

800835

REPORT
on
PRELIMINARY GEOLOGICAL EXAMINATION
of the
FARR LAKE - TYNER LAKE PROPERTIES,
KAMLOOPS & NICOLA MINING DIVISIONS, SOUTH HIGHLAND VALLEY AREA, B.C.
during
June, 1965
for
HIGHPOINT MINES LTD. (N.P.L.)
VANCOUVER, B.C.

January 19, 1966

President & Directors
Highpoint Mines Ltd. (N.P.L.)
c/o Mr. H. Lyle Jastley
355 Burrard Street
Vancouver 1, B.C.

Dear Sirs:

The following submission includes my June 10, 1965 report to Mr. Robert A. Lee, West Vancouver, B.C., on the Farr Lake - Tyner Lake properties, South Highland Valley, B.C., together with the necessary additional information required for presentation to the British Columbia Securities Commission.

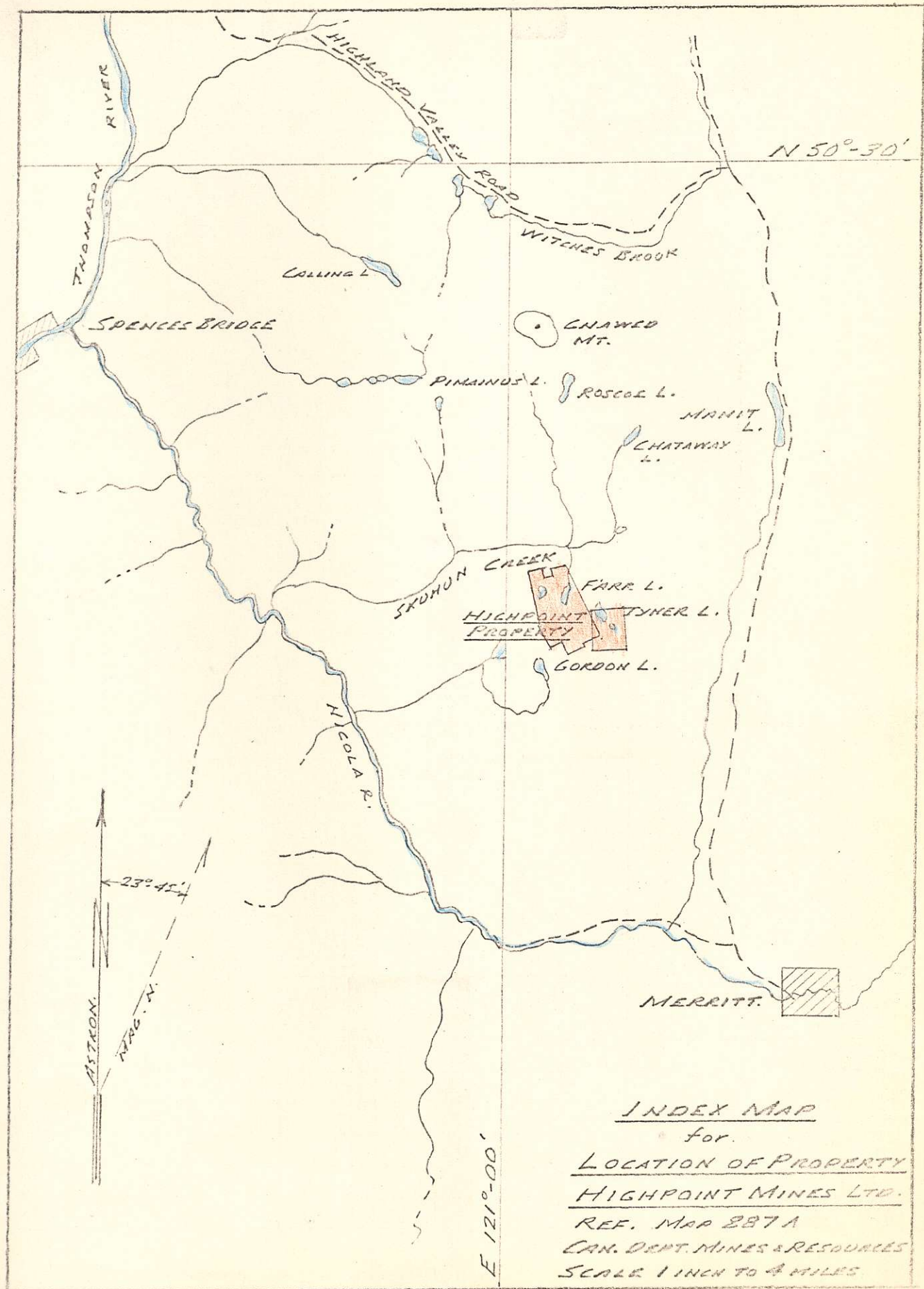
Respectfully submitted,

W.M. Sharp, P.Eng.

WMS/ed
encl.

INDEX

	<u>Page</u>
Index Map	
Summary & Recommendations	1 & 2
Estimated Costs	3
Introduction	4
Property	4
Location & Access	4
General Features	5
Regional Geology	5
History	6
Local Geology & Mineralization	7



INDEX MAP

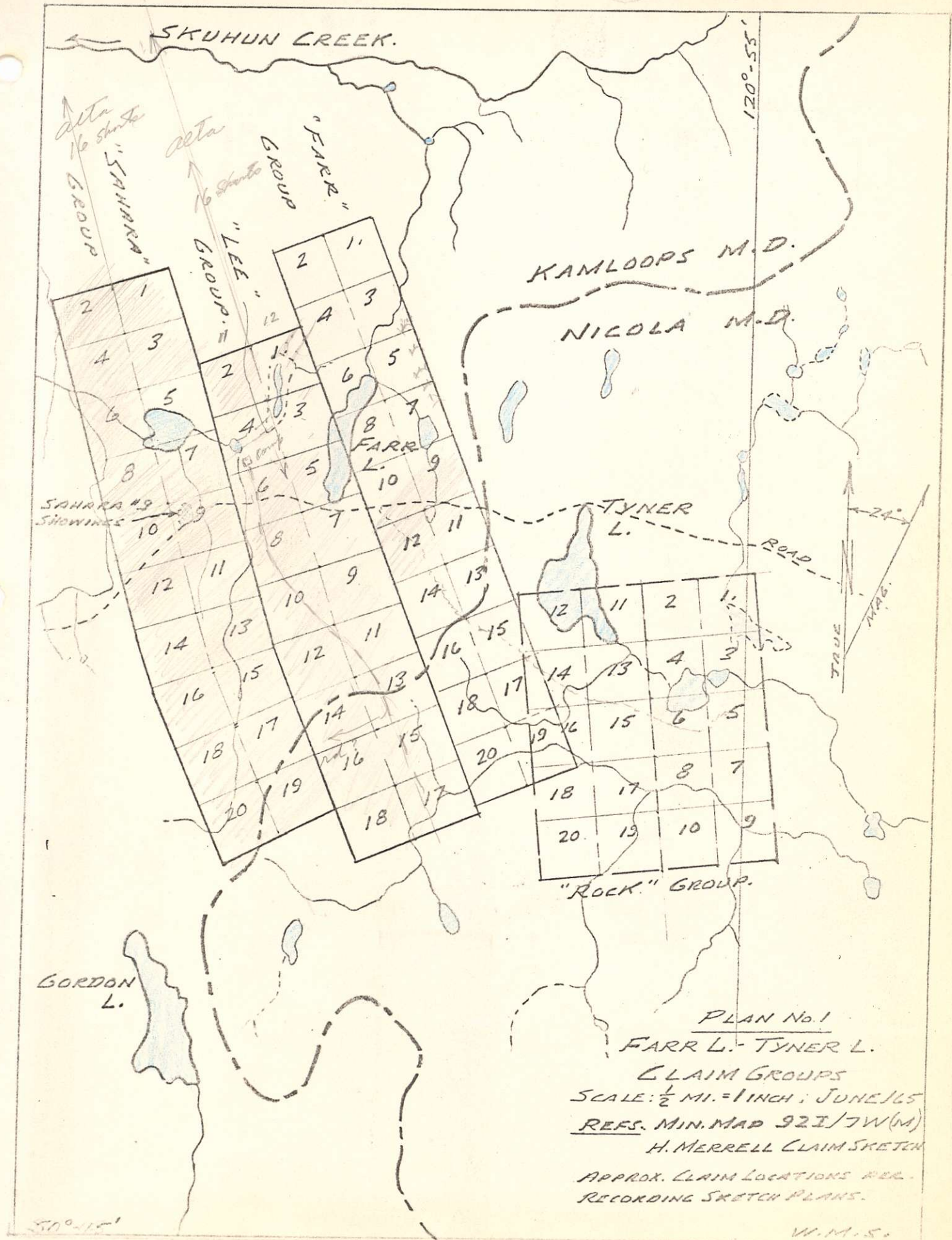
for

LOCATION OF PROPERTY
HIGHPOINT MINES LTD.

REF. MAP 287A

CAN. DEPT. MINES & RESOURCES
SCALE 1 INCH TO 4 MILES

1941-1942 - 100-100



PLAN No. 1
FARR L. - TYNER L.

CLAIM GROUPS
SCALE: 1/2 MI. = 1 INCH; JUNE 1965

REFS. MIN. MAP 921/7W(M)

H. MERRELL CLAIM SKETCH

APPROX. CLAIM LOCATIONS PER RECORDING SKETCH PLANS.

W.M.S.

SUMMARY & RECOMMENDATIONS

A major northerly-striking shear and fracture zone, within a favourable siliceous phase of the Guichon Creek Intrusive, has been explored very locally within the westerly Sahara claim group.

The exposed chalcopyrite-bornite-minor molybdenite mineralization occurs typically, within and adjacent to northerly trending zones of fracturing and shearing, and locally within intersecting or conjugate transverse zones of fracturing and brecciation.

The presently-indicated width of the Sahara composite fracture zone is in excess of 400 feet - as determined by local detailed mapping.

The northerly trend is such that it should generally coincide with the Skuhun Creek north fork lineament through the Gnawed Mt. area - currently the general areal focus of several major exploratory and mining-development programs. This correlation is one involving general structural zones, rather than specifically-defined structures.

Recommendations for more comprehensive exploration are as follows:

1. Reconnaissance surface investigation of the better-exposed southerly halves of the 'Sahara' and 'Lee' groups by a locally-experienced prospector. Mr. H. Merrell of Merritt could provide valuable assistance on this phase of exploration.
2. Reconnaissance geochemical prospecting of the numerous drainage courses throughout the group, followed by general areal soil sampling where preliminary results suggest additional investigation.
3. Establish an exploration grid, using the 'Sahara' group location line as a base-line, with cross-lines at approximately 300-foot centres from this line. The preliminary exploration grid--to adequately investigate extensions of the known zone--should cover the Sahara No.'s 7-14 inclusive claims. To expedite progress, a bulldozer should be used to construct the cross-lines through denser stands of lodgepole pine and/or 'blow-down' areas. Normal blazing and clearing

should suffice through more 'open' sections. Cross lines should be flagged or picketed at 100-foot intervals. Mr. Merrell also has equipment and crew to assist on the above.

4. Run check magnetometer, soil sampling and geological surveys over the above grid. A readily-portable magnetometer such as the Sharp A-3, or a small flux-gate type, is recommended. Preliminary soil analyses should be by one of the soluble heavy-metals methods, *subst* and checked, if indicated, by geochemical determinations for a specific metal or metals, *radiochemicals*.
5. Following analysis of results from the above plan further reconnaissance or detailed exploration of indicated target zones by physical and/or geo-physical procedures.

COST ESTIMATES

Per Item 1:

Prospector wages & expenses		\$ 500.00
-----------------------------	--	-----------

Per Item 2:

Crew wages & expenses	\$750.00	
Sample determinations	250.00	1,000.00

Per Item 3:

Base line preparation- 2 mi.		
Grid-line " 18 "		
20 mi. @ \$100.00		2,000.00

Per Item 4:

Magnetometer survey,		
wages	500.00	
Equipment rental	150.00	650.00

Per Item 5:

I.P. survey-reconnaissance & detail at 24 miles @ \$400.00 / mi. plus incidental expense		10,000.00
--	--	-----------

Additional:

Provision for bulldozer trenching		2,500.00
" " sampling and assaying		350.00
" " Engineering-supervision		2,000.00
" " Contingencies & general expense		<u>1,000.00</u>

Total		\$20,000.00
-------	--	-------------

Respectfully submitted,

 W.M. Sharp, P.Eng.

INTRODUCTION

This report summarizes my recent field examination of the principal showings on the property, together with a review of the immediately available reports outlining previous exploration within the general claims area.

The writer arranged the examination with Mr. Harry Merrell, of Merritt, B.C., on June 2, 1965, and completed it the following day. Mr. Merrell provided transportation from Merritt, guidance and assistance during the field examination, and considerable background information concerning previous exploratory operations within the group and general area. The writer gratefully acknowledges his helpful assistance, cooperation, and background information arising from his knowledge of the property and general areal developments.

Property (Ref. - Plan No. 1)

The property is comprised of four claim groups totalling, in all, 78 'located' claims. These were staked for or otherwise acquired by Mr. Lee during May, 1965. The composite group straddles the local boundary line between the Kamloops and Nicola Mining Divisions. Details are as follows:

<u>Name of claim (s)</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Mining Div.</u>
Sahara 1 - 20	50009-50029	May 14, 1965	Kamloops
Farr 1 - 16	50043-50058	May 14, 1965	"
Lee 1 - 14	50029-50042	May 14, 1965	"
Farr 17 - 20	24314-24317	May 17, 1965	Nicola
Lee 15 - 20	24318-24323	May 17, 1965	"
Rock 1 - 20	24294-24313	May 17, 1965	"

Location and Access

The property is situated within a south-central part of the Highland Valley camp at approximately 6 and 9 miles, respectively, north of Craigmont Mine and the town of Lower Nicola. Access is by way of 8 miles of paved to secondary road northward from Lower Nicola, and thence by approximately 8 miles of jeep road westward through the group. Elevations within the group range between 4200 and 4900 feet.

General Features

In general the area is typical of thickly-wooded plateau areas within the Highland Valley. Low rock ridges and elevated flatter areas are covered by dense growths of lodgepole pine, with frequent windfall-littered areas, but relatively sparse underbrush. Lower wet to swampy sections contain thick growths of poplar and some spruce. Numerous beaver dams cause intermittent flooding of swampy creek draws and lakeshore areas.

The climate is typical 'Interior Dry Belt', with only light precipitation, as rain or snow respectively, over the warm to hot summer, and cool to very cold winter seasons.

Regional Geology

The property is rather centrally situated within the south part of the Guichon Creek batholith, and which is the host rock for the typical copper mineralization of the general Highland Valley camp. This district intrusive, measuring about 40 miles in north-south length and up to 17 miles in east-west width, is mainly composed of granodiorite and quartz diorite. Within the principal mineralized areas there is usually an associated complex of slightly younger more alkaline to acidic porphyries, granites, 'felsites', and related 'breccias'.

Structural control of mineralization within the region appears most pronounced within zones of strong shearing and fracturing on northerly formational trends, and particularly where formational shearing is associated with zones of transverse shearing, brecciation, and sheet-fracturing.

Within significant areas of disseminated-type Cu -(Mo) mineralization conspicuous alteration of the intrusive country rocks has been accomplished by the development or introduction of quartz, kaolin and pink to orange potash and soda feldspars, chlorite, epidote, sericite, etc. The occurrence of pale-bleached, or pink, orange and greenish colourations is usually indicative of a specific alteration zone. It is of prime importance that such zones be noted and mapped during the prospecting and reconnaissance-mapping phases of any exploration

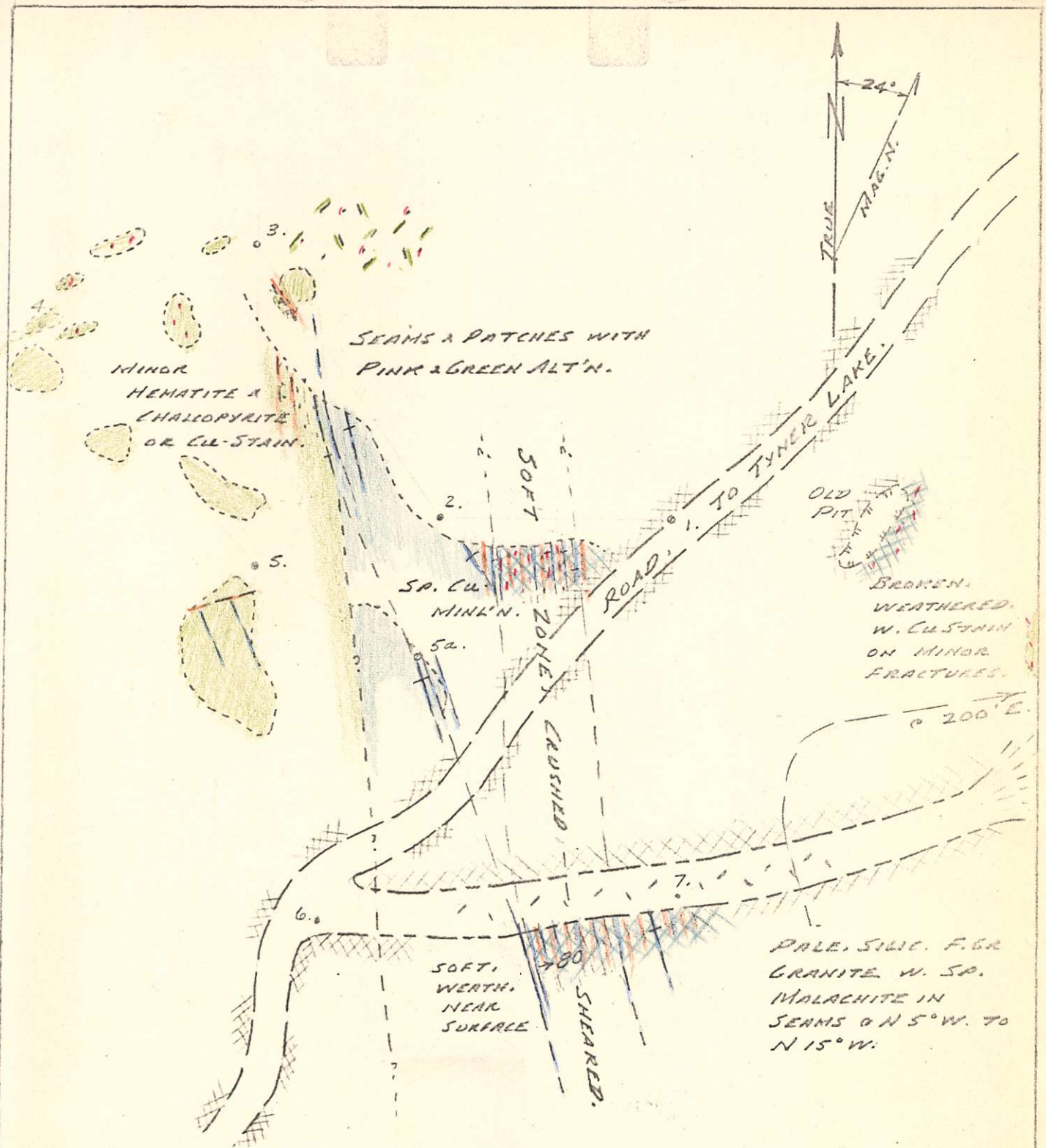
program within the camp. The above distinctive geological features occur, to varying degrees, at all producing mines and major prospects within the camp; ie. Bethlehem, Craigmont, Lornex, Divide, O.K., and Aberdeen properties - the latter situated on the easterly contact of the intrusive at three miles east of Tyner Lake ("Rock" group).

The general geology of the region, and of some of the older properties, is illustrated and described in G.S.C. Memoirs 249 (1948), and 262 (1951), 243 (1947). A more recent description is given in C.I.M. Transactions, Vol. LX, 1957 - 'The Geology and Mineral Deposits of Highland Valley by W.H. White, R.M. Thompson, and K.C. McTaggart (1959), which presents more modern and better substantiated concepts of ore control than some of the earlier references.

HISTORY

During 1958 Noranda Exploration Company Limited conducted areal geological and geophysical surveys within a large block of ground around Tyner Lake. Several minor NW-trending conductors were disclosed by the geophysical work, but no serious physical exploration was attempted. General experience throughout the camp has shown that 'E.M.' methods are only very locally adaptable to the exploration for disseminated type mineralization. To the writer's knowledge, no significant program of geochemical prospecting was attempted during their investigations.

During 1961-62 North Merritt Mines explored the old K.W. group at 6 miles due north of the Craigmont mine. This block is now covered by the present 'Sahara', 'Lee' and 'Farr' groups. Exploration consisted of geological and geochemical investigations within the section previously explored by Midnight Consolidated Mines Ltd. --including the present Sahara #9 showings. The writer does not have the records of this work but was advised that it covered only a small area within the two westerly groups. Also it does not appear that geophysical exploratory methods were extensively employed. Consequently the major part of the groups requires a comprehensive program of prospecting and exploration.



LEGEND

- COARSE-GRAINED (H.B.D.-BI) GRANODIORITE
- COARSE BIOTITE GRANITE; VAR. CRUSHED-ALT.
- FINE-TO MED.-GRAINED PALE, SILIC. GRANITE
- EPIDOTE-CHLOR.-PINK FELD; CU MIN'L.N. STRIPPED & TRENCHED AREA
- SHEAR-CRUSH ZONES; JOINTS & 'SLIPS'
- CLAY-GRAVEL OVERBURDEN.

PLAN No. 2

GEOLOGICAL DETAILS.
 ON
 SAHARA NO. 9 M.C.
 SCALE: 1"=40'; JUNE 3, 1965
 W.M. SHARP, P. ENG.

LOCAL GEOLOGY & MINERALIZATION (plan No. 2)

By reason of the rather limited time available for field examination, and the large extent of the claims area, the detailed investigation was restricted to the principal showing on the Sahara 9 M.C. and intermittent outcrops occurring rather closely adjacent to the main access road.

Stripping has exposed a strong shear zone trending northerly through the claim. This structure, which probably extends through several claim lengths is only locally exposed for a strike length of less than 300 feet, and very partially exposed across a width of less than 100 feet.

Shearing and crushing appear to have been localized close to the contact of distinct granodioritic and pale granitic phases of the local Guichon intrusive country rock.

Mineralization, consisting of minor amounts of disseminated and veining chalcopyrite, was observed within the variably-weather surface exposures of the shear zone and adjacent generally massive granitic rocks. Hydrothermal type alteration, with chlorite-epidote-potash feldspar, is best developed within the sheared and broken coarse-grained granodiorites. Minor mineralization, consisting of chalcopyrite (or copper carbonates) and associated specular hematite occurs within the soft shear and within fractures occurring within more extensive siliceous granitic phase to the east and west of the shear. Mineralization within the relatively small area of the exposures is definitely submarginal; however weathering and leaching are pronounced along the crush zone and, as no significant subsurface exploration has been attempted to date, the mineralogy of the occurrence below the weathered zone is unknown. However, there is no evidence at the showings that would suggest a marked increase of mineralization with depth within the immediate locality. Shearing and wall-rock alteration are locally quite pronounced; therefore further exploration of strike extensions of the local structure north and south of the existing showings, and of possible similar parallel structures should comprise the initial exploratory effort.

The pale siliceous (granitic) phase of the intrusive appears to be the predominant rock type over the westerly parts of the property. Frequent but minor occurrence of finely-disseminated chalcopyrite and bornite have been observed within fractured zones in this phase, and it would appear that it locally forms the 'favourable' host rock, as it does elsewhere in the camp. As only a very minor part of whole potential zone of mineralization has been exposed, the writer could not see any purpose in systematic or spot-sampling at this time.

The mode of occurrence of the copper minerals, as disseminations and random fracture-fillings, appears suitable for detection by the Induced Polarization geophysical method.

W.M. Sharp, P.Eng.

WMS/sd

CERTIFICATE

I, W.M. SHARP, of North Vancouver, British Columbia,
DO HEREBY CERTIFY THAT:-

1. I am a Consulting Geological Engineer, with residence at 3280 Chesterfield Avenue, and offices at 161 Pemberton Avenue, North Vancouver, British Columbia;

2. I am a registered Professional Engineer in the Province of British Columbia;

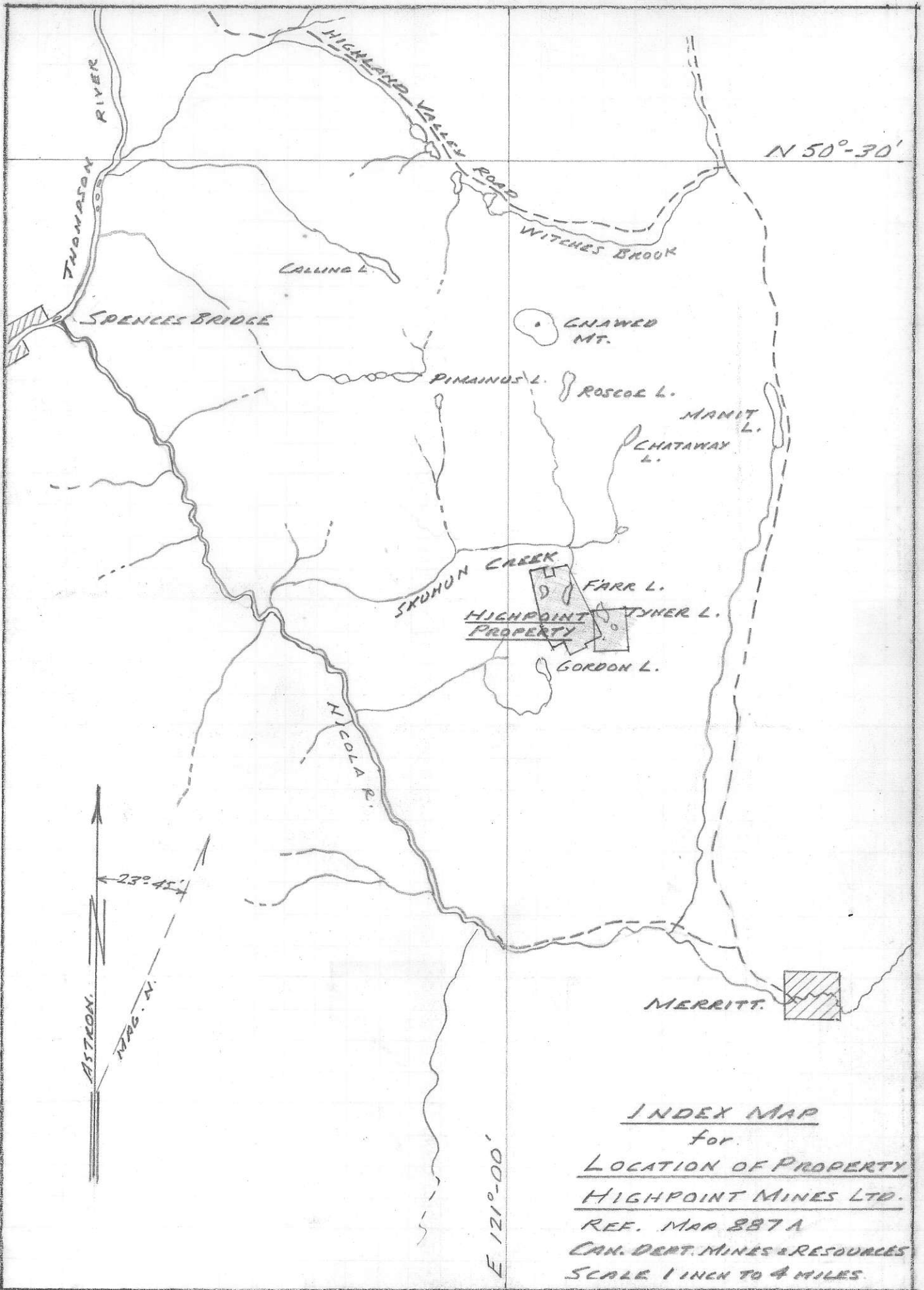
3. I am a graduate of the University of British Columbia, with B.A. Sc. & M.A. Sc. degrees in Geological Engineering, and have practiced my profession since 1946;

4. I am not a vendor, member of the Board of Directors, or a regular employee of the Company to which this report is directed;

5. I have no interest, direct or indirect, in the properties or securities of the above company, nor do I expect to have any such interest;

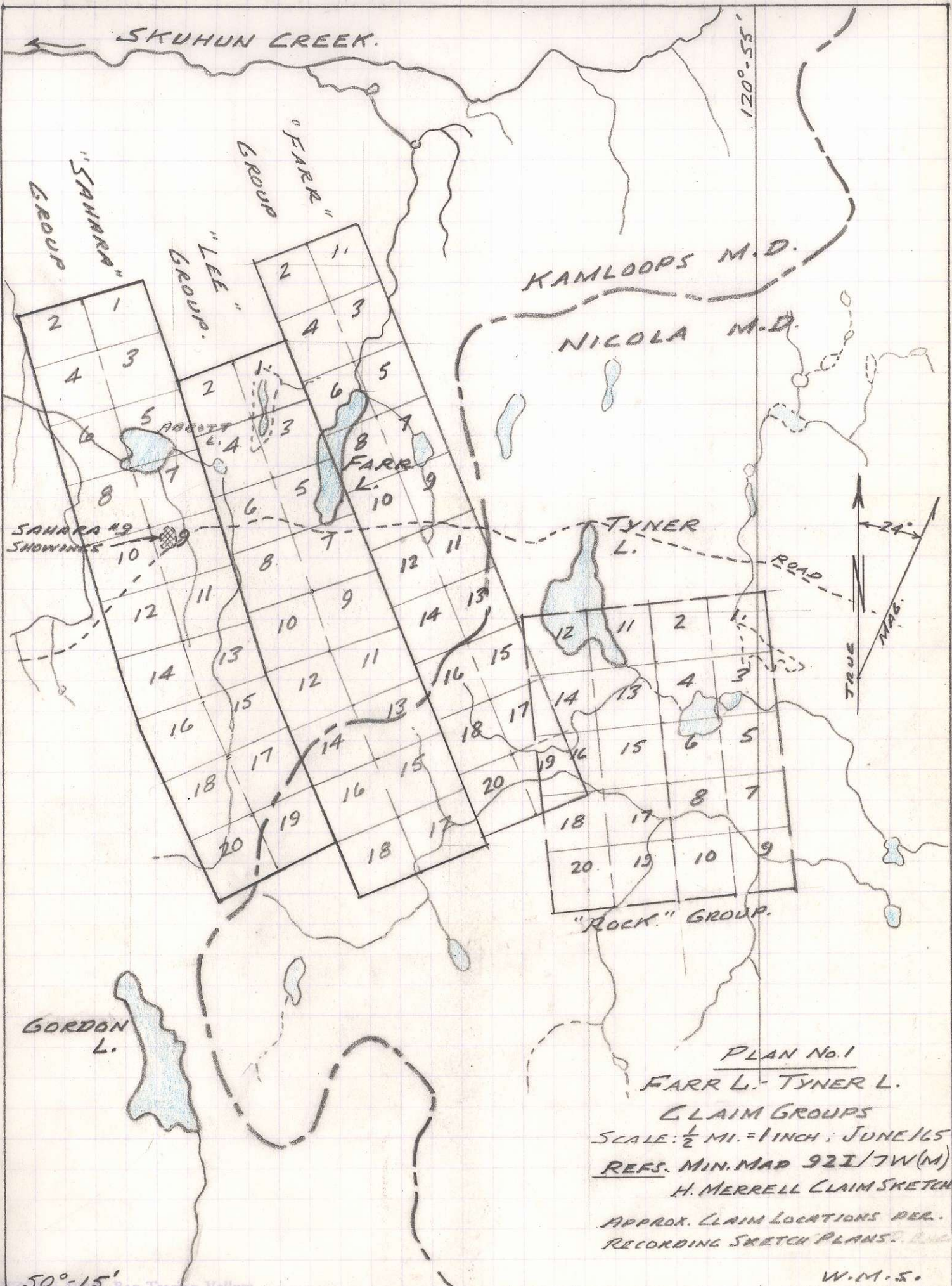
6. This report on the ~~Farr Lake - Tyner Lake~~ Properties, Highpoint Mines Ltd., (N.P.L.) is based on personal examinations, the most recent being on June 2, 1965, and previous reports contained in the Annual Report to the Minister of Mines for the Province of British Columbia.

W.M. SHARP, P. ENG.



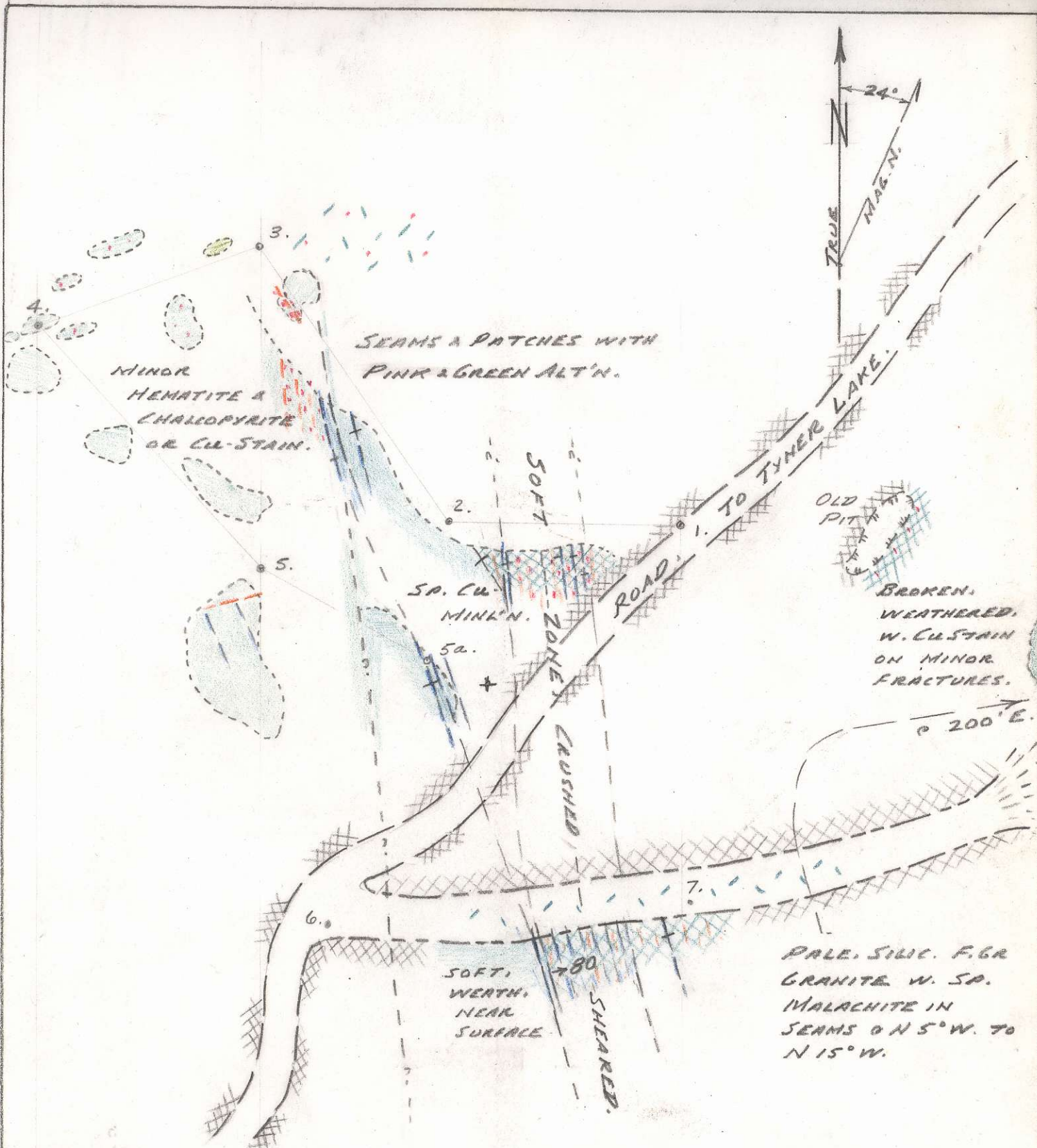
INDEX MAP
 for
LOCATION OF PROPERTY
HIGHPOINT MINES LTD.
 REF. MAP 887A
 CAN. DEPT. MINES & RESOURCES
 SCALE 1 INCH TO 4 MILES.

JAN. 1966 - W.M.S.



PLAN No. 1
 FARR L. - TYNER L.
 CLAIM GROUPS
 SCALE: 1/2 MI. = 1 INCH; JUNE 1965
 REFS. MIN. MAP 92I/7W(M)
 H. MERRELL CLAIM SKETCH
 APPROX. CLAIM LOCATIONS PER
 RECORDING SKETCH PLANS.

W.M.S.



LEGEND

- COARSE-GRAINED (H.B.D.-BI.) GRANODIORITE
- COARSE BIOTITE GRANITE ; VAR. CRUSHED-ALT.
- FINE-TO MED.-GRAINED PALE, SILIC. GRANITE
- EPIDOTE-CHLOR.-PINK FELD ; CU MIN'L'N. STRIPPED & TRENCHED AREA
- SHEAR-CRUSH ZONES ; JOINTS & 'SLIPS'
- CLAY-GRAVEL OVERBURDEN.

PLAN No. 2

GEOLOGICAL DETAILS.
 on
 SAHARA NO. 9 M.C.
 SCALE: 1" = 40' ; JUNE 3, 1965
 W.M. SHARP, P. ENG.

4076



5



more grass stand
at the same

5a highly - succub.

front view
of loc. of material

long narrow strip
w/ sp. traces in chloroform soluble stain

3

SP. str. + loc. stain

material stain by
chloroform in front strip
+ more - more color

→ brown red stain



more grass plants
(act. in)



Cya. grass g.d. (blue-hi)



F. sp. leaves (under grass)
w/ sp. strongly blue

Slippage for 'Midnight' course
1957-58?

--- material (chloroform stain?)

--- all grass + stems
sp. chloroform sol. stain

broken
material
to be stain
in front

①

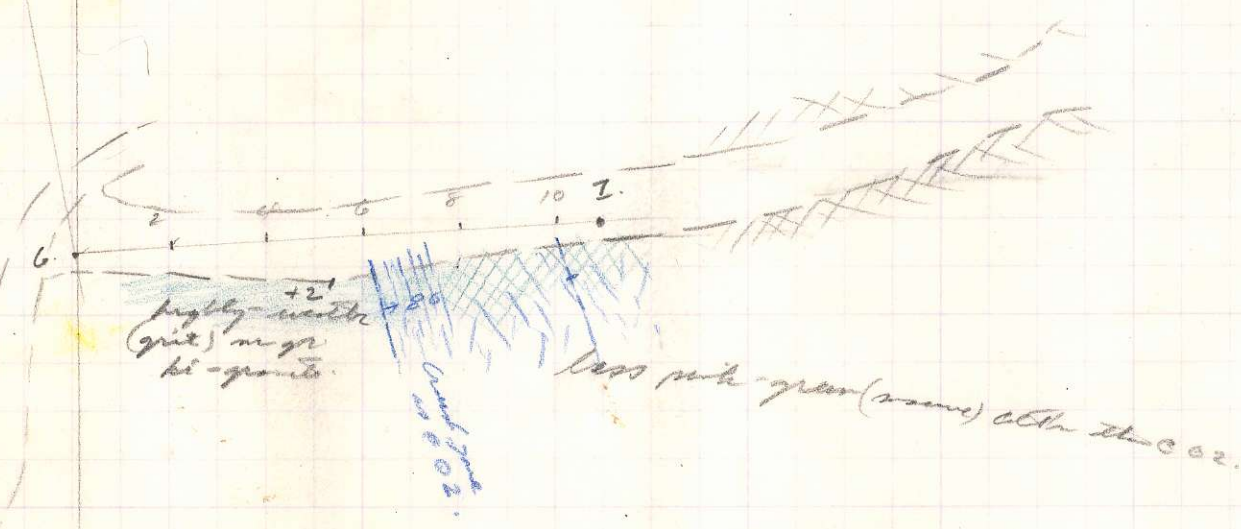
R. Lee Purpurt
Stripped Area on Sahara #9
June 3/65 1" = 40'

in cut @ old
 road level
 sp to the southeast
 in Sams @ N5W
 to N15W @ 20° dip.
 * in pale ^{the bed}
 ground (shreddy lily)

Shreddy lily 200'

Sol. lily
 20' in gr
 in bed
 100' - 200'

5 a/d



①
 R. Lee Pasport
 Trenchard Hill School #9
 June 3/65. 1 "a40"

See Report June 165

See loc'n line well blazed by Nansen

H. Merrill to provide figures on Cat-clearing time
25⁰⁰ / hr soil swamps: -