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— N. Church
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LEXINGTON

Geological Description:

A comprehensive description of this property was given in Geology Exploration and Mining in British Columbia 1970. The purpose of the present report is to fill in and up date this geology from data gathered during a brief visit to the area in the spring of 1971.

As outlined previously much of the work on the property over the past two to three years, under the direction of F. Franchi, consisted of soil and silt geochemical, induced polarization surveys and geological ~~mapping~~ sidecasting; 33 diamond drill holes totalling more than 18,000 feet; about two miles of trenching; access road construction; and reconditioning underground workings and camp facilities in the City of Paris and Lincoln areas.

In the spring of 1971 the Lexington portal was re opened. The geology and sample stations in the underground workings and in vicinity of the portal are shown in Figure ~~three~~ No. 1. Some of the best mineralization on surface consists of pyrite and chalcopyrite impregnations in sheared serpentine located immediately south of the quartz porphyry contact. Similar mineralization was found in the serpentine in the Lexington tunnel between the quartz porphyry contact and the portal, a distance of about 250 feet. This segment of the Lexington tunnel ~~follows the strike~~ roughly follows the strike of an andesite dyke. It appears that this dyke may have been instrumental in local mineralization of the serpentine walls possibly by damming hydrothermal solutions.

Six chip sample sections taken at strategic points along this part of the tunnel average 0.73 per cent copper.

In addition to the exploration ~~near the Lexington~~ in the Lexington portal area, during the past year the block of claims held by Lexington Mines Ltd. was extended south and southwest of Gidon Creek beyond Norwegian Creek and Hyppolite Creek to the International Boundary. This newly ~~added~~ acquired area is underlain by several units which are also found on the main claim block plus the eastern most edge of the Tertiary lava pile of the ~~the~~ Midway basin.

Briefly the mile-wide-strip between Gidon Creek and Hyppolite Creek consists of black phyllitic argillite on the west spur of Mt. McLaren; dacitic andesite volcanics located west of the argillite at about 4250 feet elevation; and the quartz feldspar porphyry stock located west of the volcanics at about 3800 feet elevation. These rocks are intruded extensively ~~intruded~~ by relatively fresh biotite diorite dykes (the Scatter Creek formation?). The Tertiary lavas crop out on the low hills north of Norwegian Creek ~~where~~ they overlie the west side of the quartz feldspar porphyry stock; the contact between ~~these rocks~~ the lavas and the stock is ~~roughly defined~~ defined roughly by ~~a line~~ an imaginary line projected from the junction of McCarren Creek and Gidon Creek to the junction of Norwegian Creek and Hyppolite Creek. In the area south of Hyppolite Creek, the black phyllitic argillite unit, exposed on Mt. McLaren, was traced to the International Boundary.

A review of the geology on the northeast side of the property suggests that the Mt. Wright serpentine intrusion is, in fact, the northeast plunging limb of a small northwesterly ~~plunging~~ plunging lopolith. A serpentine - gabbro zone found near the east boundary of the map-area is possibly the keel or feeder dyke system of the intrusion (see Figure 62. G.E.M. 1970).

Concerning the chemical composition of the Tertiary ~~igneous rocks, mostly~~ dykes and lava outliers on or near the Lexington property, a few interesting features are worth noting. ~~light~~. For example the available chemical analyses of these rocks bear a marked similarity to the volcanic rocks of the White Lake basin near Penticton (see G.E.M. 1970 p. 399). Three magma suites are recognized, Series 'A', 'B' and 'C'; ~~are represented by~~ andesite, trachyte and phonolite compositions, respectively (see Figure 12). Series 'A' is represented by two Eocene andesite lava samples, Nos. 1 and 3 from the Norwegian Creek area and two diorite samples (the 'Scatter Creek' diorite?) Nos. 2 and 4 from the ~~Flatbed~~ Lexington and Phoenix areas, respectively. Series 'B' rocks are typically light brown or cream coloured and include the paloskite ~~described~~ sampled by Daly (1912), No. 5, ~~at~~ at the Kettle River bridge near Midway and by LeRoy (1912), No. 6, from the Phoenix area. These rocks are almost certainly feeder dykes to the Midway trachyte lavas. ~~Similar types are also found on the Lexington property.~~ Series 'C' rocks, ~~which occur found in areas adjacent to the Lexington property~~, consist of rhomb porphyries and analcitic phonolite phonolite lavas and equivalent intrusives. These are represented by analyses No. 7 by Daly (1912), a sample from Rock Creek, and No. 8 by LeRoy (1912), from the Phoenix area.

The three igneous series are probably all Eocene age (see Mathews 1963 and GEM 1970 p. 397). The main sequence of eruption, as recorded by the conformable Tertiary volcanic successions in the White Lake basin and the Midway area, appears to be series 'A', 'B' and 'C' in order from youngest to oldest.

WORK DONE:

Magnetometer and induced polarization surveys and 38 miles of line cutting. ~~on newly acquired~~

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