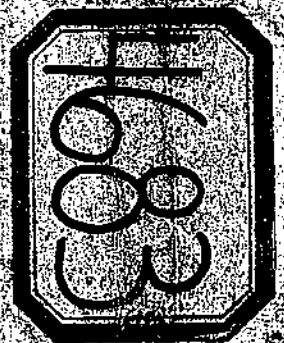


93A/12E, 12W B

SUNSHINE VALLEY MINERALS INC.

Subject: Reconnaissance of B Property
Location: Cariboo District, British Columbia
Date: October 9, 1972
By: John I. Campbell



4683

SUNSHINE VALLEY MINERALS INC.

Subject: Reconnaissance of B Property

Location: Cariboo District, British Columbia

Date: October 9, 1972

By: John I. Campbell

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4683	MAP

MAPS

- #1 Soil Geochemistry Traverses
- #2 Geological map

SUMMARY

A group of 80 claims lies between Trio Lake and Morehead Lake, in central British Columbia. The B claims, controlled by Sunshine Valley Minerals Inc. lie in direct proximity to Cariboo Bell and Amax claim groups.

The geological feature of prime exploratory interest, a monzonite intrusive has not been found on the B group. Since the traverse spacing is wide and the ground was not totally covered, it is possible that the intrusive does lie on the B group, but was unseen.

The bedrock found on the B group consists of associated basic volcanics, amygdaloids, breccias and tuffs. Sparse mineralization, in the form of native copper and chalcocite, locally found in the amygdaloid.

LOCATION AND OWNERSHIP

The B group claims, controlled by Sunshine Valley Minerals Inc., are located in central British Columbia, 60 miles east of Williams Lake and eight miles west of the community of Likely. The property, consisting of 80 claims lies between Morehead Lake (to the northwest), Bootjack Lake (to the northeast), Trio Lake (to the southeast) and Jacobie Lake (to the southwest). The property is roughly 18,000 ft. (12 claims) long by 9,000 ft. (6 claims) wide, adjoined on the northeast by Cariboo Bell Mining Co. claims and to the southeast by Amax claims.

HISTORY

Portions of the property now known as the B claims have been previously held by at least four companies since 1965 -- Cariboo Bell Mining Co., Amax, Self, and Chattaway Lake Exploration. Of these companies, both Cariboo Bell and Amax maintain claims in the proximity of the B group. The Cariboo Bell claims are reported to contain mineralization to the extent of 39 million tons at .39% Cu/Ton. This mineralization lies in a syenitic intrusive. Amax reports indicate no significant mineralization.

GENERAL GEOLOGY

The area of interest includes several rock types, the oldest is a lower Jurassic group of volcanics and minor associated sediments. These are intruded by later Jurassic quartz monzonite and syenite stocks as well as quartz feldspar dykes. Above these, covering most of the area, is a layer of Pleistocene glacial till. Outcrop exposure is generally poor throughout the property area.

The volcanics are of three types. First and most common is the amygdaloidal volcanic. Often closely associated with this are thin beds of fine vitreous tuff. The weathered surface is a light green to purple. Outcroppings of this rock type are concentrated along the southwestern edge of the property. The rock itself is generally fine grained, with plagioclase (30%) and pyroxene (30%) phenocrysts up to approximately 2 MM set in a finer groundmass (20%). The amygdules are spherical, occasionally flattened, averaging 1 CM but range up to several centimeters in diameter. They contain calcite, fluorite and very occasionally rhodonite, zeolites and native copper. Occasionally orthoclase is also found (probably as a secondary mineral) although its presence is locally variable over a few feet.

Second is the volcanic breccia. Weathering makes breccia fragments, of several compositions, stand out clearly from the finer

grained purple matrix. The two compositional types of breccia fragments vary in size (from 2 CM - 15 CM) and amounting (in proportion with each other as well as in proportion to the volcanic matrix). However, there is no apparent zoning of fragment size or composition. The first fragment type is porphyritic, 40% plagioclase laths, 40% sub-hedral green pyroxene, 20% fine grained ground mass. These are most probably fragments from underlying flows.

The second compositional type is light orange-brown in color, fine grained, composed mostly of K-feldspar. It is, in fact, similar in texture and composition to the syenitic intrusive. It would, however, be premature at this point, to speculate a common origin for the fragments and the syenite. The volcanic breccia seems to be concentrated in the northwest portion of the property.

The third volcanic rock type found on the B claims, and the least common, is a purple volcanic agglomerate. This consists of spheroidal, angular fragments approximately 3 CM in diameter closely packed in a fine grained matrix. As the rock is fine grained, the exact composition of the agglomerate is not clear without microscopic analysis.

Also found in the area are syenite-monzonite and granodiorite intrusives. Neither type of intrusive was located in place on the B

property. The focus of interest in this case falls upon the monzonite intrusive, since it is mineralized to the reported extent of 39 million tons of rock carrying .39% Cu on the Cariboo Bell property. Near Trio Lake, on the southeast side, outcroppings of the monzonite weather light grey, and appear porphyritic. Upon close examination, the feldspar "phenocrysts" (uniformly sized approximately 1/2" x 1/2") are aggregates of finely divided feldspar with small amounts of hornblende intermixed. These felsic blobs are set in a medium grained ground mass consisting of plagioclase (60%), hornblende (30%) and pink K-feldspar (10%). This texture suggests a complex cooling/intrusion history. Elsewhere, on Polly mountain, the monzonite contains no felsic blobs but is otherwise compositionally identical. However, the monzonite is cut by irregular dykes and veinlets of syenite, a phase more rich in K-spar (up to 70%). In some cases, the syenite appears to follow parallel fractures in the monzonite, giving the rock a striped appearance. These parallel veinlets are approximately 1/4" thick, 3 to 6" apart. As well, the syenite takes a more massive aspect forming fat, sinuous dykes.

The last major rock type found in the area of the B property is an altered feldspar-quartz dyke. The weathered surface, like the fresh surface is a cream color, highly limonitized on fractures. The feldspars in the dyke (90% of rock) are altered to a softer, clay material.

The contact between the dyke and wall rock is fractured, with wall-rock fragments enclosed in the dyke and veinlets of dyke material piercing into the wall rock. While exposure of this dyke material, principally in road cuts, is poor, these lensoidal structures seem to strike roughly N 78° W.

STRUCTURE AND METAMORPHISM

The dyke structures are heavily fractured and gouge seams are found in every one, indicating that some fault movement has taken place after the emplacement of the dyke. While the sense of fault movement, as indicated by drag folding, is the raising of southwestern blocks, the extent of faulting is not known. Other than these associated faults there is no folding or noticeable metamorphism of the rocks.

MINERALIZATION

Copper mineralization in the form of native copper and chalcocite was found in four locations on the B group. In each location, a representative sample has been taken. A grab sample of the most heavily mineralized material in one location was also taken.

All copper mineralization was found within or closely associated with vesicular volcanics. The most northerly mineralization

C 11 (a through 9) is found in claim B 70. The mineralization is very sparse, lying wholly within calcite-rhodonite-filled amygdules. The mineralization consists of rare small specks of native copper and a few amygdules with malachite stain mixed with the calcite.

Farther to the southeast, in claim B 62, native copper was found in fractures within a thin bed of grey vitreous tuff. This bed overlies apparently unmineralized purple amygdaloidal volcanic. The tuff lies within fifteen feet of an outcropping of purple agglomerate. Scant sulphides and malachite were seen. Both the tuff and the purple amygdaloidal flows were sampled. (Samples 10C(B) and 10C respectively.)

Further yet to the southeast, in claim B 41, are two outcroppings 250 feet apart of mineralized amygdaloidal basalt. Only one (sample 8C) contains native copper. The other has only malachite (13C). The native copper is sparse, found in the larger amygdules. These are calcite-rhodonite filled. The copper is in the form of small chalcocite-coated laths. While throughout the property the amygdules are by and large calcite filled, the larger, cupiferous amygdules are more complex. Often surrounded by a bleached alteration halo. These amygdules contain rhodonite (8C) as well as (in one instance) an additional greenish substance, probably epidote or chlorite (C Bell 5). This may be a contact metamorphic effect (C Bell 5 is on the contact, 8C is

approximately 8,000 feet northeast of C Bell 5). It is interesting that in C Bell 5, chalcocite is the major Cu mineral, generally rare, farther from contact. Also native copper in C8 contains a chalcocite rim. That is to say that there is evidence for zoning of mineralization in the volcanics surrounding the monzonitic intrusive. The mineralization of the B group is apparently sporadic. Yet it does form a definite trend which parallels the strike of the volcanic flows. This trend may be fortuitous as all mineralized outcrops had been blasted or otherwise laid open by previous workers and the rock is generally severely weathered, it is possible that mineralization has elsewhere been surficially leached. Furthermore, as surficial expression of flow planes is poor, the attitude of the beds cannot be verified with a significant population of strike and dip readings.

The mineralization of the monzonite, mentioned earlier in this report, is unlike any found on the B claims. In the intrusive, chalcopyrite both disseminated and filling small fractures seems to be associated with the syenitic phase. Where the monzonite is not intermixed with the syenitic phase, at Trio Lake for instance, it is unmineralized. One type of mineralization within the monzonite is neither finely disseminated nor along fractures. Rather chalcopyrite forms along large biotite flakes (up to 3/8" diameter) which in turn are found around the borders of vugs in the monzonite. The vugs are filled with colliform malachite.

In summation, the mineralization found on the B claims is in the form of elemental copper and chalcocite, usually occurring within calcite-filled amygdules.

The monzonite-syenite intrusive is found only on the Amax and Cariboo Bell claims. The porphyry-type mineralization is nowhere found on the B claims.

ORE

No mineralized rock of ore grade has been found on the B claims. Although assay results have not been returned at this time, the mineralization seen to date has been quantitatively minimal, light and inconspicuous.

CONCLUSIONS

- (1) No intrusive stock was seen on the property. The monzonitic intrusive found in the area would be desirable for its possibilities as a carrier of porphyry copper ore. It is possible, given the wide traverse spacing and high degree of ground cover, that intrusive material does exist but was not seen on the B property.
- (2) The mineralization on the B claims is scanty, occurring in calcitic amygdules and thin calcite-filled fractures in volcanic material.

Native copper and chalcocite occur along a northwesterly trend in
the volcanics.

Submitted by:

John I. Campbell

John I. Campbell
607 Northtown Office Bldg.
Spokane, Washington 99207

September 9, 1972

JIC:pn

NEIL CAMPBELL
GEOLOGIST • PROFESSIONAL ENGINEER

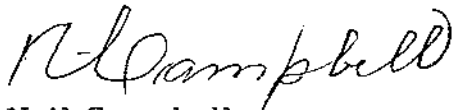
Mr. Marion Bumgarner, President
Sunshine Valley Minerals Inc.
P. O. Box 327
Manson, Washington 98831

October 24, 1973

Dear Marion:

This letter is to confirm that I was personally on your "B" claims in the Lake Quesnel area last November and personally directed exploration work in progress there. Furthermore, I hold a degree in Mining Engineering and an honorary Doctor of Laws degree from the University of Alberta and a Doctor of Philosophy degree in geology from the Massachusetts Institute of Technology. I was employed by Cominco Ltd. and its subsidiary for 30 years in positions of considerable responsibility. I am a registered professional engineer in Washington (No. 10282) and am a member of the Association of Professional Engineers of Alberta (No. 63298). I have been a Consulting Geologist with an international practice, resident in Spokane for five years. I own a home where I spend time each year in British Columbia. I am a Canadian citizen.

Sincerely,



Neil Campbell

NC:pn



NEIL CAMPBELL
GEOLOGIST • PROFESSIONAL ENGINEER

Mr. Marion R. Bumgarner, President
Sunshine Valley Minerals, Inc.
P. O. Box 327
Manson, Washington 98831

Cariboo Mining Div.
RECORDED
AUG 23 1973
Quesnel, B. C.
Receipt No. _____

November 28, 1972

Dear Marion:

Subject: "B" Property
Cariboo Mining District, B. C.

The purpose of this letter is to briefly review the geology and exploration potential of the 80 claim property of Sunshine Valley Minerals, Inc., near Likely in north central British Columbia, Canada, and to offer some suggestions on further courses of action. Reference will be to observations made during our visit to the area on September 25, to the field report of John I. Campbell and to significant aspects of adjoining properties.

As mentioned by Campbell, there is a rather pervasive cover of overburden but it is apparent that the property is underlain by Jurassic basic volcanics. The dominant rock type is purple to light-green weathering amygdaloidal andesite. Within these flows are irregular beds of volcanic breccia or fragmental flows. The least common member is composed of volcanic agglomerate and tuff.

Similar volcanics underlie the adjoining properties. To the northeast, however, the volcanics are invaded by several small stocks of intrusives. Most of these are reported as being hornblende-biotite syenite and monzonite in composition. No intrusive body of this kind is positively known to exist on the "B" property although one or more could be present. The evidence for this is scanty. Outcrops of intrusive rocks have been seen southeast of Trio Lake and are reported at the north end of the

Mr. Marion R. Bumgarner

Page 2

November 28, 1972

Lake. Mineralized syenite float has been observed near the middle of the property but the origin of this material has not been determined. Mineralized quartz-feldspar dykes presumably related to the intrusives were observed during Campbell's brief study.

The volcanic rocks have been folded and faulted. Details on these structures are difficult to obtain owing to poor exposures of bed-rock. It is noteworthy, however, that the Geological Survey of Canada records assumes a major northwesterly-trending fault flanking the southwesterly margin of the property.

Copper mineralization in place has been found at four localities on the "B" property. In general, it consists of native copper in amygdules. Chalcocite in amygdules and fine fractures together with malachite stains on rock surfaces. Small amounts of carbonate minerals are associated with the copper mineralization in most places. Insufficient work has been done to permit any conclusion as to whether these occurrences, which fall along the southwest margin of the property, relate in any way to the fault mapped by the G.S.C.

Traverses run by Campbell were intended primarily to map and sample an intrusive body said to exist on the property but which was not found. Soil samples taken along these lines were quite insufficient in number to develop any meaningful geochemical pattern. They did, however, cross two localities of interest. On the northwest side of "B" claim #48, values of 245 and 205 ppm Cu were obtained in two consecutive samples and on the boundary between claims 61 and 62, one sample contained 345 ppm. These figures are of interest because they are approximately 7 to 10 times background. Ordinarily, considerable importance is attached to soil geochemical anomalies of 500 ppm or more. Had the survey been more extensive, meaningful anomalous areas might have been developed.

In evaluating the factual evidence relating to mineralization, the kinds of deposits most likely to be commercially valuable in this geologic environment include "porphyry copper" in or associated

Mr. Marion R. Bumgarner

Page 3

November 28, 1972

with an intrusive body and "contact metamorphic copper" commonly, but not everywhere, associated with intrusives. Copper ore bodies in amygdaloidal volcanics do exist in some parts of the world, in the Keewana Peninsula for example. Copper in volcanics is reported from several places in British Columbia, but, by themselves, amygdular copper probably does not form commercially valuable ore bodies. As the facts presently stand, therefore, the evidence of copper in bedrock and soils is regarded primarily as indicative that sources of metal did exist on the property. It might also be reasoned that if localized conditions such as an intrusive body were found, the discovery of ore would be a possibility. The possibility is enhanced by the fact that on the adjacent Cariboo-Bell property to the northeast, copper mineralization of ore grade is reported.

On the Cariboo-Bell property, 37 million tons grading 0.5% Cu and 0.015 oz. Au/T is reported to have been drilled at Bootjack Mountain, roughly two miles from the "B" claims. The mineralization includes chalcopyrite and bornite in a monzonite-syenite stock or stocks. Although the mineralized zones are not rich in relation to their size, they might be considered suitable for production but for two adverse features. The mineralization is divided between three separate zones and some doubt that all three could be mined from a single pit which would be necessary in order to achieve costs sufficiently low to be viable. Secondly, difficulty has been experienced in developing a satisfactory technique for concentrating the ore. That is to say, a promising deposit has been found but it may be necessary to do considerably more exploration and to evolve a satisfactory milling process before a profitable mining operation can be visualized. In this connection, the recent announcement that Teck Corporation plans a modest \$25,000 program of reconnaissance drilling to test new anomalies may be taken to mean that confidence as to the ultimate outcome is held.

The facts at hand indicate that while the "B" property must be considered attractive prospecting ground (in spite of its having been explored to some unknown degree earlier,) no specific target area

Mr. Polley

Mr. Marion R. Bumgarner

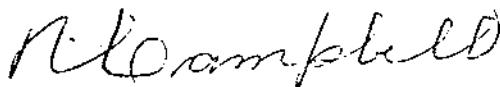
Page 4

November 28, 1972

worthy of intensive exploration has been found. As the odds in favor of eventual success is not supported by strong and specific evidence, no substantial sum can be spent prudently on the property at this time. In spite of the tendency for the pervasive glacial till to mask geochemical responses, widely spaced (lines 1000 ft. apart) geochemical traverses in the southern part of the property is warranted. Careful observations of both float and bedrock should be made and any significant indications of intrusive rocks should be followed by local detailed mapping. The program would require a geologist and an assistant working for approximately six weeks.

During our visit to the Cariboo area, we briefly visited the Bullion property where a former substantial gold placer operation had created a large, steep-walled pit in a valley bottom. Although the gold may be unrelated to local bedrock, the valley does cut through a syenitic intrusive body of unknown size. The intrusive is not mineralized in the one locality where observations were made. However, specimens, richly mineralized with copper sulphides and said to have been taken from syenite exposed by the pit, were examined. It is recommended that regardless of other exploratory action taken in the area, the source of this copper mineralization be examined. Evidence of hydrothermal alteration should be sought and evaluated. While there is very little firm information on which to base conclusions, it is possible that the Bullion property may cover a valuable ore target.

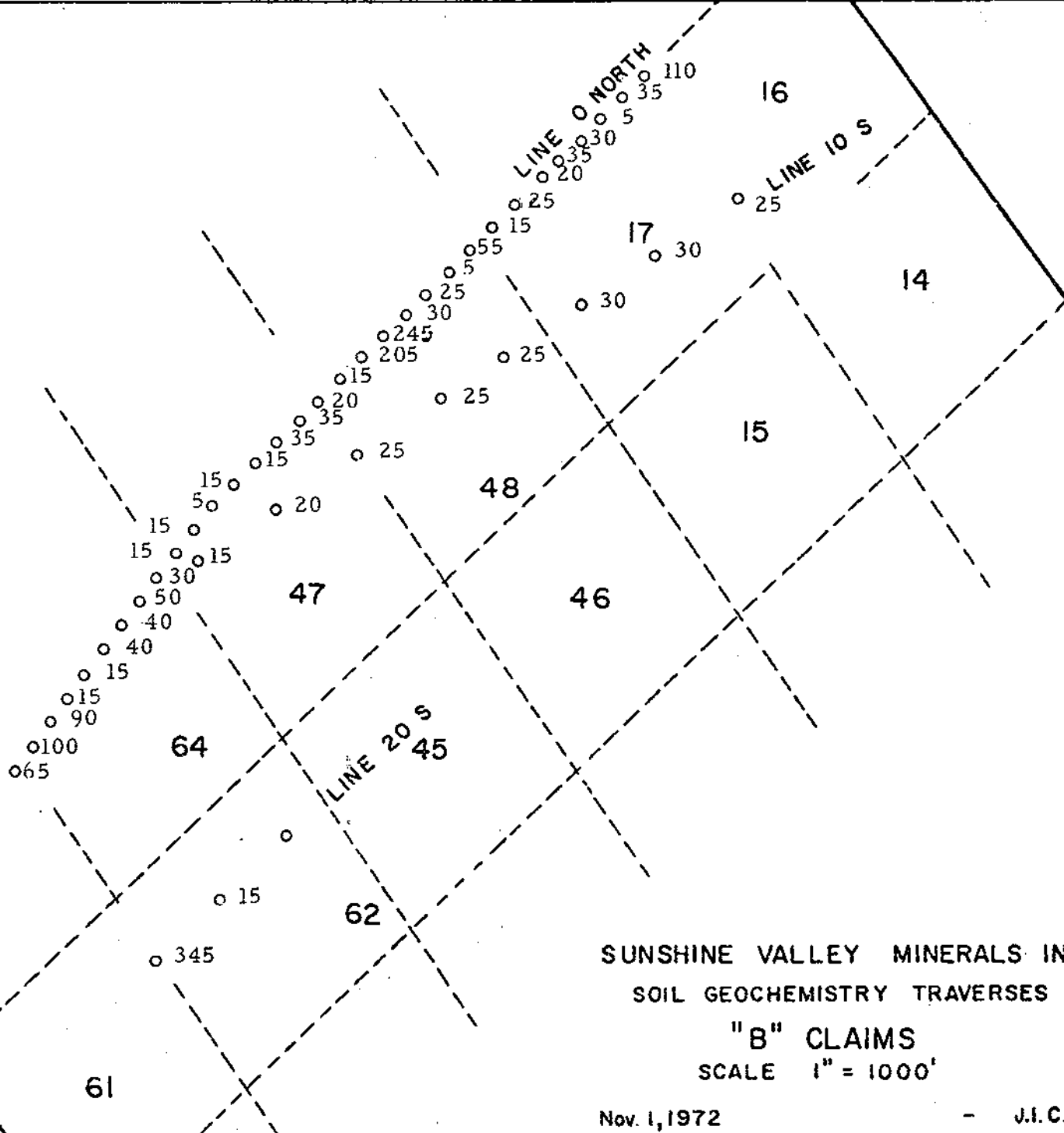
Sincerely yours,



Neil Campbell

NC:pn

Enclosure



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4683 MAP #1

○ Sample locality
P.P.M. Cu

SUNSHINE VALLEY MINERALS INC.

SOIL GEOCHEMISTRY TRAVERSES

"B" CLAIMS

SCALE 1" = 1000'

Nov. 1, 1972

- J.I.C.

Total List of Expenses

26.00

752.88

118.35

1000.00

96.56

555.00

2548.00

1493.00 - Labor

4041.00

Q. LARMIN

500.00 wcp ✓

300.00 car ✓

800.00 ✓

1000

1000

900.00

all by 1993
not Ben
paid

Jen Timmons

750.00 ✓

190.00

558.00

35.00 trailer ✓

593.00 paid

TOTAL

593.00

900.00

1493.00

Telephone 363-3302

Hand Sample Serial 30208-30220

ASSAY REPORT UNION ASSAY OFFICE, Inc.

W. C. WANLASS President
L. G. HALL Vice President
G. P. WILLIAMS Treasurer
GERALDINE A. WANLASS Secretary

Mine Sunshine Valley Minerals
Manson, WA 98831

Attn: Mr. Marion R. Bumgarner President

P. O. Box 1528
Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS October 13, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	S. PHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
CBMON-1				0.584							
CBMON-2				0.315							
CBMON-3				1.486							
8C				0.195							
8C (R)				0.012							
10C				0.025							
10C (B)				0.113							
11C (a)				0.025							
11C (B)				0.018							
11C (d)				0.037							
12C				0.012							
13C				0.018							
CBell5				0.333							

Department of
Mines and Petroleum Resources
ASST. DIR. OF RESEARCH
NO. 4683
M.P.

Remarks

Charges \$ 26.00

Glen Williams

BUSINESS EXPENSE REPORT of consultant:-

John Campbell

For the account of client:-

Date	Location(s)	Meals	Lodgings	Fares	Taxis Limos	Auto rental	Telephone Telegraph	Other expenses
SEPT 14/72	SPOKANE (COMMUNICATIONS)							25.21 SAMPLE BAGS
SEPT 17/72	SPOKANE (COMMUNICATIONS)							161.50 PRE-PAYMENT OF CHEM ANALYSIS
SEPT 18/72	"							9.10 SHIP SAMPLES TO CITY ^{SALT LAKE}
SEPT 19/72	HEBER CITY							5.97 SAMPLE BAGS
SEPT 20/72	HEBER CITY	4.96	7.35					
SEPT 21/72		19.5						
SEPT 22/72	7511 W. 3 RD	27.5						
		2.70						
SEPT 23/72	"	1.35						
SEPT 24/72	HEBER CITY	1.45						
SEPT 25/72		30.5						
SEPT 26/72		1.5						
SEPT 27/72	MCCLELLIN		4.25					
Sub totals		93.0	11.60					10.68

Explanation:

* Means receipt attached here to

Total expenses	\$127.88
Advance received from client	0
Owing to client	127.88
Owing to consultant at address above	625.00
Certified correct	ck # 564 10-16-72 date <u>752.88</u>
Approved for payment	date

To: Mr. Marion R. Bumgarner, President
 Sunshine Valley Minerals, Inc.
 P. O. Box 327
 Manson, Washington 98831

In account with:
NEIL CAMPBELL BSc, PhD, P. Eng.
 Consulting Geologist
 607 Northtown Office Building
 Spokane, Washington 99207
 Phone (509) HU9 - 1485

Fee for professional services:

Consultation, "B" Property

\$1,000.00

*Pd 12-11-72
 ck # 619*

Date..... November 28, 19 72

Time distribution of:

Neil Campbell
 607 Northtown Office Bldg.
 Spokane, Washington 99207

Professional services for:

Mr. Marion R. Bumgarner, President
 Sunshine Valley Minerals, Inc.
 Manson, Washington 98831

From	To	Location	Project	Travel	Field	Office
1972						
Sept. 24		Spokane-Penticton		1		
Sept. 25		Likely			2	
Sept. 26		Likely-Osoyoos				
Sept. 27		Osoyoos-Spokane		1		
Total days				4		

L.E. Timmons,
Box 861,
Grand Forks, B.C.,
2 OCT 1972

Mr. M. Bamgarner,
President,
Sunshine Valley Minerals,
Manson, Washington.

Dear Marien:-

I got John Campbell home in the afternoon of September 29th. We spoke briefly with Neil and John is to get busy at once preparing a report, sending samples for analysis, etc..

There is a differential of 388 miles at 12 cents per mile and 2 more days of work at \$25.00 per day, along with 2 more days at \$35.00 per day on the sale or other disposition of the claims.

Total cash owing me is \$96.56 over and above what we decided on as an average when we made up the accounts at Likely, plus the deferred \$70.00.

For the present I do not think I can do much more. I have to put the car in for repairs which would have been a necessity even without the trip to Likely. If something does require me to work a further amount we would have to make another arrangement for transportation. It is not likely (joke), that we can do anything effectively until you get the report on the property, now being prepared.

I am going to try to get to Vancouver to see the Getty people and it may be that negotiations may be commenced with them to later participating in our venture, which you said would be agreeable to you. I will set no terms and all transactions will be made through you.

Other than saying that we did all the work Neil advised be done, nothing more was discovered than we had known before. I would have liked to have found that intrusive, but I saw it once and Speed's brother says he saw it too, so for now I guess we'll have to wait until next season when we can traverse that general area more closely. I know it there and it is in place. In any case it does outcrop near our claims on the Amax group where John and I both looked at it. The chances of it not being on our "B" group is very remote.

If I can do anything further to help you please let me know.

With Best Regards,

Pay Jan 5

388 m. @ .12^d = 46.56
2 days @ \$25. = 50.00

\$96.56

10-4-72
JE # 542

Lee

Deferred Credit = \$70.00

To

Sunshine Valley Minerals

Box 327,

Wyonson, Wash. 98831

1500 miles @ .12[¢] - 180.00

15 Days @ 25.00 375.00

555.00

80.00

Less cash.

475.00

20.00

455.00

Further advance

Credit Balance.

By agreement 15 Days

at \$35.

525.00

20.00

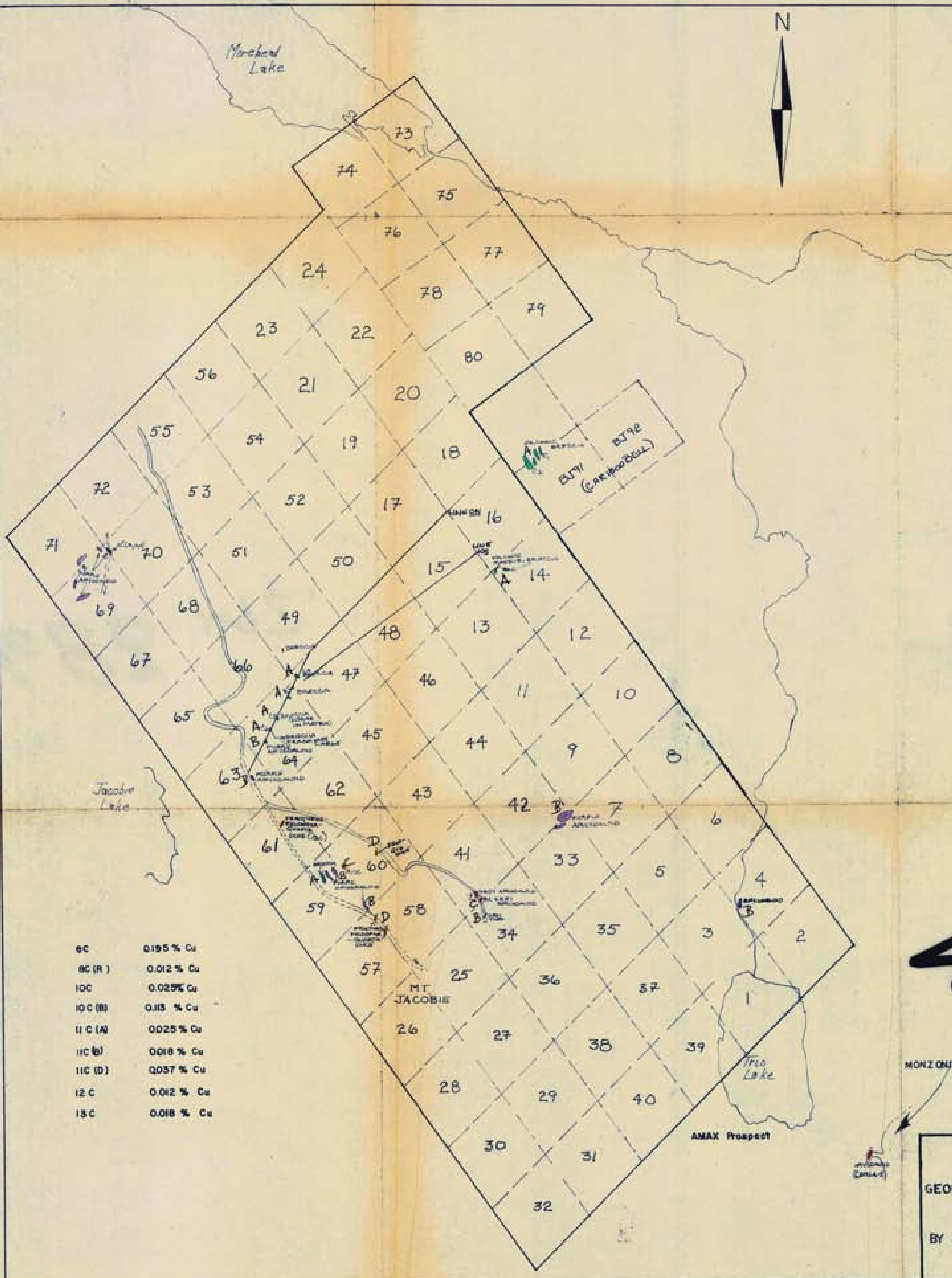
Further Advance

505.00

Likely, B.C.

26 Sept 1970

L. E. Harrison



LEGEND

- A VOLCANIC BRECCIA
- B AMYGOALOIDAL FLOW
- C COPPER SHOWING
- D FRACTURED FELDSPAR QUARTZ DYKE
- ROAD
- x(i) SAMPLE NUMBER

MT POLLEY
 CARBOO BELL Prospect

8C	0.195 % Cu
8C (R)	0.012 % Cu
10C	0.025% Cu
10C (B)	0.15 % Cu
11C (A)	0.025 % Cu
11C (b)	0.018 % Cu
11C (D)	0.037 % Cu
12C	0.012 % Cu
13C	0.018 % Cu

4683 M2

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4683** M2 #2

SUNSHINE VALLEY MINERALS, INC.
 GEOLOGICAL MAP of the "B" PROPERTY
 BY J.I. CAMPBELL
 Scale 1" = 1/4 mi
 DATE OCT. 15, 1972