

ASSESSMENT REPORTS

MAP No. 105H7

TYPE OF WORK: Geology

019894

REPORT FILED UNDER	Silver Duke Mines Ltd.		
DATE PERFORMED			DATE FILED: December 1967
LOCATION -	LAT.	61°17'N	Jane Creek Area Y.T.
	LONG.	128°44'W	
CLAIM Nos.		NIX 1-8	17370-17377
		9-42	17378-17 509
WORK DONE BY	D. Parent P. Eng.		
WORK DONE FOR	Silver Duke M. L.		
REMARKS	Geological report containing assays of lead, silver, zinc, copper and tungsten, and occurrences of gold		
	Location Map 1" - 120 mi.		
	Claim Map 1" - 1/2 mi.		

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ENCLOSURES

1. Frances Lake, Y. T., Sheet 105 H - Topographic Map, Scale 1" = 4 miles.
2. Frances Lake, Y. T., Map 6 - 1966 Geologic Map Scale 1" = 4 miles.
3. Tyers River, Y. T., Map 1382 G, Aeromagnetic Series, Scale 1" = 1 mile.
4. Frances Lake, Y. T., Map 7007 G, Aeromagnetic Series, Scale 1" = 4 Miles.

DESCRIPTION

The property consists of a contiguous group of forty (40) mining claims of a rectangular shape.

<u>Claim Name</u>	<u>Record #</u>	<u>Date Staked</u>
Max 1 - 8 inclusive	17370 - 17377 incl.	March 1, 1967
Max 9 - 40 inclusive	17310 - 17319 incl.	March 2, 1967

HISTORY

The mineral find was made by Max Martin and Ernest Beech in the summer of 1966 while working for the Yukon Territory prospecting Group which was reconstituted as the EM No. 9 Group. Work commenced in June 1966 and continued until mid-September the same year. The claims were allowed to lapse and restaked by Max Martin in March 1967.

LOCATION

The claims are located approximately 82 air miles north of Watson Lake and 14 miles due west of the Canada Tungsten Highway which parallels at this point the south flowing Highland River in the southeastern section of the Yukon Territory. The mining claims are situated at the head of Jane Creek, more precisely:

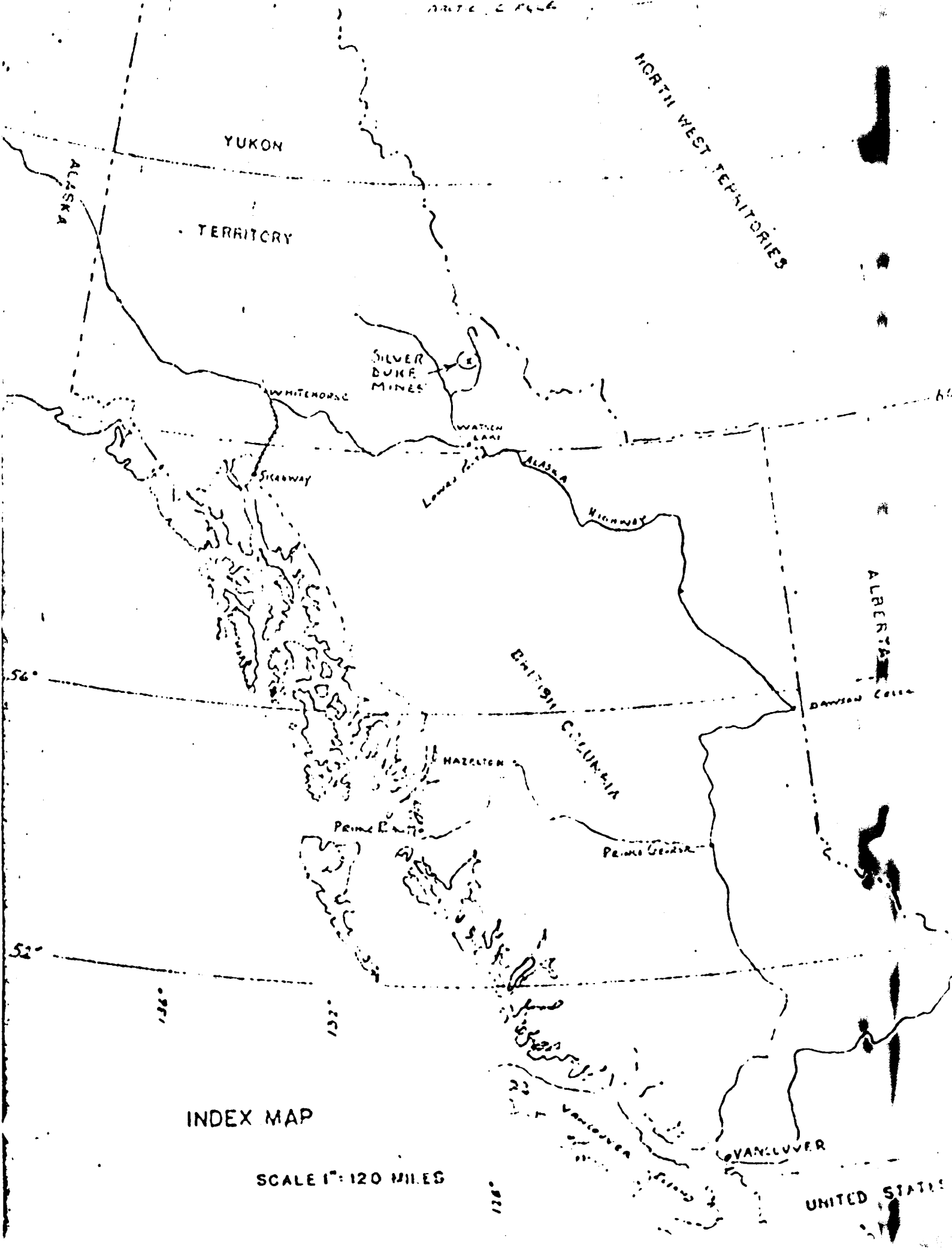
61° 17' North Latitude

136° 44' West Longitude

The elevation of the claims ranges from 4,500' to 7,000'.

CLIMATE

Break-up occurs in late June, the freeze-up in October. Summer season is generally short, weather, as expected, is variable with rain prevalent during the summer months.



ART. 2 R.C.M.

NORTH WEST TERRITORIES

YUKON

TERRITORY

ALASKA

SILVER DUKE MINES

WHITEHORSE

WATSON LAKE

SICOWAY

ALASKA HIGHWAY

ALBERTA

BRITISH COLUMBIA

DAWSON CREEK

HAZELTON

PRINCE GEORGE

PRINCE GEORGE

56°

52°

121°

123°

INDEX MAP

SCALE 1" = 120 MILES

VANCOUVER

UNITED STATES

125°

CLIMATOLOGICAL DATA FOR WATSON LAKE & ENVIRONS

Mean annual temperature	27.5° F.
Mean annual minimum temperature	- 60° F.
Mean annual maximum temperature	85° F.
Lowest recorded temperature (1921 - 50)	- 75° F.
Extreme highest recorded temperature (1921 - 50)	90° F.
Mean annual degree days	13500
	Vancouver 6000
Maximum gust speed of wind	70 m. p. h.
Prevalent winds are from the West	
Maximum snow depth (1941 - 50)	40"
Mean annual snowfall	60"
Mean annual number of days with measurable snowfall	50
Mean annual total precipitation	16"
Mean annual rainfall	10"

Source: Department of Transport N. R. C.#3151 Ottawa.

Although the approximate southern limit of regional permafrost in Canada is about 100 miles north of the Claim Group, it has been reported that some previous trenches put down on the Claim Group have encountered permafrost, this due perhaps to the high elevation of the claims. Any contemplated bulldozing or trenching work would necessarily be affected by this condition and precautions should be taken to verify this fact before undertaking any sizable program.

VEGETATION

Small Jack Pine is prevalent along the Canada Tungsten Highway where the pack-trail begins but this species of wood gives way to stunted Balsam which

Vegetation (cont.)

locally covers parts of Jane Creek valley and extends into the Claim Group; the higher reaches of the property are above the timber line.

TOPOGRAPHY

The Claim Group covers the southwestern portion of a large boss shaped mountain that has been strongly glaciated and indented by radiating fracture zones, now the sites of creek beds. Glacial debris is found in the Jane Creek area, extending into the lower slopes of the mountain. At higher elevations, the mountain is quite steep and bare.

COMMUNICATION CENTER

Watson Lake, a fast growing community of 600 people and the supply and communication center for the region, is serviced by schedule air line flights of the C. P. A. which make regular connections with Vancouver via Whitehorse and Prince Rupert, or Prince George.

Fixed-wing aircraft equipped with floats or wheels, as well as Rotary-wing aircraft, are available for charter. Watson Lake is on the Alaska Highway and good branch gravel roads, maintained the year round, run northerly to Ross River and to Canada Tungsten Mine. Frances and Hyland Rivers have long stretches of easily navigable water but these are intercepted by several dangerous rapids.

ACCESS

At present, access from Watson Lake to the property is either by helicopter or by fixed wing aircraft into Kern Lake some six air miles SSE of the Claim Group. Kern lake, during summer months, is only a beaver pond so can be landed on only when favourable winds prevail. By road, it is a hundred and seven miles (107) from Watson Lake to mile Post 48 on the Canada Tungsten road from

Access (cont.)

where a 20 mile pack trail branches off to the property. This pack trail is boggy in places and not satisfactory for use by horses. During the summer season of 1965, pack horses relayed supplies from Kern Lake to the claim site. Snowmobiles or skidoos would be ideal for use during the winter to transport over the pack trail and use in the claims vicinity.

AEROMAGNETIC SURVEY

An airborne magnetic survey was made of the Frances Lake Y. T. area in 1961 by the Geological Survey of Canada. This survey indicates numerous magnetic trends, and Silver Duke Mines Ltd. claims cover one of these anomalous areas in the Tyers River area, see Map 1382 G.

GEOLOGY

The property is underlain by sedimentary and volcanic rocks of Cambrian to Devonian age, invaded by intrusives of Cretaceous age.

The sedimentary volcanic series of rocks are found in the Jane Creek syncline which has a southeasterly plunge. To the south and east of the Jane Creek syncline, the sedimentary volcanic series again has a southerly dipping attitude. Rock outcrops are abundant in the area. The northernmost claims are underlain by granodiorite and biotite quartz monzonites which form the core of the mountain. In the mineralized areas much magnetite was found associated with sulphide minerals, i. e., sphalerite, galena, some chalcopyrite and an unidentified silver mineral.

Skarn and schist-gneiss zones have been exposed and found to be the loci of mineralization. A copper bearing zone has been located by Max Martin in

Geology (cont.)

the vicinity of Claim No. 9. This zone was not examined due to low cloud ceiling prevailing at the time of the visit.

ASSAYS

Six (6) samples taken by Max Martin and assayed July 28th, 1967, by the Whitehorse Assay Office returned the following values:

<u>Sample No.</u>	<u>Silver</u> oz/ton	<u>Lead</u> %	<u>Zinc</u> %	<u>Copper</u> %	<u>Tungsten</u> %
9851		TR	10.3	.14	TR
9854	.64	1.1	3.5	TR	TR
9855	.48	TR	7.1	.01	TR
9856	TR	TR	10.1	.28	TR
9858	33.3	17.4	25.4		TR
9859	1.74	TR	1.1	1.18	TR

One chip sample taken by the writer from large mineralized boulders, in various pits, returned the following:

<u>Sample No.</u>	<u>Gold</u> oz/ton	<u>Silver</u> oz/ton	<u>Copper</u> %	<u>Lead</u> %	<u>Zinc</u> %
629	TR	13.45	TR	4.85	6.25

PREVIOUS WORK

The Yukon Pacific prospecting Group, during 1965, with a crew of one geologist and two men made a cursory magnetic survey over a few claims and outlined eight (8) magnetic anomalies.

Apart from plotting and contouring the anomalies there has been no attempt to further interpret magnetic data.

Some trenches were put down on two anomalies which encountered sulphide mineralization associated with magnetite bearing minerals in skarn and gneiss zones.

Previous Work (cont.)

Numerous small pits were put down to test areas where mineralized float was found but the hand tools and small crew were not able at that time to cope with boulders and permafrost conditions encountered.

PROPERTIES IN THE AREA

Monarch Metals property is located about one and half mile east of the Silver Duke Mines Ltd.; the Blueberry and Fluke groups of claims are seven (7) miles N. N. W.; the McBean, Ron, Marie and Louise group are ten (10) miles N. N. E.; the Canada Tungsten Mine is about forty-eight (48) miles N. E. Other mineral occurrences are known in the Frances Lake area.

PROPOSED WORK FOR 1968

Work on the Claim Group of Silver Duke Mines Ltd. should be done in three stages as follows:

1. Magnetometer and E. M. Survey made on 24 claims during January - February 1968.
2. Complete Magnetometer and E. M. Survey on balance of claims as well as carry out soil sampling for three (3) metals, i. e., Silver, Lead, Zinc. Begin access road into property.
3. Upon completion of surveys and road, diamond drilling can be started.

The first stage should be implemented during the winter months to satisfy work requirements on claims and allow sufficient time to evaluate geophysical findings. Since strong magnetic zones are already known to occur, it will be necessary to lay out the 27.3 miles of lines with a prism or transit and run picket

Proposed Work for 1968 (cont.)

lines. A magnetic compass would not be reliable for this work. The first stage will cost about twelve thousand dollars (\$12,000.00) as outlined further in this report. This work can be farmed out on contract.

The second stage should begin after snow has left the ground and soil thawed sufficiently to permit the taking of soil samples on the whole group; magnetometer and E. M. surveys to continue to complete the balance of sixteen (16) miles of lines. A bush road passable by jeep should also be started at the same time which perhaps could be done in co-operation with Monarch Mines Ltd., since this road will pass through their property on the way into the Silver Duke Mines property.

The third stage could begin as soon as the road is passable to allow four wheel drive vehicles to deliver the diamond drill and supplies to the property. An initial program of diamond drilling will be necessary to prove up those zones found by geophysical, geochemical and bulldozer trenches. The second and third programs will cost about eighty-eight thousand dollars (\$88,000.00).

Staff (cont.)

Vancouver office to finalize maps, reports and be ready to return to the job the following year to expand the drilling program etc., depending on first year results.

NORTHERN MINERAL EXPLORATION ASSISTANCE REGULATIONS.

The Department of Northern Affairs and National Resources assist up to 40 % of cost, under certain conditions, exploratory work performed in Canada north of the sixtieth (60th) parallel of latitude. See: Appropriations Act P. C. 1966 - 1641 that provides for payments in respect of the Northern Mineral Grants Program.

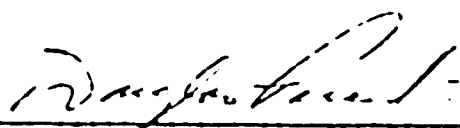
ACKNOWLEDGEMENT

Liberal use was made of Erik A. Ostensoe's report of February 15, 1966 on BM No. 9 Claim Group prepared for Yukon Pacific Prospecting Group. Mr. Ostensoe was the geologist in charge of field operations.

RECOMMENDATIONS

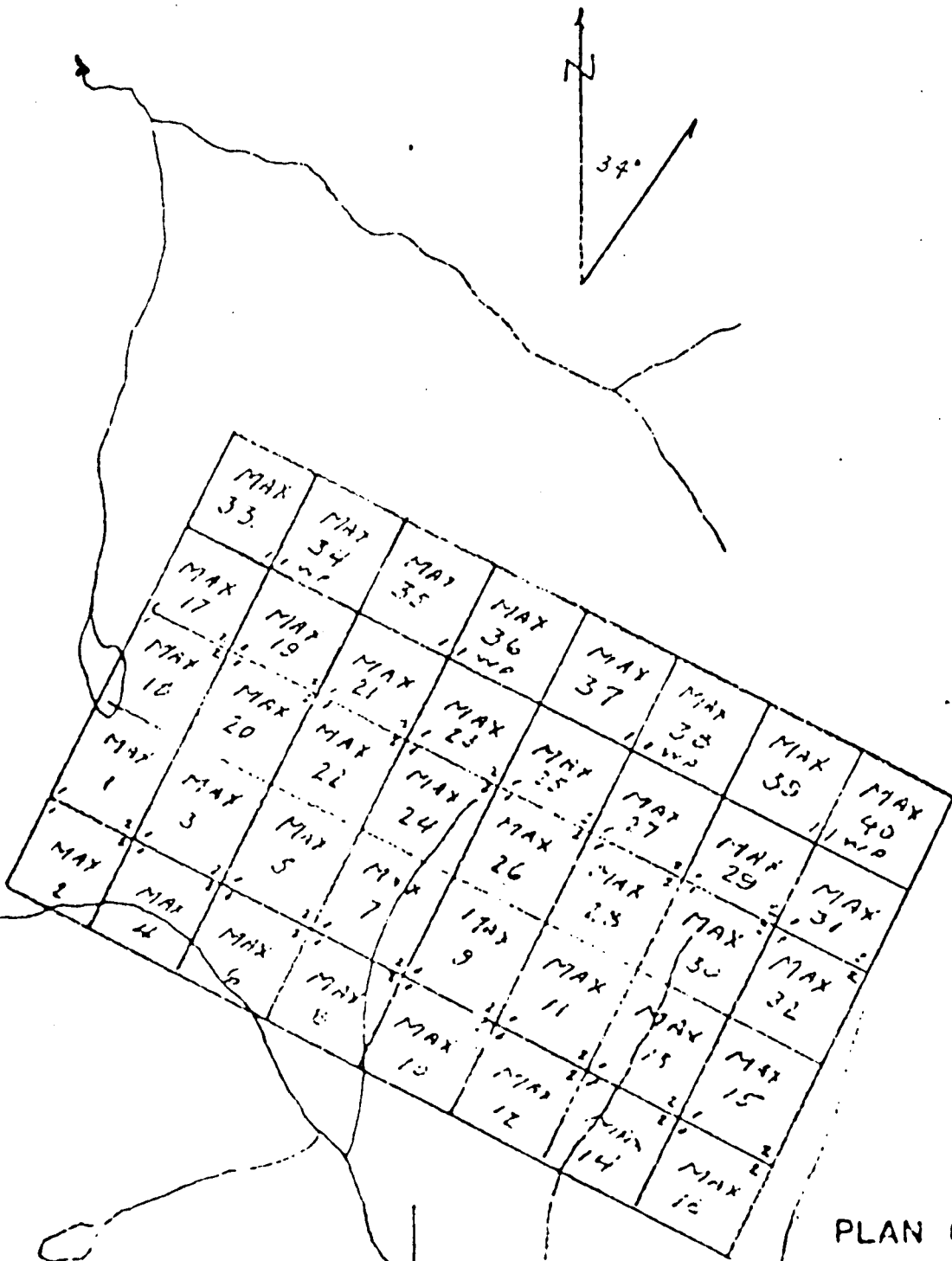
The occurrence of galena, sphalerite, and magnetite with silver minerals found as float and in place across some four claims as well as a reported copper occurrence, all in favourable geological setting, warrant further exploration by geophysical and geochemical surveys followed up by bulldozer trenches and diamond drilling. This work can be performed in part during winter and completed in the summer of 1968 for a cost of one hundred thousand dollars (\$100,000.00).

Vancouver, B. C.
December 22, 1967



Douglas Parent, P. Eng.

PAGE 8 OMITTED



61° 17'

M. H. G. 57

JANE CR.

PLAN OF CLAIMS
SILVER DUKE MINES 'N.P.
FRANCES LAKE AREA
YUKON TERRITORY

SCALE 1" = 1/2 M.
DEC. 15 1967