

TUMALO WORK IS ECONOMICAL

KEEPING WITHIN THE ESTIMATES

Good Board Given Men at Cost of 23 1/2 Cents a Meal—Purchase of Auto a Paying Investment For State—Other Tumalo Statistics

Lack of space prevented The Bulletin from printing last week as full an account of the first report on the Tumalo Project as was desired, and additional excerpts which are believed to be of general interest are given in this issue. Under the head of "camp messes" Project Engineer Laurgaard says:

"It is believed that if a workman is well fed and satisfied with the meals served him, his efficiency on the work was increased over that of an employee who felt that he was not getting the meals for which he paid. With that end in view, we have endeavored to give the men through the messes all that we possibly could and still come within the price of 25c per meal, which we charge. We have been very fortunate in the matter of cooks and kitchen help for our messes, each striving to attain a reputation for serving the best meals at a minimum cost. In order to offer inducements to the cooks to furnish good meals at a reasonable price, we adopted very early in the construction period a sliding scale for the cook's salary, it being understood, however, that no serious complaint would be tolerated from the men as to the class of meals served.

	Cook's Salary Per Mo
For meals costing 25c or more each	\$50.00
For meals costing between 25c and 33c each	65.00
For meals costing between 33c and 31 1/2c	70.00
For meals costing between 31 1/2c and 26c	75.00
For meals costing below 26c	80.00

"On special occasions, such as Thanksgiving and Christmas, meals appropriate to the occasion were furnished, consisting of, aside from the staples, turkey, celery, nuts, apples and fancy pastries. The cost of the meals during the season by months may be tabulated as follows:

1913.	No. Meal	Total Cost	Per Meal
July	1569	\$ 540.50	\$.3444
Aug.	7835	1874.37	.2392
Sept.	7835	2066.98	.2633
Oct.	8798	2075.47	.2359
Nov.	7804	1650.00	.2114
Dec.	6480	1327.78	.2049
Grand totals.	46549	\$8535.10	

Average cost of meals for the season 23 1/2 cents.
 Total profit on messes after deducting all expenses, which also include construction of mess houses and equipment depreciation for the season is \$602.15.

"Early in the season it was decided to utilize the waste from the mess houses by purchasing a few pigs. By the investment of \$72.50 in twenty two young pigs, we were able to furnish our messes during the late fall and winter with meat, which, purchased from our local dealer at the usual rate, would require an expenditure of \$204.00, thus netting a profit of 182 per cent on the original investment. At the close of the year only two of the five camps used during the season are still in operation, the work having been completed so their usefulness was at an end.

Automobile a Good Investment.
 The automobile which the project engineer purchased in August has brought the state a profit, according to the figures given by Mr. Laurgaard. At the end of December the car had covered 3833 miles at an average cost of 10 1/4 cents a mile, including depreciation. Aside from depreciation, the actual cost was 6.7 cents a mile. Figuring that if a car had been hired to cover the 3833 miles, at the usual commercial rate of 25 cents, or a total of \$958.25, Mr. Laurgaard shows that the state has made a profit of \$11.66, as the original cost, \$687.75 and the expense of \$258.84 has totaled only \$946.59.

In regard to men employed and wages paid, the report says:
 "During the months of August, September, October and November, when the bulk of the construction work was done, the force of men varied from 125 to 175 and the teams from 40 to 60. The wages paid were high considering that the day's work was only eight hours, and considering the general condition of the labor market. The following is a general schedule of the wages paid:
 Timekeeper \$75.00 to \$100.00
 Foremen \$3.50 to \$5.00
 Carpenter foremen \$4.00
 Sub-foremen \$2.40 to \$3.20
 Carpenter \$3.00 to \$3.50
 Carpenter-helper \$2.40 to \$2.60
 Engineers and machinists \$2.40 to \$3.20
 Corralman \$65.00
 Powderman \$2.40 to \$3.00
 Drillers \$2.20 to \$2.40
 Plow holder \$2.20 to \$2.40
 Slip holder \$2.20 to \$2.40
 Timberman \$2.40 to \$2.60
 Concrete men \$2.40 to \$2.80

Labor, common \$2.20
 Cooks \$40.00 to \$80.00
 Flunkies \$25.00 to \$35.00
 Bull cook \$65.00
 Team and teamster \$4.00

Work Being Done Below Estimates.
 Under the head of estimates, Mr. Laurgaard says:
 "The original estimates covering the construction of the feed canal contained an item of 6000 feet of wooden flume at \$4.50 per lineal foot. After the feed canal was finally located, it was decided to construct 6500 feet of flume, thus increasing the length of flume 500 feet. The metal flume was originally estimated to cost \$7.00 per foot, thus the estimated increase for the metal flume was \$18,500.00 over the original estimate. In addition to this, the 375 feet of concrete lining increased the construction over the estimates by \$1435.89. The placing of concrete footings and concrete warped surface at the ends of the metal flumes, increased the construction over estimates, which did not provide for same, \$2128.70, making a total of \$23,064.59 increase in the present permanent and substantial construction over the original estimates, which were based on wooden construction. The original estimates provided for an expenditure of \$101,260.00, which includes fifteen per cent for administration, engineering, etc. We have expended on the feed canal to date, \$95,758.05, including engineering, administration, etc., and we estimated that before completion it will be necessary to expend about \$11,342.95 in addition, making a total of \$107,000.00 to complete the feed canal, metal flumes, concrete lining, concrete footings, and the substantial permanent construction throughout. Thus it will be seen that in place of an additional estimated amount of \$23,064.59, over and above the original estimate of \$101,260.00, we will over run the estimate only \$5740.00, showing a saving over estimates on the feed canal construction alone of \$17,224.59.

Administration Charges.
 "The engineering and general administration charges for the past season were rather heavy in proportion to the actual amount expended on construction work. Practically the same organization and the same general overhead charges could have been applied for construction work of two or three times the magnitude of expenditures that were actually incurred. The total cost for the past season could be charged to the feed canal construction covering the following items was \$11,128.83, which includes all engineering, clerical and legal charges, and the operation of the general offices, corrals, storehouse and garage. The actual construction cost of the work on the feed canal was \$95,758.05, which makes the engineering and administrative charges about 11.6 per cent. It is expected that for the coming season, with much larger operations and the expenditure of a great deal more money than last year, with practically the same overhead charges, these engineering and administrative costs will be cut at least three or four per cent. The low cost of the engineering and administrative

charges may be briefly explained as follows: The Project Engineer is able to do the work of two high-salaried officials, viz., that of project engineer, which has to do with the general supervision of all matters in connection with the project, and in addition, that of chief engineer, which has to do with the engineering features and the construction only. He has been able to spend a large portion of each day on the actual construction work and personally superintend its progress. The method of field and office accounting adopted by the project is responsible to a great extent for the low administration charges, because on accurate and closely itemized accounts details are watched with considerable care, also the lack of duplication of work in bringing the accounts in from the field, decreases the number of the office force quite materially. For the past season, also, there has been no expert legal or engineering charges in connection with the project, which ordinarily are large enough to be of some consequence. In the engineering department the force has always been kept to a minimum, the parties being continually switched from one end of the work to the other in order to leave no idle men against this administration account; also, men who did not give satisfactory service were soon dismissed. This being the only project at the present time constructed by the state, all the project records are kept and maintained at the project headquarters, and no other supervising office is necessary, as the state officials who comprise the State Desert Land Board receive their salaries and traveling expenses through their own respective departments.

"At the beginning of operations on the project, it was known that the appropriation with which we had to complete the project was scarcely enough to accomplish the work desired. This matter was carefully impressed on each of the men in actual charge and they were instructed to keep expenses down to a minimum and to watch details. The result has been that the men in charge of the important positions on the project have taken great pride in showing that a great amount of work has been done at a minimum cost."

Maintenance Charges.
 "The total number of acres irrigated, or for which water was actually delivered during the past season was 2571 acres, for which a charge of \$1.00 per acre was made in accordance with the old contract for maintenance. The following tabulation of the distribution of the cost of operation and maintenance during the past irrigation season may be of interest:
 Tools and equipment \$ 136.89
 Cleaning and repairing ditches 1,055.54
 Office equipment, rents, etc 232.08
 Salaries Irrigation Manager and ditch riders 2,031.85
 Making a total expenditure of \$3,447.27
 The amounts collected to cover this expenditure have been as follows:
 Collected by labor credits \$ 738.20
 Collected by transfer of

payroll accounts \$24.29
 Collected in cash 2,171.82
 Total collected \$2,234.31
 This shows a small deficit in the amount expended over the amount actually collected of \$212.96, but there still remains unpaid on December 31st, at the close of the season, \$336.63, which it is hoped will eventually be collected to pay the outstanding indebtedness of the Water Users' Association.
 "Since October 15th, the actual expense to the State of Oregon for the operation of the canals has been charged directly against the operation of our camps and the operation of the Calyx drill outfit for the Tumalo dam, except the salary of the Irrigation Manager, which has been charged direct to the adjudication of water rights and other office accounts.
 "The actual handling of the lands under the project that will be opened for sale and all contracts with private land owners for water, will also be handled by the operation and maintenance department. In this connection can state, that applications are in hand at the present time in the project office sufficient to provide for the sale of all uncontracted land."

Co-Operation on Irrigation Work.
 What Mr. Laurgaard has to say about co-operation follows:
 "Within the State of Oregon there are many projects in an uncompleted condition, some of which were undertaken under the Carey Act, while others were promoted as private enterprises. The actual completion of these projects and the reclaiming of the lands embraced by them is of great importance to the State of Oregon at large. This may be realized more fully when the vast area of arid land of the state is compared with the area upon which profitable crops may be raised without irrigation.
 "Some of the public spirited officials and prominent men of the state have realized this, and as a solution of the problem have presented what is commonly called "co-operation" between the State and Federal Government. At the present time Oregon stands as the pioneer in this field of development and already has under way several investigation projects for which the State and Federal Government are paying on a co-operative basis.
 "Until some better plan is promulgated for the reclamation of the arid lands within the state, we believe that the idea of co-operation with the federal government is probably the most feasible. Every with co-operation it is necessary for the state to develop some feasible plan to raise money without direct appropriation or taxation. Should some suitable means be finally adopted by the people of the state for the raising of money to be used in co-operative work with the government, some definite plan must also be outlined for the expenditure of these large sums of money and for the carrying out of the actual construction work.
 "Several plans have been suggested but this office believes that one that would be most feasible would be in general as follows:
 "A commission of three men
 (Continued on Page Seven)

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