

are undertaken. Already one English company has made the mistake of building a costly rope tramway (and mill) without having first ascertained that they had sufficient ore to warrant the expenditure. Four months sufficed to run through the mill all the ore known to exist in the property and then the tramway (and mill) were idle and useless—unless other ore be found, which may, or may not, happen. A conspicuous failure like that, however, does not appear to afford sufficient warning to inconsiderate rashness, for rumors have recently been rife of even a much more costly tramway being built to another mine where there is still less development. For such foolishness—because it deserves no other name—the mining reputation of British Columbia must suffer, notwithstanding that British Columbians, who know, are strongly opposed to such ill-timed and unwarranted expenditures.

A few remarks may here be made upon the important subject of "Ore in sight." Figures, it has often been said, may be made to prove anything, but that is only when the premises are unreliable. A lively fancy, unrestrained by experience, is one of the most dangerous qualities a miner can possess, especially when he comes to estimate the quantity of ore in sight. Most glaring errors are committed, in this connection, again and again, for which the capitalist has to suffer. When quantities are stated it should be made perfectly clear what is included. A mine may shew a large superficial extent of ore and yet it may be quite impossible to estimate the quantity of it. Ore "blocked out" is the only ore in sight that can be cubed with any approach to accuracy. The remainder can only be dealt with as a factor in fixing the price which may safely be given for a mine.

The cost of hauling ore by wagon and sleigh ranges from about ninety cents to \$3.25 per ton, according to distance.

The freight rates on ore to U. S. A. smelters range from about \$11 to \$19 per ton. To British Columbia smelters they are much less but this advantage is mainly nominal as the increased local smelting charges absorb a great part of the difference.

8. PROSPECTING AND LOCATING.

No one who has ever had any experience of prospecting in British Columbia will ever begrudge the prospector his hard earned success; for prospecting is often most toilsome work and can only be pursued successfully for any length of time by men of great determination and with strong constitutions. The thick underbrush and fallen timber often render the forests impenetrable, and it is this fact which leads to so many forest fires. The latter are, however, only partially successful in their object and the prospector is often compelled to make his way through miles of thick forest towards timber-line, where he can work with greater freedom; partly because there is less timber to contend with, but also because the rocks are more exposed, there being less detrital matter on them. The "packing" of sufficient food and other necessities for an extended excursion of this kind is no easy matter and the hardy prospector in order to minimise the weight to be packed occasionally has to sleep for weeks at a time, in the open, without even a blanket.

That prospecting should be more successful, other things being equal, among the more exposed rocks near the mountain tops, than at lower levels, where the rocks are hidden by drift and underbrush, is very evident, and, therefore, there is nothing surprising in the fact that almost all the more important mines in British Columbia are at considerable altitudes. The following table shows the height, (Barometric) above sea level, of some of them:

MINE.	DISTRICT.	Feet above Sea
Payne	Slocan	7100
Idaho	"	6700
Alamo	"	6700
Ruth	"	4700
Slocan Star	"	5000
Whitewater	"	5000
Reco	"	6200
Silver King	Nelson	6000
Le Roi	Rossland	3600
War Eagle	"	3700
Cariboo	Camp McKinney	4600

Prospecting to be done intelligently, however, requires something more than great energy and endurance, and that something the ordinary prospector almost invariably lacks. Like the ordinary miner he is frequently imbued with ideas such as might arise from a misconception of the doctrine of uniformitarianism. The behaviour of deposits and the nature of the country rock in the district where he was trained, unless he has since worked in other districts are apt to have an undue influence on his actions, so that instead of seeking to learn the real geologic character of any new area he may be exploring, he plunges into it with a variety of preconceptions which may, or may not, agree with the facts as there presented. One of the consequences of such a mode of procedure is often seen in the staking out of claims crosswise, even on comparatively level ground. With the present square claims it is not so important that a vein should be parallel to the location line, but prior to 1892, when the claims were 1500 feet by 600 feet and had extra-lateral rights, which might be very greatly reduced by improper staking, it was most essential that the prospector should ascertain exactly the course of every vein on which he proposed to locate. Yet many of these older claims are wrongly laid out, some being at right angles to the course of the vein on which they are placed. Instances of this kind are found at the Payne mine in the Slocan, at the Cariboo gold mine in Camp McKinney and elsewhere. Other claims form a less angle with the vein but yet they are so far astray that they lose, equally with those at right angles, a large percentage of their extra-lateral rights. In some cases the errors doubtless arose from ignorance of the principles of stratigraphy but often, more probably, resulted from assuming the direction of the veins instead of ascertaining the actual facts.

In staking extensions mistakes may very easily occur, unless the prospector has some knowledge—which he seldom has—of stratigraphy. An actual case of this kind may be here described. A vein of great promise having been found and partly traced on the surface, as shown in figure 2 other prospectors proceeded, as is usual in such circumstances, to stake out extensions.