APPENDIX.

VI.-NOTES ON THE GEOLOGY OF THE YUKON.

My companion on the Yukon, Mr. Dall, published a few notes on the geology of the region in "Silliman's American Journal" for January, 1868, some extracts from which are here given.

Speaking of the mountains known as the "Ramparts," etc., he says: "They were entirely composed of azoic rocks, of which a silvery greenish rock of talcose *appearance*, but very hard, predominates. Quartz in seams, slates and quartzite rocks, are abundant, and a rock resembling granite, but with a superfluity of feldspar, and no mica, is rare. The slates generally have a north-westerly dip.

"True granite appears only once, near the termination of the Ramparts, and forms a ledge extending across the river, and making a rapid, not, however, a dangerous one. Fifty miles or less below the rapid the Ramparts terminate; the Tanana River (or River of Mountains) comes in; and from this point to the mouth, as a rule, the river is wide, with the right bank high and the left bank low, but occasionally with mountains in the distance, or a bluff on the river. From the end of the Ramparts to Co-yukuk River (250 miles) the right bank presents, in their order, conglomerate, quartzite, bluffs of yellow gravel, blue talcose slate conglomerate, hard blue slates and quartzose rocks, blue sandstones and a soft green rock (plutonic), with light stellate spots in it. Granite is very rare, and mica also. I have found fine specimens of obsidian on the beach, and, just above the Ramparts, pebbles of Niagara limestone, with its characteristic fossils. From the bend we find the following strata : blue sandstone (unfossiliferous), brown sandstone in beds at least 500 feet thick, containing vegetable remains in some layers, and, rarely, casts of mollusca—all, as far as I have collected, Lamellibranchs. Thirty miles below the bend is a small contorted seam of coal

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