

to 800 feet. Here, resting upon it, are to be seen only the trappean beds of the Keweenaw group, with a low dip east-south-eastward. In the next basin, five to seven miles from the bay, the indurated marls and sandstone beds of the Keweenaw group appear under the trappean beds.

Low down, within two or three miles of the bay and about three to four miles south of Wolf River, I saw black-looking flat slates, which I think must be Animikie. I have not been in that locality for years and would not be sure of this point. If Animikie, it would be interesting to trace out the contact with the Keweenaw beds. Within these basins and all around this locality, the folded schists, the granites and the gneisses stand vertically or nearly so, and must have been eroded and planed down to a great depth before the deposition of the overlying flat beds, whether the verticality of the strata was caused by folding or by faulting.

Again, in McTavish Township in the vicinity of Enterprise Mine, the old rock foundation, in the form of islands, protrudes through the flat-lying sandstones and marls of the Keweenaw group. In similar manner the green Huronian strata protrude through the flat-lying Animikie beds in the vicinity of Blende Lake, near the foot of Thunder Bay, and at other places.

The 3 A Silver Mine in McGregor Township, is in the Huronian greenstone-schists formation, and the Silver Harbour Mine in the flat Animikie slates, both locations adjoining. The line of contact of the two formations is covered, but on approaching it, they show no change in their regular dips, which are almost at right angles to one another. Again I could see no tendency to a transition in character—the one showing its Animikie peculiarities and the other the Huronian aspect, as distinctly as when these rocks occur at great distances apart. On the shore of Thunder Bay to the west, between Silver Harbour and Wild Goose Point, I remember distinctly seeing undisturbed patches of the original smooth surface or floor, upon which the Animikie beds were deposited over the nearly vertical Huronian green chloritic and dioritic schists. Some flat Animikie slate was still fast *in situ* at these places. The lower layer consisted of a thin indurated matrix, thickly packed with small pebbles, mostly of white quartz. The vertical schists referred to strike into the bay directly under the Animikie beds. Again further west along the line of contact of the two formations about two miles and a half to the north-west of T Harbour, on Location No. 2, the flat Animikie slates are seen in place, filling indentures in the highly inclined green Huronian strata.

At the Duncan (formerly called the Shuniah) Mine two or three miles north-east of Port Arthur, the rocks at the surface consist of the flat-lying, unaltered, Animikie black slates, etc., with the nearly vertical Huronian strata underlying them at a depth of about five hundred feet, while the surface-contact of the two formations lies to the north about one mile from the works. The shaft-sinking, and the deep borings made at this mine with the diamond drill, actually afforded direct proof that the horizontal and unaltered shales, etc., rest immediately on Huronian syenite and on the upturned and denuded edges of the crystalline schists of this series.

The folded schists with associated granites and gneisses are highly inclined or vertical, in the vicinity of Thunder Bay, as is the case with them generally; while the Animikie beds, on the north shore, are, with rare exceptions, flat or slightly inclined. We find patches or outliers of the Animikie beds in their usual flat position, resting on