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A PRELIMINARY REPORT
ON 32L/105
THE KINGFISHER, ELK & JULIE CLAIM GROUPS

Vernon Mining Division
British Columbia

474
Vancouver, B.C.
June 20, 1964

A.F. Reeve
Geological
Engineer

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&

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Submitted to: Dakota Silver Mines Ltd.

Vancouver, B.C.
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Albert F. Reeve
Geological Engineer

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I N T R O D U C T I O N

On June 12, 1964, the writer was requested by Mr. L. G. White, P. Eng., to examine and report on the mineral properties described herein, on behalf of Dakota Silver Mines Ltd.

The examination was carried out from June 14th to 16th, 1964. Mineral showings on the Elk and Kingfisher claims were inspected, sampled and roughly mapped. A general examination of the geology on the Julie Group was also made. General Location maps of the properties and sketch plans of the mineral occurrences are enclosed in the appendix. The work was supervised by Jos. Sullivan, P. Eng. of Vancouver.

LOCATION AND ACCESS

The properties are located in Vernon Mining Division, west of the north end of Mabel Lake, on the headwaters of Kingfisher Creek. (Approximately $50^{\circ} 45'$, $118^{\circ} 45'$).

Local access is from Enderby, which is 335 highway miles from Vancouver. Enderby is a rail point on a branch line of the C.P.R. The properties are reached by travelling 20 miles east from Enderby on a secondary highway which runs along the north side of the Shuswap River valley; then turning northward on logging road which follows the course of Kingfisher Creek. Nine road miles north of the highway intersection, a road branches westward to the Julie and Elk Groups. The Kingfisher showings are located about one quarter mile west of the main logging road, 12 miles north of the intersection. Logging roads are in good condition and are passable by automobile.

LOCAL RESOURCES

Adequate supplies of water and timber are available for the purposes of preliminary exploration and development. The nearest electric power source is a single phase 7200 volt line which runs eastward along the Shuswap River to Mabel Lake some 8 scale miles south of the properties.

PROPERTY

The following 34 claims are held by Dakota Silver
Mines Ltd. under private agreements to options:

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>	<u>ASSESSMENT ANNIVERSARY</u>
Elk #1	7307	May 15, 1965
" #2	7308	" " "
" #3	7309	" " "
" #4	7310	" " "
" #5	7311	" " "
" #6	7312	" " "
" #7	7324	May 26, 1965
" #8	7325	" " "
Kingfisher #7	7107	November 19, 1964
" #8	7108	" " "
" #9	7109	" " "
" #10	7110	" " "
" #11	7111	" " "
" #12	7112	" " "
" #13	7113	" " "
" #14	7114	" " "
" #104	7139	" " "
" #105	7140	" " "
" #106	7177	November 25, 1964
" #107	7178	" " "
" #120	7141	" " "
" #121	7142	" " "
" #123	7144	" " "
" #142	7374	May 29, 1965
" #143	7375	" " "
" #144	7376	" " "
" #145	7373	" " "
Rodney	7368	" " "
Barbie	7367	" " "
Deer #1	7326	" " "
Rich #2	7050	August 13, 1964
" # 3	7051	August 16, 1964
" # 4	7052	" " "
Bright Star Trio #4	7044	July 3, 1964

PROPERTY (Cont'd)

The following 18 claims are jointly held by Dakota Silver Mines Ltd. and Sunshine Lardeau Mines Ltd.

<u>CLAIM NAME</u>	<u>TAG NUMBER *</u>	<u>ASSESSMENT ANNIVERSARY</u>
Julie #1	527101	
to	to	June 12, 1965
Julie #18 incl.	527118 incl.	

*NOTE: No record numbers were assigned at the time of title search. (Vancouver, June 17, 1964).

The above property information was obtained from the owners and verified at the Vancouver and Vernon Mining Recorder's offices.

HISTORY AND DEVELOPMENT

The general area is underlain by Shuswap rocks, in which few metallic mineral deposits have been discovered and very little in way of intensive exploration and development work has been done.

According to the owners, zinc showings in the vicinity of Kingfisher Creek have been known for at least ten years. Work on these occurrences has been limited to prospecting and a small amount of surface trenching.

GENERAL GEOLOGY

The area is underlain mainly by Precambrian meta-sediments known regionally as the Monashee Group, a sub-division of the Shuswap terrane. Localized remnants of tertiary volcanics and sediments overlie the Monashee.

Lithology

Gneiss, composed principally of feldspar, quartz and mica, comprises most of the Monashee rocks.

Locally the gneisses are inter-bedded with bands of quartzite and calcareous marble. The quartzite is coarse and crystalline and grades into the enclosing gneiss. The marble variously contains lenses and masses of quartz, lime-silicates and gneiss.

Lenses and wisps of coarse, gneissic quartz feldspar pegmatite are enclosed concordantly in the complex.

Structure

The gneissic fabric of the above rocks is believed to conform approximately with the original sedimentary bedding. Internal isoclinal folding, accompanied by high-grade metamorphism has left the foliated strata in steep to moderately inclined positions.

A north-south oriented fault structure transects the Elk Claim Group along Kingfisher Creek.

ECONOMIC GEOLOGY

(1) Kingfisher - (see Fig. 4 Appendix)

The mineralization here consists of coarse vaguely banded disseminations of sphalerite in marble. The sphalerite varies from black to light honey coloured. It is generally accompanied by pyrite and by sub-massive pyrrhotite in places. Minor amounts of galena are also present.

The heaviest mineralization occurs in a green silicious section of the marble. The principal exposure of this type of material is in a bulldozer cut about 50' in length. The mineralization appears to extend about 30' along the rock wall of the trench, but because of sloughing and caving, only about 14' of this was well enough exposed to sample.

The following are samples taken from the main trench:

<u>NO.</u>	<u>DESCRIPTION</u>	<u>LENGTH</u>	<u>Zn.</u>	<u>Pb.</u>	<u>Au.</u>	<u>Ag.</u>	<u>BY</u>
59404	Min. grey-white marble	9'	3.25	0.23	Tr	0.1	AFR
59405	" " " "	5'	0.87	0.70	Tr	Tr	AFR
#3	" green lime-silicates	grab	7.72	-	-	-	Owners
#1	"caprock"	grab	0.12	-	-	-	Owners

In addition, there are 4 lesser outcrops of gneiss, quartz, and marble carrying zinc mineralization, as noted on Figure 4. The mineralized outcrops occur in an area about 900' in length.

The writer has tentatively assumed a strike of about N50W and a dip of 55° SE at the main trench; however, there is insufficient information available at this point to firmly establish strike, true width or dip of the mineralized zone or zones.

ECONOMIC GEOLOGY (Cont'd)(2) Elk - (See Fig. 3 Appendix)

On the Elk zone the mineralization consists of coarse disseminations of sphalerite, pyrite and irregularly distributed galena in smokey grey crystalline quartzite. A slight blue stain on fracture surfaces suggests the possibility of a little copper mineralization as well. In the discovery trench this type of material is cleanly exposed over a width of 10'. This trench has cut the east wall of the zone, but stops in strongly mineralized material on the west side.

Samples taken from the main pit are as follows:

<u>NO.</u>	<u>DESCRIPTION</u>	<u>LENGTH</u>	<u>Zn.</u>	<u>Pb.</u>	<u>Cu.</u>	<u>Au.</u>	<u>Ag.</u>	<u>BY</u>
59402	Mineralized grey qtz.	10'	0.47	0.05	0.04	Tr	Tr	AFR
59403	High Pb section	1'	5.11	8.27	-	Tr	0.2	AFR
#4	Mineralized quartz	30#bulk	3.23	2.99	0.04	-	0.1	Owners

One hundred feet north of the main pit, a section of heavily mineralized gossan in a small pit was sampled (not a full section).

<u>NO.</u>	<u>DESCRIPTION</u>	<u>LENGTH</u>	<u>Zn.</u>	<u>Pb.</u>	<u>Au.</u>	<u>Ag.</u>	<u>BY</u>
59401	Mineralized gossan	2½'	4.09	2.32	0.01	0.2	AFR

In addition, several other small exposures of mineralized quartz and gossan were found along strike as noted on Figure 3. A narrow band of calcareous marble follows the zone, on the west side, but is apparently not mineralized.

ECONOMIC GEOLOGY (Cont'd)

This zone was traced by the writer for a distance of about 800' and it is reported by the owners to extend several hundred feet further north. It has a steep dip and well defined average strike of about N 15° E.

Note Re Sampling: It should be noted that the samples taken on both the Kingfisher and Elk Showings do not represent full mineralized widths and can only be interpreted as very limited indications of character and tenor.

(3) Julie Group

These claims were staked about a week prior to the examination and no detailed prospecting has been carried out yet by the owners. The writer made a brief general inspection of the geology. The most abundant rock types are quartz-feldspar, biotite gneiss, and pegmatitic feldspar-quartz gneiss. Several minor bands of marble and quartzite were observed; none being more than 10' in thickness. In general, these rocks have a strike of about S 70° W and dip variably northward.

SUMMARY AND CONCLUSIONS

The Kingfisher, Elk, and Julie claim groups are underlain by precambrian rocks of the Monashee meta-sedimentary complex.

As a result of relatively recent prospecting, zinc mineralization has been discovered in a marble-quartzite horizon on the Elk and Kingfisher claims.

In addition, between the Elk and Kingfisher showings along an apparent strike of N60°W, there are a number of other mineralized zones located on claims held by the Bright Star Trio mining company.

The zinc mineralization appears to be a replacement type; either introduced hydrothermally, favouring the quartzite-marble horizon, or metamorphic mobilization and concentration of zinc minerals contained in original sedimentary beds. This apparent stratigraphic control suggests the possibility of substantial extension or repetition of the mineralization within the favourable horizon.

Since there has been very little metallic mineral exploration carried out locally, and in the Monashee complex generally, these showings represent relatively new and untested exploration potential.

Locally, exploration work to date has consisted of limited prospect trenching. Further exploratory work on a broader basis will be required to obtain a reasonable assessment of economic possibilities.

GENERAL RECOMMENDATIONS

On the Kingfisher and Elk Groups a programme of surface trenching, stripping and sampling, guided by geological, geophysical and geochemical mapping should be carried out. Contingent upon the results of this type of work, some preliminary diamond drilling would be required. The Julie Group will require preliminary prospecting to determine whether more detailed work is justified.

In exploring this area particular attention should be paid to tracing and prospecting the quartzite and marble horizons.

RECOMMENDED PROGRAMMEPHASE IA. Kingfisher Group

1. Line-cutting and chaining - 10 miles
2. Geological mapping - 10 claims
3. Geochemical survey, T.H.M. colour tests - 10 line miles
4. Magnetic survey - 10 line miles
5. Stripping, trenching, and sampling.

B. Elk Group

1. Line-cutting and chaining - 8 miles
2. Geological mapping - 8 claims
3. Stripping, trenching and sampling.

C. Julie Group

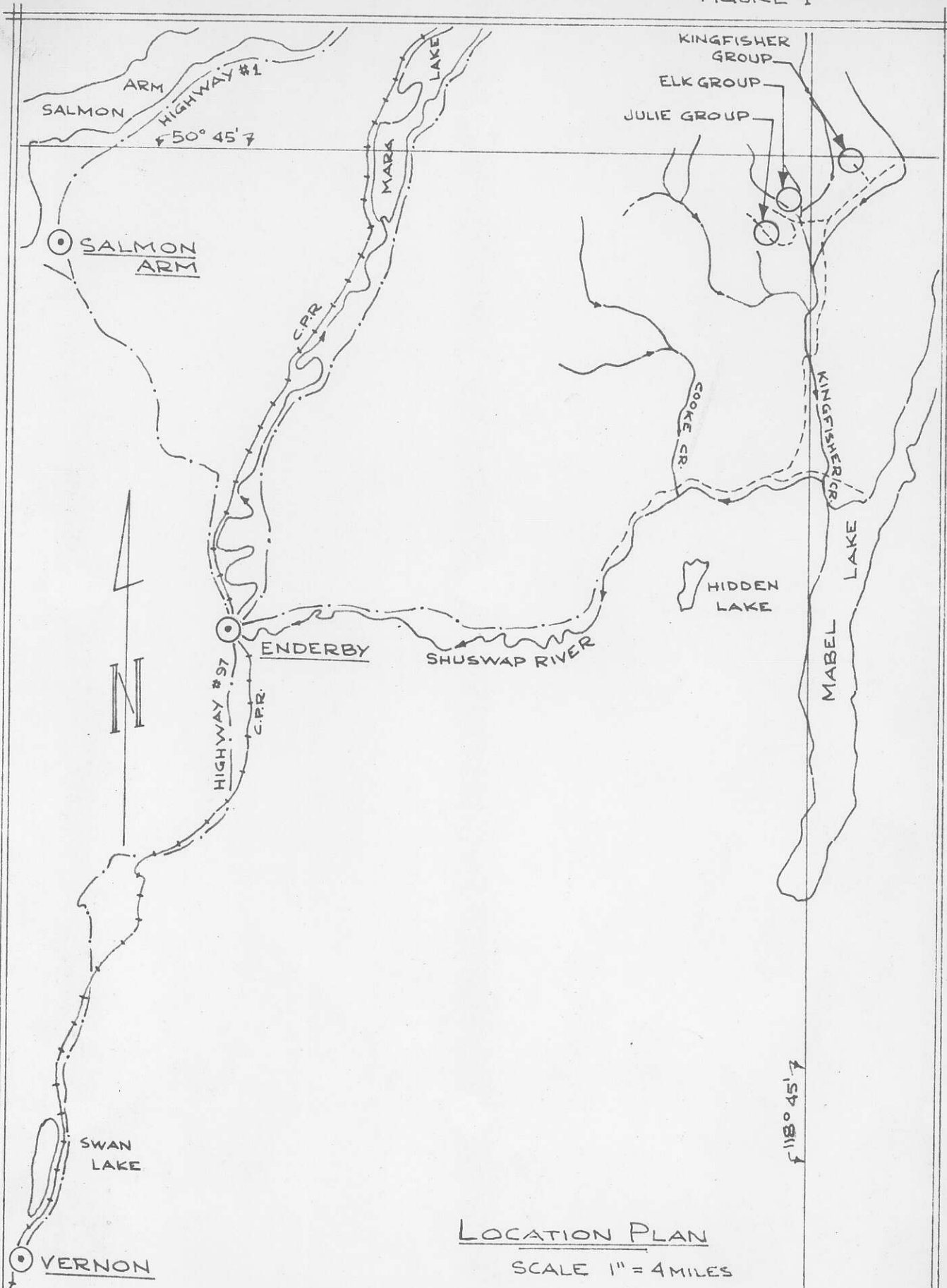
Preliminary prospecting.

PHASE II

Diamond drilling, 3000' contingent upon the success of A and B.

A P P E N D I X

FIGURE 1



LOCATION PLAN
SCALE 1" = 4 MILES

JUNE 1964

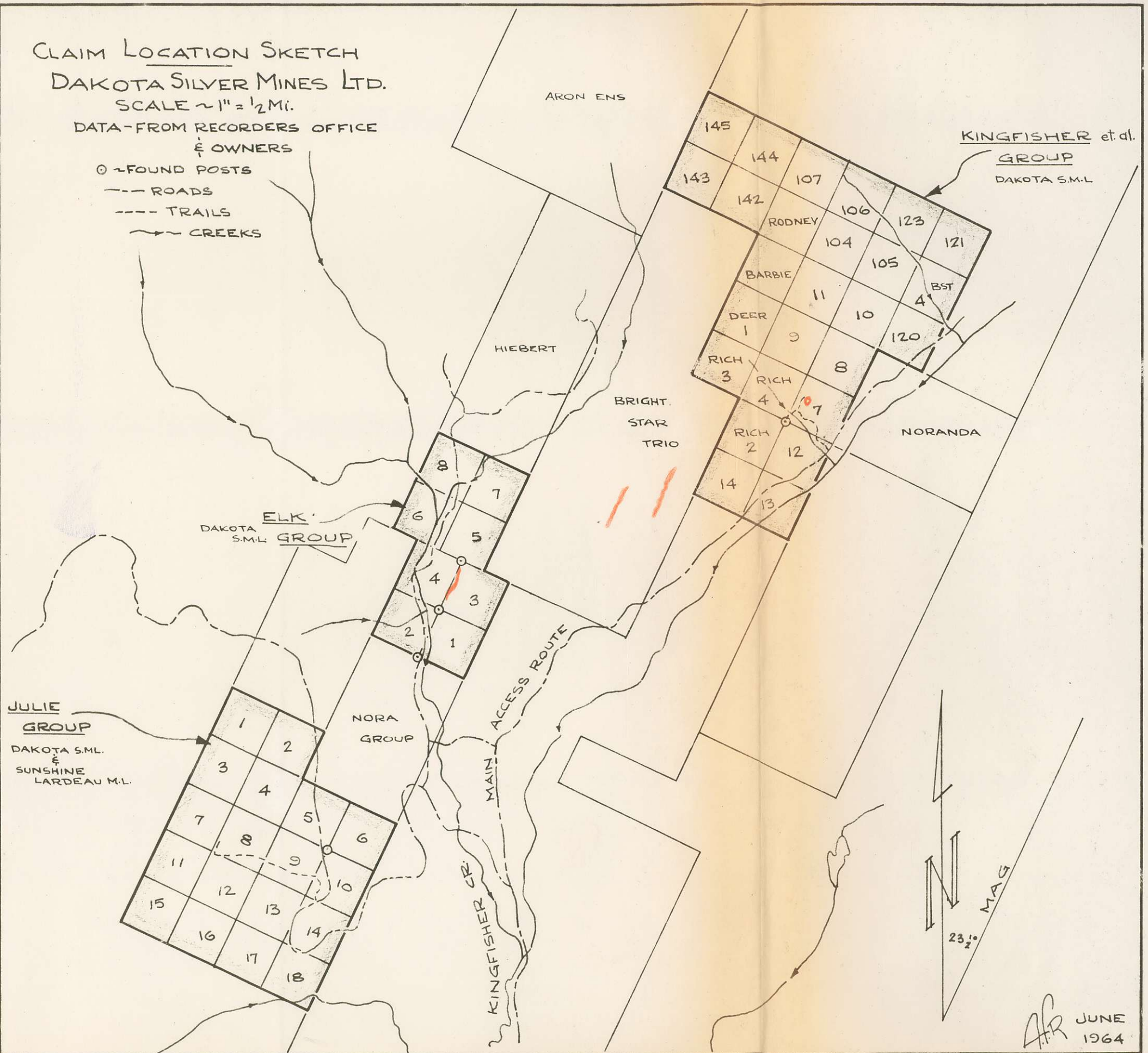
AR

CLAIM LOCATION SKETCH DAKOTA SILVER MINES LTD.

SCALE ~ 1" = 1/2 Mi.

DATA - FROM RECORDERS OFFICE
& OWNERS

- - FOUND POSTS
- ROADS
- TRAILS
- ~~~~ CREEKS



KINGFISHER et al.
GROUP
DAKOTA S.M.L.

ELK
DAKOTA S.M.L. GROUP

JULIE
GROUP
DAKOTA S.M.L.
&
SUNSHINE
LARDEAU M.L.

NORA
GROUP

ARON ENS

HIEBERT

BRIGHT
STAR
TRIO

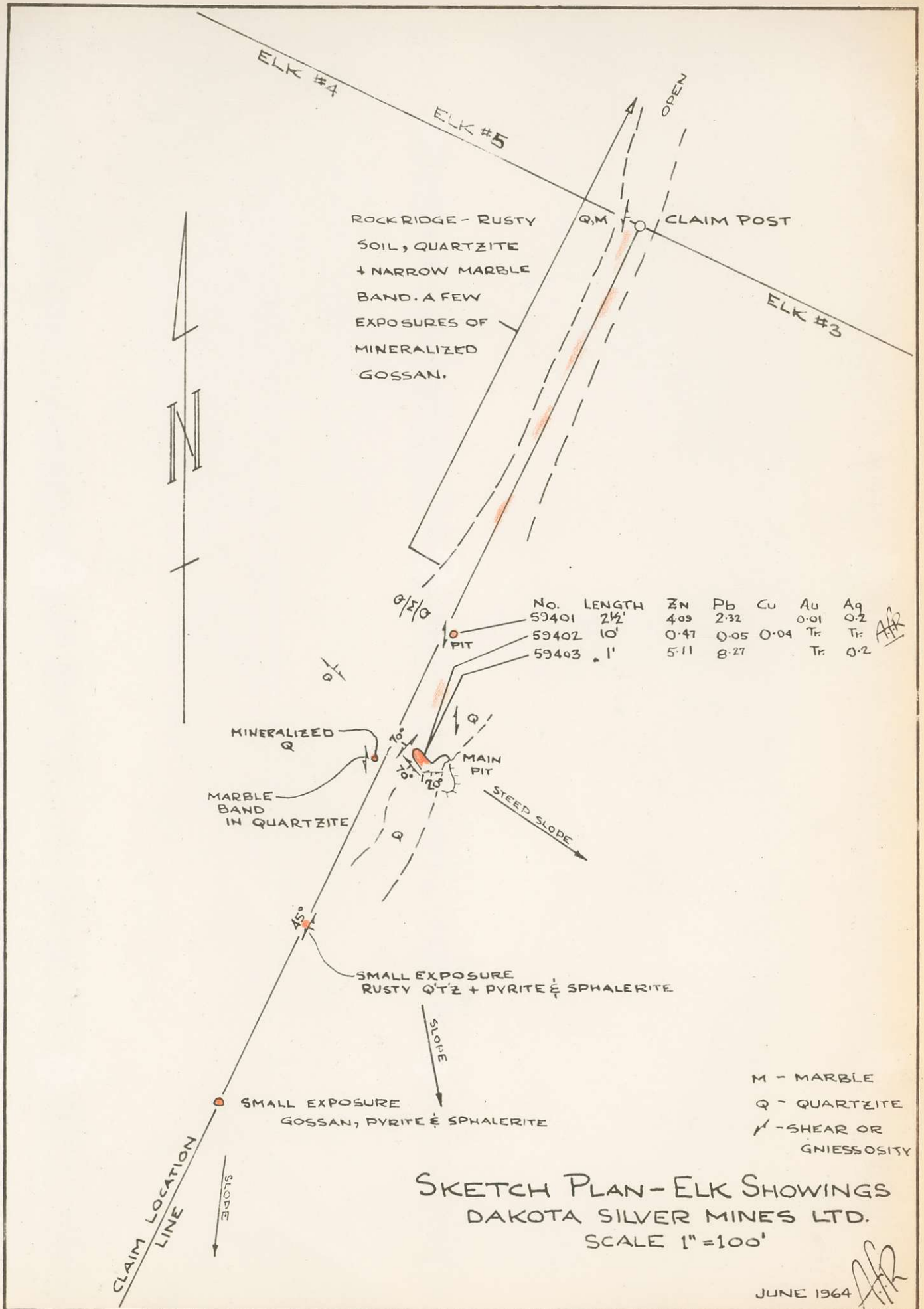
NORANDA

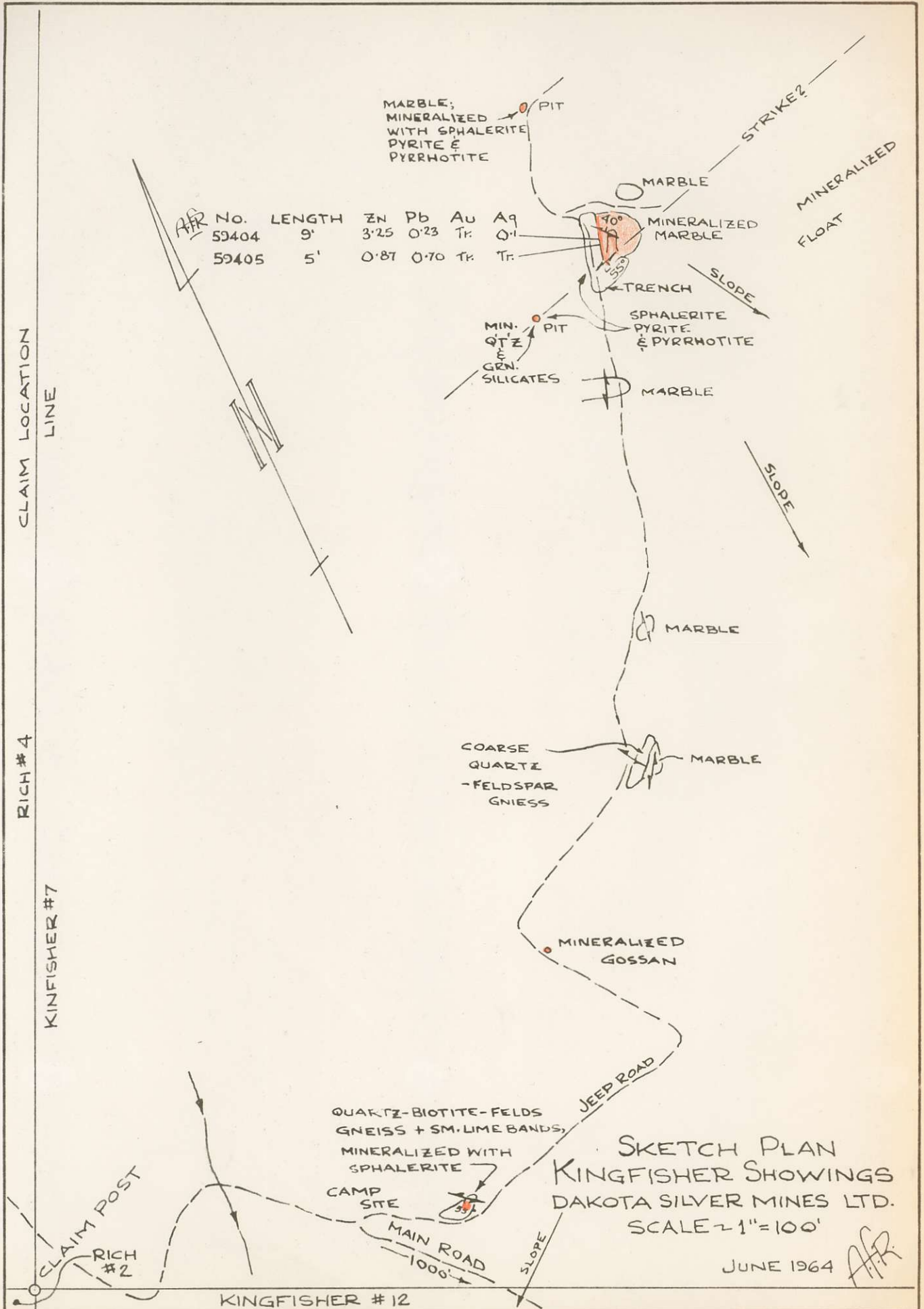
ACCESS ROUTE
MAIN

KINGFISHER CR



A.R. JUNE 1964





C E R T I F I C A T E

I, Joseph Sullivan, of the City of Vancouver, in the Province of British Columbia, hereby certify as follows:

- 1) That I am a Registered Professional Engineer of British Columbia, residing at 2766 West 30th Ave., Vancouver 8, B.C.
- 2) That I am a graduate of the University of British Columbia, and have practised my profession for 12½ years.
- 3) I have no direct or indirect interest in Dakota Silver Mines Ltd.
4. I inspected the properties described herein and supervised the writing of the enclosed report by Albert F. Reeve.

Signed:.....
Jos. Sullivan, P. Eng.

C E R T I F I C A T E

I, Albert F. Reeve of Vancouver, British Columbia,
hereby certify:

- 1) That I am a geological engineer residing at 1096 Comox Street, Vancouver, B.C.
- 2) That I am a graduate of Michigan College of Mining and Technology, and have practised as a geological engineer for three years.
- 3) That I am a certified member of the Association of Professional Engineers of the Province of Ontario.
- 4) That I have not, nor do I expect to receive, any direct or indirect interest in the mining properties of Dakota Silver Mines Ltd.
- 5) The accompanying report is my own work, based on personal examination of the properties described herein.

Signed:.....
A. F. Reeve, Geological Engineer

