslin residence were seriously damaged and that access to the Breslin home is made only by walking.

This write recently interviewed L. H. Body, engineer for the highway department on the Cape Horn project, and much of the information from that interview will be carried in next week's *POST*.

On Historic Construction Project:

Highway Engineers Elect To Bridge The Gap At Cape Horn

Camas Post-Record - July 3, 1974

(Editor's Note: In last week's Post-Record, and in the first article of this series, a detailed account of highway construction work across the face of Cape Horn east of Washougal was carried along with an account of the disastrous explosion that was expected to carve out the roadbed. The thundering landslide that accompanied the blast destroyed a farm, barn and livestock, and did nothing to create the roadbed required by the contractors. The project then came to a halt until when a new effort was launched that resulted in the completion of the highway. L. H. Bode, highway department engineer of the project in 1929 and 1930, has a vivid recollection of the work in the area, and he was interviewed by the Post-Record to complete the history. Bode is now a resident of Vancouver.

By Bill Mackey - Post Record Editor

L. H. Bode, engineer for the Washington State Highway Department on the Cape Horn Bridge Project, and now a resident of Vancouver, has a sharp recollection of hazards, difficulties and successes of the Evergreen Highway effort.

When interviewed by this writer, Bode first provided some additional information on the first effort that failed when the big blast ripped the face of Cape Horn.

Bode explained the contractor first drilled what were called "coyote holes" and and filled them with dynamite. "The contractor was just going to peel off the surface and dump the material overboard," Bode explained.

"The contractor or the power company — they often would engage a powder company expert to come in and supervise the drilling and the placing of the powder — then set the charges."

Bode explained that when the blast went off, the force kicked out the bottom instead of going up, and "the whole smear went down the hillside." The blast moved the railroad right out into the river, and trains were routed on the Oregon side of the river until the tracks could be cleared.

"Well, at first it looked like the blasting had been a success, but all that really happened was that a big mass of rock had slide down the hillside.

"Then the contractor started in with the power shovels to move the rock away, and lo and behold they discovered they had no foundation," Bode continues.

"No foundation at all. The blast had just blown the rock down. Then the contractor saw what he was up against. He buttoned up his coat and went home, and said 'to hell with it.'

"Then the bonding company had to come in and finished up the project," Bode explained.

The bonding company went to the state to decide what was the best way to finish the project, and the state said there was only one way to complete the highway across the face of Cape Horn — to build a bridge.

"The contractor awarded the new pack to the Union Bridge Company and they built that bridge," Bode continued. they spanned the section kicked out by the explosion with a bridge.

During the delays in construction caused by the disastrous explosions there was some confusion as to the actual method to be used to complete the project, however.

On July 13, 1928 J. H. Cline, resident engineer in charge of the section of road between Washougal and Prindle, was interviewed by *The Camas-Post* staff.

Kline said he expected the road would be cleared and graded by June of 1929, and that it should be open to traffic late that summer.

Four steam shovels and 75 men were working in the Beacon Rock area and another shovel on the roadway near Stevenson.

Asked if he thought it would be necessary to construct a bridge around the section blown away at Cape Horn, Kline replied that such a plan would not be feasible. He said that the roadway would probably be cut farther back into the hillside instead.

Kline went on to say that a bridge would be in constant danger from rocks falling from above, which would ruin the concrete work.

The engineer explained that the new North Bank route would cut at least six miles off the route between Camas and Stevenson. The driving time would be materially reduced as a much greater speed would be possible.

Traffic at the time was flowing over the old Washougal River Road with its many curves and narrow width.

On March 22, 1929, *The Camas Post* again reviewed developments toward the completion of the highway across the face of Cape Horn.

Kline said in that interview that the highway would be completed to Stevenson via Cape Horn by late fall. He repeated that bridging the gap caused by the Cape Horn blast was still the biggest problem facing the highway department in the completion of this section of the North Bank Highway.

Kline disclaimed knowledge of the method to be used in crossing the gap, but he

newspaper staff had learned from another source that a concrete bridge was to be constructed in the area.

By this time a total of $963,800 had been appropriated for the engineering, construction and betterment of the road from Vancouver to Maryhill, and an additional $50,0000, supposedly for the bridge at Cape Horn, had been appropriated by the State Legislature.

On June 28, 1929, *The Camas Post* learned of the final decision to bridge the gap on Cape horn.

An article in the newspaper explains, "A 500-foot concrete bridge is to solve the problem of crossing the bare pile gap torn in the Cape horn two years ago when so many tons of dynamite were set off to provide a ledge for the roadway but instead moved the whole mountainside into the river.

"The contractors were unable to complete the work following the disastrous blast and it is to finally be handled by their bondsmen. How the gap was to be spanned has been a matter of controversy ever since the blast ruined the roadway.

"The bridge will be reinforced concrete and will be covered with a rock shed to prevent injuries to travelers from avalanches. The river-side will be open to permit full enjoyment of the sweeping view of the gorge from the road high on the side of the cliff."

And on August 16, 1929, in a meeting at the Fort Rains Inn, it was decided to change the name of the North Bank Highway to the Evergreen Highway.

Representatives of Vancouver, Camas, Washougal, Stevenson, Carson, Bingen, White Salmon and Goldendale met at the inn to consider a name for the scenic route, and there was still some support for the original name.

The group finally decided that there was publicity value in the name "Evergreen," and a resolution asked the State Good Roads Association and the Legislature to adopt the name Evergreen.

At the time of the meeting, completion of the route was expected in September of 1930.

Next week, in the third article in this series, L. H. Bode will describe the difficulties in constructing the bridge across Cape Horn.

L. H. "Les" Bode Recalls Cape Horn Bridge Project

Camas Post-Record - July 10, 1974

(Editor's Note: This is the third in a series of articles recalling the struggle to construct a bridge across the face of Cape Horn as part of the Evergreen Highway. Following the big planned explosion of 1927, that was designed to carve out a roadbed in the face of the cliff, but instead turned into a disastrous landslide, engineers elected in 1929 to bridge the gap across the face of Cape Horn. L. H. Bode, now a resident of Vancouver, was an engineer for the highway department on the bridge construction, and the information for the following article was taken from an interview with him.

By Bill Mackey - Post Record Editor

Les Bode transferred to the Cape Horn Bridge project from the Olympia District, and he has a sharp recollection of his first day on the job east of Washougal.

"The first thing the foreman did, after he introduced himself, was to take me up there and show me what they were doing. They were stripping all of the loose rocks, dirt and debris off the hillside, and I'm telling you I had a death grip on the rope when we went up the cliffs," Bode recalled.

"They drove what they called draft pins, or steel bars, into the rock face where they could, and they tied ropes onto the pins. The men went down the ropes just like mountain goats to peel that loose stuff off.

"When I got acclimated I never thought a darn thing about walking right along that edge. You get used to a lot of things," Bode said.

Bode said the state spent thousands of dollars to comb the hillside and remove the loose material in order to make it safe for the workers.

Then the workers did a lot of pick and shovel work to carve out footings for the bridge structure. Then they poured concrete columns to support the bridge.

One of the few benefits from the 1927 blast was that it provided an unlimited quantity of rock for concrete and for road surfacing material. The rock was placed in a crusher, then moved to a bunker, and finally trucked to the construction area where it was needed.

Bode said there were few injuries on the project, but that the biggest hazard in the construction area was the wind. "They had to shut down every once in a while

because of the wind," Bode explained. "You could pick up a piece of shiplap 12, 16, or 20 feet long, and the wind would act just like a sail. It would just turn you right around.

"You could sail right down into the drink," Bode continues. "This was the main hazard. Lots of times they had to shut down because of it.

"First they built a trail across the face of Cape Horn, then they poured the footings, and then they poured the columns on top of the footings"

Bode said the concrete was prepared in a mixer near the construction site, and some of it was wheeled out in carts to the place it was poured. "When the mixer was located near the pouring site, some of it was run down through a funnel, and on through what was called an elephant's trunk.

"These were long sections of metal hose, you might say," Bode continued. "The worker would dump his load of concrete into the elephant's trunk, and it would go down the hose to the place where it was wanted."

Bode said that most of the concrete went into the column and girder construction. Through the use of an elevator and the elephant's trunk device, much of the concrete could be delivered to the construction site without the use of a cart.

Construction workers put in eight tough hours five days each week, and some of them went to Vancouver or Portland on weekends. During the week they lived in a construction camp at the west end of the bridge project. The cookhouse, pictured in last week's *Post Record,* provided meals for the entire crew. Bode lived in a cabin across the highway from the cookhouse.

In next week's edition of the *Post Record* this series will review the construction of the rock shed over the Cape Horn Bridge, and recall the completion of the project.

Two photos with this article, obtained from Mrs. Helena Thagon of Washougal.

On Historic Construction Project:

Back-breaking Struggle Leads To Completion Of Cape Horn Bridge

Camas Post-Record - July 31, 1974

(Editor's Note: This is the fourth and final article in a series on the construction of the Cape Horn Bridge across the face of Cape Horn east of Washougal. Once again we offer our thanks to L. H. Bode, engineer for the Washington State Highway Department on the project, to Dick Carroll, currently district highway engineer who provided the pictures, and to the pages of the ***Camas Post*** *for much of the information. The work in the area began in 1927 and was completed late in 1930.*

By Bill Mackey - Post Record Editor

Described as "one of the most spectacular pieces of highway construction in the west," the highway over Cape Horn was officially opened on Dec. 16, 1930. This completed Washington's first all-year highway through the Cascade Mountain range.

The history of the project shows the attempts to to blast a shelf in the rock face of the cliff for a roadbed, the back-breaking work building forms and carrying concrete for bridge supports, and the clearing of the face of the cliff so loose rocks would not tumble down on the workmen.

Late in 1930, only one thing remained. L. H. Bode, highway department engineer on the project in 1930, who is now a resident of Vancouver, explains:

"The contractor who build the rock shed over the road at Cape Horn got paid by the number of board feet of lumber he put in the roof," Bode stated, "and you can see the roof isn't uniform. It was cut to fit the contours of the rock face.:

"So how are you going to tell what he put up there? You're going to go right up on top of the damn thing and measure it."

"I got stuck with the job myself and another boy who now lives in Vancouver named Roy Ziegler. The job was finished and the contractor wanted to get his money."

"The weather finally was just right," Bode continued, "so Roy and I said to hell with this — let's go up and measure the roof."

Bode and Ziegler went up the steep roof, where one slip would have sent them skidding off the edge and own the cliff to certain disaster, and completed the task that also finished the project.

On Dec. 16, 1930, a large delegation including people from Camas, Washougal,

Vancouver and Stevenson met at 10 a.m. for the formal dedication.

Oregon Governor-elect Julius Meier was at the construction site, along with Samuel J. Humes, state highway engineer, and Walter A. Schwartz, district highway engineer.

Feature speaker for the ceremony was Frank Terrace, western director of the American Road Builder's Association. Terrace represented Sam Hill, railroad magnate, who was unable to attend the opening ceremony.

A telegraph message from Hill was read to the gathering, and greeting were presented by Clement Scott of Vancouver, a state representative-elect. A. C. Sly, president of the Stevenson Chamber of Commerce, F. M. Lash, Camas superintendent of schools, E. S. Lindley secretary of the Vancouver Chamber of Commerce, W. B. D. Dodson, manager of the Portland Chamber of Commerce and George Y. Moody, of the Washougal businessmen's committee.

Speakers predicted that the Evergreen Highway would soon assume a large share of the traffic which was carried by the Columbia Highway on the Oregon side of the river.

Engineers, in planning the Evergreen Highway, constantly kept in mind the fact that it must be useful both in summer and winter, and therefore it was expected never to be blocked by snow.

Following the ceremony that opened the $250,000 Cape Horn Bridge, which was held with drizzling rain and clouds hanging over the Cape, the visitors, carried in over 100 cars, proceeded on to Stevenson.

The following is a report from *The Camas Post*, Dec. 19, 1930, on the festivities at Stevenson:

"At ceremonies at Stevenson, so large was the crowd of spectators and hungry guests that the town and stores were literally overrun by well-wishers. The hotel was filled to overflowing at two sittings while the town restaurants were unable to handle the large crowds."

"Many prominent local citizens were among those seen waiting on tables and carrying out dishes in order to speed up the eating process."

And that ended the years of struggle, the failures and successes, on the way to completion of the Evergreen Highway over Cape Horn.

Today, almost in the same roadbed, the Evergreen Highway winds its way to Stevenson and beyond to the eastern side of the Cascades.

And, although hundreds of cars pass over the Cape Horn Bridge daily, few know of the struggle that made the trip possible, and most are unaware that the Cape Horn Bridge, minus the rock shed, is still there.

As L. H. Bode described it, "The bridge will be there until you and I are both gone."