

In spite of the great recent fall in the market prices of some of the Rossland stocks, there is more work going on and more ore being shipped from the camp than ever before. Boom conditions of the early nineties have passed away, but the vast low-grade ore bodies now in sight, and the extensive improvements in mine equipment and labour organization, coupled with the greatly decreased smelting charges at Northport, Wash., and at Trail, B. C., render the future a very hopeful one.

MINING AND MILLING COSTS IN CALIFORNIA.*

THIS is something which can never arbitrarily be determined until the character of the mine has been demonstrated. The width and length of the ore-shoot must be known, and the character of the walls ascertained. The probable quantity of water which will have to be handled is always problematical, and, as a matter of course, the character of the walls and vein material itself will determine the method and expense of timbering. It is not uncommon to hear it said that in California mining and milling can be accomplished, under favourable conditions, for less than \$1.00 per ton; but these conditions so rarely obtain, even in California as to scarcely be worth mentioning, for they by no means constitute or illustrate the typical features of California mining. There are mines in slaty rocks, not particularly hard, where the veins are 3 ft. to 7 ft. in width, which, being worked through tunnels and having free water-power, are operated at a very low cost; but even this class of mine does not represent the majority—indeed, such constitute a very small minority.

In the greater number of mines in California operations are conducted through shafts, which necessarily increase the expense of mining. In the central gold belt the mines vary so greatly in size, depth, character of ore and wall rocks, and quantity of incoming water, that a statement of cost would convey but little information, and comparison would be valueless unless accompanied by a complete knowledge of existing conditions and an itemised cost sheet. At a number of larger mines elaborate cost sheets are kept, and to a number of these the writer has been given the freest access. The cost of mining in the larger mines, under ordinary conditions, may be fairly represented by the cost sheet of the Wildman Company, at Sutter Creek, California, which has been kindly furnished by the superintendent, John Ross, jr.

Detailed average cost of mining one ton of ore for the years 1896, 1897, 1898, at the Mahoney mine of the Wildman Company:—

	Total cost for 134,866 tons.	Cost per ton.
Timbers	\$24,499 18	18.163
Spiling	4,913 05	3.642
Lumber	1,017 57	0.755
Charcoal	1,242 01	0.92
Candles	1,840 59	1.365
Powder	4,386 75	3.252
Fuse	780 16	0.578
Caps	186 05	0.138
Water	7,538 00	5.589
Freight	1,338 42	0.992
Iron	1,224 24	0.908
Steel and steel rails	1,417 27	1.05
Hardware	3,139 48	2.328
Oil	775 37	0.575

* California Mining Bureau Bulletin, No. 18.

	Total cost for 134,866 tons.	Cost per ton.
Grease and tar	117 27	0.087
Coal	229 57	0.170
Miscellaneous	3,241 69	2.403
Power drill machinery	2,346 90	1.740
Surveying	667 50	0.495
Cement	15 00	0.011
Insurance	103 77	0.077
Taxes	737 63	0.547
Wire rope	636 28	0.472
Office supplies	97 67	0.072
Superintendence and labour	160,003 58	118.621

Totals

Detailed average cost of milling one ton of ore for the years 1896, 1897, 1898, at the Mahoney mill of the Wildman Company:—

	Total cost for 134,901 tons.	Cost per ton.
Shoes	\$2,310 00	1.712
Dies	2,078 63	1.541
Screens	441 97	0.328
Quicksilver	870 14	0.645
Hardware	1,199 05	0.889
Water for power	10,699 60	7.931
Freight	1,064 00	0.789
Cyanide potassium	162 00	0.120
Wood	220 88	0.164
Charcoal, iron and steel	97 74	0.073
Oil	63 95	0.047
Grease	23 13	0.017
Lumber	67 34	0.050
Miscellaneous and coal	1,529 46	1.134
Timbers	17 95	0.013
Assay supplies	516 59	0.382
Office supplies	275 73	0.204
Expressage, bullion	391 16	0.290
Hauling and loading sulphurets	2,354 65	1.746
Silver-plating plates	281 50	0.208
Insurance	423 14	0.314
Taxes	701 11	0.520
Plates	86 49	0.064
Superintendence and labour	16,791 58	12.447
	\$42,667 79	31.628

The above costs includes all repairs and equipment.

COMPANY MEETINGS AND REPORTS.

PAYNE CONSOLIDATED.

AT the annual meeting recently held in Montreal, the chairman stated: In March last your directors deemed it advisable to suspend the payment of dividends, owing to the scarcity of ore in sight above No. 5 level. This level has been a disappointment in that it has not produced anything like the quantity of ore as found in the level above, and as estimated by Mr. Bernard MacDonald, in his report, at about the time this company took over the property.

No. 8 tunnel has not yet reached the ore shoot, progress having been very slow, owing to the many drawbacks to which your manager makes reference in his report.

Your directors have under consideration the advisability of installing a compressor and concentrator, to be operated by water power, and one of your directors, Mr. F. B. Mathys, has recently paid a visit to the mine to thoroughly investigate and report on same.