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DON TULLY ENGINEERING LTD.
SUITE 102 - 2222 BELLEVUE AVENUE
WEST VANCOUVER, BRITISH COLUMBIA
V7V 1C7

82E/14W

GEOLOGICAL REPORT

ON THE

REPUBLIC PROPERTY
SLOCAN MINING DIVISION
SLOCAN, BRITISH COLUMBIA

N. LAT. 49 - 48

W. LONG. 117 - 26

FOR

TANDEM RESOURCES LTD
5316 FLEMING STREET
VANCOUVER, BRITISH COLUMBIA

BY

DONALD W. TULLY, P.ENG.

OCTOBER 18, 1976

WEST VANCOUVER, B. C.

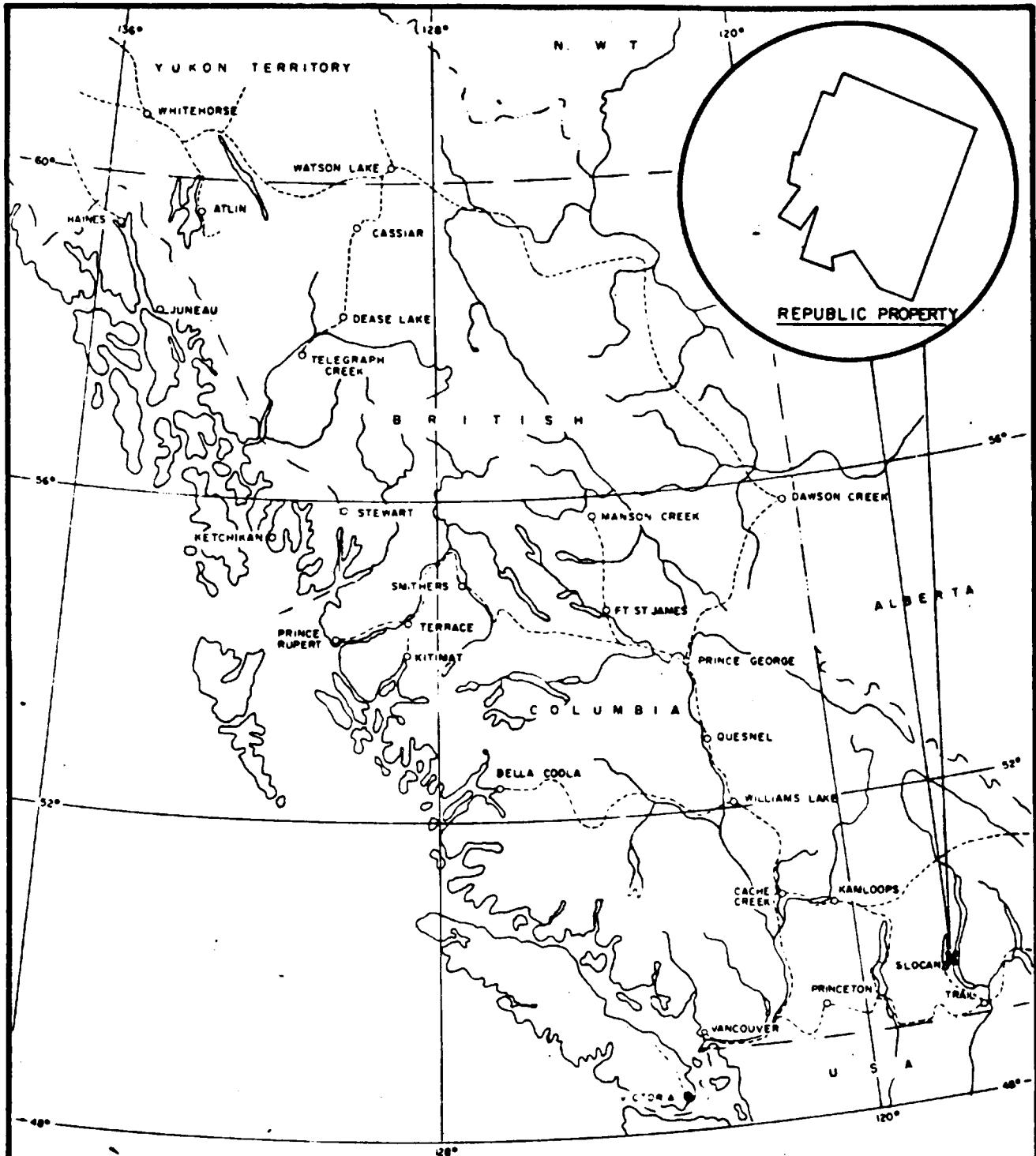
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LOCATION MAP.....	FRONTISPIECE
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REPUBLIC PROPERTY
TANDEM RESOURCES LTD.
PROPERTY LOCATION MAP

BRITISH COLUMBIA
 SCALE 1" = 125 MILES

Donald W. Tully

To Accompany Report by Donald W. Tully, P.Eng., dated October 18, 1976.

SUMMARY AND CONCLUSIONS

The Republic property is a former mineral producer located at Slocan, British Columbia. Previous production of silver, gold, lead and zinc is recorded from quartz vein structures on crown granted claims which form part of the claim group. A total of 13,299 ounces silver, 107 ounces gold with minor amounts of lead and zinc is reported.

The property is composed of six mineral crown grants and fifteen mineral claim units.

Geological mapping over the property during the summer of 1973 suggested four important areas requiring initial exploration for new mineral vein zones. A northeast trend of the known veins is apparent.

A two-phase program of work is proposed to explore the claims.

Backhoe trenching is recommended as a first stage of a work program to better define diamond drill targets. Follow-up diamond drilling is proposed. The program is estimated to cost \$31,750.00.

INTRODUCTION

The subject of this report is the Republic property of Tandem Resources Ltd located at Slocan, British Columbia. The report was prepared at the request of Mr. Dennis Vigoret, President of Tandem Resources Ltd.

The writer geologically mapped most of the ground covered by the present claim group in 1973.

LOCATION, ACCESS, TOPOGRAPHY

The Republic property lies at the headwaters of Scorpion Creek about a mile west of Slocan Lake and three miles north of the town of Slocan, British Columbia. It is accessible by 4-wheel drive truck, a road distance of about five and one-half miles.

The topography varies from 3300 feet above sea-level at the south end of the property to 4650 feet elevation in the central area of the group. Over burden is generally shallow as evidenced by the abundance of rock outcrop.

Economic stands of hemlock, spruce, cedar, pine provide forest cover. Underbrush occurs over previously timbered areas on south-facing slopes of the property.

Topographic Map 82F/14W on scale 1" = 50,000 feet is a useful topographic reference.

PROPERTY

Eleven crown grants and fifteen located claim units comprise the property. These are shown on the accompanying claim plan as follows:

<u>CROWN GRANTS</u>	<u>NAME</u>	<u>DATE SURVEYED</u>	<u>TAXES PAID FOR YEAR</u>
L. 1530	Erin	October, 1896	1976

FROM B.C.
CLAIM PLAN
82F-14W



SCALE 1"=1/2 MILE
Approx.

L 3263 - CLAIM CANCELLED

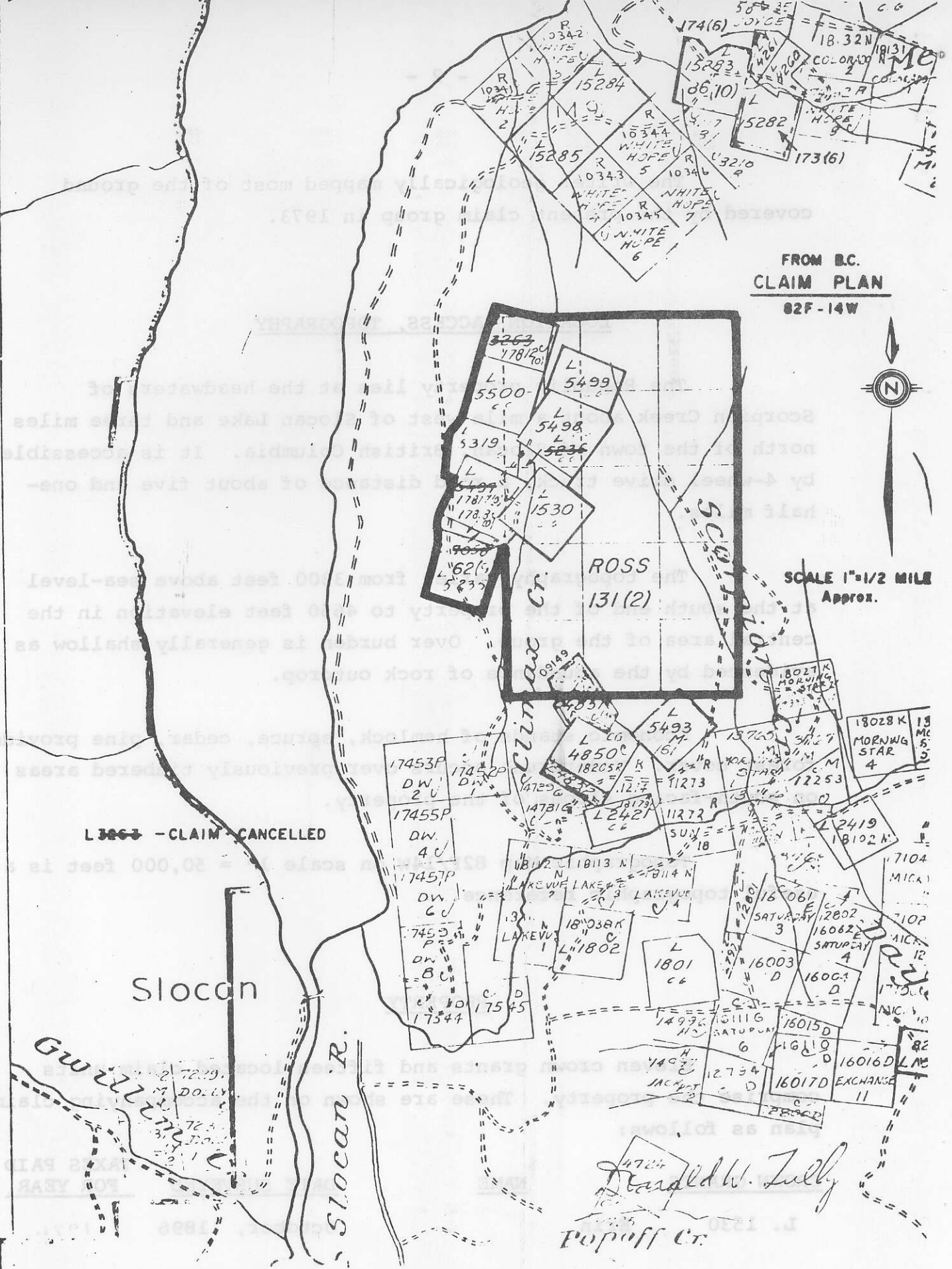
Slocan

Slocan R.

Donald W. Tully
Popoff Cr.

117°30' SLOCAN MINING DIVISION
To Accompany Report by Donald W. Tully, P.Eng., dated October 18, 1976.

CANADIAN



<u>CROWN GRANTS</u>	<u>NAME</u>	<u>DATE SURVEYED</u>	<u>TAXES PAID FOR YEAR</u>
L. 5236	Erin Fraction	November 1900	1976
L. 5319	Sunlight Fraction	May, 1901	"
L. 5498	Republic No. 2	June "	"
L. 5499	American Eagle	" "	"
L. 5500	Bell No. 2	" "	"

The Mineral Taxation Office in Victoria reported on October 19, 1976 that the taxes were paid by Ross Tikinoff, 5151 Clarendon Street, Vancouver, British Columbia.

<u>MINERAL CLAIM</u>	<u>UNITS</u>	<u>RECORD NUMBER</u>	<u>RECORDED HOLDER</u>	<u>DATE RECORDED</u>
Ross	15	131(2)	Marvin A. Mitchell	February 16, 1976

Those claim posts located during the field work are shown on the accompanying geology plan. Legal titles and property option agreements concerning the mineral claims were not examined.

REFERENCES - HISTORY - PREVIOUS DEVELOPMENT

Exploration for minerals on these claims is recorded in the Annual Reports of the Minister of Mines, British Columbia, as follows:

1896 -	Pages	73, 74, 104, 170, 171, 570, 613
1897 -	"	535, 603
1898 -	"	1075, 1076, 1077
1899 -	"	689, 843
1900 -	"	830
1901 -	"	1027, 1223, 1227
1902 -	"	150, 296, 297
1903 -	"	138
1904 -	"	170, 203
1917 -	"	163
1918 -	"	171, 195
1919 -	"	126, 155
1920 -	"	146
1924 -	"	367

1935 - Pages A27, E32
1939 - " E38
1940 - " 65
1946 - " 134
1951 - " 77
1952 - " 181

Geological Survey of Canada Memoir 184 - Page 184
Geological Survey of Canada Mamoir 308 - Pages 151-2
Unpublished Engineering Reports not available to the
writer
B. C. Mineral Claim Map 82-F-14W.

The claims were located in 1895. A small production of silver, gold, lead and zinc was reported during the period 1896 - 1904. Further development was done between 1918 - 1920. Production was again recorded in the years 1935, 1939, 1941 and 1951-2.

H. W. Little reports 242 tons of ore were mined and shipped between 1902 and 1952 yielding 13,299 ounces of silver, 107 ounces of gold, 268 pounds of lead and 171 pounds of zinc.

Six adits or inclined tunnels and one shaft were mapped on the Republic No. 2 claim as well as associated trenches and test pits.

Two adits and one test pit were mapped on the Bell No. 2 claim (L. 5500).

One inclined tunnel and four trenches were found about 1500 feet to the northeast on the strike of the Republic No. 2 (L. 5498) workings. An adit and tranche were also noted a short distance further on strike to the northeast.

Trenches and two adits were mapped at the south end of the property.

Trenches, test pits, shafts and adits were noted on former Ross No. 3 and No. 16 claims.

The underground workings on the Republic No. 2 (L. 5498) claim are generally in good condition for underground examination. Elsewhere on the property the caved-in nature of the adits, tunnels, test-pits, shafts and tranches precludes any definitive examination for mineralization by detailed geologic mapping and sampling until bulldozer trenching and rehabilitation is preformed.

Evidence of previous diamond drilling on the Republic property was not found during the current program of geological mapping.

SURVEY CONTROL

A grid plan was supplied the writer on scale 1" = 500 feet showing claim locations, baselines and picket lines by Mr. Wayne Mathers of ELC Geophysics Ltd. This plan was copied and converted to scale 1" = 400 feet by the writer as a base for plotting the geological map accompanying this report.

Any claim posts found during the geological survey were recorded and are plotted on the geological plan accompanying this report.

All claim locations are assumed to be correct as shown. However, the field data should be examined by a British Columbia Land Surveyor for any final opinion as to position and title.

GEOLOGY

LITHOLOGY

The rocks exposed on the claim group are components of the Nelson Batholith and of probable Cretaceous age.

Eight lithologic rock units were mapped and are assumed to be from youngest to oldest in sequence as follows:

- Quartz veins
- Lamprophyre dykes
- Syenite porphyry
- Quartz porphyry
- Quartz-feldspar porphyry
- Granite
- Quartz diorite
- Pyroxene-amphibole-biotite phase

Quartz veins are aphanitic to finely granular in texture and essentially white to bluish in colour. They occupy tension fractures. Open vug areas in the veins are relatively uncommon. Calcite was observed as an accessory mineral in only one instance. Strikes of the veins vary between northeast and northwest with varying degrees of dip.

Lamprophyre dykes were noted at two locations on Republic No. 2 claim and on east line 32N. Composition is chiefly basic mineral now altered to micaceous minerals and calcite. The strikes at both locations are north-northwest with steep dips and occupy fracture planes. Age relationship to quartz veins was not established but are probably genetically related to the ore deposits.

Syenite porphyry is used to describe a dark to brownish weathering feldspar porphyry rock with scattered grains of quartz. The exposures of this rock type map as dyke-like bodies trending in a north-northwest direction. Age relationships were not observed.

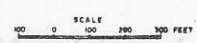
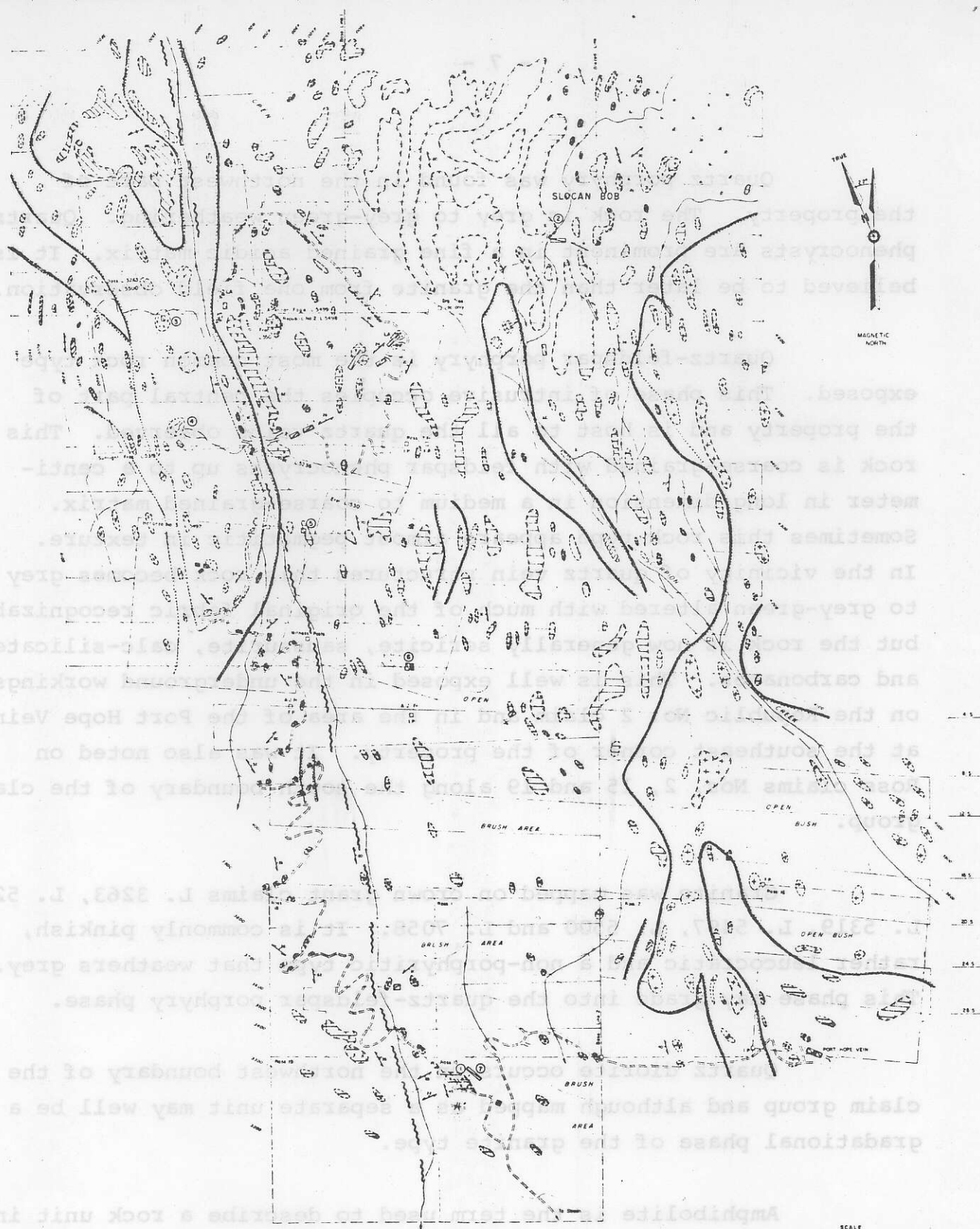
Quartz porphyry was found in the northwest part of the property. The rock is grey to grey-green weathering. Quartz phenocrysts are prominent in a fine grained acidic matrix. It is believed to be later than the granite from one field observation.

Quartz-feldspar porphyry is the most common rock type exposed. This phase of intrusive occupies the central part of the property and is host to all the quartz veins observed. This rock is coarse-grained with feldspar phenocrysts up to a centimeter in long dimension in a medium to coarse-grained matrix. Sometimes this rock type appears almost pegmatitic in texture. In the vicinity of quartz vein structures this rock becomes grey to grey-green altered with much of the original fabric recognizable but the rock is now generally sericite, saussurite, calc-silicates and carbonates. This is well exposed in the underground workings on the Republic No. 2 claim and in the area of the Port Hope Vein at the southeast corner of the property. It was also noted on Ross claims Nos. 2, 15 and 19 along the south boundary of the claim group.

Granite was mapped on crown grant claims L. 3263, L. 5235, L. 5319, L. 5497, L. 5500 and L. 7058. It is commonly pinkish, rather leucocratic and a non-porphyrific type that weathers grey. This phase may grade into the quartz-feldspar porphyry phase.

Quartz diorite occurs on the northwest boundary of the claim group and although mapped as a separate unit may well be a gradational phase of the granite type.

Amphibolite is the term used to describe a rock unit in hornblende and biotite. This unit was observed as later in age than the quartz-feldspar porphyry unit on east picket lines 24N and 32N. This rock unit is slightly magnetic in the hard specimen.



Approved: *[Signature]*
 To accompany report by Gerald W. Tully, P. Eng. dated October 18, 1975

LEGEND

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TANDEM RESOURCES LTD.
 REPUBLIC PROPERTY
 SLOCAN MINING DIVISION
 SLOCAN, B.C.

GEOLOGICAL PLAN

SCALE 1" = 400' DATE JULY, 1975

Location of map area is shown from information obtained & is not shown for other purposes and is not guaranteed.

In places it appears similar to phases of quartz diorite and granodiorite grading quickly to bornblende-biotite rich types that suggest an orthogneiss origin.

STRUCTURE

All rock units trend northerly through the property with the exception of some southeast striking quartz veins.

A north-northwest striking shear zone called the Republic Fault trends across the property and through the centre of the crown-granted claims. Abundant evidence of fracturing and shearing occur along the topographic depression of this postulated shear-fault zone. The dip is probably steeply eastward.

A second zone of fracture is inferred from topographic relief trending northwesterly through the valley of Scorpion Creek. Evidence for this fracture zone is less abundant in the rock outcrops along this creek.

Three directions of fracture are prominent, North 55 - 85 East magnetic, South 5 - 60 East magnetic, North 10 - 40 West magnetic. Dips vary from 20 degrees to vertical and generally in the north and east quadrants.

Quartz vein structures trend northeast through the Republic No. 2 claim and strike beyond to the northeast. Veins in the southern part of the property strike about S50 - 60E. Both sets of veins dip northerly at a flat angle.

Vein structures west of the Republic Fault strike northwesterly.

VEINS - MINERALIZATION - ASSAYS

During the field mapping any mineralization of apparent merit was sampled. Seven grab samples were taken and are summarized below.

Bornite, chalcopyrite, pyrite, sphalerite, galena, argentite and native silver were noted in samples of veins of quartz on the Republic No. 2 claim. The Republic Vein strikes slightly north of east and dips 20 - 30 degrees north. It is composed of several segments exposed over a strike length of at least 1500 feet and appears to be on strike with the Slocan Bob Vein about 1600 feet further to the northeast.

Galena, pyrite and chalcopyrite were noted in a 12-inch quartz vein probably on Ross claim No. 10 in what is referred to as the Slocan Bob Vein. A grab sample assayed 28.84 ounces silver and 0.176 ounces gold.

Galena and pyrite were noted in a 38-inch quartz vein on Ross claim No. 15. A grab sample assayed 3.85 ounces of silver and 0.018 ounces gold. White vein quartz float in a trench about 100 feet to the east of this vein referred to as the "Tough Vein" assayed 0.96 ounces silver, 0.001 ounces gold and 2.07% lead.

A grab sample of vein quartz on the dump of an underground development on Bell No. 2 claim assayed 10.32 ounces silver, 0.084 ounces gold and 0.06% lead. The vein is bluish white quartz and carries minor pyrite and chalcopyrite in fine scattered grains.

Results of grab samples taken during the mapping process and assayed by Acme Analytical Laboratories Ltd., 6455 Laurel Street, Burnaby, British Columbia, are as follows:

<u>GRAB SAMPLE #</u>	<u>SILVER</u>	<u>GOLD</u>	<u>LEAD</u>	<u>CLAIM AREA</u>
1	3.85 oz.	0.018 oz.	--	Ross No. 15
2	28.84 "	0.176 "	--	Slocan Bob
3	1.28 "	0.002 "	--	
4	10.32 "	0.084 "	0.06%	Bell No. 2
5	0.16 "	0.001 "	--	
6	0.89 "	0.010 "	--	
7	0.96 "	0.001 "	2.07%	

RECOMMENDATIONS

Because of the numerous caved-in test pits, shafts and tunnels on the Republic No. 2 claim (L. 5498) and the abundance of mineralized vein on the dumps, a program of backhoe stripping is recommended to clean out these former workings. A second target area for backhoe stripping and trenching is recommended on the "Slocan Bob" zone (sample location 2) where a grab sample of vein material assayed 28 ounces of silver and 0.17 ounces of gold. The third and fourth target areas are the former workings on the Bell No. 2 claim (L. 5500) at sample location 4 and the "Tough Vein" on Ross claim No. 15 (sample location 1).

Should additional vein structures or extensions of the presently known veins be revealed as a result of the proposed work program of stripping and trenching, follow-up diamond drilling is proposed to test the vein structures. Short-hole drilling is recommended to test the extension of the known veins on the Republic No. 2 claim both laterally and vertically.

ESTIMATED COSTS OF PROPOSED WORK PROGRAM

PHASE I

Backhoe Trenching and Stripping

Republic No. 2 claim area	- 140 hours
Slocan Bob zone	- 80 "
Bell No. 2 claim area	- 40 "
Tough Vein (Ross 15 claim area)	- 40 "

Total - 300 hours

300 hours x \$25/hour	\$ 7,500
Sampling, assaying and administration @ 10%	750

SUB-TOTAL: \$ 8,250

PHASE II

Diamond Drilling

Republic No. 2 claim area	- 1000 feet
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Total - 1000 feet

1000 feet BQ size wireline drilling x \$18/foot	\$18,000
Mobilization and demobilization	3,500
Supervision, administration, engineering	2,000

SUB-TOTAL: \$23,500

ESTIMATED TOTAL COST: \$31,750

Respectfully submitted,



October 18, 1976

Donald W. Tully, P.Eng.

DON TULLY ENGINEERING LTD.
SUITE 102 - 2222 BELLEVUE AVENUE
WEST VANCOUVER, BRITISH COLUMBIA
V7V 1C7

CERTIFICATE

I, DONALD WILLIAM TULLY, of the Municipality of West Vancouver, Province of British Columbia, hereby certify as follows:

1. I am a consulting geologist with an office at Suite 102, 2222 Bellevue Avenue, West Vancouver, British Columbia.
2. I am a registered Professional Engineer in the Provinces of Ontario and British Columbia.
3. I graduated with the degree of Bachelor of Science, Honours Geology, from McGill University in 1943.
4. I have practiced my profession for thirty-one years.
5. I have no direct, indirect or contingent interest in the Republic Property claims or the the shares of TANDEM RESOURCES LTD, nor do I intend to receive any interest.
6. This report dated October 18, 1976, is based on a field study of the rocks and geologic structures on the ground covered by most of the claimed ground during the period June 15 - 19 and June 28 - July 3 inclusive, 1973, at the Republic Property at Slocan, British Columbia.

DATED at West Vancouver, British Columbia, this 18th day of October, 1976.



DONALD W. TULLY, P.ENG.
CONSULTING GEOLOGIST

TO Denu Mining &
Development Corporation,
5316 Fleming St.,
Vancouver, B. C.

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis
 6455 Laurel St., Burnaby 2, B.C.

Tel: 299-5242

File No. 2200
 Type of Samples Rocks
 Disposition 1 year

ANALYSES CERTIFICATE

No.	Sample	Ag oz/ton	Au oz/ton						No.
1	1	3.85	.019						1
2	2	28.84	.176						2
3	3	1.28	.002						3
4									4
5									5
6									6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED June 19/73
 DATE REPORTS MAILED June 20/73

ANALYST Dean Toye

DEAN TOYE, B.Sc.
 CHIEF CHEMIST
 CERTIFIED B.C. ASSAYER

TO Denu Mining &
Development Ltd.,
5316 Fleming St.,
Vancouver, B.C.

ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis
 6455 Laurel St., Burnaby 2, B.C.

Tel: 299-5242

File No. 2364

Type of Samples Rocks

Disposition 1 Year

ANALYSES CERTIFICATE

No.	Sample	Pb %	Ag oz/ton	Au oz/ton				No.
1	4	.06	10.32	.084				1
2	5		.16	.001				2
3	6		.89	.010				3
4	7	2.07	.96	.001				4
5								5
6								6
7								7
8								8
9								9
10								10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED July 6, 1973

DATE REPORTS MAILED July 9 1973

ANALYST

Dean Toye

DEAN TOYE, B.Sc.
 CHIEF CHEMIST
 CERTIFIED B.C. ASSAYER

JOHN C. OSWALD & CO.

Chartered Accountants

Vancouver, Canada

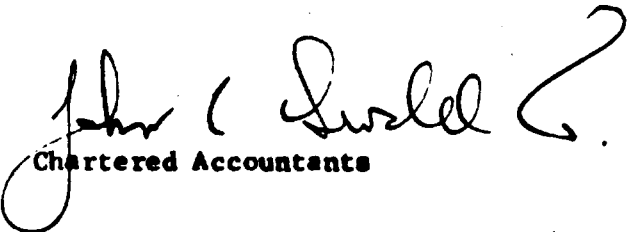
August 2, 1976

Auditors' Report

To the Shareholders of
Tandem Resources Ltd.

We have examined the accompanying balance sheet of Tandem Resources Ltd. as at June 30, 1976 and the statements of deficit, deferred exploration and other expenditures and changes in financial position for the year then ended. Our examination included a general review of the accounting procedures and such tests of the accounting records and other supporting evidence as we considered necessary in the circumstances except that we were unable to obtain a solicitor's opinion on the company's title to its mineral claims.

In our opinion, except for the foregoing limitation in the scope of our examination, these financial statements present fairly the financial position of the company as at June 30, 1976 and the results of its operations and changes in financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.


Chartered Accountants