## MINERALS OF NEW BRUNSWICK.

## SULPHATES.

[A glass made of soda and silica becomes red or orange-yellow when sulphur is present (by the addition of a mineral containing it). All the sulphurets except Blende have a metallic lustre. Hence with this exception any *unmetallic species* in this list *containing much sulphur*, *must be a sulphate*. Blende may be distinguished by the test for zine (See Sulphurets).]

49. BARYTES, --III. H = 2:5 - 3:5; G = 4:3 - 4:7, --"Heavy Spar." Sulphate of Baryta. Color white inclining to yellow, red, &c. Streak white. Transparent to opaque. B.B. Decrepitates and fuses with difficulty. Occurs at Swallow Tail, Grand Manan, Frye's Island, Charlotte Co., and with Manganese at Markhamville and Shepody Monntain. This mineral is largely used in the manufacture of paint.

50. ANHYDRITE, —I'U. H =  $3^{\circ}$ -  $3^{\circ}5$ ; G =  $2^{\circ}9$ -  $2^{\circ}96$ . —Anhydrous sulphate of Line. Color white, grey, blush and reddish. Streak greyish white. B.B. Whitens but does not extended (*i. e.* open out into leaf-like layers) and finally is covered with a friable enamel. In beds with gypsum at Hillsborough, Albert Co. Same uses as gypsum.

51. GYPSUM.—IV. H = 1.5 - 2; G = 2.3.—Sulphate of lime. In crystals; also grannlar, fibrons and compact. Color nsually white; also grey, brown, &c. Lustre on some faces (of crystals) pearly; when massive the lnstre is glistening to dull. Streak white. B.B. becomes opaque white, opens ont into leaf-like layers and falls to a powder which, if moistened, soon becomes solid and hard. The varieties are:

51a. Selenite. Transparent crystals. In the mud of a spring at Sussex.

51b. Alabaster. The massive varieties of fine grain and pure color. Of excellent quality at Hillsborough, Albert Co.

51c, Station Space. Translucent fibrons variety. Albert and Westmorland Co's. 51d. Fibrons Gypsum. White fibrons variety. Albert and Westmorland Co's.

516. Forons Gypsan, White informs variety. Intervarieties of a dull color, 51e. Common Gypsan, The massive and impure varieties of a dull color, Extensive beds of gypsum are found in Albert, Westmorland and Victoria Counties. Plaster of Paris is gypsum rock, caleined and ground, and has various uses in the arts. The nucleined plaster is extensively used for improving soils. Alobaster is cut into vases and ornaments, and Selenite is used for optical instruments.

## PHOSPHATES.

52. VIVIANITE. --IV. H = 15-2; G = 2.66. --Color blue. Streak blnish. B.B. fuses to a dark brown scoria or slag that effects the magnetic needle. Affords water in a glass tube. Dissolves in nitrie acid. Ocenrs in elay at Quisabis River, Madawaska County.

## CARBONATES.

[Carbonates effervesee with dilute muriatic acid and more briskly with strong acids].

53. CALCITE. —VI. II  $2\cdot 5 - 3\cdot 5$ ; G  $-2\cdot 5 - 2\cdot 8$ . "Cale Spar." Carbonate of Lime. This mineral is next in abundance to quartz and as varied in its aspect. A knife easily scratches it, and a drop of dilute nitrie or muriatic acid produces an immediate frothing on its surface. B.B. gives an intense white light and burns to quickline. The sparry varieties are—

- 53a. Iceland Spar. Transparent crystals. These exhibit the property of double refraction, which calcite possesses in an eminent degree. Objects seen through a crystal of this spar, held in a certain position, seem double. Large crystals have been found at Bellednne, Gloucester County. Iceland spar is used in optical instruments.
- 53b. Calcareous Spatr or cale spar has a variety of crystalline forms such as "mail-head spar," "dog's-tooth spar" and the hexagonal prism found at Fort Howe Hill, Portland, and Lawlor's Lake, Simonds; and simple and modified rhombohedrons found at Markhamville, Kings County, and Goos Creek Saint John Connty.
- Goose Creek, Saint John Connty. 53c. Stalactile and Stalagnite. Teicle forms produced by the dripping of calcareons water from the roofs to the floors of caverus. Dipper Harbor and the caves of Portland, St. John County, are localities for these varieties. Used for ornamental work.