



Irrigation flume wends way from Panther Creek toward yet-to-be-built High Bridge over Wind River.

## **Carson - Wind River Valley Water Supply**

By Ivan Donaldson  
Skamania County Historical Society

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**E. J. Weigle home north of Carson. (This and other photos presented to Skamania County Historical Museum by Paul Boyd.)**

Much of the soil of the Carson Valley is a shallow sandy layer deposited on top of the geologically recent Trout Creek Olivine basalt lava flow. This is the lava flow which filled the Wind River canyon to a considerable depth, dammed the Columbia River, and created the Panther Creek reef or lava dike which is described later in this article. The soil, while fertile and productive, dries out quickly and crops grown in this valley require frequent watering in the summertime. Contra to this statement is the knowledge that the early strawberry fields produced well with no irrigation water.

During the first decade of the 1900s, entrepreneur and promoter, B. M. Hawley of Home Valley, Washington, and his associates began action upon their dream to convert the heavily timbered Carson Valley into an agricultural paradise. These gentlemen indulged their expensive fantasy to initiate construction of an irrigation flume which to extend from Panther Creek six to eight miles to the semi-level Carson Valley plain as we know it now in 1984.

Skamania County records show that on 1 April 1907 B. M. Hawley filed for a water right on Panther Creek, tributary to Wind River, for 60 cubic feet per second of water, giving the point of diversion and stating it was for irrigation, power, and domestic use.

Again on 7 May 1908 Mr. Hawley, as president and manager of the “Home Valley Development Company”, filed on Panther Creek at the same point and asked for 400 cubic feet per second of water. This application stated that the water was to be carried a distance of seven miles by open ditch, flume, culvert and tunnel.

Then on 2 December 1908, Mr. Hawley filed for 600 cubic feet per second of water, giving the same location on Panther Creek for the point of diversion.

On 10 December 1908 G. M. Illingworth from Hood River, Oregon, filed for 700 cubic feet per second of water from a point farther up Panther Creek, and it looked as if a war over water might develop there, but evidently Mr. Illingworth discovered he had filed too late and that all available water had been reserved by the prior filings.

The next entry made in the records was the filing of letters of incorporation forming the Home Valley Irrigation & Power Company with capital stock of \$50,000 divided into 500 shares at \$100 each.

On 19 June 1911 the new corporation filed deeds covering the right-of-way purchased from Xenophon Wade, E. J. Weigal (we think this name is correctly spelled “Weigle” after whom the geological formation in that area was named), and Wm. Thurston, Sr. This was followed by the outright purchase of land, the prices paid ranging from \$255 to \$600 per acre.

Mr. John Allinger, Skamania County Assessor at that time (1962), commented in a letter, “These same tracts (in the years closely preceding 1962) have sold for \$20 to \$100 an acre in the past few years, showing that the attempt to promote the area as a fruit growing center did not work out, whether it’s the lack of water or soil conditions I’ll not attempt to answer.”

Mr. Hawley sold a good number of lots at Home Valley to several individuals including a Mr. Cook and Christina Cook. Nothing more was found in the records pertaining to his irrigation plan, however. Physical evidence still exists today of the presence of a ditch and tunnel.

To those who lived in the Carson Valley during the 1900-20 period, it became evident that the leaders of the irrigation development company had a larger scheme. Older residents recall that these gentlemen purchased other parcels of land from the original homesteaders at a very low price with the idea of reselling at inflated prices to eager farmers who would surely flock to the excellent soil, and arable land.

These promoter optimists had pamphlets printed extolling the marvels of the Carson Valley as an agricultural area. (At least one of these pamphlets exists yet in a Carson home.) One of the photos used in this circular shows ship’s captain Anderson (Dewey Anderson’s father) as a young man standing by one of his family’s heavily laden pear trees.

Ten postcard-sized photographs (fortunately given to the Skamania County Museum by Paul Boyd) show the point of diversion of Panther Creek into the flume as two miles upstream from the present bridge across Panther Creek. They depict the substantial wooden flume as having been made of rough cut 2” x 12” Douglas fir boards. It measured 2’ wide by 2’ high, hence it was designed to carry a considerable quantity of water. The lumber was cut by B. M. Hawley’s small steam-powered mill located about 2 miles north of the later high bridge site. A portion of the flume was built prior to construction of this first high bridge across Wind River, which many readers will recall traversing before it was torn down in 1956 or 1957 and replaced with the present structure.

The flume at its origin was sited on the east side of Panther Creek and extended from there to a point 300 feet upstream from the existing Panther Creek bridge, where it was trussed across to the west side. Here the water entered a tunnel 200 feet long excavated by hand through a rocky ridge of earth. Then it turned south toward Carson.

For the free privilege of attaching his flume to the anticipated first high bridge, Mr. Hawley cut and supplied the lumber used in the bridge construction, but the flume never reached that point. When completed it was approximately five miles long with its several branches ending at a point

three miles north of the old suspension bridge. The one or two smaller branching flumes were extended to acreages deemed suitable for agricultural use. The most lengthy of these was about one mile long.

Tragically, this “too early” flume attracted only two customers: Messrs. Hale and Cassidy. With no remaining capital and few customers to pay for water, the irrigation company went bankrupt.

At that time (1907-1915) very little land had been cleared of that “worthless weed” called Douglas fir. These magnificent old growth trees were considered to be a serious impediment to farming, and Herculean steps were taken to kill and burn them. The Anderson family bought a number of these giant clear-grained firs, 4 to 5 feet in diameter, for 50¢ per cord.

Mr. Ed Hollis of Carson purchased 20 acres of such timberland for \$700, and sold it many years later for more than \$70,000. This parcel had been homesteaded by the senior Rudolph Glur. In 1926 another Carson resident paid \$250 in delinquent taxes and received clear title to 23 acres of timberland. This tract sold for \$35,000 in 1978.

In 1920 Tom Underwood made an attempt to repair the Hawley flume and reopen the tunnel. Dewey Anderson worked on this project, and recalls seeing two older foreign miners inside the shaft shoring it with timbers and removing rocks and earth which had occluded this conduit. Water was delivered to and through the tunnel but the flume and bore were soon abandoned without productive usage. Now, with passage of time and many rains, the flume timbers have rotted and disappeared.

On a scouting trip in August, 1983, Dallas Forrest, Richard Weaver and the writer, all associated with the Skamania County Historical Society, found no trace of the flume, but the tunnel is certainly very much in evidence. A 30-foot long section of the middle portion has caved in, thus giving four possible points of entry, however, none of the three men were foolhardy enough to enter this dark and dangerous area to explore further. Official Skamania County records denote many land transactions near Carson and at Home Valley by B. M. Hawley and wife, May M. Hawley. To illustrate: On 8 October 1921, B. M. Hawley and wife May transferred 11 Home Valley lots to one L. G. Hawley (believed to be their son), and on the same day L. G. Hawley deeded three Home Valley lots to Mrs. May M. Hawley.

Earlier, 7 September 1915, Mrs. Christina L. Cook sold a parcel of land to B. M. Hawley. (We do not know whether this Mrs. Cook was the wife of Charles Cook after whom the Cook, Washington post office is named. Various people or entities, including the railroad, added an “s” to the name and thus changed it to “Cooks”; but the following quotation from page 45 of CLARK COUNTY HISTORY, Vol. 5, 1963, states: “. . . The first post office to be established in (Skamania) County (came) as a direct result of the building of the S P & S (railroad). It was named after Charles Cook, purser on the Columbia River steamer, “D. S. Baker”.. .”)

Since 1907, the Carson Valley has produced many fruits and vegetables, but the early efforts to make it productive did not always meet with success. At least one family endeavored to grow apples in the late teens or early 1920’s. It is recalled that travelling salesmen, including Stark’s Nursery representatives, sold various fruit trees to the home-owners in the Carson Valley. Dewey Anderson’s father purchased enough Ben Davis and Black Astrachan apple trees to plant 11½, acres about one mile north of Carson. The trees bore fruit, but the Ben Davis variety was deemed inedible, and the Andersons could not give these apples to their friends or visitors. Some of these trees still can be seen growing where they were planted so long ago.

For many years Rudolph Glur supplied water from Carson Creek to the people in and immediately adjacent to the town known as Carson. The pipes used were of small diameter, and the pressure was only moderate or non-existent. Those people living at the distal ends of the ½” piping did not always receive the water needed for house and gardens. The length of some of these lines discouraged some people from settling in the valley.

A second Carson Valley water supply works (small, but significant) was developed 60 or more years ago by Henry Metzger, scion of a pioneer family, who placed hydraulic rams below two and possibly three springs on his property, north of and adjacent to Carson, to provide water for his five



**Hand-bored tunnel permits flow of water into irrigation flume.**

or six neighbors located along Wind River Highway to Shipherd Falls road. He also purchased a strip of land adjoining his place on which another spring was located, thus having an additional supply of water available. The rams forced an adequate supply of pure water up into a 600-gallon wooden reservoir. Early settlers who remember this system do not recall any problem with winter freezing, nor do they recall when Mr. Metzger stopped supplying water to his nearby friends. He charged only \$1 per month for the service.

The next attempt to bring water to the soil of the Carson Valley was made by the Works Progress Administration (WPA in 1933) at the nadir of the Depression years. Extensive ditching was done all by hand labor to bring Panther Creek water to the Carson Valley for domestic and garden use. By that time more land had been cleared of trees.

The WPA workmen began digging a ditch about the same time Bonneville Dam construction was started — October, 1933 — and continued several months. The ditch was excavated along the east side of Panther Creek approximately along the older flume route. It is not known whether the engineers planned to use the previously excavated tunnel, but it is assumed that such was the case.

In this event, the water would necessarily have had to have been flumed or piped across Panther Creek at the same point where the earlier flume had crossed to empty its water directly into the tunnel. This point of crossing is in itself a significant and historic site, for here, 300 feet above the present bridge, a rocky reef or dike of a strange lava is much in prominence, and this reef was the site and anchor for one of the three splash dams on Wind River and its tributaries. (See photo.)

These when opened were used to create a great flow down Wind River to flush the Wind River Lumber Company logs in periodic log drives down to the Columbia, where the logs were made up into large rafts and towed to the sizable sawmill at Cascade Locks, Oregon. When Mr. and Mrs. Dallas Forrest purchased their homesite 100 feet to 150 feet above and on the east side of Panther Creek in 1961, a considerable portion of the splash dam was still present, but freshets and floods since that time have ripped away all but one foundation log.

This WPA ditch was opened down Panther Creek and the Carson Valley to a terminus about one mile north of the present high bridge. Excavation was all done with pick and shovel by hand labor. The WPA permitted workmen to labor two 8-hour days per week at 25¢ per hour. As many as 10 to

12 workmen were employed during this activity. The WPA hired "Red" Haven, a local surveyor, as supervisor, and the manual labor was performed by other local residents who had very urgent need for this \$4 per week! (They lived on this wage!)

The WPA planned, and would have supplied steel pipe to carry the water from the point of diversion on Panther Creek down to the homes in the valley, and all the way to Carson. The 8" pipe was to have been buried in the excavated ditch.

Unfortunately two local, more affluent and influential local dissidents set out to destroy the project. This they did by spreading false statements about the scope and cost to the farmers who were to use the water. They claimed that the farmers would have to pay water fees for each acre of their entire farmstead, whereas, in truth the farmers would have had to pay for water used only on the number of acres irrigated and for domestic use.

"The next attempt to bring water in the Valley," Mr. Allinger wrote, "was by our Public Utility District, they made an extensive engineering study (to determine the feasibility of piping water) from Tye and Cold Springs to North Bonneville, Wa.

"The Valley has depended on timber (since World War II) as the main source of livelihood (sic) and is still dependent on the logging and lumbering industry. This caused a swinging bridge to be built and dedicated in 1913 to make the access (sic) to the valley more feasible (sic), this (bridge) was rebuilt (in 1925) and used until replaced with the present span.

"With the completion and dedication of a new road out the Valley, we may see at a far earlier date water coming down through the valley as envisioned by those early settlers, who faced the job of opening up this area, yes, we have water in the rivers and creeks and in the air, but not always right in the place we need it most." (Words in parenthesis added by author.)

John Allinger thus wrote about the meritorious dreams to enlist the aid of the Skamania County PUD to bring an adequate supply of water to the Carson-Wind River Valley near the town of Carson. Following an affirmation by the citizens of the valley, and the PUD Board, this agency did undertake that expensive project.

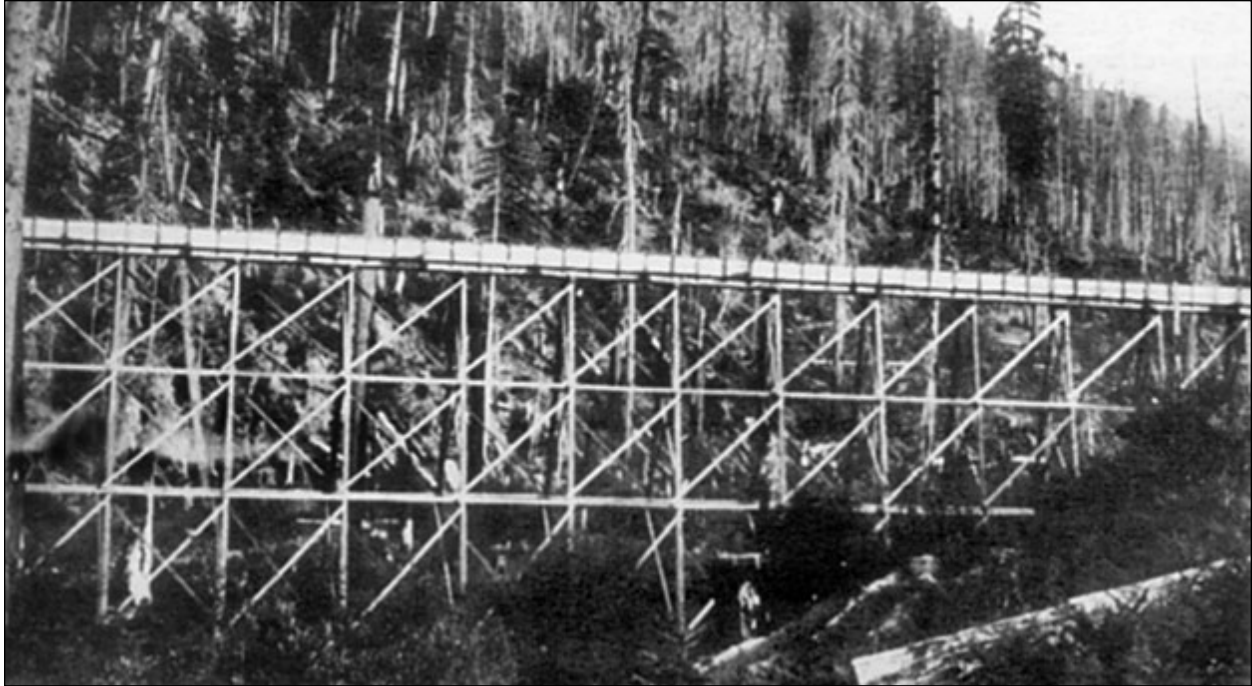
In preparation for this work the PUD in July of 1952 engaged the N. W. Haner & Associates, engineering firm of Portland, Oregon, to design a modern water supply system. Soon after, on August 28, 1952, the PUD purchased the Rudolph Glur water supply system for the sum of \$8,000. After a proper plan had been agreed upon, work progressed over a period of several months to bring the plan to fruition.

At first a log and rock dam was used to divert Bear Creek water into a 12" metal pipe to carry the water four or five miles to the vicinity of Carson where it was joined to the older Glur system. It is not known whether the small pipes of the older system were replaced with larger conduits. Much ½" galvanized pipe had been used by Mr. Glur.

Water now flows in the 12" pipe by gravity to and across Wind River approximately one mile upstream from the present high bridge across Wind River. Here, the large pipe is carried above the sometimes violent stream by a bridge or suspension support at a level high enough to escape damage by destructive floods.

No effort was made to attach this large conduit to the suspension bridge because that structure moved several feet in a wave motion under loads of moving cars and trucks. Inasmuch as the water in the pipe must rise from the bottom channel of Wind River to a level to and above the Carson Valley plain, an inverted siphon is created, therefore the metal pipe must withstand considerable pressure deriving from the elevation of the town above the river crossing.

Until 1975 surface waters (including Bear Creek) could be used for domestic use, but during that year the Federal Safe Drinking Water Act was passed which required that such open supplies of water for domestic use must be filtered and treated with chlorine. As a consequence, in 1976-77 the PUD system was improved by construction of a 750,000 gallon steel storage reservoir and filtration plant west of Carson with a pump installed to lift the water so that it will pass through the filtration system and into the reservoir. A charcoal, sand and gravel filter, plus a floc of alum and other chemicals, is used to prevent passage of sediment and other impurities into homes.



**High trestles elevate irrigation flume in low areas.**

At the time the reservoir and filtration system were built a new concrete diversion dam and channel were constructed to shunt water from Bear Creek into the 12" water main. It is surmised that a grizzly of trash racks prevent logs and forest debris from entering the metal pipe. Records show that the flow in Bear Creek sometimes diminishes to 20 cubic feet per second, however, there has been enough flow to provide an adequate amount of water throughout the area.

A few parts per million of chlorine are added to the water at the filtration plant, but no fluorine is used.

All water is metered into or onto the property of the subscribers. At present 612 meters are in use. The minimum monthly rate is \$10 for the first 400 cubic feet of water, and 65¢ per 100 cubic feet for any additional water used during that period.

The Skamania County PUD also built and operates the Underwood, Washington water supply system. One employee is permanently assigned to work full time on these two systems.

It has taken many years of struggle and planning, but the Carson area residents now enjoy a modern water supply system.

Inasmuch as the agricultural activities, the Hawley flume and home building are irrefutably allied to the geology of the Wind River Valley, the following description of the Trout Creek lava flow which filled the valley may prove of interest to some members of the Skamania County Historical Society. Reference has been made to the rocky reef or dike at the point where the irrigation flume crossed Panther Creek, and where the splash dam was sited. The rock comprising this dike or reef was of such singular appearance that the desire arose to learn its identity and origin; consequently a sample was sent to the geology department of the Washington State Department of Natural Resources for identification.

A letter dated 23 September 1983 gave answer: "Based on the appearance and sample locality of your specimen it is probably "Trout Creek Basalt" (Olivine basalt). Enclosed is an excerpt from the soon to be released Geology and Earth Resources Division's open file report 83-5, 'Geological and Geothermal Investigation of the Lower Wind River Valley', which describes the Trout Creek Basalt.

"Quaternary Rocks

"Trout Creek Basalt, Olivine basalt originated from the Trout Creek Hill volcano and flowed southeastward down the Wind River Valley to the Columbia River. The basalt flowed around both

sides of Bunker Hill, disrupting the course of the Wind River east of Bunker Hill. The flow dammed both Panther and Bear Creeks, causing terrace formation along lower Panther Creek. Basalt also dammed the Columbia River, resulting in deposition of deltaic sediments (Wise, 1961).

“Wise (Dr. William) (1961) believed several flows erupted from the Trout Creek Hill volcano. No evidence was found in this study of sedimentary interbeds or baked contacts within the basalt, which would have been indicative of multiple flows. A 70m (70 meter) thickness of Trout Creek basalt can be observed in the Wind River gorge under the ‘High Bridge’ on the Wind River Highway north of Carson. A continuous outpouring of basalt could form such a great thickness with no interbeds or baked contacts, but it is possible that the Trout Creek basalt may have been a series of intracanyon flows, erupted over a relatively short time, confined to a relatively narrow gorge and not entirely filling the present broad valley.

Following a succession of intracanyon flows the recutting of the gorge beneath the High Bridge could today be exposing several different flows. In future studies, flow units may be separable by vertical variations in vesicularity or trace element chemistry, and thus determine the number of eruptive pulses from Trout Creek Hill volcano during its short period of activity.

“The basalt is characterized by megascopic clots of glassy, light green olivine in a dark grey, diktytaxitic groundmass. Subhedral labradorite laths (An63) accompany the rounded, iddingsitized olivine. Groundmass constituents are microlite feldspar (An53), granular pyroxene and glass. The presence of unaltered glass within the rock as well as relatively youthful lava flow morphology of the unit suggest the basalt is late Pleistocene in age. A K-Ar radiometric age date of 338,000 years was determined for basalt collected from a distal portion of the flow, near the Columbia River (see sample 17 in table 1 and plate I). This is in agreement with a K-Ar age date of 340,000 years for basalt collected from Trout Creek Hill (Hammond, 1982, personal communication).”

Dr. Paul Howell, geologist with the U. S. Army Corps of Engineers, always took his students onto the high bridge to show them the bottom of this Trout Creek lava flow as it appears under the north end of the high bridge.

(The foregoing information came from Harold (Dewey) Anderson of Carson; Mr. Bill Yee, Electrical Engineer and Manager of the Skamania County PUD; from writer’s research in County records; and from a 1962 letter by John



**Carson Railroad Station at Sprague Landing.**



# **LETTER FROM TO PAUL FROM JOHN ALLINGER, LONG-TIME SKAMANIA COUNTY RESIDENT**

Stevenson, Washington  
October 23, 1962

Dear Paul:

The information concerning efforts to bring water from Panther Creek down through the Carson Valley seems vague and while I uncovered some information, I'm sure that perhaps several of the old timers, such as Ernie Metzger, Howard Rakestraw, and Mrs. Yemolos, would be able to give you far more information that I've uncovered in the deed receipts.

Many will recall Mr. Henry Metzger's letters to the Pioneer stating that when he first entered the valley, he looked over the several springs and that he settled on and homesteaded the best spring in the valley.

And all of us recall the many homes that had little or no water and this need still is in existence out the vally, while those within reach of the PUD water system are now enjoying an abundant and pure supply of water.

The records show that on April 1, 1907, a Mr. B. M. Hawley filed a water right on Panther Creek for 60 cubic feet of water per second of time, giving the point of diversion and stating it was for irrigation and power, also domestic use.

He refiled again on Panther Creek at the same point and asked for 400 cubic feet of water per second of time, this was dated May 7, 1908, and was filed by Mr. Hawley as President and Manager of the Home Valley Development Co. This application stated the water was to be carried a distance of 7 miles by open ditch, flume and culvert.

Again on December 2, 1908, he filed for 600 cubic feet of water per second of time and gave the same location on Panther Creek for the point of diversion.

On December 10, 1908, a Mr. G. M. Illingworth from Hood River filed for 700 cubic feet of water per second of time, from a point further up Panther Creek, and it looked like a war over water might be going to come out in the records, but evidently Mr. Illingworth discovered he'd filed too late and all available water was taken with the prior filing.

The next entry was the filing of letters of incorporation forming the Home Valley

Irrigation and Power Co. with Capitol stock of \$50,000 cash, being 500 shares at \$100 per share.

On June 19, 1911, the new corporation filed deeds covering right of way purchased Zenophon Wade, E. J. Wigal and Wm. Thurston, Sr. This was followed by the outright purchase of land and the prices paid ranged from \$255 to \$600 an acre.

These same tracts have sold for \$20 to \$100 an acre in the past few years, showing that the attempt to promote the area as a fruit growing center did not work out, whether its the lack of water or soil conditions I'll not attempt to answer.

Now this firm did not enter into the records again that I could find. However, Mr. B. M. Hawley sold a good number of lots at Home Valley and finally ended up selling to a Mr. Cook and Christina Cook. At this point nothing further appearing regarding Mr. Hawley.

There is evidence of a ditch being dug, of a tunnel being pushed through a hill at the southerly side of Panther Creek and, as you well know, this project was revived in the 1930s and then ended.

The next attempt to bring water to the Valley was by our Public Utility District. They made an extensive engineering study, from Tyee and Cold Springs to North Bonneville, Wn.

This was turned down by the Stevenson Town Council and Mayor and I believe also that North Bonneville gave it the same consideration. Thus ended the efforts to get water in the upper Valley and while in 1952 the people in the Carson area petitioned the PUD to take over and provide them with a suitable supply of water, it was not possible for to get water from out the valley and make the system pay its way.

However, we feel that in time, Stevenson and Bonneville either jointly or alone, or by petition to the PUD will make use of Cold Springs and bring this source of pure cold water to these communities, at that time the cost figured about \$2.50 per home and even with the additional people we would assume, with increased prices for everything, water could be brought in at a reasonable rate.

The Valley had depended on timber as the main source of livelihood and is still dependent on the logging and lumbering industry. This caused a swinging bridge to be built and dedicated in 1913 to make the access to the valley more feasible, this was rebuilt and used until replaced with the present span.

With the completion and dedication of a new road out the valley, we may see at a far earlier date water coming down through the valley as envisioned by those early settlers, who faced the job of opening up this area. Yes, we have water in the rivers and creeks and in the air, but not always right in the place we need it most.

JOHN ALLINGER



Irrigation project under construction. Flume is built of Douglas fir lumber cut at B. M. Hawley's small steam-powered mill.



Flume under construction through logged-over land between Panther Creek and Wind River.



**Northern view of former Carson Livery Stable. Split-level in foreground houses the silo. Built in pre-1890's, it is now used as a barn and located west of Carson.**