

SILVER STANDARD MINES LIMITED
(NON-PERSONAL LIABILITY)
808-602 WEST HASTINGS STREET
VANCOUVER 2, B.C.

2409

GEOCHEMICAL REPORT

on the

BELL GROUP MINERAL CLAIMS

Lat. 54° 00' N Long. 126° 44" W

Omineca M.D.

Claims owned by

SILVER STANDARD MINES LTD. (N.P.L.)

May 1970

Norman W. Burmeister, P. Eng.
Geological Engineer

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ATTACHMENT:

Bell Group Mineral Claims SCHEDULE A

IN POCKET:

#1 Location Map. Plate I
#2 Claim Map Plate II
#3 Geochemical Survey. Plate III

Department of	
Mines and Petroleum Resources	
<hr/> ASSESSMENT REPORT	
NO.	2409 MAP

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INTRODUCTION

The following report is a documentation of geochemical work done on the Bell Group of mineral claims during the 1969 summer field season. Included in the report is a description of the property, a general discussion of the geology of the area, a description of the work performed and an interpretation of the findings.

Three plates are included in the pocket as a part of this report.

LOCATION AND ACCESS

The Bell Group of claims is situated in the Omineca Mining Division, approximately 40 miles south of Houston, British Columbia. (See Plate I). Topography at a scale of 1 : 50,000 and contour interval of 100 feet over the immediate and surrounding area is shown on the Owen Lake Sheet. Co-ordinates of the claims are Lat. 54° 00' north and Long. 126° 44' west. The claims are located two miles southeast of the southern end of Owen Lake and are approximately centered on a small intermittent lake named Bellelliot Lake. Bellelliot Lake has no inflow and is reduced to a marsh during the dry summer months.

The elevation of the claims is 2600 feet and the area is essentially flat. The group occupies a portion of the broad, gentle valley formed by the Nadina River. Lodgepole pine, aspen and alder constitute the predominant forest growth in the area.

Access to the claims is by car or truck from Houston via the Morice River road and the Francois Lake road. Both roads are well maintained and kept open throughout the year.

PROPERTY

The Bell Group is comprised of 16 full sized mineral claims as listed in Schedule A. The claims are owned by Silver Standard Mines Ltd. with its registered offices at 808-602 West Hastings Street, Vancouver 2, British Columbia.

Staking of the Bell claims was done during the spring of 1969 on the basis of information obtained from the aeromagnetic maps published by the Geological Survey of Canada. A large sharp magnetic high occurs in the area of Bellelliot Lake and the claims cover a portion of the anomaly.

GEOLOGY

The geology of the general Owen Lake area, including the Bell mineral claims, is shown on Map 671 A by the Geological Survey of Canada. The Hazelton Group of volcanic and sedimentary rocks underlies most of the area. In the Owen Lake district, the Hazelton Group is intruded by numerous acidic stocks and plugs of Tertiary Age. These intrusions are collectively grouped into the Nadina Granites.

The immediate area of the Bell claims is heavily drift-covered. No outcrops have been mapped by the government geologists and no outcrops were found during work on the claims. As the area is essentially flat, there is no topographic evidence from which to infer an interpretation of the underlying bedrock. The aeromagnetic data suggests that a small intrusive body may underlie the claims as the magnetic expression over the area is similar to the magnetic expression of several of the known Nadina Granite intrusives. In the Owen Lake district all of these plugs and stocks as presently known are associated with base or precious metal mineralization.

GEOCHEMISTRY

A reconnaissance of the claims during the early summer of 1969 failed to provide any information with respect to determining the significance of the aeromagnetic anomaly. It was therefore decided to carry out a soil sample survey of the claims to locate a target for geophysical or physical investigation.

A camp was established at the south end of the claim group and a three-man crew was employed to carry out the survey. A north-south base line was cut through the centre of the claim group and east-west grid lines were run off the base line at intervals of 800 feet. Soil samples were collected at a spacing of 400 feet on the grid lines and 200 feet on the base line. Sample sites were well marked with blazes and flagging tape for future reference. The soil samples were taken from a depth of approximately two feet or the top of a very poorly developed "B" soil horizon. A one and one-half inch diameter auger or shovel was utilized for collecting each sample. Each sample was collected and stored in a 5" x 7" high-wet-strength Kraft paper bag and air dried at the field camp. All samples were shipped in the original collection bags to a commercial laboratory in Vancouver for analysis.

When received by the laboratory in Vancouver drying of the samples was completed in a low-temperature oven. A portion of the minus 80 mesh fraction of the soil was separated using a stainless steel sieve and retained for analysis.

A standard scoop of the minus 80 mesh soil from each sample was digested using perchloric-nitric acid attack. Analyses for copper and molybdenum were made using the atomic absorption method of trace analysis. Standard samples were run with each digestion batch.

CONCLUSION AND RECOMMENDATIONS

Results of the survey indicate that standard geochemical exploration techniques are not effective in the heavily drift-covered Bellelliot Lake area. Copper values from the samples collected are all within the lower background range for the general Owen Lake area, which from more extensive work done has been determined to range from 25 to 50 ppm copper by the analytical method used. The minor variations in the copper concentration of soils on the claims are not sufficient to indicate that they are indicative of changes in bedrock geology or expressions of possible mineralized zones.

The molybdenum values from the samples are also universally low, all samples being 1 ppm molybdenum or less. As the background for molybdenum in the area is 1 to 2 ppm the results suggest that the overburden at Bellelliot Lake effectively prevents the mobilization and concentration of molybdenum in the near surface soil.

It is therefore concluded that the geochemical survey has added little or no information which might be useful in interpreting the significance of the magnetic anomaly. It is recommended that further work be restricted to ground geophysics for the next stage of investigation.

Respectfully submitted,



Norman W. Burmeister, P. Eng.
Geological Engineer

June 1, 1970

EVIDENCE OF EXPENDITURES INCURREDSALARIES:

Engineering and Supervision	2 dys.	@ 50.00/dy.	-	\$ 100.00
Line Cutting	20 dys.	@ 30.00/dy.	-	600.00
Soil Sampling	6 dys.	@ 30.00/dy.	-	180.00

ANALYTICAL WORK:

Copper-molybdenum determinations	150	@ 2.50/ea.	-	375.00
Sample preparations	105	@ .20/ea.	-	80.00

TRANSPORTATION:

Truck Rental				115.00
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ACCOMMODATION AND BOARD -

	<u>200.00</u>
	<u>\$ 1,600.00</u>

QUALIFICATIONS OF AUTHOR

I, Norman W. Burmeister, with business and residential addresses in Vancouver, B.C., do hereby certify that:

1. I am a geological engineer in the permanent employ of Silver Standard Mines Ltd. (N.P.L.).
2. I am a graduate of the Colorado School of Mines (Geological Engineering 1961).
3. I am a registered Professional Engineer of the Province of British Columbia.
4. I have practiced in the field of Geological Engineering for the past nine (9) years.
5. I have personally supervised the geochemical survey completed on the Bell claim group described in this report.

Respectfully submitted,



Norman W. Burmeister

Norman W. Burmeister, P. Eng.
Geological Engineer

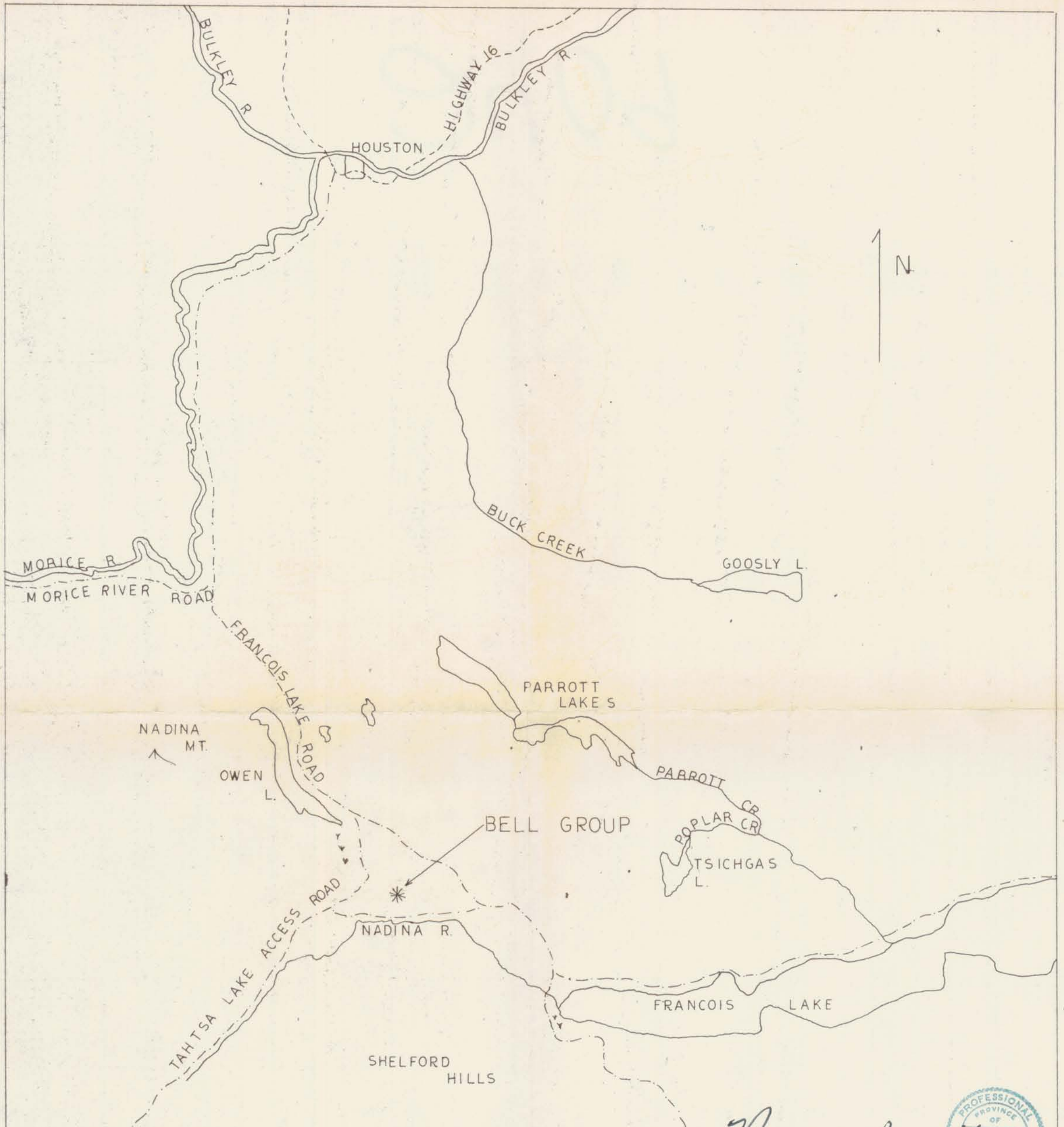


SILVER STANDARD MINES

SCHEDULE A

BELL GROUP MINERAL CLAIMS

<u>Claim Name</u>	<u>Record Date</u>	<u>Record No.</u>
Bell 1	May 12, 1969	70988
Bell 2	May 12, 1969	70989
Bell 3	May 12, 1969	70990
Bell 4	May 12, 1969	70991
Bell 5	May 12, 1969	70992
Bell 6	May 12, 1969	70993
Bell 7	May 12, 1969	70994
Bell 8	May 12, 1969	70995
Bell 9	May 12, 1969	70996
Bell 10	May 12, 1969	70997
Bell 11	May 12, 1969	70998
Bell 12	May 12, 1969	70999
Bell 13	May 12, 1969	71000
Bell 14	May 12, 1969	71001
Bell 15	May 12, 1969	71002
Bell 16	May 12, 1969	71003

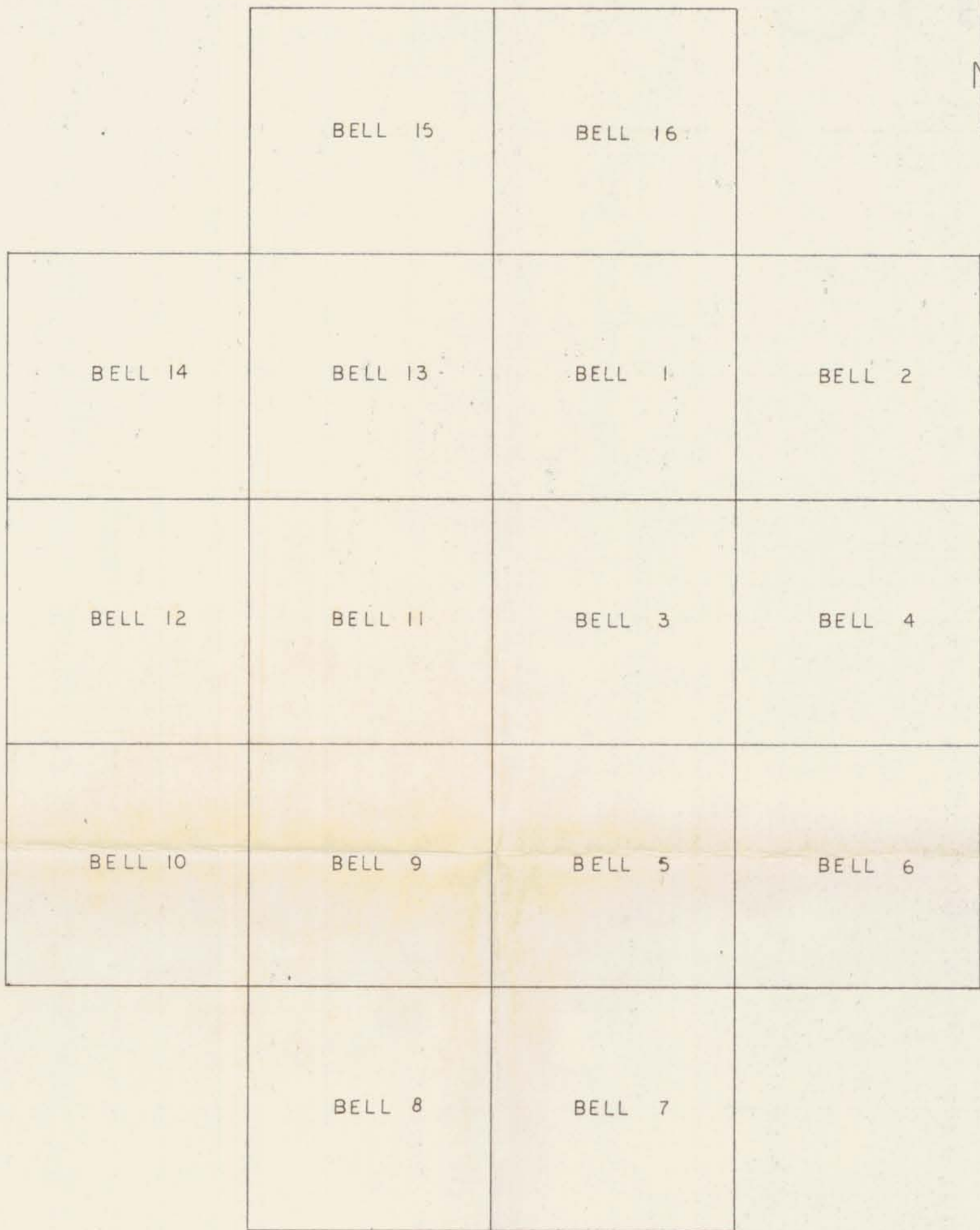


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Norman W. Burmeister
 PROFESSIONAL ENGINEER
 PROVINCE OF BRITISH COLUMBIA
 N. BURMEISTER

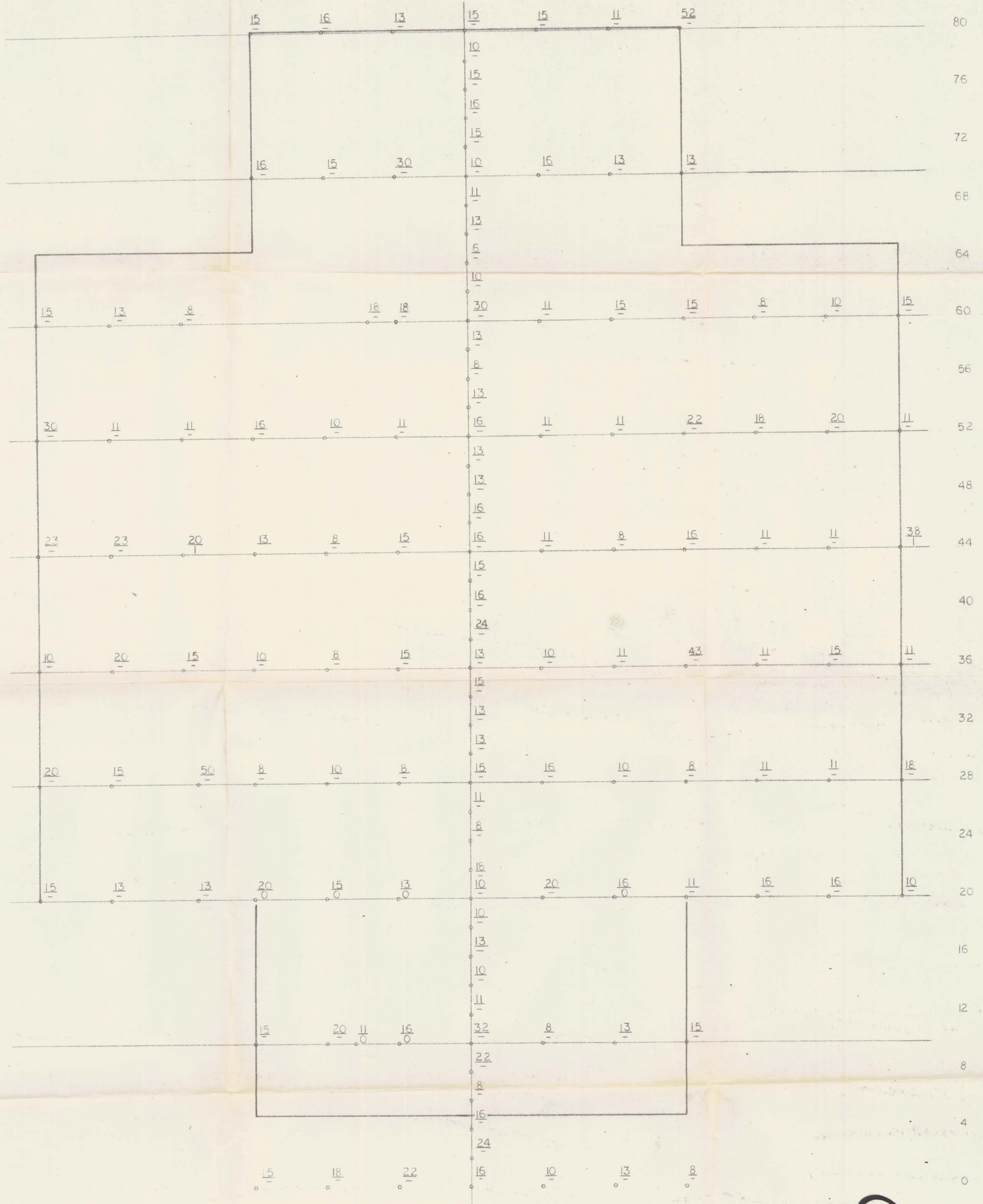
PLATE I
 LOCATION MAP
 BELL GROUP
 OMINECA M.D.
 SILVER STANDARD MINES
 SCALE 1" = 4 MI. MAY. 1970



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PLATE II
BELL GROUP MINERAL CLAIMS
OMINECA M. D.
SILVER STANDAR MINES LTD.
SCALE: 1" = 750' MAY 1970

Norman W. Burmeister

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PLATE III
 BELL GROUP
 GEOCHEMICAL SURVEY
 OMINECA M.D.
 SILVER STANDARD MINES LTD.
 SCALE 1"=400' MAY 1970

Norman W. Burmeister



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