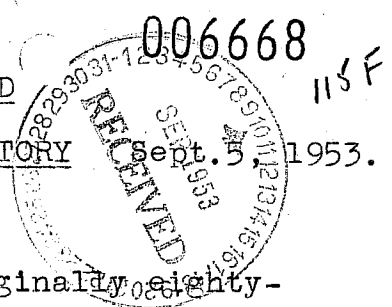


PROSPECTORS AIRWAYS COMPANY LIMITED

REPORT ON THE WHITE RIVER GROUP - YUKON TERRITORY



INTRODUCTION

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The White River Group of claims, originally eighty-eight but now reduced to forty-four, lies along the east side of Miles Ridge, Nutzotin Mountains. Miles Ridge is on the west side of the Alaska Highway and extends northwest from the White River at mileage 1169. During the current field season (1953), geological mapping, prospecting, claim surveying and some geophysical work were done on the group.

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CLAIM SURVEYING

The eighty-eight claims were surveyed by methods of triangulation, stadia and compass-chaining used in combination. However, the forty-four claims being retained were all done by triangulation; the triangulation was done by M. Cleary and D. Hull. Some error exists between the position of the claims on the survey map relative to their positions on the contour map; this is due to fringe distortion of the aerial photos used to make the mosiac in the latter case.

GEOLOGICAL MAPPING AND PROSPECTING

Geological mapping of the group was done on a contoured base map at a scale of five hundred feet to the inch. Vertical control was obtained by aneroid barometer, showing elevations within an accuracy of about ten feet. Prospecting for deposits of economic mineralization was also done in conjunction with the mapping.

GEOLOGY OF THE GROUP

A series of interbedded tuffs, lavas, limestones

and shales occurs on the group, striking in a northwest direction and dipping to the southwest at  $40^{\circ}$  to  $60^{\circ}$ . The assemblage has been intruded by concordant diorite and a long, relatively narrow peridotite dike. 1158

In a cross-section of the ground from southwest to northeast, the following rock types are in succession from the latter to the former positions:

- (a) Diorite : The body of diorite has a texture varying from coarse to fine grained. For the most part it is fairly coarse with grain size up to  $1/8$ " , but grades in to fine patches. The diorite mass is highly fractured and cut by numerous greenstone and basalt dikes. Weathering of the diorite is to a light shade of green, but is to only a shallow depth in from the fractures. In many places fine coatings of pyrite and sometimes chalcopyrite are present on the fracture planes.
- (b) Tuff and Intermediate Lavas : Interbedded brown-weathering tuff and reddish-weathering lavas are next in succession. The tuff is fine grained for the most part, but contains some coarse fragmental in two places. Individual horizons in the bedding are sometimes from 2 to 6 inches in thickness, but the texture is mainly of a massive, unstratified appearance. Minor interbedded shale is also present.
- (c) Shale: As noted above, the shale is almost entirely interbedded in the tuff, and the bedding is from  $1/4$ " to  $1/2$ " in thickness in the individual horizons. It is mainly a fine grained, dark brown rock, weathering to a chocolate-brown colour. It is also carbonaceous.

(d) Peridotite : The peridotite dike was traced by outcrop for an approximate distance of 20,000 feet along strike. The width of the dike averages from 500 to 600 feet. It is mainly medium-grained, much fractured and weathered. The colour of the weathering varies from a brownish-grey to a dark chocolate-brown.

(e) Limestone : The limestone is mainly a massive, fine grained rock. It is carbonaceous in part. No fossils were found in the outcrops. In places, large fragments of limestone have been picked up by the overlying andesites.

(f) Andesite: The andesite forms the main capping of the ridge. It is in most part a purplish, amygdaloidal, fine grained rock. The amygdules are filled mainly with calcite.

(g) Gabbro: There are two or three outcrops of coarse grained gabbro. No continuity can be seen between these outcrops, however. They seem to occur as small isolated plugs.

#### ECONOMIC GEOLOGY:

The prospecting during the summer disclosed no mineralized bodies of any extent. Several, very small mineralized zones were found, but none of these is of economic importance. (See economic report by V. Papezik). A rusty shear zone is present on the shore of the White River of the Pete Group of the Miles Creek Option. Some blasting was done on this shear, and samples taken. Low copper and negative nickel assays were obtained.

#### GEOPHYSICS

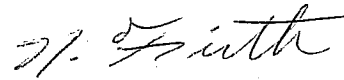
A self-potential survey was carried out by R. Walsh and A. Eberts on two of the mineralized zones. One of the zones covered was the original showing on the Andre No. 6 claim (63222).

The other work was done on the rusty shear on the Pete Group (Per Johnson claims) of the Miles Creek Option. No encouraging results were obtained. (See the accompanying maps for the location, and the graph of the results).

CONCLUSION:

No zones of possible economic importance were found during the course of the summer's work. As the area was covered thoroughly, the writer believes that no further field work is justified on this ground.

Koidern, Yukon Territory,  
September 5, 1953.



N. Firth.