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018507 (Notes gr[illegible] m by N. Carter, Jan '65).

LIME CREEK STOCK - ALICE ARM.

- 5 miles south of Alice Arm. - elevation 2100'.

History

First staked in 1912 - reported in B.C. Mines Annual Report for 1917.

Topography & Vegetation

Rugged - well treed - dense underbrush - typical Coast Range. Creeks have steep canyon walls.

Topography reflects main structural trend - N60E - broken by stock.

- Best rock exposures in creeks. -

General Geology

Table of Formations

Tertiary		Tholeiitic Lava Flows - flat lying - (TABLE MT).
		Lamprophyre dikes & sills, andesites, basalts.
		——— Intrusive Contact ———
		Intrusive Stocks of qtz monzonite porphyries, quartz diorites and granites, with associated dikes & sills.
		——— Intrusive Contact ———
Upper Jurassic - Lower Cretaceous.		Coast Range Intrusives - granodiorite, qtz diorite, diorite and felsite dikes.
		——— Intrusive Contact ———
	Hazelton -	Sedimentary Sequence - argillite, graywacke
		Volcanic & Sedimentary Sequence - argillites, graywackes, volcanic tuffs.

Radioactive Age Dating - Lime Ck Stock - 53.5 m.y.
Roundy Ck 49 m.y.

Size of Stock - Main body - 2800 × 2200 ft.
Eastern Qtz Appendage - 1500 × 1000 ft.

Rock Types

1. - Main rock type is a m-g. leucocratic qtz monzonite porphyry, with phenocrysts of plagioclase and secondary K-feldspar - orthoclase. Occupies central part of stock - grades outward on eastern and western margins to a qtz. diorite characterised by abundant secondary biotite and disseminated pyrite. Qtz. diorite in eastern appendage is more basic than western type - greater % mafics - more calcic plagioclase.

2. Intrusive into both of abal types & localised in the northern half of the stock along its margins are dikes & irregular lenses of f-g. granodiorite - qtz monzonite porphyries and breccias. Along the east & west margins, these porphyry is characterised by distinct euhedral plag. phenos to 2mm. Approaching north rim of the stock, the rock assumes a granulated protoclastic - cataclastic texture with cracked and bent feldspars in a granulated matrix. Along the north contact, the rock is an autobreccia type, with angular blocks of hornfelsed country rock to 6".

3. Intrusive into the above types and occurring as dikes & irregular bodies is a fg to mg equigranular leucocratic Alaskite composed of qtz, microcline perthite, & myrmekite. Appears to be localised near the margins of the stock - most prevalent in the middle-eastern contact area.

4. Apparently later than the above types and generally lacking in ~~generally~~ qtz veining & mineralisation is a qtz-feldspar porphyry of qtz monzonite composition. Occurs below the 1600 ft. level in the north-central portion of the stock.

5. Lamprophyre dikes & sills - cut all rocks in the stock and fill late tension fractures - N40E. 5-15' wide. Later than mineralisation.

6. Hornfelsed Sediments - secondary biotite attributed to the ~~#~~ metamorphism caused by the intrusion of the stock, occurs in the sedimentary country rocks in a zone 1000'-4000' outward from the stock, giving a distinctive biotite line.
A change in composition & color of the sediments to a biotite-qtz-~~&~~ muscovite rich rock type being brown, green to buff in colour, has taken place in the area close to the stock. This zone is 200-500' wide.

Mineralisation - confined to northern half of stock.
Mineralised zone is a ring structure, elliptical in outline, measuring 2850 x 1850 ft in an east-west direction and is 100'-800' wide.
Boundaries conform roughly to the stock contact on the east & west sides and cuts across the northern contact. Southern boundary is not governed by stock contacts.

MoS_2 mineralisation occurs in qtz veins 1/8-1/4" arranged in a closely spaced stockwork, with one Qv per 1/2 inch.
MoS_2 occurs as disseminated flakes in the veins & more commonly along the walls of the qtz veins. Veins 1/2" or larger exhibit a banded appearance with MoS_2 filled fractures parallel to the walls of the vein.
Hairline fractures filled by MoS_2 are common in hornfels & slaskite.
Disseminated rosettes of MoS_2 in slaskite to 1/4".

In creek, majority of mineralized Qv - N15E /75W.

Qtz. veins barren of MoS_2, but with varying amts of PbS, ZnS, FeS_2, scheelite & cosalite with minor fluorite are larger - up to 6" wide and strike N70W /75N.

A well developed Qv stockwork occurs ~~in~~ within the mineralized ring - values grade inward from mineralized zone to a barren one.

Structure

Major shear zones with post-mineral movement strike N50°E /60°NW.

Major Joint Set N40E /60N90°
N25W/90.

Alteration

1. K-feldspar alteration - expressed by a.) K-feldspar rimming Qv both within & without mineralized zone.
   b.) Porphyroblasts of K-feldspar replacing plagioclase - range in size from "1/4" - 1/2"
   c.) Pervasive type - obliterating all traces of original rock; converting it to a gtk-K-feldspar type - prevalent in barren central zone of mineralized ring.

2. Argillic & Sericitic Alteration in large shear zones.

3. Sericite & Saussurite alteration of feldspar.
4. Carbonate alteration of plagioclase.
5. Chlorite Alt'n of mafic minerals.
6. Secondary biotite - most common in QD.
7. Silicification along Qv - MINOR.

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ROUNDY CREEK - 2500' of drilling by S.W. Potash in 1960.

1 mile south of mouth of Roundy Creek.

Size

Western Body - 2000 x 1000'
Eastern Body - 1300 x 800'.

Form

East & west intrusive bodies ~~may~~ are separated by two N-S faults along Roundy Creek. Area between the two is occupied by bedded sediments.
Eastern portion may be a laccolithic structure.

Rock Types

1. ¼ Qtz Monzonite Porphyry - mg. holocrystalline with phenocrysts of qtz & plagioclase - euhedral.
2. Alaskite - similar to Lone Elk type. - angular lenses.

Mineralization

MoS_2 in Qv stockwork and bedding fractures in eastern body.
Western body is barren except for high grade bearing Alaskite lens in central portion averaging 6 % MoS_2.
Measures 60' x 25' x 20' (approx.)

TIDEWATER

Drilling from underground workings carried out in 1964 by Canex.

HISTORY

Original mining in 1916 - 383 tons shipped - 1.60% MoS_2. Two adits opened up.

TYPE OF DEPOSIT

Large compound Qtz Vein with ribbons of MoS_2 - up to 10' wide - pinches + swells. Cut by diorite dikes. MoS_2 values are not consistent along strike.

Qtz Veins trend N15E for 900' where they terminate in a small stock of qtz monzonite porphyry similar to Roundy Ck rock type. Stock measures 1600×1000'.

2 Small lenses of disseminated MoS_2 ~~on~~ near southern stock contact. One of these 2'×2', averaging 5% MoS_2 closely resembles that on the Fort Reliance property on N. tip Mtn.

No stockwork seen in the stock.

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