

A-7

In the plus 75- μ m ferromagnetic product magnetite is less than 10% liberated but in the minus 75 plus 33- μ m product about 75% of the magnetite is present in particles which contain more than 80% of magnetite. In the minus 33- μ m ferromagnetic products the liberation of magnetite is excellent.

Traces of pyrrhotite were noted in these products.

5.2 Mineralogy of the <3.1 sp.gr. Non-magnetic Products

The mineralogy of the <3.1 specific gravity non-magnetic products was assessed by optical observation and also by means of an X-ray diffraction study of the <3.1 specific gravity non-magnetic product of the minus 75 plus 33- μ m fraction. The result is as follows:

Quartz	Dominant
Biotite	Accessory
Feldspar	Accessory
Fluorite	Accessory
Chlorite?	Trace
Calcite	Trace
Magnetite?	Trace
Amphibole?	Trace

Key:

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- Tr = Trace. Components judged to be below about 5%.

In temporary grain mounts many particles appear to be dark, fine-grained material and, where fluorite can be seen, it forms extremely complex intergrowths in particles containing several mineral components. In polished sections, where the fluorite can be more readily identified, grains consisting of several non-opaque phases and specks of fluorite are common (Plate A-2d).

5.3 Mineralogy of the 3.1-3.3 sp.gr. Non-magnetic Products

The 3.1 to 3.3 sp.gr. non-magnetic products contain abundant liberated fluorite and less than 0.5% magnetite. The principal diluent mineral is amphibole, which has a specific gravity close to that of fluorite.

In the plus 75 μ m 3.1 to 3.3 sp.gr. non-magnetic product fluorite is approximately 80% liberated and most fluorite crystals are completely clear. A few, however, contain small (<5 μ m) inclusions of ?garnet and/or amphibole. The liberation of fluorite in the minus 75 plus 9 μ m 3.1 to