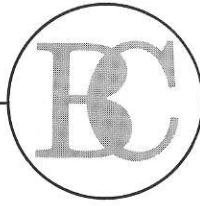


REPORT on the
NICK OF TIME and COPPER CHIEF CLAIMS
HEDLEY, E.C.

by: W.R. Bacon, Ph.D, P.Eng.

671393 February 20th, 1974.



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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
HISTORY AND PRODUCTION	2
STATUS OF TECHNICAL KNOWLEDGE	3
GEOLOGY AND ORE DEPOSITS	4
NICK OF TIME AND COPPER CHIEF	6

INTRODUCTION

There is a great deal of technical data on the Hedley gold camp, a very minor amount of which has been published. The mountain of "nuts-and-bolts" information accumulated during 50 years of mining activity is in the files of Mascot Nickel Plate Mines Ltd. of Vancouver.

It would be helpful to delve into these files in any appraisal of whatever sector of the camp, but no approach has been made to the mining company for access to any of its data. In preparing this appraisal, the writer has relied on the rather fragmentary* information supplied by the client, on the writer's personal knowledge of the Hedley camp, and on his background in other B.C. gold camps.

With regard to the section on Geology and Ore Deposits, just sufficient information is included here to provide a useful context for a consideration of the Nick of Time and Copper Chief claims.

* The 3 maps referred to on Page 1 of H.L. Hill's March 24, 1947, report were not included with the report.

HISTORY AND PRODUCTION

The Hedley camp started producing gold in 1904 and continued until 1955.

Two groups of gold deposits were mined on Nickel Plate Mountain - the Sunnyside and the Nickel Plate. The latter were by far the more extensive.

The period from 1933 on was a fascinating one, marked as it was by the formation of the Mascot Syndicate, its evolution to Hedley Mascot Gold Mines Ltd., and the commencement of production from this upstart company in 1936. For 14 years, this company and the prestigious Kelowna Exploration Company worked their separate claims, side by side, on the Nickel Plate deposits.

The Hedley Mascot mine produced 682,355 tons of gold ore, most of it from 7.8 acres of ground - the famous Mascot Fraction. The average grade (recoverable) was 1/3 oz. gold per ton - a respectable grade - not Bridge River (Bralorne, Pioneer), but respectable, nevertheless.

Kelowna Exploration, and its predecessor company, Hedley Gold Mining Co. Ltd., produced 3,100,000 tons averaging 0.41 oz. gold (recoverable).

In addition to a very little silver (less than 1/10 oz. per ton), nearly 3 lbs. of copper per ton was recovered at times from the Hedley Mascot.

Post-production history involved the amalgamation of Hedley Mascot and Silver Giant Mines into the successful nickel producer

(at Hope, B.C.), Giant Mascot Mines Ltd. In 1968, this company obtained an option on the Kelowna Exploration ground at Hedley and carried out exploration, including diamond drilling, during 1968-70. The option was exercised in 1971 and a new company, Mascot Nickel Plate Mines Ltd., was formed to hold and further explore the gold deposits on Nickel Plate Mountain.

STATUS OF TECHNICAL KNOWLEDGE

Few camps anywhere, particularly of this modest size, have been exposed to more geological and mining talent than Hedley during the last 20 years of operation. The staff men were, by and large, competent but men of the international stature of Billingsley, Stewart and Dolmage devoted years to the camp in consulting capacities. These men had the respect and the authority to initiate and carry out audacious and imaginative exploration programs, involving extensive diamond drilling and underground work.

As a result of the above, this writer considers that many of the geological mysteries have been unravelled, at least as far as the favourable areas are concerned. Thus, future exploration work would do well to acknowledge in a practical manner this present knowledge, and its calibre, rather than casting about elsewhere in the camp.

GEOLOGY AND ORE DEPOSITS

Nickel Plate Mountain is a steep, bare mountain composed of well bedded Triassic sediments and volcanics cut by granitic stocks and innumerable sills and dykes.

The layered rocks dip westward at low to moderate angles. The ore bearing formation is the Nickel Plate Formation and it is dominantly calcareous, consisting of pure and impure limestones with intercalated quartzite beds. The Nickel Plate Formation is 1,200 feet thick.

The Nickel Plate Formation overlies the Redtop Formation and underlies the Red Mountain Formation, each of which is also 1200 feet thick. The Redtop Formation is predominantly siliceous whereas the Red Mountain Formation is predominantly siliceous and volcanic, containing horizons of tuff and breccia.

The main granitic stock, the Toronto stock, varies in composition from quartz gabbro and gabbro through augite-diorite to quartz diorite, the principal rock.

Sills and dykes, generally porphyritic, are abundant in the Nickel Plate Formation. In fact, they make up 30-40 per cent of the total thickness of the formation in the mine area. These minor igneous bodies are off-shoots from the Toronto stock.

The Nickel Plate sediments are folded. They have also, in part, been converted to a green skarn composed mainly of pyroxene and garnet. The skarn rock forms an irregular metamorphic aureole, mainly on the east and north margins of the Toronto stock. The ore

is in the skarn and the ore mineralization is simple. It consists of arsenopyrite (the gold carrier), pyrrhotite and chalcopyrite.

The well defined boundary between skarn rocks and unaltered limestone is the famous 'Marble Line', a term coined by Billingsley. It is a cross-cutting feature restricted to the Nickel Plate Formation, and is the major ore control because ALL ore is confined to the skarn, WITHIN 250 feet of the 'Marble Line'. Other controls such as (1) proximity to igneous contacts, (2) the presence of favourable fold structures, (3) fractures - are of secondary importance, their influence being largely restricted to the size and shape of individual orebodies.

The Nickel Plate ore deposit was a series of tabular, overlapping bodies separated by low-grade or barren skarn, or by 'porphyry' sills. Considering these overlapping Nickel Plate bodies as a single, pipe-like deposit, the deposit, from surface outcrop, plunges in a N50°W direction at an angle of minus 28 degrees for a known slope distance of 3000 feet - to the vicinity of the Nick of Time claim. Insofar as the writer is concerned, this N50°W direction of the Nickel Plate orebodies is profoundly significant, whether or not it has any actual structural connotation. In other words, any future exploration beneath the known Nickel Plate ore should hew rather closely to this trend.

NICK OF TIME and COPPER CHIEF

In regard to these claims, the writer has been asked for the following:

- (1) his conclusions on the past work done on the claims.
- (2) his assessment of the viability of putting the property into production, given the grade of ore found there in the past.
- (3) his recommendations, if any, on subsequent steps to be taken.

Before discussing these three items, it should be noted that the Copper Chief claim is "off the (N50°W) beam", whereas the Nick of Time claim, elongate in a N-S direction, logically should contain the down-dip extension of ore mined on the Morning claim and Mascot Fraction.

Nothing of consequence was ever found on the Copper Chief, nor on the adjoining Copper Cleft. Actually, only limited work was done on the former when results on the Copper Cleft were disappointing. Thus, the Copper Chief can be dismissed as a claim possessing no known ore and no potential. It is noteworthy that, in Hill's report of April 11, 1949, on the "Nick of Time and Copper Chief Mineral Claims", the Copper Chief is not even mentioned in the text.

With regard now to the Nick of Time:

- (1) A very considerable amount of drilling and underground work was done on this claim and 12,000 tons of 0.55 oz. of gold per ton was indicated by this work.

This ore was never mined, probably because it would have required a winze (internal shaft) to extract it and the quantity

and value did not merit this capital expenditure, even though the Hedley Mascot mill was in operation at the time (1947-49).

To sum up, good and sufficient work was done on the Nick of Time - insufficient ore was found.

- (2) There is nothing wrong with the grade of ore - 0.55 oz. gold per ton - but one would need approximately 20 times as much ore as has been found thus far before thinking in terms of an independent mining operation.

This ore should have been mined and milled when the nearby Hedley Mascot mill was still in operation. Today there is no mill on Nickel Plate Mountain.

- (3) The recommendation is to "sit tight", at least with the Nick of Time. There is always a remote possibility that Mascot Nickel Plate Mines Ltd. may come up with a viable situation somewhere on their numerous claims on Nickel Plate Mountain. Then is time enough to formulate new plans for the Nick of Time.

In conclusion, after careful consideration, the writer has decided not to include any mining costs in this report because inflation (labour costs, equipment prices, etc.) renders such figures obsolete in a matter of months. Similarly, nothing is included with regard to possible revenues in view of daily changes in the gold price and, on this particular day, the introduction of the Mineral Royalties

Act in the Provincial Legislature. Thus, at present, a state of complete confusion exists in the B.C. mining industry.

Respectfully submitted,

BACON & CROWHURST LTD.

A handwritten signature in dark ink, appearing to read 'W.R. Bacon', written in a cursive style.

W.R. Bacon, Ph.D, P.Eng.

A single horizontal line drawn in dark ink, likely a decorative flourish or a placeholder for a stamp.