

The Twin Falls-Oakley Irrigation Project

Reclamation of 45,000 Acres of Goose Creek Valley Land Will Bring Added Prosperity and Homemakers to Southern Idaho

To harness the waters of Goose Creek in Cassia County, Idaho, and turn them on to land now giving the appearance of a barren waste is the purpose of the Twin Falls-Oakley project, by means of which one of the most fertile valleys of the West will be made into a blooming garden and about 45,000 acres added to the rapidly increasing area of reclaimed land. This enterprise is but one of many similar ones that are to be found in the great basin country, and presages the continued prosperity of an already prosperous community. It is a tribute to the confidence of its masters in the science of reclamation and in the future of southern Idaho. The dam that will hold back the waters of Goose Creek entails an expenditure of a vast amount of money, for it is being constructed with a view to permanency, no expense being spared to make it so.

Before the inauguration of the plan to furnish water to the entire valley, rights on the creek were held by owners of about 6000 acres. Goose Creek is a small mountain stream with a minimum capacity of 15 second feet from July to January and a maximum of 300 second feet through the balance of the year. For many years the 6000 acres had been irrigated from the unregulated flow of this stream, some years with perfect satisfaction but ordinarily with an insufficient flow of water when most needed. The farmers therefore flooded their crops when water was plentiful early in the season and conserved the moisture thus stored up by cultivation during the dry months. Many difficulties attended this method of procedure, and when the proposed regulation of water supply was outlined owners of the 6000 acres agreed to surrender their rights to the waters of the creek in return for a regulated supply of 1 1/2 acre feet, to be delivered to them whenever needed. Thus the water that had gone to serve 6000 acres insufficiently is to be distributed over 45,000.

The land above that to be irrigated has a fall of 25 feet per mile, sloping to the level alluvial bottom. The sides of the valley are steep, converging at the dam site to a width of 400 feet, with steep slopes on either side reaching to a height of 100 feet and then rising vertically in a straight wall of solid lava to a height of 155 feet above the river bed. Engineers were quick to see the natural advantage of this narrow neck, as well as the abundance of material available for an earth dam. These and the wonderful productivity of the valley seemed to justify the expenditure, and the project was launched.

Tons of earth and rock make up the substance of the dam, which is 145 feet high and 1050 feet long. Through the center stretches a core of concrete, starting at bedrock with a width of three feet and tapering to a thickness of one foot at the top. The bottom is pure concrete, while the top is reinforced. Bedrock was found at a depth of 25 feet below the bottom of the stream. The body of the dam is a mixture of sand, clay and small rock, the rock being mostly

crushed lava. The dirt used in the fill is conveyed by means of a belt carrier for a distance of half a mile and dumped into a chute at the summit of the bluff, from which it empties into the waiting wagons on the dam. An idea of the expense entailed to convey this dirt to the dam can be had from the fact that it is first excavated by steam shovels and loaded into cars which discharge into the conveyor. The conveyor makes an ascent of 85 feet in the half mile run to the dam.

No pains is spared to make the dam strong. First a layer of small stones, sand and clay is deposited to a depth of six inches. It is then sprinkled thoroughly and rolled by a four-ton traction engine. Close to the concrete core the dirt and stone are deposited in a pool of water so that the settling process is constantly going on. On the upstream side a finer mat is used than on the down stream portion, and when completed the surface of the dam will be provided with a layer of loose rock three feet deep on the upper side and a similar layer of smaller rock two feet thick on the lower. The outlet of the reservoir

own under the smile of sunny skies. So project after project has sprung up and the business of "controlling the rainfall" has taken hold on the district with a vengeance. Startling as the figures may seem, it is stated upon good authority that this county boasts 92.9 per cent of its cultivated farms under the ditch.

Such a condition cannot help but bring enthusiasm among the advocates of irrigation. Yet the enterprise and enthusiasm preceded the water. Men with foresight looked into the matter scientifically and determined the productivity of the soil without water. It required no system of higher mathematics to demonstrate that with the addition of an abundance of rainfall, regulated as are the great irrigation projects of the state, the production of every acre could be made to increase in ratios hardly conceivable. Men came into the vicinity and invested thousands of dollars in planting orchards and laying out vineyards. Many did not wait for the completion of the canals but manifested their faith in the future of the country by starting development before the ditches were made. Southern Idaho is dotted

result of this faith in the country, supplemented by actual labor.

The Twin Falls-Oakley project will quench the thirst of 45,000 acres of a most fertile valley. Where now exists only the unsightly sagebrush will stand the alfalfa and the sugar beet, the wheat and the orchard. Land that has hitherto been accounted of little value will bring the highest price for the water will give it worth. Modern

homes and spacious barns will dot the landscape. The expanse of gray will be replaced by the restful green of the more humid climate, all of which will testify to the happiness of a new people in a reclaimed land. Nothing can stop the development of southern Idaho as long as these projects find favor. And the faith of the people themselves will make the outcome sure.

Big Land Opening in Moses Lake Valley

Discovery of Immense Underground Lake East of Wenatchee Results in the Development of Many Rich Acres of Fruit and Alfalfa Land

A large body of fruit land in the Moses Lake valley of Grant county, Washington, directly east of Wenatchee, has recently been opened to settlement, and is now attracting a great deal of attention.

The development in Moses Lake valley is nothing short of marvelous. Within a few years this district is to furnish homes to at least 50,000 people. Many sections of rich land, which have lain dormant for centuries, and which until just recently were considered practically worthless, because of the lack of water for irrigation, have now been placed on the market and are rapidly being settled. The discovery of an immense body of sheet water, underlying the entire district, is responsible for this development. This water is nothing more nor less than an immense underground lake, which crops out in various parts of the county.

Hundreds of pumping plants are being installed, each irrigating from 10 to 4000 acres, and once the water is turned onto the land it yields a production of fruits, alfalfa and garden truck that is prolific. Water is obtained at from 25 to 100 feet, in inexhaustible quantities. It isn't a question of where to drive a well in order to get water. It is merely a question of where the farmer or orchardist wants his well. If he sinks there, he is sure to get the water.

Some of the orchards that have already been developed in the Moses Lake district are actually yielding higher than \$1000 an acre net profit per season, and it is predicted that this district will soon hold the record of being one of the greatest fruit producers on the continent. The soil is very similar to that of the North Yakima and Wenatchee fruit districts, and a recent chemical analysis shows it to be richer than the latter by several per cent. It is composed of decomposed lava and volcanic ash. It is deep and mellow, and underlain with a gravel formation that insures perfect drainage.

A visit to one orchard near Moses Lake was nothing short of a revelation. This orchard, which consists of 30 acres, 20 of which are in bearing, is known as the Tichacek place. During the 1912 season 16,000 boxes of fancy apples were harvested from this 20 acres, and they sold for \$1.45 per box net, the sale being made through the Wenatchee Fruit Growers' association, the organization which has successfully solved the problem of finding a market for Northwestern fruit at good prices. This association is now handling much of the fruit

from the Moses Lake region, and finds a ready market for all of it. Figuring 45c per box for expense of production, this leaves a net profit in this instance of \$10,000 for the season. Other growers are doing as well.

A very interesting instance might be told in connection with the Tichacek place. Last summer Mr. Tichacek sold the orchard for \$63,000. The buyers got the benefit of the season's crop. About the time the output of the place was marketed Mr. Tichacek had a case of "cold feet." He regretted the move he had made, and he wanted to get it back again. He did buy it back, paying \$69,000 for it, or a clean premium of \$6000 over the price he had sold it for a few months before.

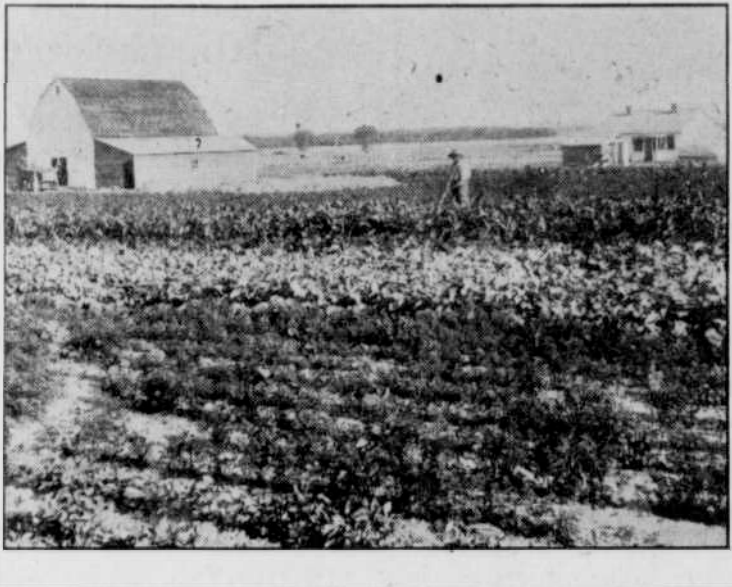
Among those who have been first to appreciate this new Moses Lake district are the men who have made Wenatchee. Several Wenatchee capitalists have, within the past year or so, invested \$4,000,000 in this district. Some of them have planted an entire section to orchard, and, although the orchard is only a few months old, these men would not take \$500 an acre for the property today. They see its future possibilities. Raw land is selling in Moses Lake valley for \$100 an acre, and a value of \$500 an acre is placed on it as soon as the trees are planted.

Becoming interested in the reports of wealth and opportunity coming out from this comparatively new territory, the editor of the Wenatchee World recently started on a trip of investigation. He covered a good portion of Grant county. Then when he got back to his office he wrote one of the strongest endorsements of a new country that has ever been published in a rival district. In part he said:

"Those who hold the opinion that the Wenatchee valley has a monopoly on the apple land of this section of the state must change their minds. Those who do not change their minds must do so later. The writer has had a constantly increasing opinion of the lands of Grant county. A thorough inspection of the lands in that county during the past few weeks has forced the conviction that the fruit lands in the country east of here are in every way equal to those of Wenatchee, Entiat, Chelan, Methow and Okanogan valleys. In fact, the Wenatchee valley is just a sample of the future of Grant county."

"In short, the country to the east of the Wenatchee valley is one of tremendous possibilities. It affords one of the greatest opportunities in the United States today."

The Desert Garden After the Boon of Irrigation



which is now in use to convey the water around the dam is a tunnel bored through the solid rock 700 feet in length and 10 feet square. The bottom is on a level with the stream bed.

For years "Twin Falls" has been almost a trade mark for southern Idaho. And rightly so, for the county of Twin Falls stands today as the banner irrigation county of the state, and indeed of the Northwest. No other county in the state can boast so great a proportion of its farmed land under the ditch. And this progress has been very rapid. Twin Falls has believed in the mission of irrigation from the very first. That is why the country about the city of Twin Falls has come under the spell of the irrigation fever. Those who have watched the development of this splendid fruit and farming district have seen barren wastes turned into fertile fields and the desert veritably made to blossom as the rose. Immense orchard companies have entered the field because they believed in the country and the irrigation business. It needed but a small demonstration to prove to the less sanguine that with water to turn upon the soil at will the country would come into its

today with the farms and orchards of these men, to whose faith and courage the state owes much. Moreover, business men in the southern Idaho towns threw their support behind the projects with the result that communities became a unit in working for, boosting and anticipating the future of their sections.

Beyond the confines of Twin Falls County the spirit of improvement is no less. Where the government has not taken hold of projects private corporations have undertaken the task, and the Twin Falls-Oakley project is but one of them. Irrigation started slowly in Idaho, the people going conservatively for several years. But in 1909 22 projects were launched throughout the state, and of these southern Idaho received its share. Experts have repeatedly examined the soil of its fertile valleys and pronounced it excellent. Demonstrations have repeatedly been made with the same verdict. It is not surprising then that capital should seek these fields on which the eyes of the East had been turned through the enterprising publicity efforts of commercial organizations. The fields of waving grain, alfalfa, the blooming orchards and the luxuriant gardens today greet the eye as the

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