

GEOLOGICAL REPORT

on the

BABS 3, BABS 4 and BABS 5

MINERAL CLAIMS

within the

DOME GROUP

Omineca Mining Division

93L/10E 93L/15E

54 deg. 44' N. 126 deg. 37' W.

for

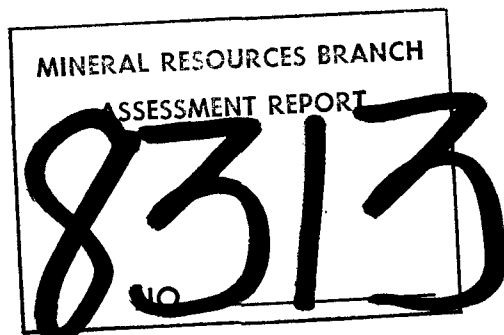
SILVER STANDARD MINES LIMITED

904 - 1199 West Hastings Street
Vancouver, B. C.

owner/operator

by

G. GIBSON - GEOLOGIST



September 23, 1980

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INTRODUCTION

The BABS 3(20U), 4 (20U), and 5 (18U) mineral claims were recorded on August 28, 1979 by Silver Standard Mines Limited of 904-1199 West Hastings Street, Vancouver, B. C.

Subsequently the size of the claims was reduced to 8U, 8U and 5U for each of BABS 3, 4 and 5 respectively. (Application(s) to reduce the size of a mineral claim filed August 20, 1980.)

Assessment is herein applied to the resulting contiguous block, totalling 22 units, named the DOME group. (Notice to group filed August 20, 1980.)

CLAIM DATA:

<u>M. D.</u>	<u>CLAIM NAME</u>	<u>SIZE</u>	<u>RECORD NO.</u>	<u>GROUPING</u>
Omineca	BABS 3	8 U	1983	Dome
Omineca	BABS 4	8 U	1984	Dome
Omineca	BABS 5	5 U	1985	Dome

Owner/Operator -
Silver Standard Mines Limited

LOCATION, ACCESS AND PHYSIOGRAPHY:

The BABS 3, 4 and 5 claims are located on the east and south flanks of Dome Mountain, 34 air kilometres east of Smithers in north central British Columbia - N.T.S. 93L/10E, 93L/15E; Lat. 54 deg. 44'N/ Long. 126 deg. 37'W.

Figure 1 is an index map, scale 1:50,000, showing the location of the property.

Best ground access is via approximately 30 km. of 4-wheel drive road, presently in good repair, from Haskins Corner at Telkwa.

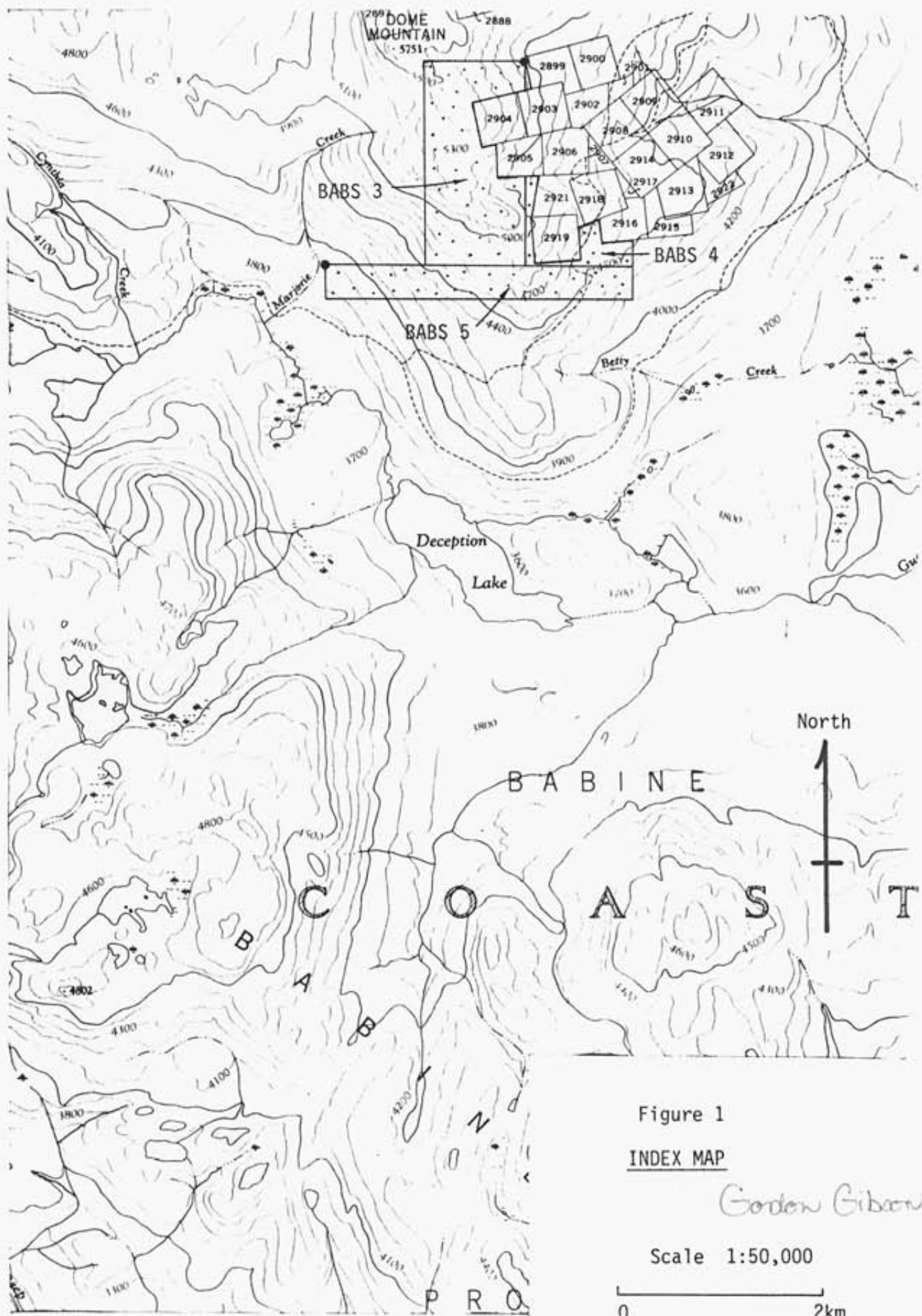


Figure 1

INDEX MAP

Gordon Gibson

Scale 1:50,000



Air access is facilitated by permanent helicopter bases of Okanagan Helicopters Ltd. and Highland Helicopters Ltd. at Smithers.

The BABS 3, 4 and 5 claims occupy gently sloping sub-alpine terrain on the south and east slopes of Dome Mountain, an isolated hill rising to an elevation of 1760m A.S.L. - approximately 675m above the surrounding plateau (see Figure 1). Elevations on the claims vary from 1350m to 1680 m A.S.L.

The highest reaches of the property, above a tree line at approximately 1530m, support only a sparse growth of grasses and lichens, and rock outcrop is abundant. By contrast, the lower levels are clothed in dense stands of spruce and balsam, and bedrock exposures are exceedingly rare.

PREVIOUS WORK:

Gold-quartz veins were discovered on Dome Mountain prior to 1915 and the area was explored extensively, but intermittently until 1940. Early work was mainly focused on "proving up" individual veins. Numerous reports by the B. C. Minister of Mines pertain to these pioneering activities, particularly those of the Dome Mountain Gold Mining Co. and Babine Gold Mines Ltd. More recently, the same ground has received attention from Lake Surprise Mines Ltd. (1951), Dome Babine Mines Ltd. (1967) and Amoco Canada Petroleum Co. Ltd. (1972)

In 1979 Silver Standard Mines Ltd. reconstructed and improved approximately 30 km. of access road from Haskins Corner into the Dome Mountain area.

SUMMARY OF WORK - 1980:

Geological mapping, prospecting and channel sampling was carried out during the period of August 2 to 7, 1980. Provincial government

air photographs (1:20,000), airphoto-based contour maps (1:25,000) and detailed surface plans (legal claim survey, 1 inch = 300 feet and 1 inch = 400 feet) were used as field maps. Geological data are compiled on Drawing 1 of this report - scale 1:10,000. Total area surveyed is approximately 700 hectares.

GEOLOGY

REGIONAL SETTING:

The Dome Mountain area occupies a position in the Intermontane tectonic belt of north central British Columbia. It is underlain by regionally metamorphosed and strongly deformed volcanic and sedimentary strata of the Jurassic Hazelton Group. On the northeastern flanks of Dome Mountain, north of the BABS 3, 4 and 5 claims Eocene (?) intrusive rocks, chiefly granite and quartz porphyry, are emplaced as dikes and small epizonal (?) stocks in the volcanics and sediments.

PROPERTY GEOLOGY:

1. Lithology

The immediate area of BABS 3, 4 and 5 claims is underlain mainly by basic to intermediate volcanic rocks with subordinate (to 10%) intercalated sediments.

The volcanic component of the sequence consists of andesite flows, pillow lavas, tuffs and breccias. Dome Mountain itself is underlain by massive andesitic ash-tuff flows which strike approximately 160 degrees and dip west 25 - 40 degrees. Fragment size increases structurally down-section toward the northeast so that 1000 m northeast of the summit of Dome Mountain, the predominant rock type is andesite flow breccia. Toward the south and west (structurally up-section) somewhat finer grained tuffs with interlayered andesite flows become more common.

Metasedimentary units (quartz-graphite schist, quartzite) and water-lain dust tuffs occur as interbeds in all the volcanic units except the andesite flow breccias. Frequently they are less than 1 m in thickness but in the central part of BABS 3, one unit is approximately 12 m in thickness.

The recognized stratigraphic column is generalized on Figure 2. Results must remain tentative in view of the complexities inherent in isoclinal deformation of parts of the sequence (see Structure).

2. Structure

Structures in the BABS 3, 4 and 5 claim areas are dominated by northwest trending isoclinal or chevron-type folds with moderate southwest dipping axial surfaces (Drawing 1). Folds of this kind are accompanied by a penetrative layer-parallel foliation and develop preferentially in finer grained members of the volcanic/sedimentary sequence. Accordingly, metasedimentary rocks and dust tuffs are strongly deformed while coarser andesitic pyroclastic units react as rigid blocks to directed stress and show only minor elongation of their contained fragments.

Numerous coalescing shear zones are localized along the limbs of isoclines and show the same overall attitude as foliation. Minor steeply dipping tension gashes are oriented at right angles to the structural grain.

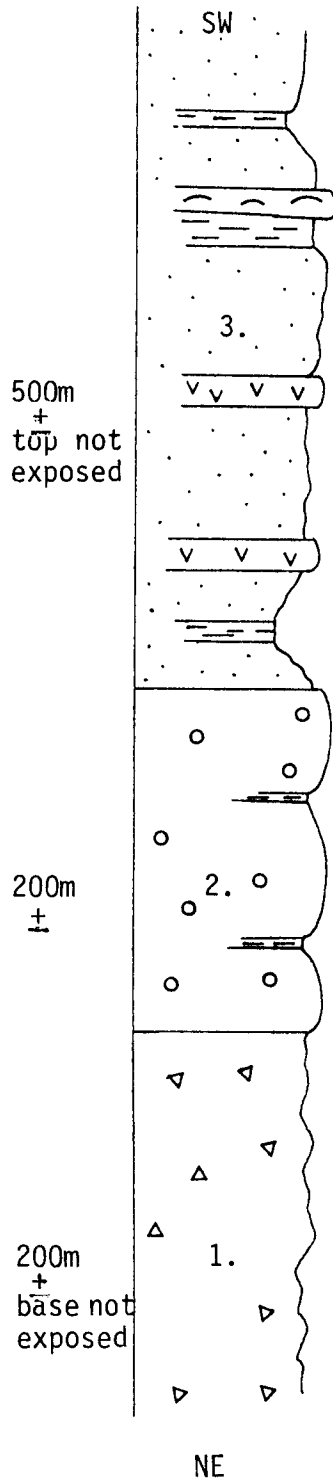
Regional metamorphism has produced chlorite-sericite and quartz-graphite schists from original sedimentary and fine grained volcanic units. By contrast, the coarser volcanic rock types show only very minor and local alteration to chlorite and epidote.

3. Mineralization

Mineralization occurs as well defined gold and silver bearing quartz veins, mostly up to 1 m in thickness which carry pyrite, arsenopyrite, sphalerite, galena, chalcopyrite and tetrahedrite in approximate order of abundance. With exceptions, the veins appear to be structurally controlled and normally parallel the local foliation. There is a direct correlation between the degree of host rock deformation and the density and thickness of the quartz veins. Accordingly, veins are relatively

Figure 2

Generalized Stratigraphic Column
Dome Mountain Area



3. ASH TUFF

- Fine grained, fragmental
- Interlayered massive andesite flows
- Lesser interlayered quartz graphite schist, quartzite, aquagene tuff, pillow lava.

2. Andesitic ASH-FLOW TUFF

- Lapilli sized fragments
- Rare interlayered sediments, aquagene tuff.

1. Andesite FLOW BRECCIA

- Cobble and boulder sized fragments.


General Column

common in chlorite-sericite schists and ash tuffs but are rare in the massive andesite flow breccias. (See Structure.)

A zone of closely spaced, thin, interconnected quartz veinlets in chlorite-sericite schist occurs near the southeast corner of the BABS 3 claim (Drawing 1). The veinlets appear to be controlled by random fracturing and jointing in the host rock and are unique to the area surveyed. Although few sulfide minerals were observed it was thought the zone could represent an area of widespread but low grade mineralization. A series of seven representative channel samples were taken for gold and silver assay. Sample locations are plotted on Figure 3, scale 1:1,000 and assay results are listed in Appendix 1. Results were negative; gold averaged less than 0.002 oz./t. and silver averaged less than 0.05 oz./t.

CONCLUSIONS

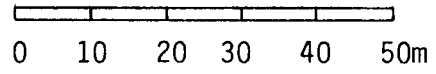
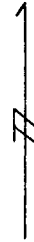
1. The area of the BABS 3, 4 and 5 claims is underlain by a regionally metamorphosed predominantly andesitic volcanic sequence.
2. Persistent quartz veins occur preferentially within chlorite-sericite schists and ash tuffs which constitute a minor part of the total sequence. The veins average approximately 60 cm. in width and are of variable gold content along strike.
3. An area of widespread, narrowly spaced quartz veinlets located on the southern portions of the BABS 3 and 4 claims does not represent a zone of economic interest.



Gordon Gibson
Geologist

20817 .001/0.05
20816 .002/0.05
20818 .001/0.04

20822
.001/0.01



Scale: 1cm = 10m

D R A W

20821
.001/0.01

Ernest Gibbons

20819 .001/0.02
20820 .001/0.05
BABS 3 CP 4S

Figure 3
ASSAY PLAN
0.001/0.05
Au Oz/t Ag Oz/t

STATEMENT OF COSTS

1. WAGES (Aug. 2-7)

Consultant	Aug.3-6	4 man-days @ 300	\$1200.00
Geologist	Aug.2-7	6 man-days @ 70	\$ 420.00
Prospector	Aug.2-7	6 man-days @ 65	\$ 390.00
Assistant	Aug.2-7	6 man-days @ 50	<u>\$ 300.00</u>
			\$2310.00

2. FOOD AND ACCOMODATION (Aug. 2-7)

Motel	30.00/day X 6 days	\$ 180.00
Motel	27.30/day X 6 days	\$ 163.80
Motel	27.30/day X 4 days	\$ 109.20
Food	20.00/day X 24 man-days	<u>\$ 440.00</u>
		\$ 893.00

3. TRANSPORTATION (Aug. 2-7)

Truck	1980 Chev 4X4 3/4T	27.00/day X 6 days	\$ 162.00
Truck	1980 Chev 4X4 3/4T	25.00/day X 4 days	\$ 100.00
		+ fuel	\$ 200.00
Helicopter	425.00/hr.	X 1.5 hrs.	\$ 637.50
Airline	VAN-SMI-VAN	X 1 man	<u>\$ 183.60</u>
			\$1283.10

4. ASSAYING/FREIGHT CHARGES \$ 73.35

5. REPORT PREPARATION \$ 100.00

Total \$4659.45

STATEMENT OF QUALIFICATIONS

I, Gordon Gibson, with residential address #201-2020 West 2nd. Avenue,
Vancouver, British Columbia, do hereby certify that:

1. I am a geologist in the employ of Silver Standard
Mines Limited, of 904-1199 West Hastings Street,
Vancouver, B.C., V6E 3V4.
2. I am a graduate of the University of British Columbia
with a Bachelor of Science degree (1975).
3. I have practiced in the field of mineral exploration
since 1975.
4. I am a member of the Canadian Institute of Mining and
Metallurgy.

Respectfully submitted,

Gordon Gibson

Gordon Gibson
Geologist

APPENDIX I

Assay Results



Member
Canadian Testing
Association

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.

2095 WEST TRANS CANADA HIGHWAY — KAMLOOPS B.C.
V1S 1A7

PHONE: (604) 372-2784 — TELEX: 048-8320

CERTIFICATE OF ASSAY

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS
METALLURGISTS

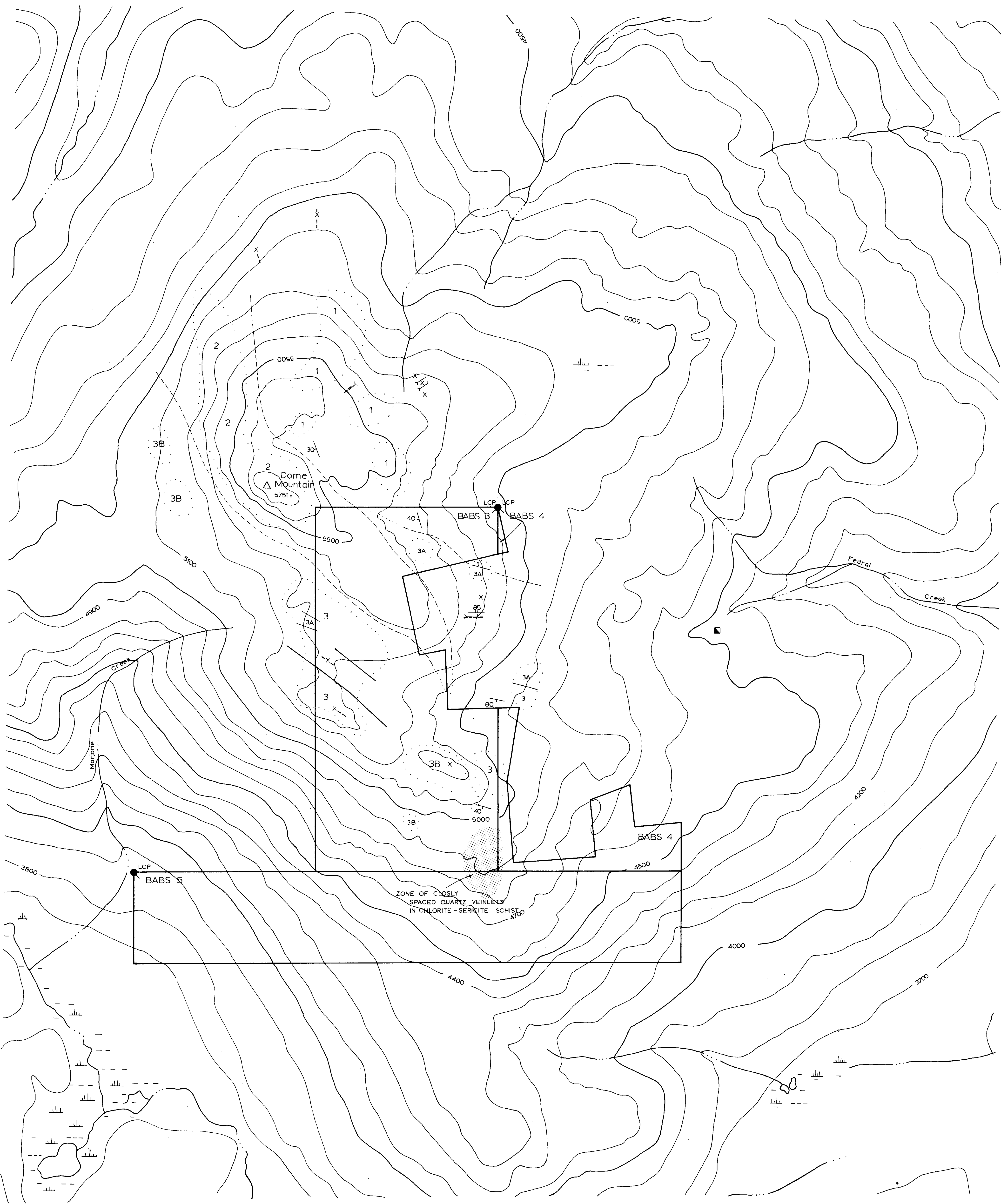
TO Silver Standard Mines Ltd.
904 - 1199 W. Hastings St.
Vancouver, B.C. V6E 3V4 Attention: Mr. A. Ritchie

Certificate No. K-3048

Date August 13, 1980

I hereby certify that the following are the results of assays made by us upon the herein described chip samples

Kral No.	Marked	GOLD	SILVER							
		Ounces Per Ton	Ounces Per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent
	<u>Project: Dome 27</u>									
1	20816	.002	.05							
2	20817	.001	.05							
3	20818	.001	.04							
4	20819	.001	.02							
5	20820	.001	.05							
6	20821	.001	.01							
7	20822	.001	.01							



LEGEND

ASH TUFF

- 3 Fine grained, fragmental
Lesser interlayered QUARTZ-GRAPHITE SCHIST,
QUARTZITE, Aquagene TUFF
- 3A Interlayered massive ANDESITE
FLOWS, PILLOW LAVAS
- 3B CHLORITE-SERICITE SCHIST

Andesitic ASH FLOW TUFF

- 2 Lapilli sized fragments
Rare interlayered SEDIMENTS, Aquagene TUFF

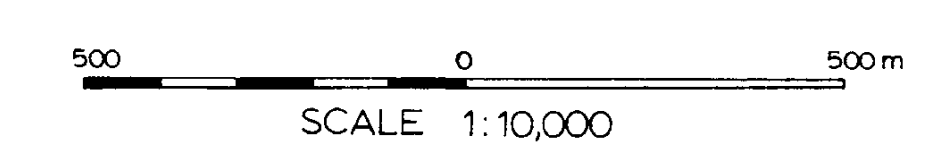
Andesitic FLOW BRECCIA

- 1 Cobble and boulder sized fragments

- CONTACT defined, approximate, assumed
- ISOCLINAL FOLD AXIS
- QUARTZ / SULFIDE VEIN
- OUTCROP
- 40 Attitude on layering
- 40 Attitude on jointing
- X ADIT
- SHAFT
- Y TRENCH
- X PROSPECT PIT

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8313

Gordon Gibson
Sept 23/80



SILVER STANDARD MINES LIMITED	
GEOLOGICAL PLAN	
NTS. 93 L/10E 93 L/15 E	SURVEY BY GGibson, GHScott DATE Sept 1980 SCALE 1:10,000
DWG. NO. 1	NOTES To accompany Assessment Report on BABS 3,4 and 5 mineral claims.