

PROSPECTING IN NOVA SCOTIA.

Written for the CANADIAN MINING JOURNAL by
W. H. Prest.*

Having been asked to contribute a short paper on prospecting in Nova Scotia, I find it difficult to separate the actual work from the geological problems with which they are intimately associated. In fact, the methods and distribution of work can hardly be described without giving the reasons for such distribution and these reasons are chiefly geological. The mere sinking of pits and opening of trenches without system is not prospecting. Systematic work in this line means a programme arranged after a fair preliminary knowledge of rock structure, surface distribution, and origin of debris. This is all that can be learned by a surface examination and only serves as a guide to the location of trial pits. The first work in jobs of this kind in Nova Scotia is nearly always experimental and only lays bare local peculiarities of drift distribution. Only then can a method of working be devised that will ensure economy and success. The following working programme seems to me to be most suitable for deep surface such as we have in Nova Scotia.

Location.

Prospecting in Nova Scotia is as a rule a far different matter from prospecting in Ontario and the west. In our circumscribed areas the wandering prospector has little place. The chance surface finds are nearly all made, and the prospector makes his home in or near an established mining camp. The largest area not intersected by good roads is a tract of about 1,000 square miles in the western part of the province, and it is only there that the prospector goes to his work in western style. The prospector's duties are now chiefly confined to tracing float and, as this is usually done in deep surface, his sphere of operations is limited. Within the limits of each district are usually two or three localities noted for the discovery of rich float. This is usually held under lease or license as our too liberal mining laws have resulted in nearly all mining land of any value being held without working conditions. This state of affairs leaves little new land worth prospecting, and if the owner does not or cannot do the work it remains undone. Rich float was found on some properties nearly 50 years ago, the source of which has not yet been discovered. Therefore the prospector is usually hired as he can seldom afford to work on shares and pay those who help him.

As a rule, the gold mining districts are well defined and surveyed, and within the limits of these districts nearly all the prospecting in Nova Scotia is done. The five counties of Guysboro, Halifax, Hants, Lunenburg, and Queens, contain nearly all the gold mines in Nova Scotia. In these counties are 50 or 60 localities in which rich float has been found, indicating the existence of still undiscovered veins. The search for these hidden veins is the work of the prospector of the future. It is not likely that much more rich float will be found on the surface, as even the farmers invariably examine and break every piece of quartz or heavy rock they find. But the float already found points to many years of trenching and shaft sinking. In them we have the source of much probable profit as some of this float is very rich.

Outfit.

In the early history of gold mining in Nova Scotia a prospector's outfit would not have called for much comment—a pick, a pan, a kettle, an axe, a few pounds of food, and the inseparable pipe, tobacco, and matches. Tent and blankets were luxuries to be despised by any man who desired an honourable reputation for hardihood. Camp and dishes grew on every white birch tree and every prospector had Indian lore enough to strip the bark and make them.

Now, however, all this is changed. The work is harder, the surface is deeper, and the prospector more particular. Now an outfit for ordinary work will include, say, one dozen heavy cast steel single pointed picks, one-half dozen long-handled pointed steel shovels for surface work, three short-handled pointed steel shovels for underground work, one stone hammer, one striking hammer, one blacksmith's hammer, one crow-bar, one prospecting pick, one half-dozen short drills, one miner's spoon, two axes, three zinc pails, one gold pan, one pocket lens, one pocket compass, one hand-saw, one blacksmith's file, two saw files, one cold chisel, one pair tongs, one 1½-inch augur, one keg (100 lbs.) of mixed 5 and 7-inch spikes, 25 pounds 3½-inch nails, ¾-inch rod iron, hoop iron, one iron bound rock tub, one water barrel, 50 feet 1-inch rope with grummet, one 5-foot x 5-inch windlass with cranks and standards, one portable forge, one combined anvil and vice, one diaphragm hand pump with 2½-inch suction. Repair material for forge, pump, tub, and windlass. Lumber (1-inch) for spouts and other purposes; 1½-inch lumber for lagging, dump box, etc. Dynamite fuse and detonators, say enough for 20 shots. Camping and cooking outfit for at least four men. At least one month's provisions. A boarding house or even an empty house near by will greatly facilitate the work. The modern prospector in Nova Scotia must be prepared for trenching, shaft sinking, or tunnelling as conditions demand. The outfit also includes to an extent that it never did before, a knowledge of structural and glacial geology. In the new order of things the wandering prospector occupies but little space, therefore I can be excused for not describing farther a fast-vanishing phase in this occupation.

Before leaving this part of the subject I may say that the pay of a cook is often saved for more effectual work by including a few barrels of hard bread in the provision list. Not the kind that weak-mouthed home-stayers usually call hard tack, but those that the old-time British tars used to repel boarders with. Compact and nourishing, but durable as wood, I pity the martyrs to toothache who cannot eat them or will not try. My toothache stopped when I began their use twenty years ago.

Mapping.

This important preliminary to prospecting is usually neglected here, as elsewhere. If the Government maps have been published they are often used. The general maps are drawn on a scale of 1 inch to 1 mile, the district maps on a scale of 1 inch to 250 feet. These maps, which I may call Mr. Faribault's life work, cover about three-quarters the area of our gold bearing rocks and are well worth the time spent on them. Once done, the work will last for many generations. The struc-

*Mining Engineer, Bedford, Nova Scotia.