

83-#875 - 11795
10

Geological, Geophysical and Physical Work

on

The G.G. Claim Group

Goldbridge Area

Lillooet Mining Division

Lat. $50^{\circ} 51'$ Long. $123^{\circ} 55'$

NTS 92J15W

Owned and Operated by:

Chalice Mining Inc.

Sechelt, B.C.

Consultant:

Lawrence Sookochoff, P.Eng.

Consulting Geologist

Pan American Consultants

Vancouver, B.C.

Written By:

Steven Hodgson

Professional Prospector and

Director of Chalice Mining Inc.

Sechelt, B.C.

November 7, 1983

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,795

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INTRODUCTION

- (i) The property is located at Lat. 50 51' Long. 123 55', 6 Km. west of the town of Goldbridge, and within the Lillooet Mining District. Access is by two wheel drive gravel road. (NTS 92J/15W See Index Maps 1 & 2)
- (ii) The property currently comprises 62 Claim Units:

<u>Claim Name</u>	<u>Tag No.</u>	<u>Units</u>	<u>Rec. No.</u>	<u>Expiry Date</u>
G.G. West	66758	12	2245(10)	Oct.25,'83
G.G. West I	67505	18	2184(10)	Oct.25,'83
G.G. North	67506	18	2185(10)	Oct.25,'83
G.G. Fraction	66757	1	2186(10)	Oct.29,'83
Veritas I	n/a	1	2258(1)	Jan.24,'84
G.G. I	80806	12	2607(8)	Aug.31,'84

Prior known work has consisted of exploration programs on the property in 1978 and 1979 conducted by Climex Mining of B.C. Ltd. personnel.

Sub-grade logging roads criss-cross the area and have been in place since the 1930's. The general geology was described by J.A. Roddrick in CSC Paper 75-1 Part A Pemberton (East Half) Map Area*, B.C. and W.S. McCann in Geology and Mineral Deposits of the Bridge River Map Area, B.C. GSC Memoir 130 1922: Mineral types and their age (K-Ar) in the area has been described by D.E. Pearson in Mineralization in the Bridge River Camp, B.C. Dept. of Mines and Petroleum Resources Geological Fieldwork 1975. Mineralization and rock types are discussed in Larry Sookochoff's Geological Report January 11, 1980*

The property is currently owned and operated by Chalice Mining Inc. The G.G. Claims Group has the potential of finding economic gold bearing mineralization* (L. Sookochoff's geological report, and Ministry of Mines and Petroleum Resources Research Data Sections 092JNE 03 'Veritas).

(iii) SUMMARY OF WORK DONE:

Physical Work

The following physical work was completed: 8 km. of brushing out of old logging roads. Both chainsaw and axes were used to remove windfall trees blocking roads and removal of deciduous and evergreen trees from roadway. Underbrush was removed alongside existing roads and stacked in old cleared log dump areas. Several minor washouts were repaired with shovels.

Geophysical Survey

A VLF_EM Survey was completed covering 4.7 km. using a Ronka EM 16. The purpose of this survey was to verify the validity of previous work and investigate the possible extension of quartz vein mineralization from the Veritas Crown Granted lots onto the G.G. Group. The first days work, using the Seattle transmitter, was of questionable validity as signals were weak and difficult to discern. Cutler, Maine was tried on the second day and was giving a normal signal. On the final day Seattle was again used as the signal was well received. There was no scheduled shutdown and batteries were new, so one can only suspect the first days results.

Geological Survey

A geological survey was undertaken covering approximately 2.9 km. square plus several road traverses for familiarization with surrounding geology. Maps are drawn to a scale of 1:12,000 (or 1 inch = 1,000 feet).

DETAILED TECHNICAL DATA AND INTERPRETATION

Geological Report

A geological report for Chalice Mining Inc. was completed by L. Sookochoff, P. Eng., in September of 1983 and by Chalice Mining personnel in August and October of 1983. The property was observed to contain a northwesterly belt of metamorphosed sedimentary and volcanic rocks. The mineralization observed was pyrite, chalcopyrite and arsenopyrite in quartz and calcite stockworks and veins. The Cadwallader Break, with which the gold bearing quartz veins of the Bralorne Intrusive appear to be associated is projected northwestward to the Chalice property and is characterized by the marked development of serpentine and gabbro. It is surrounded by an extensive phase of augite diorite of the Bralorne Intrusives. The regional structure in the shear zone trends at 295° to $310^{\circ}/V^{\circ}$. The Veritas vein included in the Chalice property appears to be related to a porphyrite flow (greenstone) with mineralized veins (arsenopyrite, chalcopyrite, pyrite) of up to 1.2 meters.

A traverse along the southwestern border of the G.G. claim group revealed a thick sequence of mainly Hurley Formation composed of sandstones, agillites, siltstones and conglomerates with visible mineralization being chalcopyrite and pyrite. The general bed-

ding observed in the argillites trends at $330^{\circ}/70^{\circ}\text{SW}$ at the southwest corner of G.G. West I and $310^{\circ}/83^{\circ}\text{N}$ at the southeast corner of G.G. West I, indicating the presence of anticline. The sediments observed are carbonate rich with numerous calcite and quartz carbonate veinlets randomly oriented. Mineralization is present in the argillite and the vein material. Within this sequence of sediments is a thin (4-6 meters) unit of light green fine grained rhyolite or rhyodacite. No structure was obvious but jointing was $045^{\circ}/55^{\circ}\text{E}$. The conglomerate viewed composed 50-60% of this portion of the claim area mapped.

The Veritas Crown granted claims were investigated as they adjoin the G.G. Group. Several workings were observed. Crown Grant 2358 near Lajoie Lake, which is owned by Chalice Mining, has a collapsed adit 50 meters from the lake. It is striking at 040° . From the dump area, pyrite, chalcopyrite, diorite, quartz and ankenite were noted. A series of adits and trenches begins on C.G. lot 2356. An adit at 3085' elevation is driven at 253° for 4 meters in diorite; it then swings to 278° and proceeds for 48 meters until a 9 meter cross cut is intersected. The mineralization encountered was pyrite and chalcopyrite in a stockwork composed of 8 quartz carbonate veins from 2" to 1' in width, which are surrounded by diorite which has been serpentinized and has asbestos or chrysotile veinlets near its contact with greenstone. The adit then continues for 20 meters and another 6 meter cross cut is intersected, exposing the same vein as encountered in cross cut #1. The adit again continues another 20

meters and a cross cut 10 meters long is encountered and exposes the same vein system as in cross cuts #1 and #2.

A trench, located 42 meters uphill, is on strike with adit #1 and attempted to cross cut the vein. It is a 2x7 meter trench dug North-South. At 59.3 meters another two trenches 3x14 meters and 2x6 meters, both dug North-South, are slumped and no obvious exposure is evident.

At 121 meters uphill, at a 30° slope, a large tailings dump was examined and pyrite, chalcopyrite and arsenopyrite were observed as the main sulphides in banded graphitic quartz and as massive blebs occurring in shears and slickenside surfaces. Mariposite, talc and serpentine were also observed. The adit located directly above was driven at 295° and was unsafe to enter. A sheared zone was noted directly above the entrance.

At 92 meters continuing along the same strike a 3-3.5 meter milky quartz vein, striking at 295°/80°N was encountered in a blocky dark-gabbroic matrix. It is at 3300' elevation. Five to six tension veins, ½"-1" also occur and are at the same attitude. Ten meters west pyrite and arsenopyrite are seen occurring in a medium green altered volcanic (greenstone).

At 122 meters another adit is driven at 295° on the same strongly sheared zone. Gash and tension veins to 6" at 280°/84°N are above and on the north wall of the shear zone. On the east wall there is a largely barren milky white quartz vein. The adit is located at 3375' elevation and the country rock is largely diorite.

Geophysical Report

Geophysical work on the property was performed by Chalice Mining personnel under the supervision of K. Sweet and S. Hodgson. A VLF-EM survey was conducted over portions of the G.G. Group to validate work done by the previous owners. The main showing of the Veritas Crown Granted Group bordering the G.G. claims to the South were also surveyed to obtain background information as to the possibility of extensions to the Chalice property. The work was not contoured because of insufficient data but it did validate previous results by Climex Mining of B.C., Ltd.

Interpretation

The presence of favorable structure and similar geology to that of former producers in the area substantiates the possibilities of mineral potential. The Survey completed validates the work previously done and further work, as to the possibility of Veritas type mineralization, should be conducted to the northwest of that group. Further geophysical surveys, VLF-EM and geological mapping should delineate future targets to be explored by I.P. and drilling.

VLF-EM Survey

A Ronka VLF-EM 16, Serial #93, was used in the survey.

The VLF-EM radio transmitters in Seattle, Washington and Cutler, Maine were used.

Cutler

Line	Dip	Quad	Notes
100N			
200 West	+25	-14	
150 "	+22	-18	
100 "	+15	-16	old road
050 "	+20	-14	
000 "	+20	-16	
050 East	+23	-20	
100 "	+20	-14	
150 "	+20	-10	
200 "	+23	-10	creek 10m. east
250 "	+25	-6	
300 "	+25	0	

Cutler

Line	Dip	Quad	Notes
040N			
300 East	+25	0	
250 "	+25	0	
200 "	+30	-10	trench 10m. south
150	+20	-10	

Line 040N	Dip	Quad	Notes
100 East	+20	-10	
050 "	+20	-4	
000	+23	-10	
050 West	+25	-10	
100 "	+30	-10	
150 "	+25	-10	
200 "	+30	-14	

Cutler

L 000 (base line)

	Dip	Quad	Notes
200 West	+25	-10	
150 "	+25	-6	
100 "	+30	-6	
050 "	+25	-12	
000 "	+25	-12	
050 East	+28	-20	
100 "	+35	-16	
150 "	+35	-14	trench 20m. north
200 "	+30	-4	
250 "	+25	-10	
300 "	+25	-6	

Cutler

Line 40S	Dip	Quad	Notes
300 East	+25	-6	
250 "	+22	-6	
200 "	+28	-12	
150 "	+35	-10	shallow trench 35m. north
100 "	+35	-14	top knoll
050 "	+35	-10	
000 "	+25	-6	
050 West	+25	-10	old drill site
100 "	+20	-18	
150 "	+20	-18	

Cutler

Line 100S	Dip	Quad	Notes
150 West	+20	-14	top ridge - vol. o/c
100 "	+25	-4	
050 "	+25	-10	
000 "	+32	-4	extensive windfall timber
050 East	+36	-10	
100 "	+38	-10	
150 "	+38	-10	
200 "	+30	-10	
250 "	+22	-16	
300 "	+20	-10	road 15m. east

Seattle

Road - Veritas

Station	Dip	Quad	Notes
00	+16	+10	
025	+15	+10	
050	+16	+12	
075	+27	+14	
100	+35	+16	
125	+45	+20	
150	+30	+14	
175	+28	+14	
200	+32	+14	
225	+30	+16	
250	+25	+10	
275	+17	+8	
300	+15	+6	
325	+10	+2	
350	+10	0	
375	+25	+10	
400	+17	+6	
425	+25	+16	
450	+22	+20	
475	+10	+10	adit

Veritas (Cont')

Station	Dip	Quad	Notes
500	+20	+16	
525	+20	+24	
550	+10	+18	o/c serpentine
575	+2	+18	Road
600	0	+26	
625	0	+18	
650	-5	+16	
675	-2	+20	
700	+8	+26	
725	+10	+28	
750	+10	+26	
775	+10	+28	
800	+15	+25	
825	+15	+20	
850	+15	+18	
875	+10	+10	
900	+15	+18	
925	+5	+10	creek 940
950	0	+2	
975	0	0	
1000	+4	+2	

Seattle
Road - Veritas

Station	Dip	Quad	Notes
1025	+10	+16	
1050	+10	+8	
1075	+15	+10	
1100	+10	+10	Road
1125	+10	+10	
1150	++18	+15	
1175	+20	+20	Road
1200	+20	+20	
1225	+10	+18	
1250	0	+20	
1275	0	+18	
1300	-2	+15	

Seattle

Base Line	Dip	Quad	Notes
300 East	0	0	
250 "	+4	+6	
200 "	+10	+20	
150 "	+5	+26	
100 "	+13	+28	
050 "	+5	+20	
000	+5	+18	
050 West	-8	+6	creek
100 "	+20	+12	
150 "	+15	+4	

Seattle

Line 040S	Dip	Quad	Notes
150 West	+22	+10	
100 "	+15	+15	
050 "	+8	+10	
000	-20	-4	creek
050 East	+15	+20	
100 "	+5	+26	andesitic knob
125 "	0	+20	
150 "	-12	+18	
175 "	-3	+25	
200 "	0	+26	
250 "	+6	+10	
300 "	+5	+2	

Seattle

Line 100S	Dip	Quad	Notes
300 East	+8	+2	
250 "	+18	+20	
200 "	+15	+30	
175 "	-3	+24	
150 "	-8	+20	
100 "	+15	+24	
075 "	0	+20	
050 "	+14	+20	
000	-5	+8	creek
100 West	+20	+14	
150 "	+25	+4	

ITEMIZED COST STATEMENT

<u>Date</u>	<u>Job Performed</u>
August 22-23, '83	Brush out 8 km. of logging road
October 11-14, '83	VLF-EM Survey & geological mapping

WAGES

A.K. Sweet	6 da. @ \$125 da.	\$750
S. Hodgson	6 da. @ 125 da.	750
J. Coxall	2 da. @ 125 da.	250
W. Smallwood	6 da. @ 125 da.	750
D. Boyte	4 da. @ 125 da.	500
	<u>Total</u>	<u>\$3,000</u>

Total Wages	\$3,000	
Cost of Assessment Report	255	
Cost of Geological Report	629	
Copying, Mailing, Telephone	80	
VLF-EM 4 da. @ \$40/da.	160	
Vehicles @ \$.20/km.	200	
Fuel	78	
Food	348	
Lodging	305	
Small tools & supplies	<u>51</u>	
	<u>TOTAL</u>	<u>\$5,106</u>

REFERENCES

- _____ Annual Report of the Minister of Mines of the
Province of B.C., 1932 p. 218 and 1933 p. 268
- _____ British Columbia Department of Mines Bulletin 3
- _____ Geological Survey of Canada Memoir 213 p. 131 and
Memoir 130 p. 95
- _____ Geological Survey of Canada Paper 73 p. 17
- _____ Geological Survey of Canada Map 43-15A
- _____ Geological Survey of Canada Aeromagnetic Map
8552G Tyaughton Lake
- McCann, W.S. Geology and Mineral Deposits of the Bridge River
Map Area, British Columbia, GSC Memoir 130 1922
- Roddrick, J.A. Geological Survey of Canada Map - Pemberton (East
Half) Map Area, British Columbia, Paper 73-17, 1973
- Stevenson, J.S. Lode-Gold Deposits of Southwestern British Columbia,
B.C. Department of Mines, Bulletin No. 20 - Part IV
1947 pp. 31-35
- Sookochoff, L. Geological Report on the GOLD BRIDGE PROPERTY of
CLIMEX MINING OF B.C. LTD., Jan. 11, 1980
- Kerr, J.R. Surface Geology on the VERITAS PROPERTY, June, 1978
prepared for W.A. Cook, owner and operator, of Lillooet, B.C.

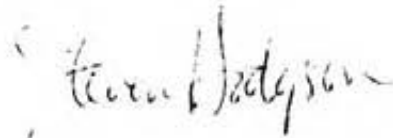
REFERENCES (cont.)

- Pearson, D.E. Mineralization in the Bridge River Camp,
Ministry of Mines and Petroleum Resources
1975 Geology in British Columbia, pp. G57-G63

AUTHOR'S
QUALIFICATIONS

I certify that:

1. I am a graduate of the Mineral Exploration for Prospectors Course (1979) Selkirk College, Castlegar, B.C.
2. I have been a prospector in British Columbia for 7 years.
3. The information for the accompanying report was based on work done personally and from Mineral Inventory Assessment Report and Government Publications
4. I am a Director of Chalice Mining Inc. - Owner Operators of the G.G. Mineral Claims Group.


Steven Hodgson

SELKIRK COLLEGE



CASTLEGAR, B. C., CANADA

COMMUNITY EDUCATION SERVICES



THIS IS TO CERTIFY THAT

STEVEN HODGSON

HAS PARTICIPATED IN

"MINERAL EXPLORATION FOR PROSPECTORS"

144 HOUR COURSE

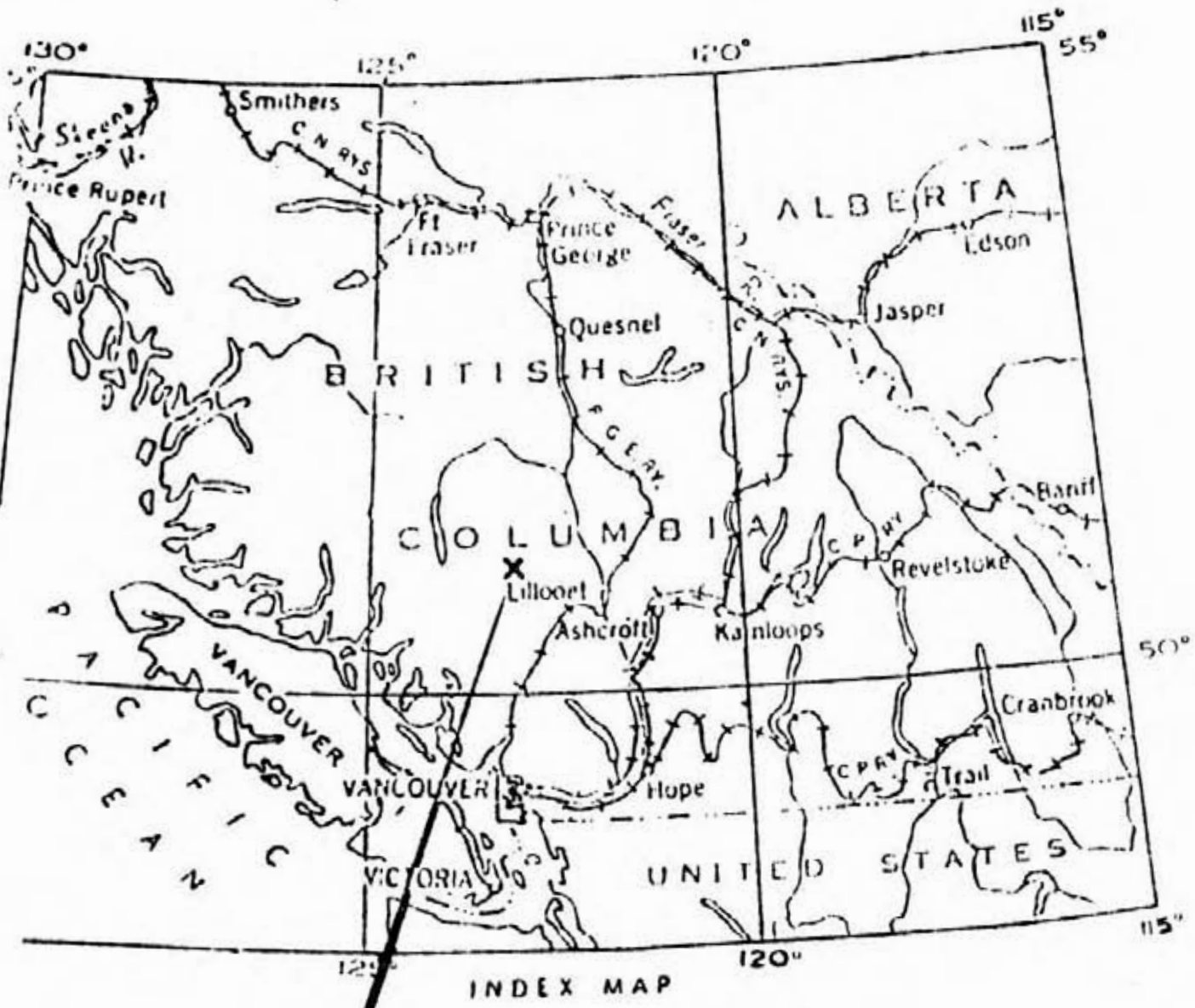
Co-sponsored by the Ministry of Energy, Mines and Petroleum Resources,
the Ministry of Education,
and Continuing Education, Selkirk College

C. J. M.
INST

W. Sleplund
PROGRAM COORDINATOR

C. P. Adams
COMMUNITY EDUCATION

CHALICE MINING INC.



GG CLAIMS
GOLDBRIDGE

CHALICE MINING INC.

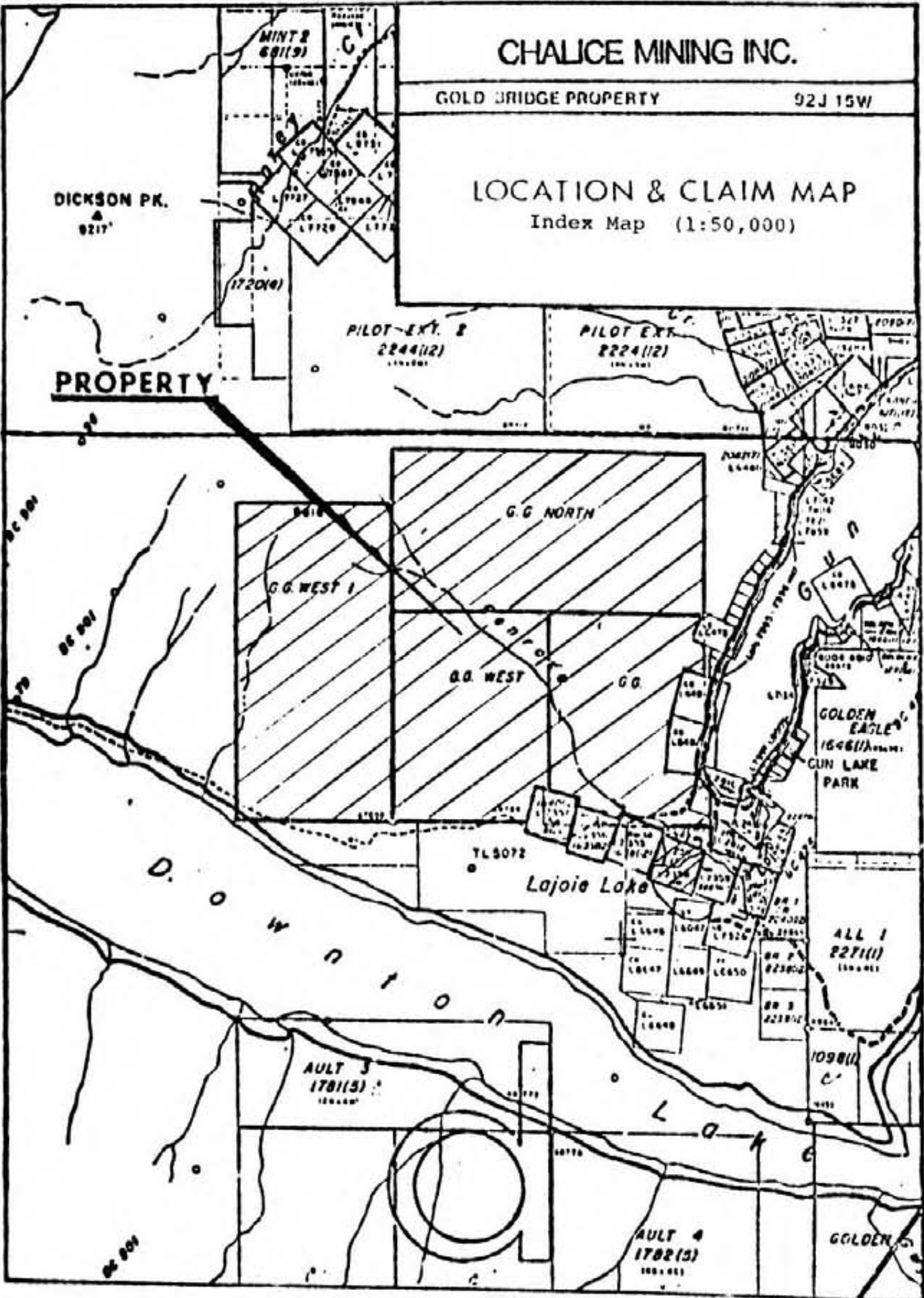
GOLD BRIDGE PROPERTY

92J 15W

LOCATION & CLAIM MAP

Index Map (1:50,000)

TO WEST SEE MAP 92 J14 E



CHALICE MINING INC.	
GOLD BRIDGE PROPERTY	92J 15W

GEOLOGY OF GG CLAIM GROUP

HURLEY FORMATION

- ARGILLITE
- Conglomerate, Vol. Cong.
- VOLCANICS, ANDESITE

BRIDGE RIVER GROUP

- ARGILLITE
- GREENSTONE

BRALORNE INTRUSIVE

- DIORITE
- GABBRO






ULTRABASIC ROCKS

- SERPENTINE

MINERALIZATION

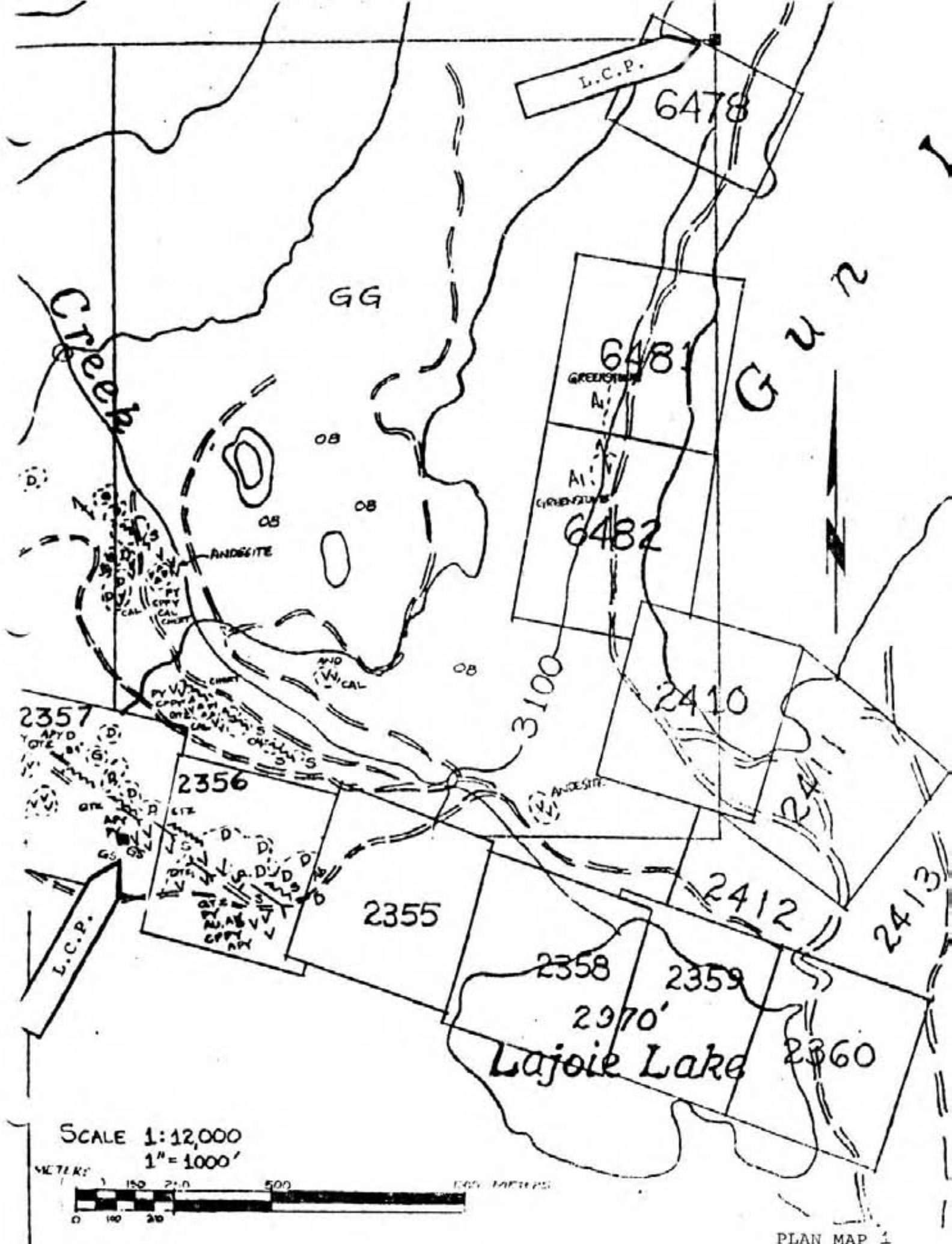
- PY PYRITE
- APY ARSENOPIRITE
- CPY CHALCOPYRITE
- CAL CALCITE
- QTZ QUARTZ
- Ab asbestos

STRUCTURE

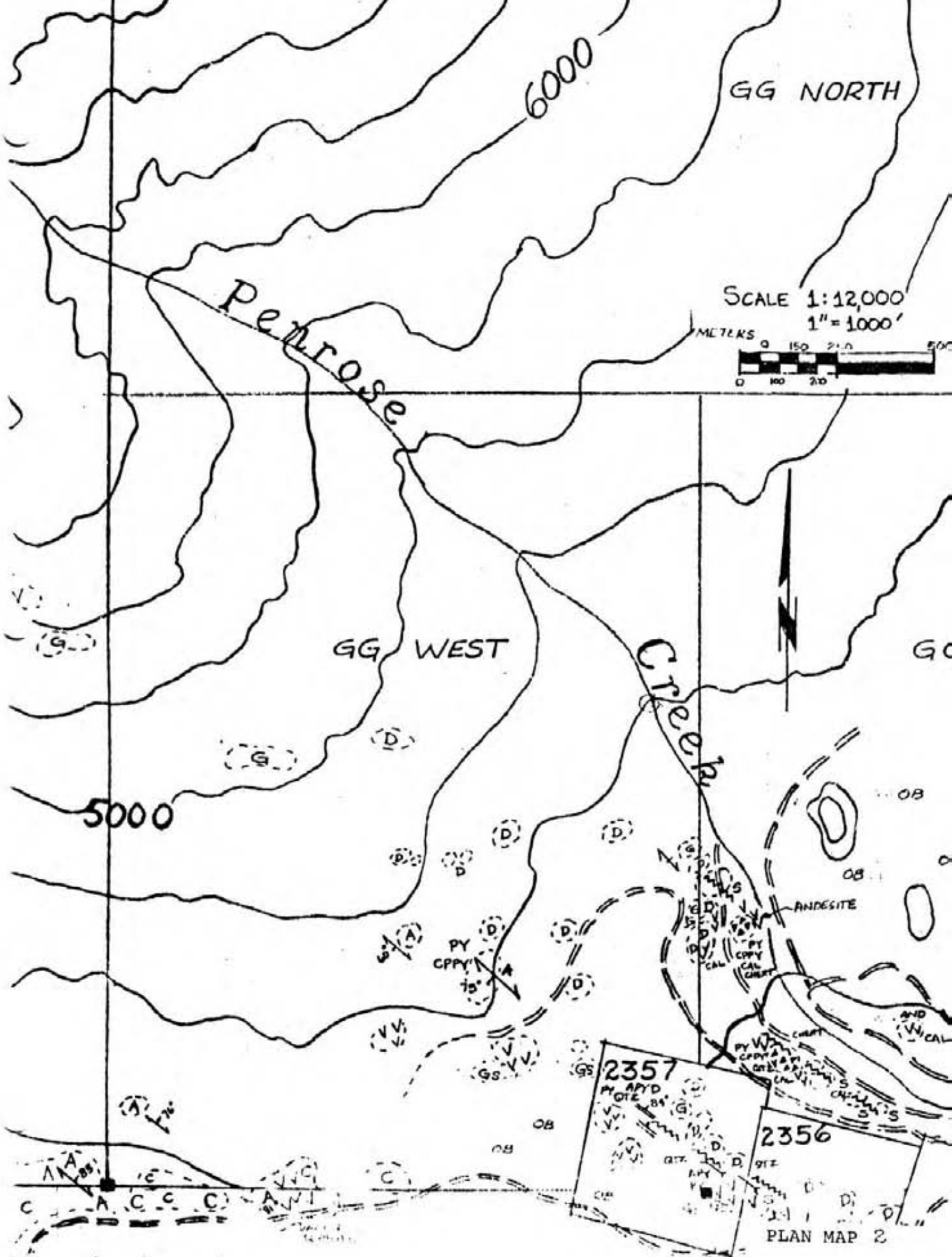
-  Bedding attitude
-  QTZ VEIN ATTITUDE
-  ADIT
-  TRENCH
-  OVERBURDEN

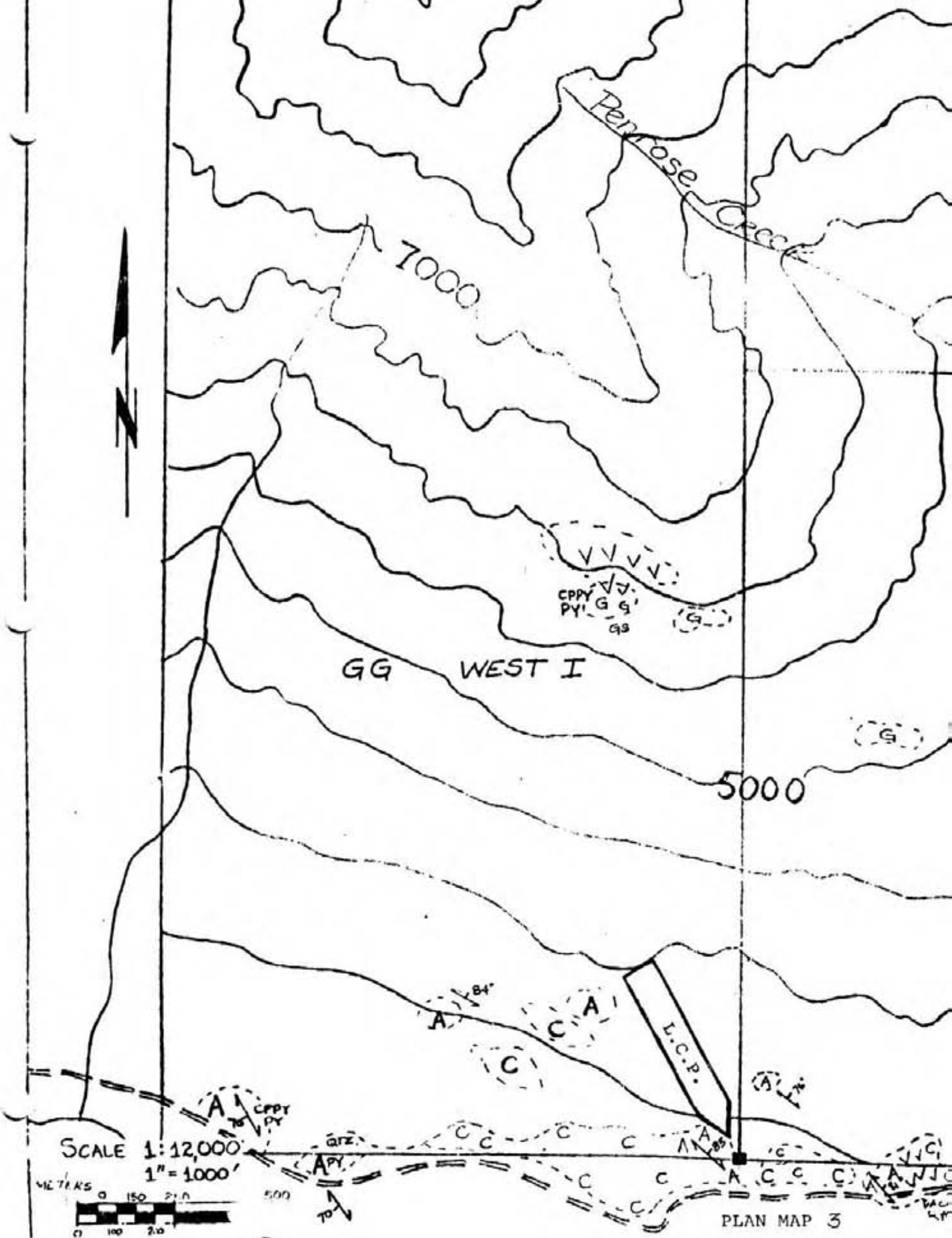
CULTURAL FEATURES

-  4 WHEEL DRIVE GRAVEL ROAD

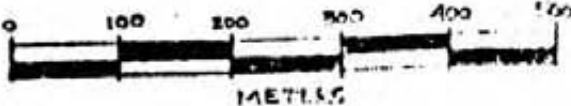


PLAN MAP 1





PLAN MAP 3



PENROSE CREEK

4000'

3500

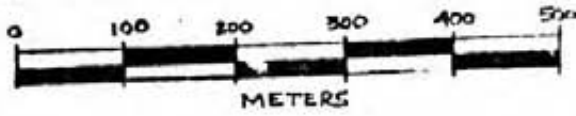


LCP 5W GG1

GEOPHYSICAL MAP
VLF-EM SURVEY
GG GROUP
PLAN MAP # 3

VERITAS

PLAN MAP 4



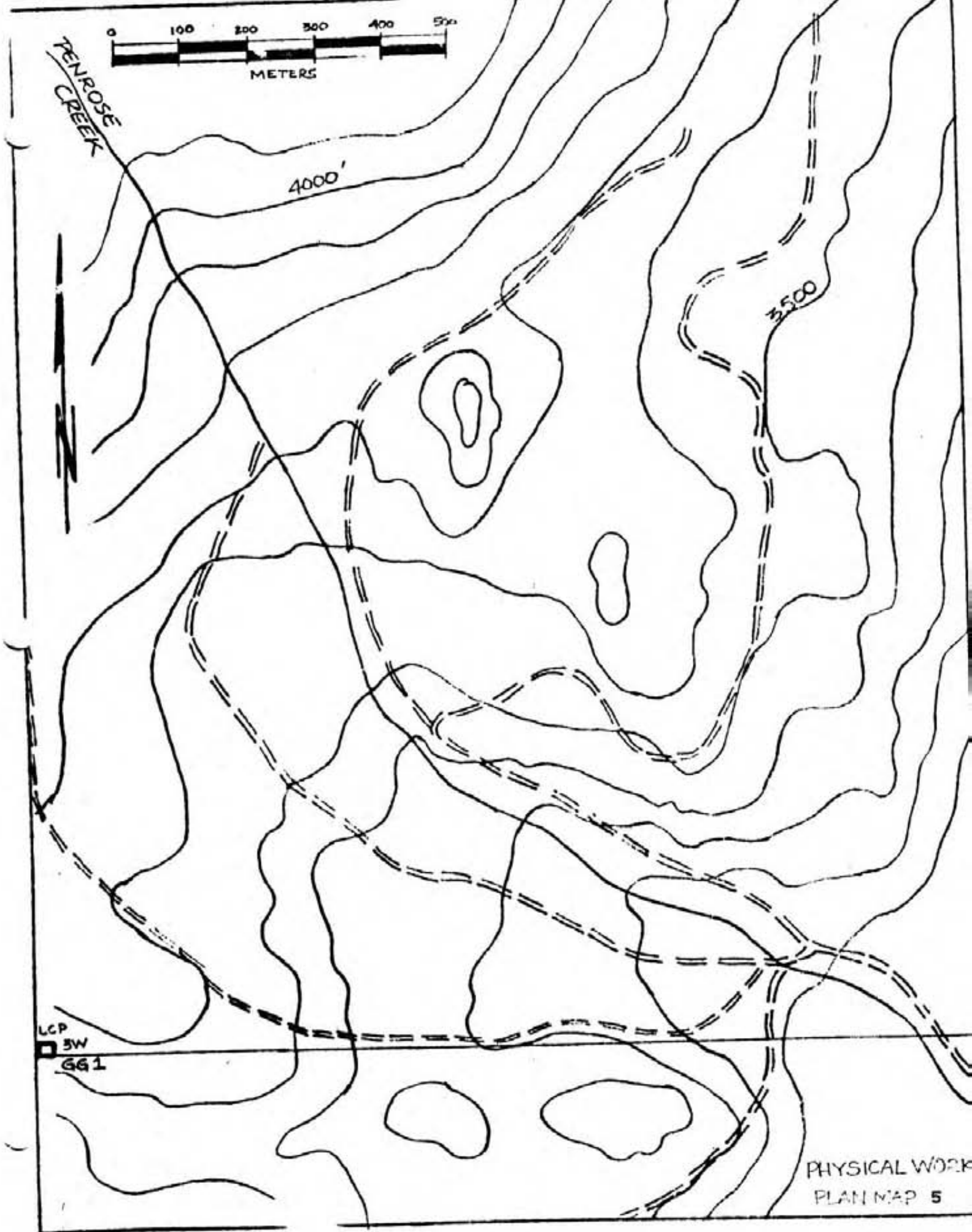
PENROSE
CREEK

4000'

3500

LCP
5W
661

PHYSICAL WORK
PLAN MAP 5



APPENDIX

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ILLUSTRATIONS

SCALE

FIGURE 1	LOCATION MAP & CLAIM MAP	1:50,000
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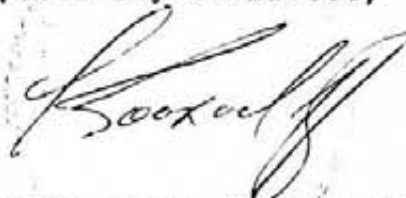
RECOMMENDATIONS

A three phase exploration program is recommended to be carried out on the property. The exploration program would be designed to initially delineate localized correlative anomalous areas which would subsequently be tested by diamond drilling.

An exploration program to locate and test for potential economic mineral zones on the Veritas vein would be initiated.

It is also recommended that Chalice Mining Inc. allocate \$102,000 to initiate and execute the recommended program.

Respectfully submitted,



Laurence Sookochoff, P.Eng.
Consulting Geologist

September 26, 1983
Vancouver, B.C.

RECOMMENDED EXPLORATION PROGRAM

The exploration program should be designed to locate prime correlative anomalous areas that would be tested by diamond drilling. Thereafter a program would be set up in three phases, the first of which would be comprised of a magnetometer and E.M. survey to locate potential favorable structures for localizing mineralization and to aid in geological mapping. A geological mapping program would be carried out in association with the geophysical surveys.

The second phase would be comprised of a geochemical survey in addition to an I.P. survey. Both the exploration programs should delineate prime correlative anomalous zones to determine specific sites for diamond drilling.

ESTIMATED COST OF RECOMMENDED EXPLORATION PROGRAM

Phase I

Veritas Vein exploration	\$10,000
Magnetometer and E.M. Survey	6,000
Geological Mapping	7,000
Associated Expenses	3,000
Engineering and Supervision	<u>3,000</u>
	\$29,000

Phase II

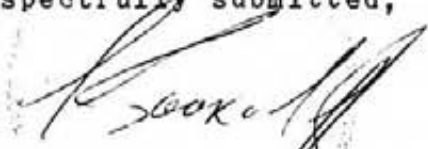
Geochemical Survey 500 samples @ \$18.00 (including assaying)	\$ 9,000
I.P. Survey (resistivity)	8,000
Associated Expenses	3,000
Engineering and Supervision	<u>3,000</u>
	\$23,000

Phase III

Test Diamond Drilling 500 meters @ \$100.00	\$50,000
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It is estimated that the first phase of the exploration program would take six weeks to complete.

Respectfully submitted,



Laurence Sookocchoff, P.Eng.
Consulting Geologist

September 26, 1983
Vancouver, B.C.

CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 1406-1055 West Georgia Street, Vancouver, B.C.

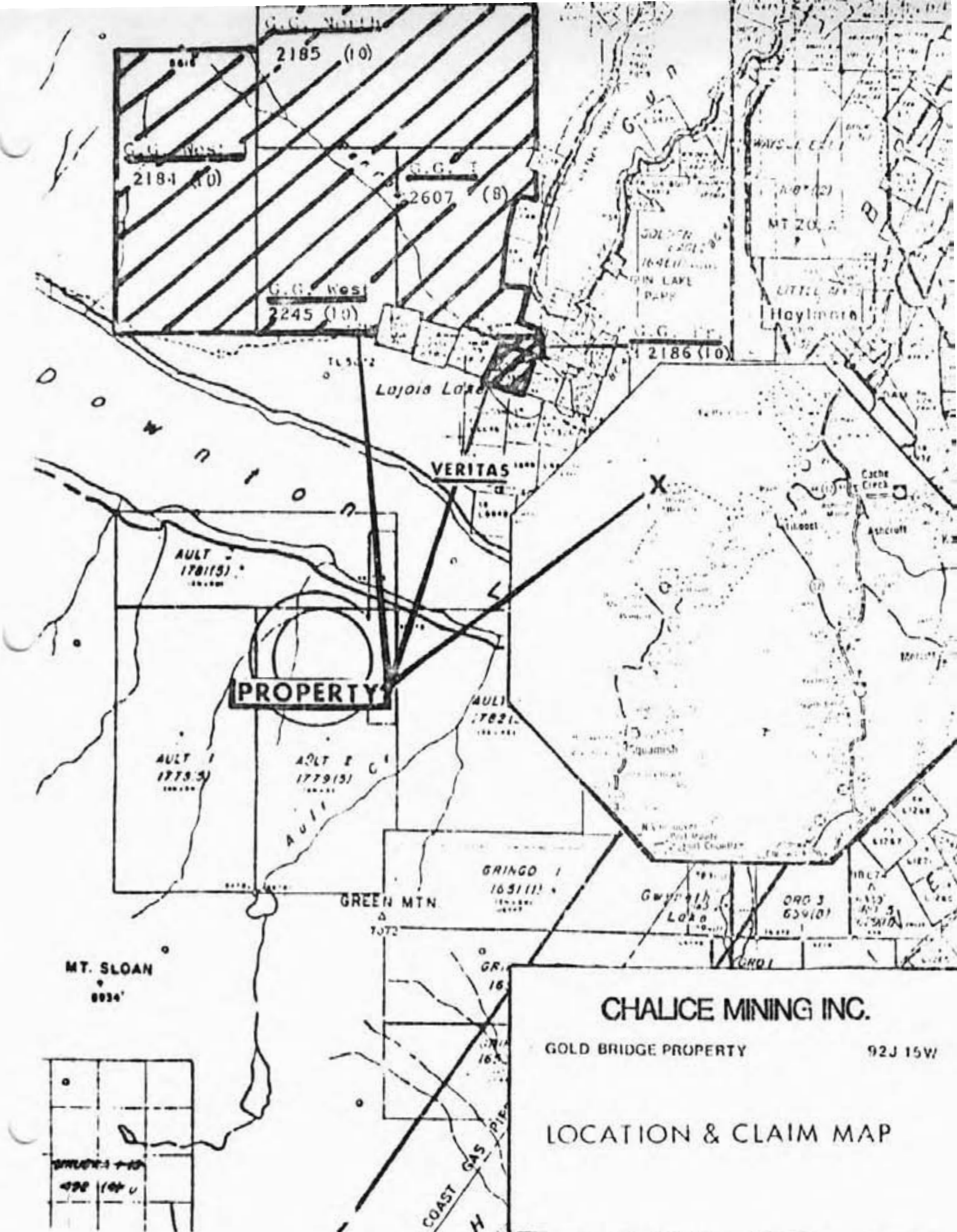
I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past seventeen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for the accompanying report is based on pertinent publications and from the writer's examination of the property on July 22, 1979
5. Neither I nor Pan-American has direct or indirect interest in the property described herein or in the securities of Chalice Mining Inc.
6. This report may be utilized by Chalice Mining Inc. for inclusion in a Prospectus or Statement of Material Facts.

Laurence Sookochoff, P.Eng.
Consulting Geologist

September 26, 1983
Vancouver, B.C.





PROPERTY

CHALICE MINING INC.

GOLD BRIDGE PROPERTY

92J 15W

LOCATION & CLAIM MAP

MT. SLOAN
8934'



Geological Report

on the

GOLD BRIDGE PROPERTY

of

CHALICE MINING INC.

Lillooet Mining Division 92J 15W

September 26, 1983
Vancouver, B.C.

L. Sookochoff, P.Eng.
Consulting Geologist

Geological Report
on the
GOLD BRIDGE PROPERTY
of
CHALICE MINING INC.

Part A

SUMMARY AND CONCLUSIONS

The Gold Bridge Property held by Chalice Mining Inc. is located 13 km from the former gold producing Bralorne and Pioneer Mines.

Other smaller former gold producers are located along the northwesterly belt of metamorphosed sedimentary and volcanic rocks. A central structure, along the Cadwallader Creek valley with which the gold bearing quartz fissure veins of the Bralorne Intrusives appear to be associated, is projected northwestward to the Chalice property.

Recent preliminary exploration results by Chalice personnel indicated a magnetometer anomaly in addition to two northwesterly trending correlative arsenic-copper-gold-silver anomalous zones.

A 37.6 meter drill hole to test an anomalous area indicated a meta diorite serpentine contact with epidote and calcite stringers in addition to local breccia zones.

The Veritas vein included in the Chalice property appears to be related to a porphyrite flow (greenstone) with the mineralized veins of up to 1.2 meters wide (four feet mineralized with erratic sulphide contact. The vein is revealed for 304 meters (1,000 feet) horizontally with a vertical height of 122 meters (400 feet) as indicated from the old workings.

It is concluded that the Chalice Mining property is within a geologically favorable area for the occurrence of economic gold mineralization. The favorable structural indicators in addition to the favorable preliminary exploration results and the known mineralized vein on the Veritas claim substantiate the merit of the property. An exploration program to delineate and test prime anomalous areas in addition to the exploration of the Veritas vein system should be initiated.

Geological Report
on the
GOLD BRIDGE PROPERTY
of
CHALICE MINING INC.

Part B

INTRODUCTION

At the request of Mr. S. Hodgson of Chalice Mining Inc., the writer was requested to examine and assess the geological potential for economic gold mineralization on the Gold Bridge property.

With the strategic location of the property in a known "gold camp", the Chalice property area should be examined for surface and/or underlying mineral potential.

Information for this report was obtained from material as cited under references in addition to a property examination carried out by the writer on July 22, 1979.

PROPERTY

The property is comprised of two contiguously located mineral claims consisting of a 12 unit claim block and an adjoining reverted crown grant. Particulars are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
G. G. West	2245	October 25, 1983
G. G. West I	2184	October 25, 1983
G. G. North	2185	October 25, 1983
G. G. I	2607	August 23, 1984
G. G. Fraction	2186	October 29, 1983
C. G. Veritas I	2258	January 24, 1984

Any legal aspects to the property are beyond the scope of this report.

LOCATION AND ACCESS

The property is located six km west of Gold Bridge and two km west of the south end of Gunn Lake in the Lillooet Mining Division.

Access from Gold Bridge is westward for seven km via good gravel road to the Gunn Lake road. The Dunn road cut off is taken for one km to the property.

WATER AND POWER

Sufficient water for all phases of the exploration program could be available from Penrose Creek which is in part covered by the property.

Electric power is available within 500 meters of the claims.

TOPOGRAPHY

Moderate to steep slopes prevail on the property with elevations up to 1900 meters and relief in the order of 750 meters.

HISTORY OF THE AREA

The history of the area is centered around the Bralorne and the Pioneer Mines where lode gold production was carried on from the early 1900's.

The Bralorne and Pioneer situated on Cadwallader Creek within 13 km southwest of the Chalice property, in addition to other significant former properties such as the Ben d'Or and the Wayside are located within a mineralized belt on the western flank of the Ben d'Or Mountains.

During the early 1900's, production initially utilizing arrastras was carried out at these properties with the Bralorne producing to 1972 when shut down for economic reasons.

The history of the Chalice property stems from the Veritas crown grant where former exploration included a "tunnel 225 feet long and several open cuts" on a vein cutting an augite-diorite and serpentine. A total of a "thousand feet" of underground work in three tunnels is reported.

Preliminary geophysical and geochemical surveys were carried out by Chalice personnel in 1979 with a diamond drill hole put down on an anomalous zone.

In 1982 trenching by Chalice personnel was completed at the southwest corner of the Gwendolyn's Glory claim.

GEOLOGY

In the area of the Chalice property, Triassic sedimentary and volcanic rocks including variably metamorphosed units are intruded by three or more intrusive episodes including an ultrabasic or intrusive. Generally, the Triassic formations include the middle Triassic Fergusson group of cherts to limestone in addition to biotite schists, the younger Noel Formation, Pioneer Formation and the Youngest Hurly Formation which in addition to fine grained and sedimentary rocks, include conglomerates, agglomerates and andesites.

The individual formations are exposed to a greater irregularity towards the central Cadwallader Creek extending northwesterly to Mt. Penrose west of Gunn Lake. The band is generally enveloped by diorite to syenodiorite intrusives with localized ultrabasic and augite diorite. Bralorne intrusive plugs and northwesterly stretched stocks are associated with the central formations.

The major aerial structural feature is a broad northwesterly trending and plunging anticlinal arch centered east of Cadwallader Creek in the Ben d'Or range of Mountains. The western limb in which the principal ore deposits of the area occur, extends into the Cadwallader Creek valley, which reflects a major structure. The major structure results in secondary and minor folds which resulted in complex distortion of the formations in addition to providing a locus for the ultrabasic and gold associated Bralorne intrusives. The lenticular intrusives extend to the Chalice property area where topographical structural features are not as obvious as along the Cadwallader Creek valley.

The gold bearing quartz fissure veins of the Bralorne intrusives and more specifically, the veins in the Bralorne and Pioneer Mines are conspicuous for the exhibited ribboning effect where quartz ribbons are "separated by thin, dark-gray films of ground-up sulphides, sericite, white mica and gouge and occasional slickensided free gold".

The vein fissures extending from the augite diorite are persistent into the Pioneer greenstone with weaker indications in thinly bedded sediments and "feathering out" in serpentine.

Associated indicator minerals that are found in the Bralorne-Pioneer veins and can reflect gold mineralization are mariposite, scheelite, arsenopyrite, sphalerite and galena. Other metallic minerals include pyrite, chalcopyrite, stibnite, tetrahedrite, marcasite and sylvanite (?) or calaverite (?).

On the Gunn Lake road west of the southwest corner of the property, a reported sequence of mixed sandstone, siltstone and carbonate rich conglomerate with minor thin rhyolite/dacite volcanic members trending NW and dipping SW occur.

On the Chalice property the Veritas vein is described as a vein trending at 120 with a dip varying from 64 NE to vertical. The vein formed along a fracture system in altered volcanics (greenstone) which is locally intruded by a Bralorne-like-micro-diorite pluton. The micro-diorite is serpentized near the contact. Quartz veins are irregular lenses in NW trending shears. The outcrop and workings reveal 1,000 feet of vein zone with a vertical height of 400 feet (old workings). Veins are of milky white quartz "three inches to four feet" wide with erratic sulphide content. The vein appears to be cut off by a micro-diorite pluton.

On Penrose Creek along the western boundary of the property the geology is reported as altered volcanics and serpentines occurring as large inclusions (pendants) within micro-diorite. Calcite, ankerite and quartz stockworks occur in the serpentine with pyrite, chalcopyrite and arsenopyrite. Carbonate quartz veins also occur within brecciated green volcanics of a serpentine lens.

RECENT EXPLORATION WORK

The results of previous exploration work carried out on the Chalice property are as follows:

1. Magnetometer Survey

A government aeromagnetic map of the area reveals a northwesterly trending high generally associated with the Cadwallader Creek Valley and more distinctly along the northwestward extension to Penrose Mountain. The highest reading along this zone is along Penrose Creek and is covered by the Chalice property.

Magnetometer readings along stations over three lines 20 meters apart and extending 280 meters covering the indicated locus of the aeromagnetic high were taken. The results revealed a north-south trending magnetic anomaly.

2. Geochemical Survey

Soil samples were taken on a grid covering most of the magnetometer survey area in addition to two lines to the south with an extension of all lines 80 meters to the west.

The results indicated two northwesterly trending correlative arsenic-copper-gold-nickel anomalous zones.

The more distinct zone (A) centered at 00 revealed an arsenic anomaly 60 meters wide and extending through the five lines for 80 meters.

Anomalous copper values correlated with the arsenic with spotty gold-nickel correlation.

A second northwesterly trending zone (B) centered at approximately 150 E indicated spotty correlative anomalous geochem values. The zone also generally correlates with the magnetometer anomaly.

3. Diamond Drilling

A drill hole (Ax core) was put down at an anomalous zone for the purpose of testing the high magnetic readings and spotty high geochemical values.

The hole was drilled to a depth of 37.6 m (123.6 ft.). A log of the core by the writer indicated a meta diorite with light epidote and moderate calcite stringers in the upper part of the drill hole. The diorite trends to a serpentine along a gradational contact. The serpentine contains patches, lenses and veinlets of calcite in addition to local breccia zones.

In an examination of the property outcrops of serpentine with occasional quartz carbonate veinlets are located northwest and along strike of the arsenic-copper-gold-nickel anomaly.

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,795

DOWNTON
LAKE



GEOLOGY OF GG CLAIM GROUP		
HURLEY FORMATION		
(A) ARGILLITE	(PY) PYRITE	
(C) CONGLOMERATE, Vol. Cong.	(APY) ARSENOPYRITE	
(V) VOLCANICS, ANDESITE	(GPPY) CHALCOPYRITE	
BRIDGE RIVER GROUP		
(A) ARGILLITE	(CAL) CALCITE	
(G) GREENSTONE	(QTZ) QUARTZ	
BRALDORNE INTRUSIVE		
(D) DIORITE	(AB) ASBESTOS	
(G) GABBRO	STRUCTURE	
ULTRABASIC ROCKS		
(S) SERPENTINE	(Bedding) Bedding attitude	
	(Dip) Dip attitude	
	(Fault) Fault	
	(Trench) Trench	
	(Over-siden) Over-siden	
	CULTURAL FEATURES	
	(---) 4 WHEEL DRIVE	
	(---) GRAVEL ROAD	

