

REPORT ON EXAMINATION OF MINERAL
OCCURRENCE IN ARROWHEAD PASS,
YUKON for DYNASTY SYNDICATE

M.O. Hampton
September 23, 1963 *10870-11*

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REPORT ON
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for
DYNASTY SYNDICATE

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Introduction

Dynasty Syndicate engaged the writer to examine an occurrence of copper mineralization found by Messers T. Skonseng and N.J. Mervyn while prospecting for the Syndicate in July, 1963. The occurrence is located in Arrowhead Pass at the headwaters of the Rogue River (a tributary of the Hess River) in east central Yukon. Arrowhead Pass has co-ordinates $63^{\circ} 40' N$ latitude and $131^{\circ} 15' W$ longitude. Specimens brought out by Skonseng and Mervyn contained silver and gold values. Assay results prompted the present examination to ascertain the nature of the deposit and the economic possibilities. The examination was carried out during the period of September 14 to September 19, 1963. The writer was accompanied by Mr. T. Skonseng on this examination. Access to the area was gained by a chartered float-equipped airplane from Mayo, Yukon.

General Geology

The showing is in an area of rugged topography resulting from intensive alpine glaciation. Topographic relief in the area is approximately 3000 feet. While this topography impedes travel, it gives excellent rock exposure which aids geologic work.

The main rocks in the immediate area of Arrowhead Pass are volcanics of intermediate composition. These rocks represent thin bedded flows; no tuffs, breccias or other ejecta were observed. There has been considerable warping and folding in the area with a general strike in an east-west direction and overall dips northerly. The dip varies radically over short distances from horizontal to vertical. Several minor folds were observed with a slight westerly plunge. Some of these minor folds have sheared and it is, therefore, probable that the rocks were fairly brittle at the time of deformation. These rocks are highly jointed yielding rectangular blocks a few inches in size. This jointing pattern gives the canyon walls, in many places, along the pass the appearance of brick walls.

Mineralization

Mineralization in the pass consists of very small {up to 1" thick} scattered stringers and lenses of chalcopyrite, bornite and arsenopyrite in a highly and irregularly fractured volcanic rock of lighter colour and probably more acid than general rocks of the area. The fracture surfaces are coated with jarosite {identified as causing yellow stain common in the area} and limonite and, in the areas of more concentrated mineralization, hydrous manganese oxides. The rock in which the mineralization occurs appears to be in

fault contact with the well bedded darker volcanic rocks. No foliation or bedding is apparent in the lighter rock. The mineralization is confined to three narrow fault zones, about one foot thick, which run approximately at right angles to the fault contact. (See accompanying sketch) This mineralization in the canyon of a tributary of Old Cabin Creek flowing westerly from Arrowhead Pass.

Another sign of mineralization is a spring deposit to the southwest approximately one-half mile and about 200 feet higher from the canyon occurrence. This spring has formed a conglomerate cemented by hydrous iron and copper stain. This material probably represents the results of leaching of material extending from and similar to the exposure in the canyon.

Conclusions

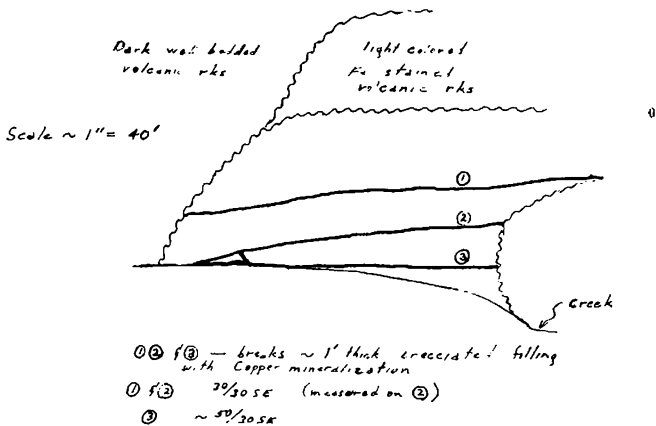
Mineralization in the form of chalcopyrite, bornite and arsenopyrite is rather minor and of a scattered nature. The occurrence and assays, however, are evidence of deposition of useful minerals in the general area. Although this occurrence is not of economic value it suggests that an intensive prospecting programme in this area, which has to date received neither comprehensive geologic mapping nor prospecting, may yield favourable results.

Respectfully Submitted,

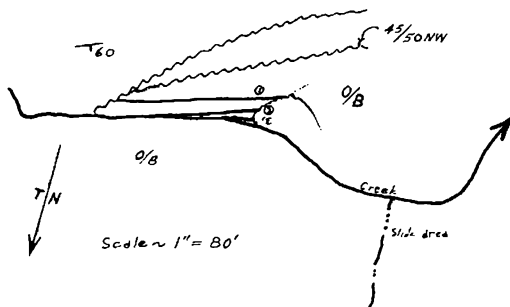
Murray O. Hampton
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Copper Showing at Arrowhead Pass Yukon

Profile of South Wall of Canyon

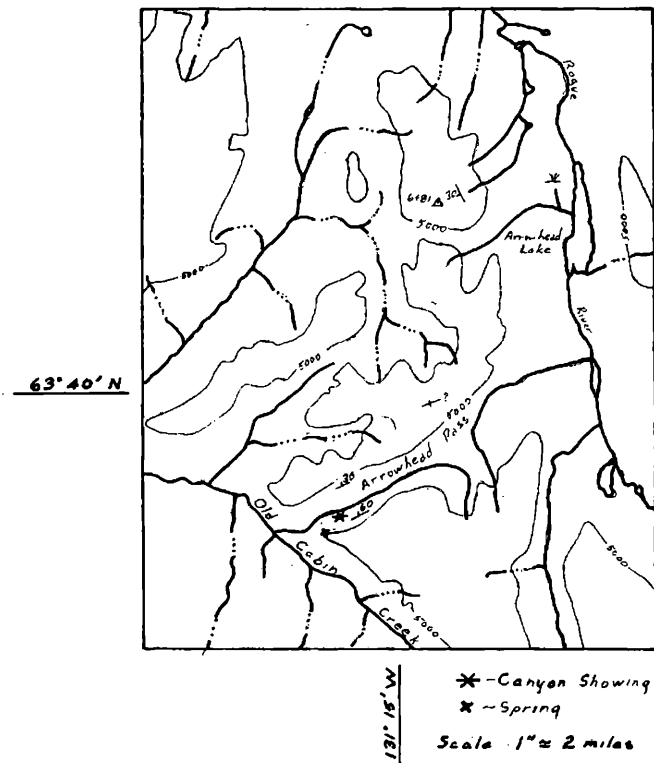


Plan



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Map
of
Arrowhead Pass Area
Yukon



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