

FALCONBRIDGE NICKEL MINES LIMITED

INTER-OFFICE MEMORANDUM

DATE: September 26th., 1963

TO: Mr. G. P. Mitchell

COPIES TO: Dr. A. Smith ←

FROM: L. C. Kilburn

SUBJECT: Burnaby Island Nickel Prospect, Queen Charlotte Islands, British Columbia

Introduction

This prospect was examined during a brief visit on July 11th., 1963. It lies near the northwest corner of Burnaby Island, a distance of about 600 feet from the coast. The area is accessible by float-mounted aircraft, which can land at a shallow beach near the prospect. Granby and Silver Standard have constructed an exploration camp on the beach, where the road from the main showing comes to the shore. This location is easily detectable by aerial observation.

All drill core was left at the drill site, and all drill hole locations marked.

A cook from a Department of Fisheries boat made the original discovery and staked it. It was optioned to Silver Standard and Granby. Other members of the ship's crew began making claims on the property, when options and money began to appear. Silver Standard and Granby has suspended work until these ownership complications can be cleared up.

Previous Work

A specimen from the main showing had been examined by our Richvale Lab, the results of which are described in Mineralogic Section 263. A polished thin section study identified the rock as an olivine pyroxenite, which contains 50% sulphide. Sulphide in turn consists of 65% pyrrhotite, 30% chalcopyrite and 5% pentlandite. Pentlandite is blocky and should separate well, but talc may cause sliming. Low Ni:S ratios are not an encouraging factor. Massive sulphides are estimated to contain 1.3 to 1.5 percent nickel.

Geology

All drill core was logged and a pace and compass traverse was used to position all drill holes relative to surface geology. The main showing was mapped and a few representative specimens of mineralization were collected. A representative piece of mineralization was taken from the core of Hole #17. These specimens have been sent to the Richvale Lab for further study.

Nickeliferous mineralization occurs as disseminated and net structure sulphide in a melanocratic to leucocratic gabbro. The melanocratic variety consistently overlies the leucocratic type and they are gradational one into the other. A grey to dark brown felsite underlies the leucocratic gabbro in

most places, and appears to be gradational from it. This sequence of basic rocks is encountered in most drill holes and indicates an overturned differentiated sill. Sulphides are consistently concentrated on the upper contact and diminish in quantity downward towards the top of the overturned sill.

A light to medium grey felsite occurs interbedded with fine grained argillites in the hanging and foot walls of the gabbroic sill. It is difficult to distinguish this felsite from the upper parts of the gabbroic sill. Breccia fragments of felsite are commonly found in the wall rock argillites.

Structure

Interpretation of diamond drill results in conjunction with surface mapping indicates an overturned anticlinal fold. Axes are overturned to the east and plunge south. It is difficult to determine whether a significant degree of cross folding exists, because the line of drill holes runs at an oblique angle to the primary fold axis. Large differences in elevation between contacts in drill holes 24 and 25 indicate that an important cross folding element exists.

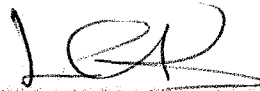
Accompanying maps show the diamond drill pattern, surface geology and interpreted structure. Map of the discovery pit shows the structural pattern, which has been interpreted from surface mapping and diamond drill inter-sections. Enclosed herewith are also drill sections, drill hole location plan with interpreted structure at the main showing and a longitudinal projection along the main line of drill holes. Interpreted shape of folding is shown on drill sections for holes 6, 14 and 19. This is an overturned sequence, and anticlines have a synclinal position.

Conclusions and Recommendations

The low ratio nature and small size of this deposit does not warrant further work. On the other hand, the blocky nature of pentlandite indicates good milling characteristics. Significant copper values occur in the sulphides.

0.63% Ni
0.75% Cu
0.064% Co
28.2% Fe
15.5% S

The tightly folded and overturned position of this sill indicates the possibility of favourable structures for sulphide concentration. I believe that this area warrants further prospecting and I recommend that some work be done to find the extensions of the sill. Thicker and more extensive sills may exist at other levels in the stratigraphic sequence or as other parts of the same body. This prospect is not sufficiently impressive to give rise to an intensive exploration program, but has sufficient worth to warrant further prospecting in the area.



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L. C. Kilburn.

FALCONBRIDGE NICKEL MINES LIMITED

SILVER STANDARD - GRANBY NICKEL PROSPECT

BURNABY IS. , QUEEN CHARLOTTE IS., B. C.

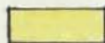
LEGEND



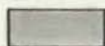
MELANO - GABBRO



LEUCO - GABBRO



FELSITE



ARGILLITE



SULPHIDE MINERALIZATION DISSEMINATED
NET STRUCTURE

SILVER STANDARD - GRANBY NICKEL PROSPECT

MAIN SHOWING

SCALE 1" = 10'



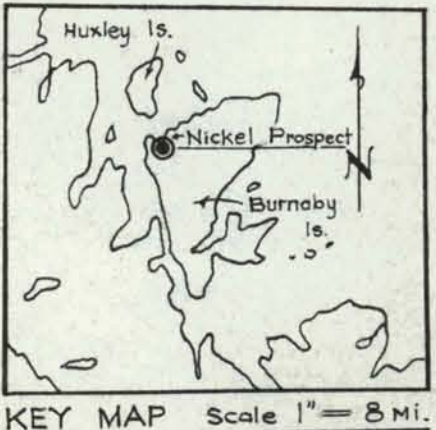
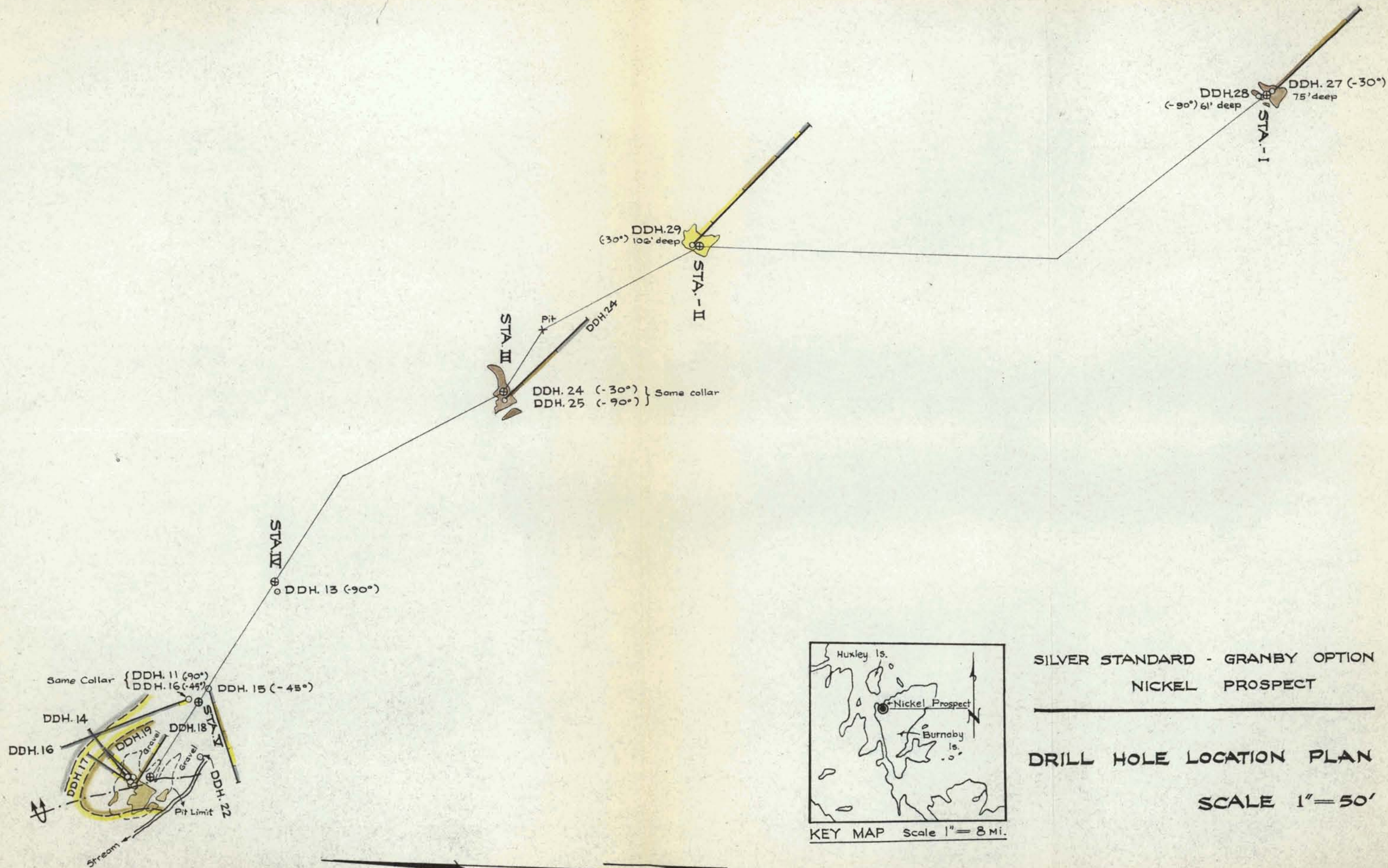
KEY

- 15 Vertical depth to gabbro - felsite contact.
- (15) Vertical depth to felsite-argillite contact.

 Plunging overturned anticline.

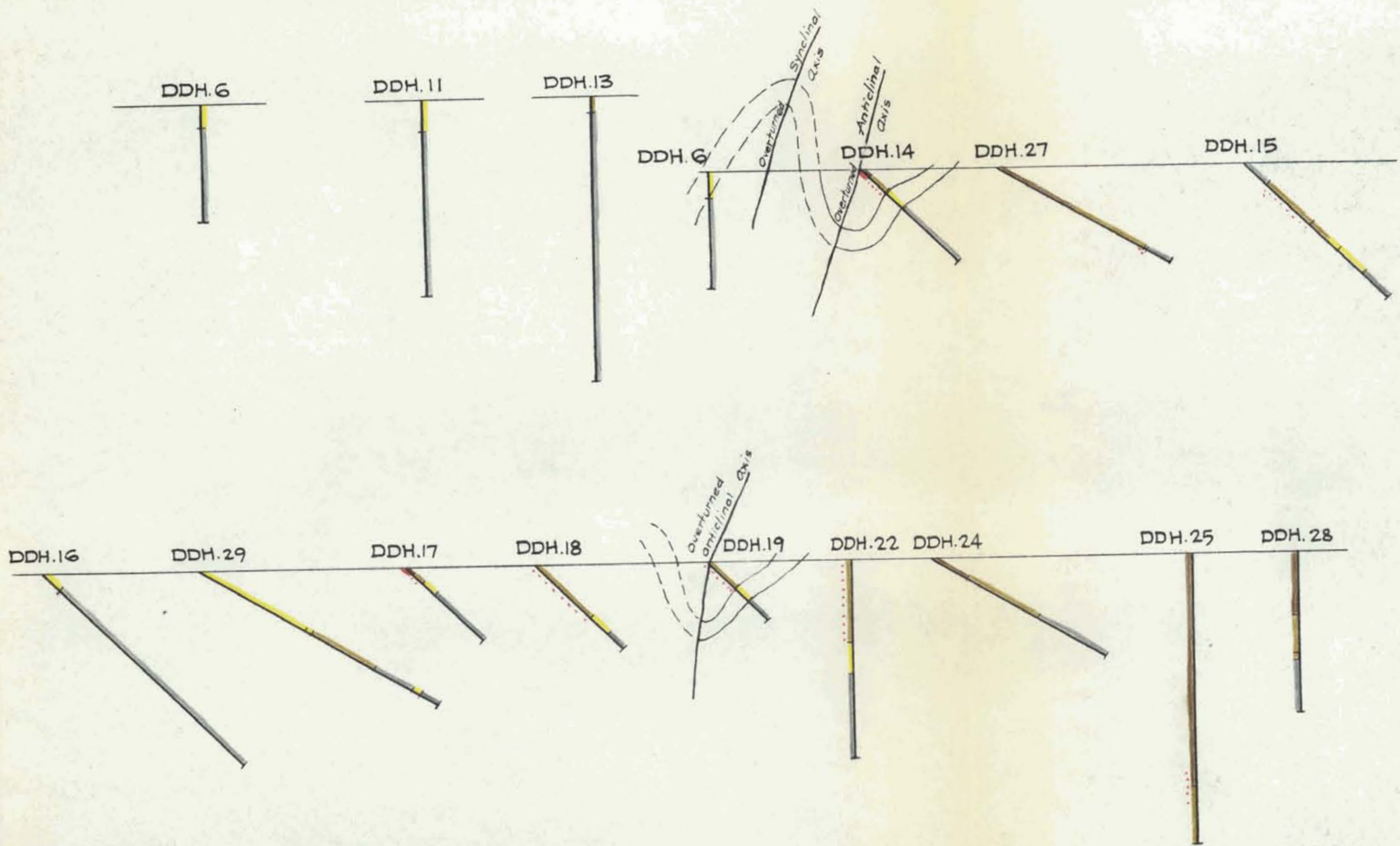
DDH.15

NTS 103 B / 5 + 6



SILVER STANDARD - GRANBY OPTION
 NICKEL PROSPECT

DRILL HOLE LOCATION PLAN
 SCALE 1" = 50'



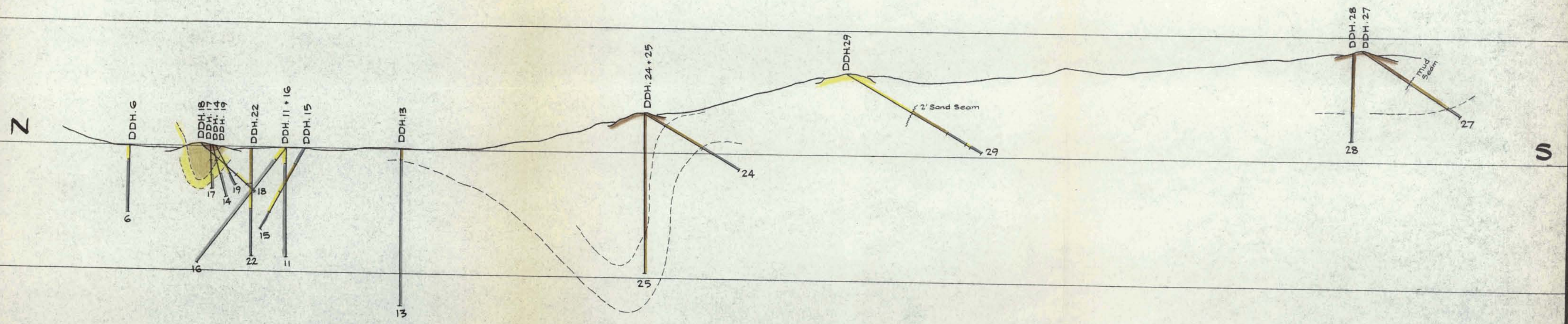
SILVER STANDARD - GRANBY NICKEL PROSPECT

DRILL SECTIONS

SCALE 1" = 50'

SILVER STANDARD · GRANBY NICKEL PROSPECT
LONGITUDINAL PROJECTION TO TRAVERSE LINE

SCALE 1" = 50' VERTICAL & HORIZONTAL
TOPOGRAPHIC PROFILE — ESTIMATED



*Burnaby Is. Nickel
C.C. 2*

SILVER STANDARD MINES LIMITED
(NON-PERSONAL LIABILITY)

Mr. A. Smith

April 18, 1963

Mr. G. P. Mitchell,
Director Exploration & Geology
Falconbridge Nickel Mines Ltd.
7 King Street East
Toronto, Ontario

Dear Geoff:

Many thanks for the mineralogical report on the sample from Burnaby Island. It confirms our own ideas of the type of rock in which to look for the sulphide mineralization. Unfortunately, to date we have not been able to find any quantity of either the host rock or the mineralization. It could be that our discovery is in a large fault and we may have to go some distance to find more like it.

At any rate, we are working along these lines and hope to come up with something in the next few months. I'll let you know if we do.

Give me a phone call sometime when you are in Vancouver.

Best Regards,

Bill
Wm. Dunn

WD:hm