

REPORT
ON
1967 EXPLORATION PROGRAM

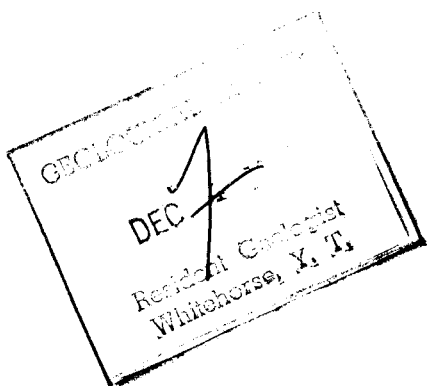
H.H. CLAIMS

KENO HILL DISTRICT, YUKON

for

NORTHAIR MINES LTD.

October 1, 1967



This report has been examined by
the Geological Evaluation Unit
and approved as being of significant worth by:

D. C. Findlay

Approved as a report of work
done under Section 50(4) Yukon Quartz
Mining Act.

R. F. Dutton

Approved as a report of work
done under Section 50(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

Alan R. Archer

Consultant

Whitehorse, Y.T.

INTRODUCTION

The writer is familiar with Northair Mines Ltd.'s property in the Keno Hill district having supervised all of the exploration work done to date. Furthermore, having been chief geologist for United Keno Hill Mines Ltd. from 1963 to 1966 the writer is intimately familiar with the geology and mineral potential of the district.

LOCATION AND ACCESS

The property is located on the south slope of Stand To Hill about six miles due north of the summit of Keno Hill. Access is by foot from a six mile long tote road built in 1966 from the McQuesten Lake - Elsa recreation road to the adjoining Foley Silver Mines Ltd. property. The tote road passes within four hundred feet of the western boundary of the claims. Total distance from Whitehorse to the property by road is 296 miles.

PROPERTY

The property consists of 16 contiguous unpatented mineral claims that are registered in the Mayo Mining District as follows -

<u>Claims</u>	<u>Grant Numbers</u>	<u>Owner</u>	<u>Expiry Date</u>
H.H. 1 - 8	Y6558 - Y6565	J.B. O'Neill	Nov. 3, 1967
H.H. 9 - 16	Y6566 - Y6573	H. Ball	Nov. 3, 1967

(2)

The claim group forms a rectangular block 8 claims long and 2 claims wide that lies 1,000 feet south of Foley Silver Mines Ltd. property.

HISTORY

Silver-lead mineralization was discovered in the Keno Hill district at the turn of the century. The first large scale mining began in 1920 and, except for several years during the second world war, has continued uninterrupted to the present time.

Silver-lead mineralization was discovered on Stand To Hill in 1920 and a narrow vein, now held by Foley Silver Mines Ltd., was subsequently drifted 60 feet. A sample across the face of the adit taken by W.E. Cockfield of the Geological Survey of Canada in 1921 assayed 17.6 ounces silver per ton and 19.4 per cent lead over a 14 inch width. Surface bulldozing by Foley Silver Mines Ltd. in 1966 located another vein, 1,000 feet northeast of the old adit, that was exposed for a 300 foot length on surface and drifted approximately 100 feet during the spring of 1967. An open cut blasted on the surface exposure is reported by S.J. Hunter, consultant, to average 25 ounces silver per ton and 26 per cent lead across a 10.0 foot width. The drifting located two short lengths of fairly massive mineralization over a narrow width for which the assays have not been published.

(3)

The Northair property was well prospected during the 1920's and late 1940's. Several hand pits and a single bulldozer trench were cut but no veins or float were found. A program of soil sampling was conducted under the writer's supervision during August 1967.

GEOLOGICAL SETTING

Except for the Sadie-Ladue mine, all of the economic mineral deposits in the Keno Hill district have been found in vein faults cutting the central quartzite formation. This Lower Cretaceous formation, about 3,500 feet thick, is overlain by phyllites and underlain by phyllites and greenstone sills. The entire assemblage has been folded into a wide northsouth trending anticline, the western limb of which forms Keno Hill, Galena Hill and Stand To Hill. A smaller eastwest anticline has been superimposed on this limb to the west of the summit of Keno Hill. All productive veins in the district are found in the south limb of this smaller anticline.

The Northair Mines property is underlain by the phyllites and greenstones sequence that is below the quartzite formation. This sequence is on the west limb of the major anticline and lies northeast of the smaller anticline. A narrow horizon of quartzites mapped on the adjoining Foley Silver property by the Geological Survey of Canada (Map I5 - 1962) is probably unrelated to the central quartzite formation.

(4)

The Foley Silver vein faults, striking almost due north and dipping vertically, project south through the center of the Northair property.

The topography of the property is alternate ridges and creek gullies on an overall slope of about 20 degrees. The claims lie just below timberline and are thickly covered by buckbrush with clumps of stunted black spruce. Outcrop is fairly abundant on the ridges. Overburden is mainly residual till covered by a thin layer of peat and moss.

EXPLORATION TECHNIQUES

The most successful exploration technique in the district has been soil sampling, using lead as the indicator metal, followed by bulldozer stripping of anomalous areas so found. Mineralized veins invariably have extensive lead rich "float trains" that assay from 500 to over 1,000 parts per million (p.p.m.) lead for more than 500 feet downhill from the subsurface outcrop. Reconnaissance sampling at 400 foot centers is sufficient to locate all significantly anomalous areas and follow-up sampling is done on these specific areas on a 100 foot by 100 foot spacing to better define the source vein for exploration by bulldozer stripping.

SOIL SAMPLING PROGRAMGeneral

The H.H. 7 - 10 claims were soil sampled at 200 foot intervals on lines 400 feet apart. The remaining claims were sampled on a 400 foot by 400 foot spacing. Lines were established by pace and Brunton compass from a cut base-line. Samples were taken from the "B" horizon with a mattock grub-hoe and each sampled location marked with red flagging.

A total of 300 samples were collected in individual Kraft sample bags and sent to Chemex Labs. Ltd., North Vancouver, B.C., for lead analysis by a hot acid extraction technique.

Results

Soil sample assay results in parts per million (p.p.m.) lead are shown on Figure 2 in the appendix. Background for the property is about 35 p.p.m. which is typical for the district. Two isolated values of 1,330 and 275 p.p.m. are found along the northwestern boundary of the property but can not be considered significant on a 400 foot sample interval.

An area of above background lead values is found crossing the property in a northsouth direction more or less along the projected location of the known veins on the Foley Silver property. However, in this above background region only one significantly high value is found indicating that the chances of substantial amount of silver-lead

(5)

mineralization is low.

CONCLUSIONS AND RECOMMENDATIONS

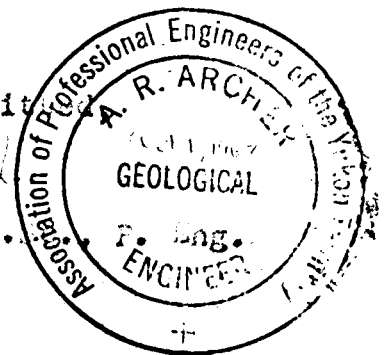
The H.H. claims, although situated in the Keno Hill district, are poorly located with respect to the geological setting.

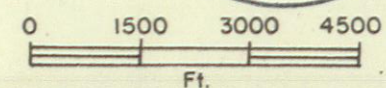
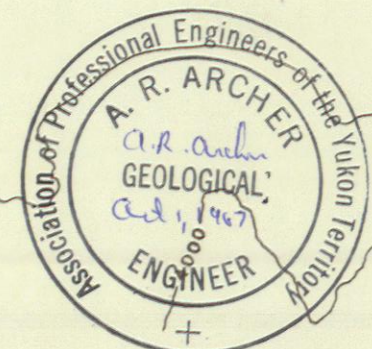
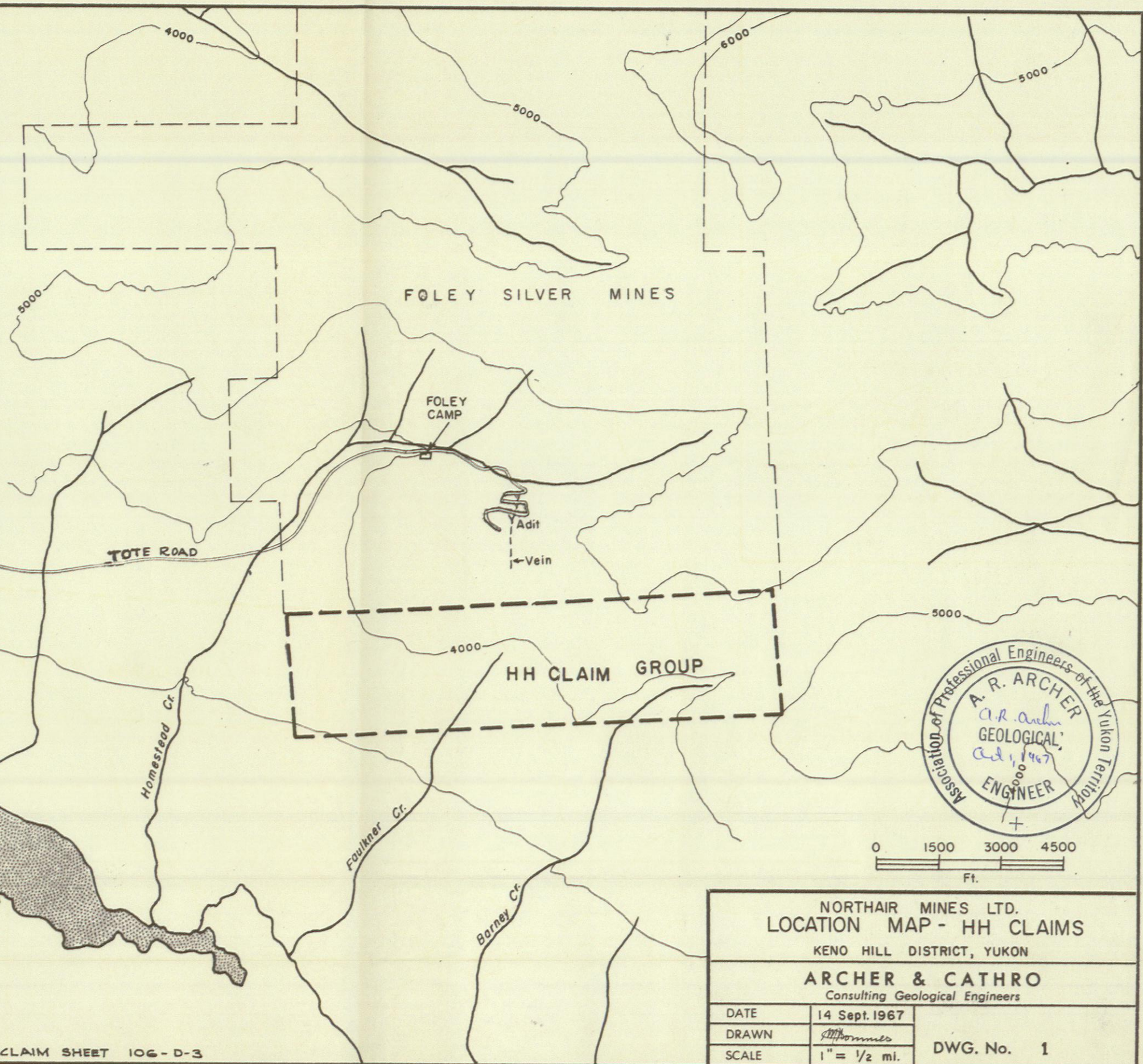
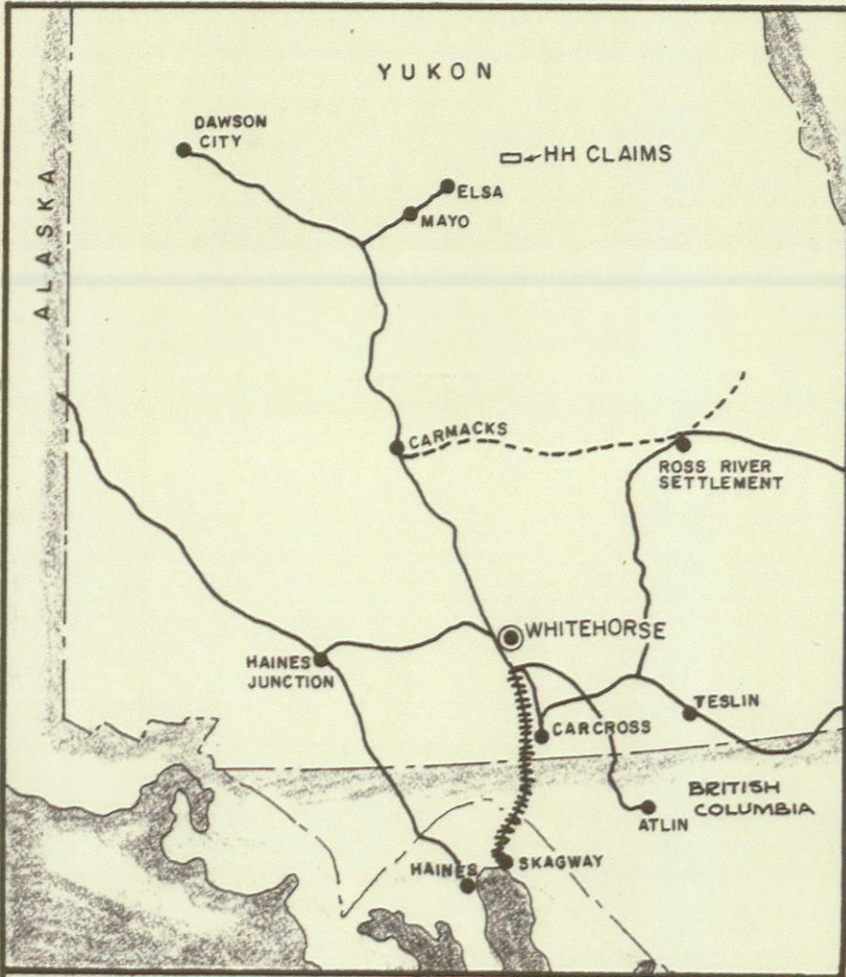
There is geochemical evidence that the two mineralized veins on the nearby Foley Silver property cross the H.H. claims but there is no evidence that these veins contain significant quantities of silver-lead.

No further exploration work can be justified at present. However, the claims should be kept in good standing for several years incase continued drifting by Foley Silver proves productive.

Respectfully submit

Alan R. Archer
Alan R. Archer, B.S.





NORTH AIR MINES LTD. LOCATION MAP - HH CLAIMS KENO HILL DISTRICT, YUKON		
ARCHER & CATHRO Consulting Geological Engineers		
DATE	14 Sept. 1967	DWG. No. 1
DRAWN	<i>M. Hommes</i>	
SCALE	1" = 1/2 mi.	

FROM CLAIM SHEET 106-D-3

STAND-TO HILL

ZAHN HILL

Projection of vein drifted in 1921

Projection of Foley Vein

Foley Silver Mines

Open Ground

- 12+00N

- 8+00N

- 4+00N

BASE LINE 0

- 4+00S

- 8+00S

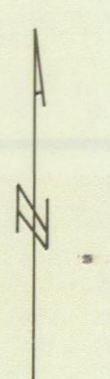
- 12+00S

- 16+00S

- 20+00S

- 24+00S

- 28+00S



- O - CLAIM POST
- SU - SAMPLE UNOBTAINABLE
- o - SOIL
- X - SILT

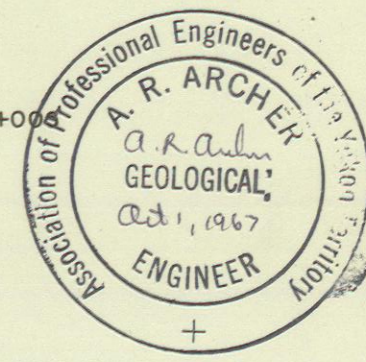
Hot Acid Extraction

- 50-100 P.P.M.
- 100-200 P.P.M.
- 200-400 P.P.M.
- 400+ P.P.M.

60+00W | 56+00W | 52+00W | 48+00W | 44+00W | 40+00W | 36+00W | 32+00W | 28+00W | 24+00W | 20+00W | 16+00W | 12+00W | 8+00W | 4+00W | 0 | 4+00E | 8+00E | 12+00E | 16+00E | 20+00E | 24+00E | 28+00E | 32+00E | 36+00E | 40+00E | 44+00E

Claim Boundary Line

Borby Creek



LEAD GEOCHEMICAL SURVEY
 HH CLAIMS - NORTHAIR MINES
 STAND-TO HILL, YUKON

ARCHER & CATHRO
 Consulting Geological Engineers

DATE	25 Aug. 1967
DRAWN	[Signature]
SCALE	1" = 400'

DWG. 2

STAND-TO HILL

ZAHN HILL

Projection of vein drifted in 1921

Projection of Foley Vein

Foley Silver Mines Property Boundary

- 12+00N

- 8+00N

- 4+00N

BASE LINE 0

- 4+00S

- 8+00S

- 12+00S

- 16+00S

- 20+00S

- 24+00S

- 28+00S

Road to Foley Silver Mines

3500'

Homestead Creek

3000'

4000'

GREENSTONE

H. H. CLAIM BASELINE

PHYLITES GREENSTONE

GREENSTONE PHYLITES

OLD TRENCH

RIDGE

QUARTZ PORPHYRY

RIDGE

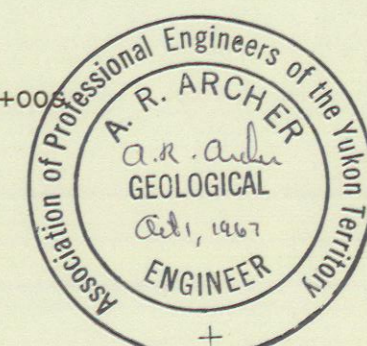
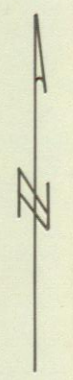
Barnay Creek

H. H. Claim Boundary Line

3500'

4000'

60+00W - 56+00W - 52+00W - 48+00W - 44+00W - 40+00W - 36+00W - 32+00W - 28+00W - 24+00W - 20+00W - 16+00W - 12+00W - 8+00W - 4+00W - 0 - 4+00E - 8+00E - 12+00E - 16+00E - 20+00E - 24+00E - 28+00E - 32+00E - 36+00E - 40+00E - 44+00E



GEOLOGY	
HH CLAIMS - NORTHAIR MINES	
STAND-TO HILL, YUKON	
ARCHER & CATHRO	
Consulting Geological Engineers	
DATE	25 Aug. 1967
DRAWN	<i>[Signature]</i>
SCALE	1" = 400'
DWG.	3

CONTOURS FROM CLAIM SHEET 106-D-3