Property File

083D 020

Muscovite Deposits

MICA CREEK AREA

Revelstoke Mining Division.

British Columbia.

005226

No. 3.

Highway Deposit
Lower Showing

C.B. NEWMARCH. - 1942

The muscovite deposits of this region may be reached by following the Big Bend Highway for a distance of 86 miles from Revelstoke to the road crossing of Mica Creek. Just downstream from the Mica Creek Bridge a trappers cabin serves a convenient point for storing supplies or for stopping overnight.

Since the trails of the area have fallen into disrepair possibly the best route to follow in travelling to the headwaters of Mica or Potlatch Creek is to continue along the highway for approximately 1 mile beyond the Mica Creek bridge, then to strike directly up the hill to an elevation in the neighborhood of 5000 feet. Once at this elevation travel is no longer impeded by the thick undergrowth which makes travel difficult at lower elevations. Good going is to be found on the southwest slope of Fred Laing ridge to the headwaters of Mica Creek. The northeast side of this ridge is steep and rugged.

MUSCOVITE

(1) Highway Deposit.

1.1 miles north of the Mica Creek bridge a branch road, 100 yards in length, leads easterly to an abandoned gravel pit, situated at the base of the slope of an old burn. On a bearing of 67 degrees from this pit and at elevations of approximately 2380 feet and 2500 feet (i.e. 470 feet and 590 feet above the pit) are located exposures of a mica-bearing pegmatite dyke. The outcrops may be referred to as the "Lower Showing" and "the Upper Showing"; both appear to be on the same dyke though the area between the showings is covered.

Lower Showing.

At this point a pegmatite dyke, 4 feet in width, strikes north 65 degrees east, dip vertical, cuts mica schists that are presumably Pre-Cambrian or Mesozoic in age.

The schists strike north 35 degrees east and dip at 10 to 20 degrees southeasterly.

The dyke here carried books of muscovite up to 3 inches by 3 inches by 2 inches thick. The larger books of mica appear to be localized to an area some two feet in diameter. Some 1 inch by 1 inch books were noted and a great deal of smaller mica, ¼ inch to ½ inch in diameter. The zone carrying the larger books of mica would consist of possibly 20 per cent by volume of muscovite. Biotite which by transmitted light is dark ruby-red, was noted in books up to 1 inch by 1 inch by ¼ inch thick.

Within the schist at this outcrop, a ¼ inch band carrying considerably kyanite was noted.

Upper Showing.

Here the pegmatite dyke is 6 feet in width, strikes due east and has a vertical dip. It is exposed by a tension fault that has produced an open fissure, approximately 6 feet wide and open to the surface for some 25 yards. The fissure follows either at, or within a few inches of, the south side of the dyke. With the aid of a rope and flashlight the fissure may be followed for a considerable distance underground and an excellent longitudinal section of the dyke obtained. Zones within the dyke, which shows considerable block disintegration, carry 5 to 10 per cent by volume of 1 inch by 1 inch by ½-¾ inch thick books of muscovite. These zones are generally not more than a foot or two in diameter. A great deal of smaller than 1 inch by 1 inch muscovite was observed. The muscovite, except where acted upon by surface waters, is clear but is often strained. In addition to muscovite the dyke carried considerable garnet (the pink variety almandite) in crystals up to one eighth inch in diameter, and also some black tourmaline.

Should mining be contemplated, the open fissure would greatly facilitate removal of the pegmatite.

(2) 1st Fork of Mica Creek.

At an elevation of approximately 6250 feet, and immediately above an old campsite on a small northwesterly-flowing branch of the 1st fork, pegmatite sills, varying from 6 inches to 2 feet, and occasional lenses up to a maximum of 15 feet in width, carry some muscovite. The bulk of this muscovite is in books of ¼ inch diameter, though occasional books up to 1 inch diameter were noted. The sills lie within a garnetiferous-micaceous gneiss, and are generally discontinuous, pinching or swelling suddenly. The average strike of the sills is due east

with a dip of 55 degrees to the south. Almandite is a conspicuous mineral of the gneiss and often occurs in the pegmatite sills, or lenses, or in the quartz veins.

At the head of the first fork, high on the south wall, at an elevation of approximately 7100 feet, a pegmatite sill, varying in width from 6 to 15 feet, carries a very little one-eighth inch diameter muscovite. The sill also carries almandite and black toumaline. The gneiss, which has well-marked banding, strikes south 85 degrees east and dips 10 degrees to the southwest.

At an elevation of approximately 7350 feet, at the 1st fork-Potlatch Creek Divide, the country rock is a micaceous schist, containing the minerals kyanite, muscovite, biotite, almandite, in approximately equal proportions. At this point a pegmatite lens, 3 feet thick, striking north 20 degrees east and dipping 15 degrees to the southeast, carries muscovite in books up to ½ inch in diameter. The muscovite here makes up possibly 5 per cent of the lens by volume.

(3) 2nd Fork of Mica Creek and Headwaters of Potlatch Creek.

At an elevation of approximately 6810 feet, on the Potlatch slope of the 2nd fork - Potlatch creek Divide, a pegmatite lens, 35 feet in length, with its long axis along a direction of north 50 degrees west, carries muscovite. The mica books are up to 1½ inches in diameter and 1 inch thick. The books make up possibly 5 per cent of the lens by volume. The enclosing rocks are micaceous schist (carrying muscovite, biotite, kyanite and almandite).

Just south east of the above mentioned outcrop, at an elevation of approximately 6940 feet, and directly above two small glacial lakes at the head of Potlatch Creek, an irregular pegmatite sill, 5 to 30 feet thick, striking south 70 degrees east and dipping 15 degrees to the southwest carries some muscovite. The books are generally one-eighth inch in diameter. Occasional patches of black toumaline were noted within the sill.

Pegmatite lenses and sills outcrop in the steep slopes at the head of the second fork of Mica Creek, carry muscovite in books up to 1½ inches in diameter, and almandite in patches up to ½ inch in diameter. The muscovite is to be found only locally within these sills or lenses.

(4) Mica Creek Above 2nd Fork.

One-half mile upstream from the junction of the main northerly-flowing fork of Mica Creek, on the north side of the creek, between elevations of 3830 feet and 4130 feet, pegmatite lenses and sills outcrop. They occasionally carry zones of muscovite in books up to 1 inch diameter and ¾

inches thick, though most of the books are one-eighth to one quarter inch in diameter.

Directly up the slope from these outcrops, at an elevation of approximately 5810 feet, a pegmatite sill, 3 feet thick, strikes north 50 degrees west, dip 30 degrees to the northeast, carries an unusual amount of rather better than average grade muscovite. Books up to 3½ inches in diameter by 2 inches thick were noted. Possibly 5 per cent to 10 per cent of the sill by volume consists of mica.

(5) Lower Reaches of Mica Creek.

Upstream 1½ miles from the Mica Creek bridge on the north bank of the creek, at an elevation of approximately 2320 feet (100 feet above creek level) a pegmatite dyke, approximately 30 feet wide, and striking north 20 degrees west with a dip of 80 degrees to the northeast, was observed. This dyke carries some muscovite in books generally of ¼ to ½ inch diameter, and a small amount of well-crystallized kyanite.

Area Covered.

Both slopes of Fred Laing Ridge, embracing the northerly flowing tributaries of Potlatch Creek, (with the exception of the most south-easterly tributary); the southerly flowing tributaries of Mica Creek, (with the exception of the northeast forks of the North Fork,) and portions of the valley-bottom of the main Mica Creek.

KYANITE

Descriptions of kyanite deposits observed have been included in the body of the report. Small amounts were noted at the Highway Deposit, the headwaters of the 1st and 2nd forks of Mica Creek, and in the lower reaches of Mica Creek. It is suggested that further work, preferably in the lower reaches of the creek, might reveal worthwhile deposits of this mineral. Thin bands of kyanite were noted in the schists of the lower Mica Creek, whereas at the headwaters of the creek kyanite was observed as a component of the schist.

GARNET

The pink variety of garnet, almandite, is common throughout the area. At the head of the Second Fork of Mica Creek crystals up to ½ inch in diameter were observed. Prospecting in this region may reveal garnets of gem quality.

SUMMARY

Pegmatites carrying books of muscovite occur at a number of places within the area. Most of the muscovite is in books less than 1 inch diameter. Books of muscovite from 1 inch to 3½ inches in diameter and up to 2 inches thick occur locally within the sills or dykes, in zones which are usually not more than 1 or 2 feet in diameter.

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