PHASES OF INDUSTRIAL GROWTH IN THE STATE OF OREGON

WATER IS LIFE TO THE SOIL

What Irrigation Means to the Development of the State of Oregon.

LANDS ARE SUSCEPTIBLE

Progress Made in Bringing Arid Tracts Into Cultivation and Plans Which Are Formed for New Projects.

If much of this page is this week given to water and its work it is because at this time the subject is engrossing general attention. The Trans-Mississippi Congress, which has just closed its sessions, converted itself into an irrigation congress for much of its time. Mr. Newell, of the Reclamation Service, is in Oregon, has been visiting the irrigation sites, and determinations have been arrived at of the greatest consequence to Oregon. The Telegram printed on the 17th a long account of the general situation supplied by "one of the attaches of the Government Reclamation Service" now in Portland, whose modesty concealed his name. He states the main point in these few words: "In Oregon there are at least 2,330,000 acres of land which can be irrigated, and the flow of all the rivers and sources of water supply for this amount of land aggregates enough water to cover 12,000,000 acres one foot in depth. Of these 2,000,000 acres about 440,000 acres have been reclaimed through private enterprise."

Large Acreage Involved.

Later on, however, it apears that 140,000 is the number of irrigated acres assigned to Oregon in the last census. On this basis at least 200,000 to 240,000 acres more should be added as the result to date of recent irrigation works, outside of operations in progress but not yet completed. The further statement is quoted from the same source that the investigations of the department "to date show that in time there may be added to the 440,000 1,300,000 or 1,500,000 acres more." The significant statement follows that this addition must come mainly through large and expensive works, many of which are out of the range of possibility until the railroads penetrate near where these must be located.

One point before passing on: "All the normal flow of the streams in Eastern Oregon is appropriated, and in many instances over appropriated." So says this expert. Judging from the enormous number of filings, in both Eastern and Western Oregon, this may be true. But if so a heavy crop of litigation is being sown, of which the suit in Umatilla County with 2000 interested parties, and among them the State of Oregon (which was referred to in last week's Industrial page) is the first fruit. The whole system of water claims, past and present, is another illustration of the same want of foresight which in forestry matters has landed Oregon in the worst of trouble. The State of Oregon in relation to her rivers and streams proceeds to try to shut the door after the best horses in the stable have been stolen.

Plans at Klamath Lake.

The following communication from Klamath Falls brings up to date the story of that reclamation project and its relation to the surrounding country of vast possibilities.

KLAMATH FALLS, Or., Aug. 20.—Within a few weeks the Government will call for bids for the construction of a portion of the Klamath project. This statement is issued to the landowners under the project as the joint assurance of the Reclamation Service and the directors of the Water-Users' Association. The service has submitted estimates to the Washington office, and as soon as certain requisite legal formalities on the part of the landowners are observed, the Government will advertise for bids. The directors of the association state that these legal matters will be attended to within a few days.

A conference was held here this week between Chief Engineer Newell and Supervising Engineer Lippincott, of the Reclamation Service, and the directors of the Water-Users' Association, representing the landowners. Mr. Newell stated the adage, "Haste makes waste," has been peculiarly justified in the history of irrigation enterprises. The Reclamation Service has been sometimes criticised because it spent so much time in preliminary investigation, stream measurements, topographical surveys, soil testing and study of conditions affecting the proposed work. It was because such investigations were neglected that so many irrigation enterprises have been such lamentable failures. The criticisms of the service were natural and not unanticipated, "but the Reclamation Service," said Mr. Newell, "would not be rushed by them into hasty, ill-advised action. If the service erred, it would be on the side of safety." But while the service is not hasty, neither is it dilatory. The surveys on the Klamath project have been prosecuted with unusual rapidity, and the service is now ready to advertise for bids. Just how soon this is done depends now altogether upon the landowners.

In answer to an inquiry, Mr. Newell stated that the service did not ask of the owners of private lands impossible or unreasonable conditions; that the project embraces a number of canal systems, and work on all could not be commenced at the same time, and that as soon as a sufficient percentage of the private lands under any one system was properly subscribed to the association, work on that system would be commenced.

The irrigable area in the Klamath project proper is 250,000 acres. The original estimate was 235,000 acres, but it has been decided to install two pumping plants, which will provide water for 15,000 acres. The total estimated cost is $4,500,000, or an average cost of $18 an acre. Of the irrigable area, approximately 130,000 acres are now lake lands and covered by water, ranging from two to 12 feet in depth. There will be no public lands under the project subject to entry for several years, as the public area is confined to the lake lands, which cannot be entered until fully reclaimed, as the Government does not desire that its land be placed in competition with private lands which must be sold. Since the Government cannot sell a water right to any one person for more than 160 acres, a large acreage of the private holdings must be sold. Present prices average from $12 to $50 per acre.

The people of the Klamath country realize that the Reclamation Service has made remarkable progress in forwarding this work. T. H. Humphreys, project engineer, first began the investigations 14 months ago, under direction of J. B. Lippincott, supervising engineer. The proposed work involved the lowering of the water levels of certain navigable lakes, in part navigable waters of the United States. Authorization to do this had to be obtained from Congress and from the Legislatures of Oregon and California. Strong opposition to the bill developed in Congress. A private corporation had undertaken the work of putting in a large irrigation system and refused to sell except at a prohibitive figure. There were several other ditches and many riparian interests to be considered. There were no reliable records of precipitation and run-off. An engineering force had to be organized and set to work. Obstacles of various kinds were encountered. To carry out the provisions of the law, contracts from the private landowners, a great many of them nonresidents, had to be obtained. Yet, after only 14 months of ceaseless activity, the service announces that it is ready to begin construction.

Two railroads to connect this country with the Southern Pacific line in California have locating parties in the field, and both promise to reach here next year. The people will welcome either or both of these roads, but they are anxious for direct rail connection with Portland. They feel that Portland is their natural market, and they appreciate the advantage that would result in having two competing markets.

Joseph Jacobs, consulting engineer of the Reclamation Service and formerly engineer of the Southern Pacific, made the following statement in regard to probable railroad business:

"It is, of course, difficult to predict the exact future tonnage this country might yield for transport by rail, as a result of the building of this project, but the following data may, in a measure, indicate its possibilities: Klamath Falls, the county seat of Klamath County, has at the present time a population of 1200, and the population of the county is about 5000. The Federal project, as now planned, contemplates the irrigation of 250,000 acres of land, an area easily capable of supporting a community of 50,000. The dry lands with irrigation are adapted to culture of the hardier fruits, grain and alfalfa, while the swamp lands, when reclaimed, will open up rich tule-peat lands, admirably adapted to truck farming and to culture of the various forage plants required for dairy interests, an industry which has proven so highly profitable in the bottom lands of the Sacramento and the San Joaquin valleys. Beet culture also promises to become an extensive industry in this basin. The extensive hill pasturage afforded here makes this an excellent stock country, and there are now being shipped from this district some 25,000 head of cattle per annum. With the large increase in forage crops for Winter feeding that will result from irrigation, this industry will expand, and is sure to become one of the chief elements of the future wealth of the country. The timber interests of the country are highly valuable, and any railroad entering it must pass for much of its length through a rich belt of yellow pine and red fir. The country abounds in unsurpassed pleasure resorts, with fishing, hunting, boating and the proximity of Crater Lake to make it inevitably a Meeca for the Summer pleasure-seeker. There exists here hydro-electric power possibilities to assist in the general development of the country, and some of these are now being exploited. When the full agricultural possibilities of the country will have been achieved, its exports, it is believed, will aggregate not less than 20,000 cars of freight per annum, and most of it will be of a class to yield substantial tariffs. One other matter worthy of mention is the advantageous eastern outlet for any line of railroad built into the Klamath country. Lying in a general northeasterly direction from Klamath Falls, there is a series of irrigation projects, embracing in the aggregate about 800,000 acres of land. Some of these are now being seriously considered by the Federal Government, and doubtless all are destined some day to be built, when transportation and other elements affecting their cost make them feasible."

Steamer Plies the Waters.

In this connection may be noted the launching of the new steamer, The Klamath, at Klamath Falls, to begin her run between Klamath Falls and Laird's Landing, at the lower end of Little Klamath Lake. Forty miles by stage from Laird's Landing takes the passenger to Bartels, the present terminus of the McCloud-river railroad. That road runs to Upton on the Southern Pacific Railroad, in Siskiyou County, California—thence to San Francisco. Next July the McCloud railroad is expected at Laird's Landing. From present appearances it will be on hand on time, and the direct route from San Francisco into Southeastern Oregon will be opened. The most accessible point to an Oregon road will be Shaniko, or wherever the terminus of the Columbia Southern may then be.

The Meed railroad people are not idle meanwhile. See the following item from the Lake County Examiner; the "here" being Klamath Falls:

"Mr. A. L. Peyser, member of the firm of S. N. Wood & Co., of San Francisco, arrived here yesterday morning. Mr. Peyser came up from the city with a party of San Francisco business men with a view to securing the trade of Southeastern Oregon for their city over the new railroad to tap Klamath County from Weed."

For the benefit of all who believe in the proposition that settlement and development of a country must precede the railroad's entrance the statement is officially made by the president of the Nevada-California-Oregon railroad, now building to Klamath Lake, before the California State Board of Equalization. The road is, of course, incomplete and infant. The statement follows:

"The Nevada-California-Oregon road has 143.84 miles of road, valued at $117,860. The rolling stock is valued at $17,000. The gross earnings from operation were $204,-200.94. The operating expenses were $115,-336.27, leaving a net income from operating of $88,864.59. The income from miscellaneous sources amounted to $2655.98, giving a total net income of $91,520.57. Interest on the funded debt, taxes, betterments, additions, etc., amounted to $80,352.05, leaving a surplus of $21,168.52.

"In speaking of the business of the road, Dunaway said that there had been no increase in the volume over the preceding year. The transportation of cattle, lumber and the products of the country were the main incomes of the two roads."

New uses for irrigation appear every week.

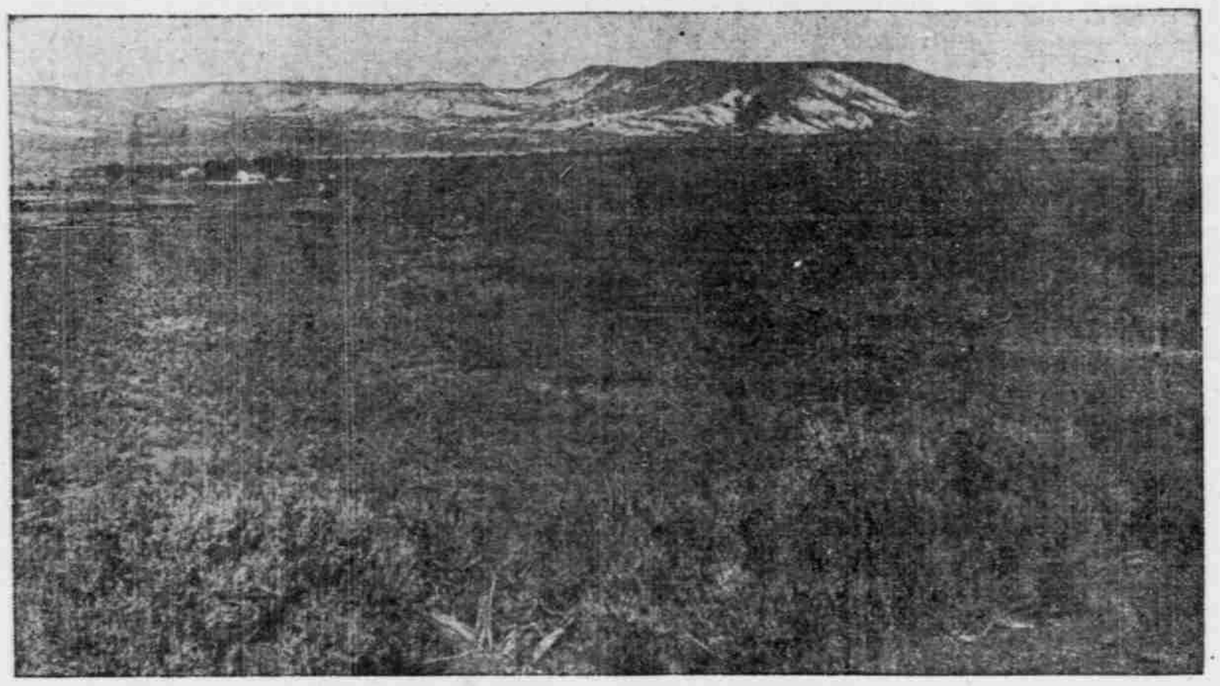
Hopyards are now backing it up. The Eugene Guard prints the following:

"Seavey Bros., the well-known hop-growers, having one of the largest and finest yards on the coast, situated in the McKenzie bottom about six miles northeast of Eugene, have just purchased a centrifugal steam pump, with a capacity of 1,000,000 gallons of water per day, for the purpose of irrigating their hops.

"This action has become necessary on account of the intense heat of the past few weeks greatly injuring the hops, drying up the leaves and young hops so that they are falling off. It is hoped by a thorough system of irrigation to prevent further injury and insure a better crop. At least one other prominent grower of Lane County will follow the Seavey Bros.' example and irrigate his yard."

Even the Rogue River Valley falls into line. In the Medford Mail appears the following:

"J. S. Barnett, the nurseryman, is having great success with an irrigating plant. He has installed an electric motor and with it he forces water to all parts of his land by means of pipes and a four-inch centrifugal pump. His water supply is furnished by a well only ten feet deep, and the pump constantly in motion fails to lower the water to any noticeable degree."



HARPER RANCH, ON THE RESERVOIR SITE, MALHEUR PROJECT, OREGON.

Oysters in Oregon.

When Professor F. L. Washburn was State Biologist, he took great interest in introducing Eastern oysters into Oregon waters. Yaquina Bay was the site chosen, and the problem was if these Eastern oysters could be prevailed on to spawn so far from home. The professor's anxiety appeared to be rewarded—the nuptials of the oysters were duly accomplished, and millions of oysters-to-be were produced. Alas! Western Pacific waters were too cold, and none of the babies came to maturity. But the older ones, the parents, grew wonderfully well. The professor's mantle has fallen on competent shoulders. Last Spring, Dr. M. M. Davis, of Newport, ordered thousands on thousands of infant Eastern oysters sent to him. They arrived in Oregon well and happy, and were deposited in their beds. When they came they were about the size of a bean. They have grown to be as large as half a dollar already, and are, seemingly, prospering. In three years' time from their arrival here they will be merchantable, and a new industry will be an accomplished fact.

IN ORCHARD AND ON FARM

WOOL - BALING SEASON FOR EASTERN OREGON.

Products of the Dairies and the Profits Which Come From This Industry.

The wool-baling season at Pendleton has closed, with the result that 6,000,000 pounds of Eastern Oregon wool has been baled in the Furnish wool warehouse. Twenty men on the average have found employment since April 25. It is understood that this figure is double the total of last season's work.

It is noted in the Corvallis Times that the price of butter-fat at the creamery has risen to 27½ cents a pound. The price stood at 22½ cents only a few days ago. In previous years the price has ranged during the early Summer months from 15 to 17 cents. This year for a very short time it was as low as 19 cents. The high values now prevailing can hardly be taken as normal, as the shortness of the grass since hay time, in consequence of the continuous dry weather, is the main cause of a slim supply of milk. But, with due allowance for this, dairying is profitable in Western Oregon to a degree that justifies the claim which is put forward. Shortly stated, this claim is that each cow, of good average but not extra quality, will return to her dairying owner $6 a month for the year round. This sum comes in on the monthly checks from the creamery. Add the value of the skimmed milk for calves, hogs and chickens—add also the value of the calf, and then sum up the worth of the dairy cow to her owner.

Doubtless the silo on many a Willamette Valley farm has been opened during this dry time and its moist contents added to the dairy cow's rations. If emptied, there will be time to have it filled again with the corn now growing so fast on well-nigh every dairy farm.

Hood River has prospered, and is prospering, so soundly and well under the influence of combination among her fruit-raisers, they have shown the way so successfully that the example is being followed. Rogue River is the next to act. There are several other districts in the state where similar action is most desirable. For the label to indicate and guarantee quality is all-important. This label should speak for more than the quality of the fruit—it should stand for careful picking and packing and for correspondence with name and designation. The Grant's Pass Courier says:

"It is the plan of the organizers of the Josephine County Fruitgrowers' Union that it shall market apples, pears, peaches, cherries, berries, melons and other perishable farm products. The union will purchase at wholesale, and supply the members at cost, boxes, nails, paper, spraying pumps and spray compounds. Growers will be instructed as to varieties of fruit that are most salable, what fruits are best adapted to certain lands, and how to plant, cultivate, phune, and spray their trees. The picking and packing will be done in accordance with the rules of the union and an expert packer will be employed to visit orchards, the fruit of which is to be handled by the union, and instruct the packers, where needed, how to properly do their work. All boxes and crates shipped by the union will bear a stencil giving the name and address of the union, the number of the grower and the number of the packer.

"The label will also show the kind of fruit in the box and the number it contains if of apples, pears, peaches, etc., and if of cherries, berries, etc., the number of pounds. During the shipping season a manager, to have charge of the packing and shipping, will be employed, as will also a bookkeeper. Warehouses will be rented or built in the various towns along the railroad from which shipments will be made, the headquarters, though, of the union, will be at Grant's Pass."

NEW ENTERPRISES STARTED

What Is Being Done in the Way of Modern Industry.

"The Oregon Produce Company has just completed a new storage building, which for size and completeness has no superior in the state. The building covers a ground space of 60x110 feet, and has a basement ten feet high. The building is substantially built of brick. This building, with the one across the street, which was completed last year, will have a capacity of 300 carloads of produce. The new building will be fitted up this Winter with an ice-making plant capable of manufacturing ten tons of ice each 24 hours. Mr. Gust stated that the ice plant would be installed in time for the Winter trade," says the La Grande Observer.

In view of the possibilities of Eastern Oregon and of the immense acreage there adaptable to this industry it is interesting that only 2300 acres should have yielded 30,000 tons of beets and have kept the La Grande sugar factory at work last year. Evidently here is an industry such as the booklet writers call "capable of indefinite extension." It is understood also that the product named is one-fourth larger than in any previous year.

Although not actually placed in Oregon the new enterprise described below is in line with the suggestion of the possibilities of Eastern Oregon. The estimated cost of land, buildings, machinery and equipment is stated to be $1,125,000. In all sincerity we, in Oregon, may both wish and predict success for this undertaking. It should be the forerunner of several others in the Harney and Malheur country and in the irrigated region of Crook County. The location chosen is Nampa, Idaho, the recent purchases there aggregating 600 acres, over 400 of which are contiguous, where the factory is to be built. The Nampa Leader publishes the following details, the cost of the land having been $20,000:

"There has been some question as to whether the building would be built of cement blocks or brick, but it has been finally decided to build of brick. The main building will be of pressed brick and steel entirely fireproof. It will be 102 feet long, 208 feet wide, highest point 90 feet, with average height of 80 feet. The track sheds will be 500 feet long and 150 feet wide. The sugar house will be 90 feet wide and 120 feet long. The total number of brick to be used will be 2,400,000. The factory will have a storage capacity for 25,000 tons of beets. The entire institution, including tracks, will cover 100 acres of ground. The machinery, which weighs 2000 tons, has been ordered, and will be delivered here January 1."

STRAWBERRIES IN ENGLAND

Care in Picking and Shipping Prevent All Waste.

Last month's issue of a well-known English magazine published an article on strawberry-growing for the market in Northern Hampshire, a district about 50 miles south of London. The crop is on a large scale, about 30,000 baskets a day being shipped from Botley Station, while the season lasts. The basket weighs five pounds. About 120 pickers were at work in the field visited, a majority of whom were women and boys of 16 or 18 years.

The stalk of each ripe berry is pinched in two, the fruit being untouched by the fingers, and bad or rotten fruit kept out at all cost. The picker having filled her or his basket, carries it to one of the little shanties dotted here and there over the field. There half a dozen packers are at work. The strawberries are weighed first, then a paper tied over the top of each basket, giving name of fruit, name of grower, and destination of consignment. Within an hour from picking the fruit is weighed, packed and in the wagon carrying it to the depot. For handling the over-ripe fruit a jam factory is established in the center of the district, about seven miles from the field in question. This surely is a hint for Oregon. An Eastern buyer visiting Hood River for the first time a few weeks ago, could not believe but that he was seeing the season's crop. In vain was he told that the season was over, and that all he saw was the leavings and ends for which no market existed.

This Western country bears the accusation of wastefulness, and a few facts like this justify it.

The English strawberry pickers receive good wages, a skilled picker earning as much as 24 cents an hour. Pickers are paid every day when work is over, and carry home from $2 to $2.50. From this strawberry center the fruit trains go to every large city in Great Britain, and some are shipped to Ireland. The refrigerator cars are fitted with shelves for the baskets. The fruit trains get the right of way and pass ahead of all other freight. The fruit being picked and packed with care, and receiving rapid carriage, arrives fresh at their destination, the motto of the whole business being "care and speed."

NEW METHOD OF PACKING

NITROGEN GAS USED AS A GERMICIDE.

California Thinks It Has Solved Method of Keeping Fruit From Decaying.

For many years process after process has been invented and tried for preserving ripened fruit. The household purgatory known as "putting up fruit" survives to the cost of many an overburdened housewife in town and country. The line of experiment and invention takes the direction of conserving the freshness and quality of the raw ripe fruit, or else, of some sort of preparation by boiling or steaming, ending in canning or bottling under heat sufficient to expel most of the enclosed air. The former art, that of keeping good the raw, ripe fruit has ended in the refrigertor car. The conditions of that traffic, involve the carload as the unit, call for the icing, of which we have heard so much, and open the door to the exactions of Earle and Armour and the rest.

The most promising of the processes on the other line, that of treating the ripe fruit to be put up in bottle or can, was the exhausting of the air from can or bottle and hermetically sealing down the lid or cover by the sudden admission of outside air into the exhausted receiver. Although excellent results followed if the process were faithfully and carefully completed, yet it involved the use of some simple machinery, and it has never come into general use.

But, if the forecast of a new method is justified in practice a revolution in the whole industry may follow. A California paper printed it and it has just been reprinted here. So far it has passed without general comment. Evidently the scope of the new process is very wide and growers and fruit packers should lose no time in informing themselves about it. As will be seen the leading idea of exhausting the air from the receptacle for the fruit is adopted, but the substitution of nitrogen gas, as germ-killer and fruit preserver is, so far as is known, new when applied on a commercial scale.

"A packing-house has been constructed and outfitted at Antioch which, if successful, will revolutionize the fruit industry of California. The process, as we unstand it, consists of packing fruit in airtight cases, from which all air has been extracted by means of suitable machinery, and this air is replaced with nitrogen gas. It is claimed for the process that the gas arrests decay, destroying the bacteria of the ferment which causes decomposition, and that any article packed in this manner will retain its condition indefinitely. There being no disease germs in the package, it is impossible for decomposition to set in, and as a result the fruit so packed will retain its qualities until it is desired for use. By this means fruit can be shipped in a fully ripe condition to any part of the world with the assurance that it will arrive at its destination in exactly the same condition it was in when shipped.

It will do away with the necessity for refrigeration, and, in short, if successful, will completely revolutionize the fruit industry, and add millions to the wealth of California. That the projectors have faith in their enterprise is evidenced in the fact that they have erected very extensive works at Antioch, that they have done it quietly and without any desire of notoriety, and that they have put very large sums of money into their buildings."

If this method succeeds we shall buy airtight cases or boxes of any convenient size, pierce and remove the cover, and find ripe fresh fruit in the same condition as when shipped.

OF MINES AND MINING.

Cinnabar in Blackbutte Is Found in Paying Quantities.

A great future lies ahead of the cinnabar, or quicksilver, mines at Blackbutte in Lane County. For a model of the new plant and furnace designed by W. B. Dennis, the manager of the company, see the mining building at the Exposition.

The following notes condensed from a description in the Denver Mining Record, will recall the main features of the new plant and furnace:

The features of the furnace of the Blackbutte mines that give it a wide lead over roasting furnaces operated on cinnabar mines of other districts is its ability to use wood as fuel, the wide range of its heating zones, which run from 900 on the lower to 1400 degrees Fahrenheit on the higher roasting zone, the increase of its capacity by the reduction of the roasting time, only eight hours being required for a single roasting, where other plants use from 24 to 48, and the elimination of soot and poisonous gases from the condensing chambers.

The treating plant now being installed on the mines will have a capacity of 240 tons daily. In the meantime the experimental plant of much smaller tonnage is being operated continually.

The Blackbutte mines, located at Blackbutte, Lane County, Oregon, are among the best developed cinnabar mines in the state. Blackbutte mountain, on which the properties are located, is peculiarly adapted to the formation of cinnabar veins. It is composed of an altered andesite, permeated by a system of fractures along the planes of which the main ore deposition has occurred.

Peculiarly enough, the mercury is not only carried in the veins and ledges, but is disseminated in small but paying quantity through all parts of the country rock lying between the fractures. This practically makes the entire mountain one huge bulk of low-grade cinnabar.

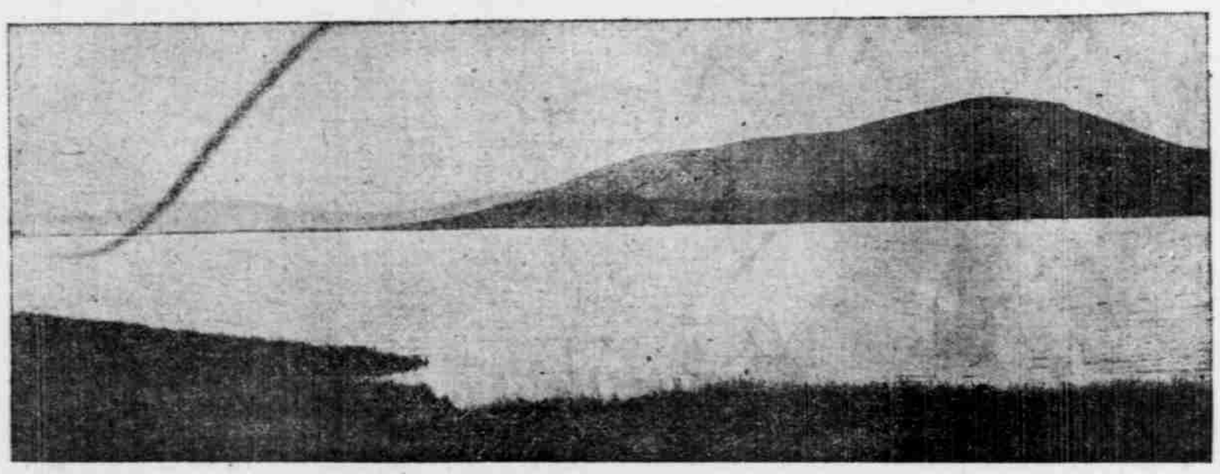
Taxation of Timber Lands.

Lane County is to be congratulated on taking a sensible and far reaching step towards placing the assessment and taxation of timber lands on a sound and logical foundation. Experts have been retained who will examine the timber lands of the county, down to areas as low as 40 acres. They will report on quantity of timber, accessibility, value of land when cleared of timber for pasturage or agriculture, and the market value of the standing timber. Their report is expected to cost $4000. Even if so the county will have made a good investment if one-half is true that is reported of the value of timber lands which have either escaped assessment, or stand in the roll at ridiculous values.

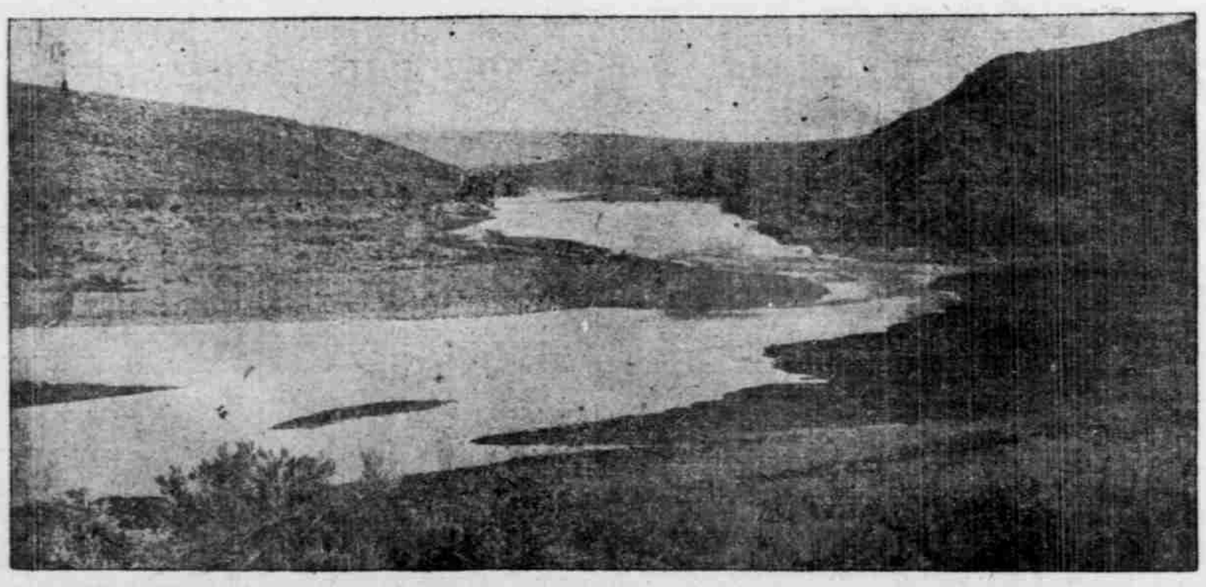
NEW "POTTER" SCHEDULE.

Additional Trips to the Beach Arranged for Popular Steamer.

The T. J. Potter leaves Ash-street dock for Astoria and North (Long) Beach points as follows: August 22, 23 and 24, at 9 A. M.; Friday, August 25, 9:40 A. M.; Saturday, August 26, 1 P. M. Particulars and O. R. & N. Summer book at City Ticket Office, Third and Washington streets, Portland.



CLEAR LAKE RESERVOIR SITE (CALIFORNIA), KLAMATH PROJECT.



UPPER DAM SITE, MALHEUR PROJECT.