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A REPORT ON THE MINING CLAIMS HELD BY YVAN VEZINA

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Énergie et Ressources naturelles
Québec

A REPORT ON THE MINING CLAIMS

HELD BY YVAN VEZINA

IN R. V1 and V11 OF BEAUCHASTEL TWP.,

NORTHWESTERN QUEBEC.

Ministère de l'Énergie et des Ressources
Gouvernement du Québec
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OCT. 5 1979
Ministère des Richesses Naturelles
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Sudbury, Ontario
October 3, 1979

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REGISTERED PROFESSIONAL ENGINEER
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PROVINCE OF ONTARIO

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SUMMARY

This report has been prepared for Mr. Yvan Vezina, and summarizes the geological information, the exploration and development work done on the property held by Mr. Vezina located in ranges V1 and V11 of Beauchastel township, Northwestern Quebec. The property consists of two close but separate claim groups covering in whole or in parts, lots 7 to 9 and 11 to 16, ranges V1 and V11, and comprising approximately 793 acres.

The property is a gold and base metal prospect. The history of the property dates back to 1926 when part of the west claims was known as the McDonnell claims. Early work on these claims and the surrounding area by prospectors consisted of considerable surface work to search for gold in the numerous quartz veins and zones of disseminated sulfide mineralization. In later years the adjoining property to the east of the McDonnell claims was acquired by Gan Copper Mines Limited and eventually, the McDonnell claims were incorporated in their holdings; the main attraction of the property being a zone of dalmatianite alteration found in the eastern part of the property. Dalmatianite, a peculiar alteration was at the time found to be intimately related to the ore zones at Amulet. Work done by Gan Copper consisted of local geophysical surveys and several programmes of diamond drilling to 1958. No work of significance appears to have been done since that date to until the claims were acquired by the present owner.

The property is underlain by volcanic flows and clastics consisting of rhyolite breccia, agglomerate, porphyritic rhyolite, rhyolite flows, andesite, a sill-like diorite, all intruded by several dikes.

In the east zone, or the dalmatianite zone, several areas of disseminated mineralization were intersected in drill holes, the best being 2.5 ft. of 1.46% copper in hole B-5. In the centre zone, several intersections such as 1.66% copper over 5.2 ft., 3.4% copper over 1.0 ft., etc., were obtained in a zone of rhyolite fragments in a chlorite matrix. The rhyolite breccia is in contact to the north with the diorite sill. In the diorite, in the vicinity of the contact, copper-zinc-gold mineralization is found in massive sulfide. In hole 32, this returned 0.40 oz. of gold, 7.35% zinc, 0.65% copper over 2.5 ft. A summary of all the holes and pertinent details is given in Appendix 2. attached to this report.

The property warrants further work. This work ought to consist of mise-a-la-masse drill hole geophysics, deep penetration geophysics, detailed geology, stripping and trenching in the vicinity of hole #32, followed by diamond drilling, if warranted, to test the targets outlined.

The above work is estimated to cost $150,000.00.

A REPORT ON THE MINING CLAIMS HELD BY YVAN VEZINA IN R. V1 and V11 OF BEAUCHASTEL TWP., NORTHWESTERN QUEBEC.

INTRODUCTION

At the request of Mr. Yvan Vezina, a study of the information available on the mining claims held by Mr. Vezina in ranges V1 and V11 of Beauchastel township was undertaken to assess the potential of the claims and recommend further work.

The property includes 15 claims comprising approximately 793 acres. The claims have been acquired by staking. All the claims are registered in the name of Mr. Vezina. A complete list of the claims and pertinent details is given in Appendix 1. attached to this report.

The property is a base metal and a gold prospect. Prospectors were active in the area in late 1920's testing the numerous quartz veins and zones of sulfide mineralization for gold. In later years, exploration work mainly by Gan Copper Mines Limited was aimed at testing the property for its base metals potential. The main base metal attraction of the property is a zone of dalmatianite alteration found near the east boundary of the property and extending on the adjoining claims to the south. This zone of dalmatianite alteration is typical to the area and has been recognized as being intimately related to volcanogenic base metal deposits in the Noranda area. Surface work, geophysical and geological surveys and diamond drilling were performed mainly by Gan Copper Mines Limited from 1938 to 1957, and more recently by Odyno Exploration & Developpement in 1976 on part of the property.

This report was prepared to provide a summary of the exploration and development work done on the property, to review the results and to make recommendations for its future exploration.

The potential of the property is assessed on its own merit and by analogy to economic deposits found in similar geological environments.

The data used in this study includes various records, both published and unpublished, records of exploration and development work done by previous owners, published geological maps and reports and assessment work files.

DESCRIPTION OF PROPERTY, LOCATION, ACCESS AND FACILITIES

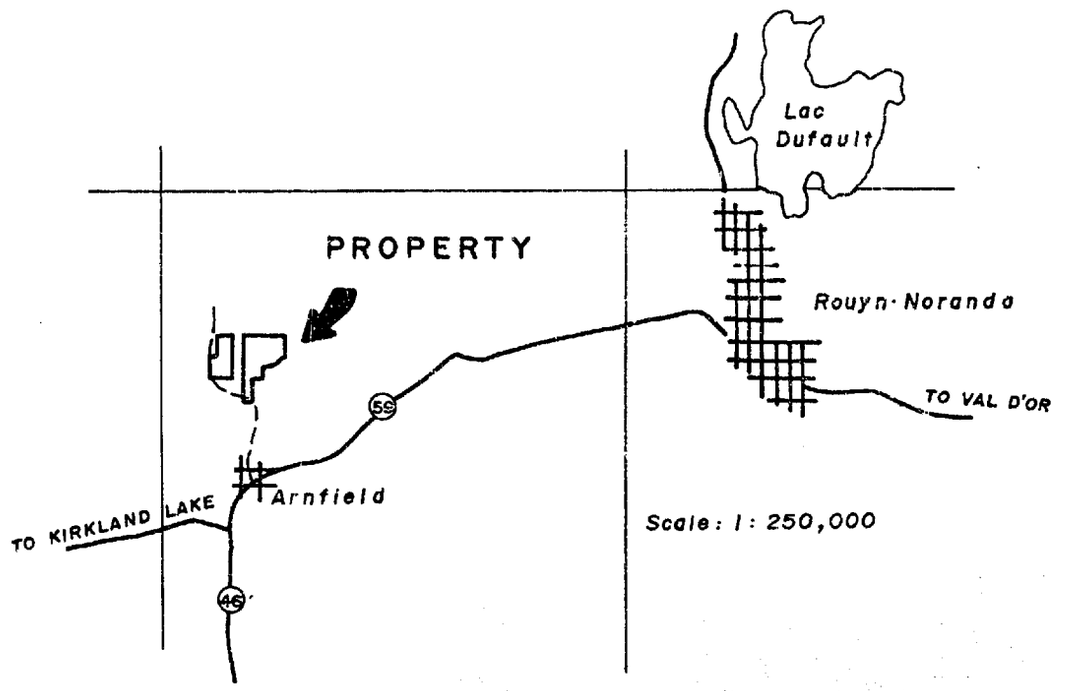
The property held by Mr. Yvan Vezina includes 15 claims covering approximately 793 acres. The claims cover the S½ of lot 7, all of lots 8 and 9, lots 11 and 12 and parts of lots 13 to 16, in range VII; and the N½ of lot 11 in range VI, all in Beauchastel township. Details of the holdings are given in Appendix 1. attached to this report.

The property is located in the northwest quarter of Beauchastel township. It lies 11 miles east of Noranda. The property is readily accessible through an access to resources road recently built by the Quebec Department of Natural Resources. This road runs north from the village of Arnfield and crosses the south boundary of the property in the vicinity of lot 9.

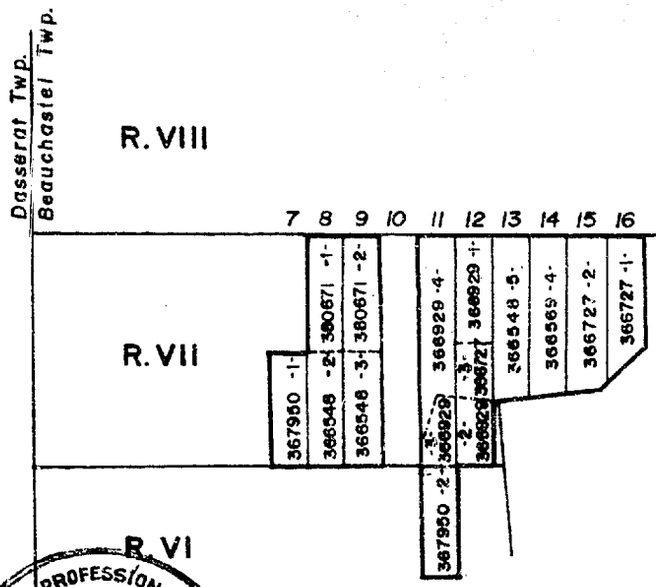
All facilities for a mining operation are readily available at Noranda, a major mining centre.

HISTORY OF EXPLORATION

The history of the property dates back to 1926 when the west part of the claim group was known as the McDonnell claims. Early work on these claims and on the eastern part of the property consisted of considerable surface trenching, rock trenching and test pitting, aimed chiefly at exploring for gold the many quartz veins and zones of sulfide mineralization occurring on various parts of the property.







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Figure 1.

LOCATION MAP

Scale: as shown

REGISTERED PROFESSIONAL ENGINEER
G. J. HINSE
PROVINCE OF ONTARIO

G.J. HINSE - AUG. 1979

Gan Copper Mines Limited acquired the east part of the property sometimes before 1938 and eventually, the McDonnell claims in later years. In 1938, the Gan property was covered with a geologic survey and local magnetic surveys; followed by two drill holes totalling 1337 feet drilled in 1941. In 1944, ten drill holes totalling 5,846 feet were put down, and one of the original holes was deepened.

In 1945, the Gan property and the McDonnell claims were under option to Mining Corp. of Canada, Howey Gold Mines Limited, Coniagas Mines Limited and Northern Canada Mines Limited. Following further magnetic and geologic surveys; and drill holes electromagnetic surveying, a diamond drill programme was started. This programme consisted of two holes drilled on the Gan property and ten holes put down on the adjoining properties of Algray Gold Mines and Beauchance Mines.

During 1948-49, following a resistivity survey on the western claims, Denison Nickel Mines Limited financed a new programme of diamond drilling consisting of two holes drilled in the eastern part of the property and 23 holes drilled in the western part of the property.

In 1951, the property was covered with geological mapping and a magnetic survey followed by 20 drill holes. This work confined mainly to the western claims.

In 1954, a study of the property was made by L.S. Trenholme and his findings are found in a report to Gan Copper Mines dated July 24, 1954. In 1957, this work was followed with one deep drill hole to test the north contact of the zone of dalmatianite alteration.

From 1958 on, no further work appears to have been done on the property by Gan Copper Mines.

In 1976, Odyno Exploration & Developpement Ltee. held the N½ of lots 6 to 8 in range VII. Following some electromagnetic surveying, shallow X-Ray drilling and trenching was done to test the anomalies outlined.

GEOLOGY OF THE PROPERTY

The property is underlain by acid to intermediate volcanic flows and associated clastics intruded by sill-like diorite dikes, all striking east-west and dipping steeply south. These rocks are in turn intruded by north-south striking diorite dikes, feldspar and quartz-feldspar porphyry dikes, lamprophyres and northwest striking diabase dike. The east-west striking rocks are terminated near the east boundary of the property by a north-south striking syenite known as the Aldermac syenite porphyry stock. Undoubtedly, some of the north-south striking minor dikes and lamprophyres are border facies and related to the intrusion of the syenitic stock.

Pillows found in the north part of the property indicate that in general, the formations face south and belong to a syncline, which axis is found near the centre of range VI, in lot 11.

The rhyolitic flows outcrop in the southern and northern parts of the property. In the southern part, they are exposed over a width of approximately 1500 feet and consist of massive rhyolite, porphyritic rhyolite with quartz eyes, rhyolite breccia, agglomerate and related clastics. In the northern part of the property, the rhyolitic rocks are exposed over a width of 800 feet and consist mainly of massive rhyolitic flows.

Both rhyolitic horizons are flanked by andesitic flows to the north. In the southern part of the property, andesites are only exposed near the east boundary of the property, to the north of the dalmatianite zone, while in the northern part, the andesite are exposed along the length of the property. The andesitic flows are pillowed and porphyritic with tops facing south.

A large sill-like diorite horizon is found in the centre of the property and has a width of some 1800 ft. across. This diorite is more basic than the northerly trending diorite dikes.

Several narrow dikes of lamprophyre, feldspar and quartz-porphyry were intersected in various drill holes. The porphyries are sparsely exposed on surface while the lamprophyres are not exposed. At depth in some of the holes drilled to test the dalmatianite zone, a porphyry dike was intersected which could represent a volcanic neck.

Some of the small quartz porphyries could also be related to the Flavrian stock, lying to the northeast of the property.

A near vertical dike of diabase, about 80 ft. across, traverses the entire property diagonally from southeast to northwest.

STRUCTURAL GEOLOGY

The volcanic rocks strike east-west and dip steeply south with tops facing south. The large diorite dike is conformable to the general strike and dip of the enclosing lava flows. Locally though, the dike cuts across the formation and this attitude is probably caused by local erosion of the underlying volcanic surface. The contact between the volcanic flows and the Aldermac stock appears to dip steeply east.

Two sets of major faults are found on the property, but little information is known on local fracturing and faulting. The main fault, the Gan fault strikes east-west and dips steeply. This fault extend beyond the claim group and probably belong to a regional family of faults extending west and southwest from Noranda. The Centre and East faults strike north and dip flatly east. Both faults are thrust faults. Possibly, another such fault could lie between the Centre and the West zone, but details of its location and attitude are lacking.

ECONOMIC GEOLOGY

The early prospectors were attracted to the property by the presence of numerous quartz veins, stringers and disseminations of sulfides, mainly

pyrite with locally fair chalcopyrite. However, in later years, exploration was stimulated by the recognition on the property of a zone of peculiar alteration which was quite similar to the one occurring in the vicinity of the sulfide deposits on the Amulet property.

The alteration, known as dalmatianite, was recognized as being intimately related to sulfide deposits at Amulet and Waite.

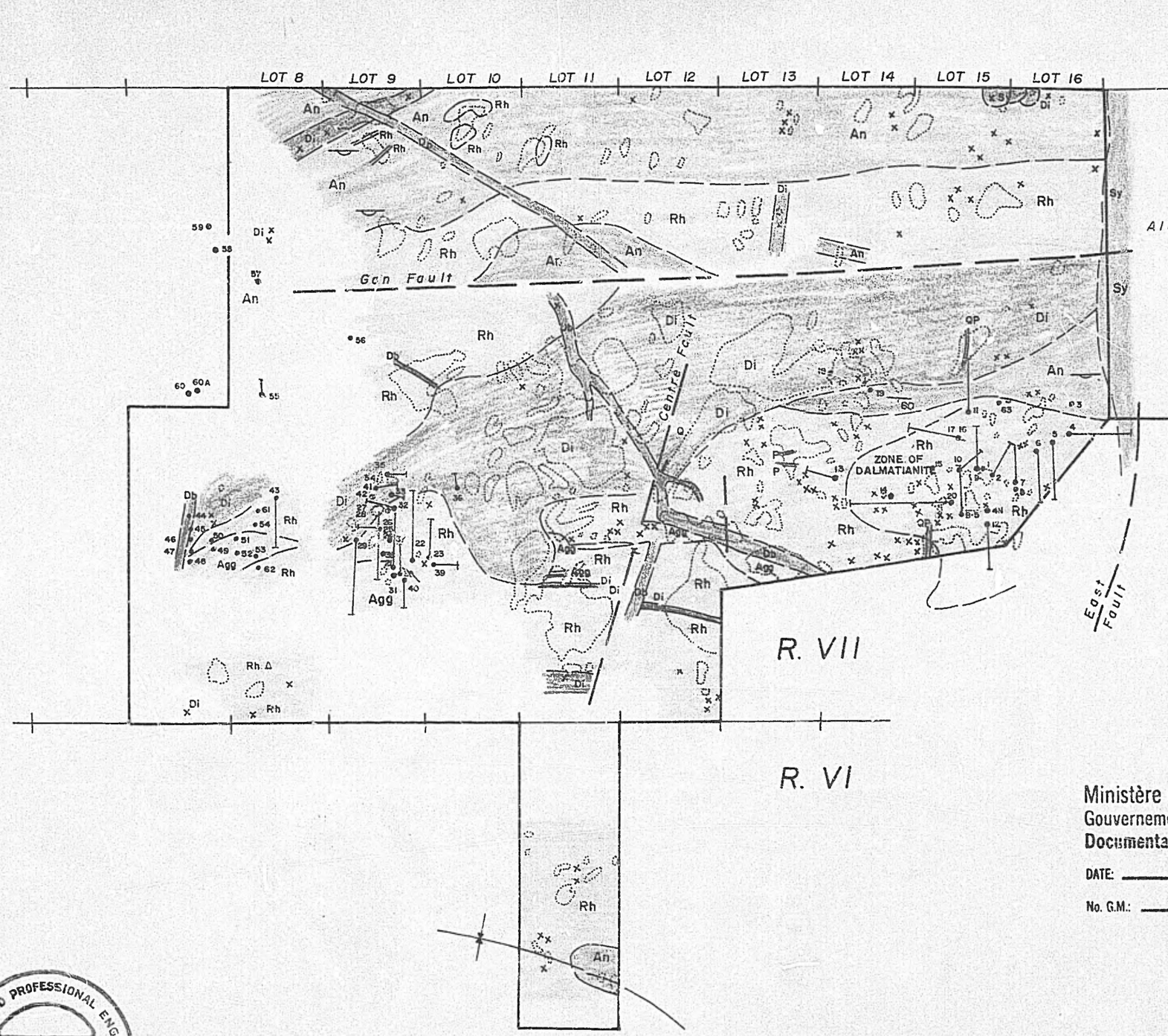
In the Noranda area, dalmatianite consists in variable proportions of cordierite, anthophyllite, gedrite, biotite, chlorite, quartz, magnetite, gahnite and sulfides. Appearance is characterized by blotchy lighter-colored ovoid of cordierite in a darker matrix.

At Noranda and Quemont, a rock similar to dalmatianite is also found in the vicinity of the ore deposits, but in this case, it is composed mainly of chlorite and sericite.

In general, cordierite-anthophyllite-rich rocks are the products of chloritization of lava flows by sulfide-rich hydrothermal solutions, thus the close association of dalmatianite with sulfide deposits related to a rhyolitic dome, which represents the waning stage of a particular period of rhyolitic volcanism. Sulfide deposits formed at surface by the deposition of copper and zinc-rich sinters and cherts by hot springs. The sulfide deposits being covered by the next period of volcanic activity, either acid to basic.

On the property, the dalmatianite is associated with coarse rhyolite breccia and associated clastics and represents a rhyolite dome. Some of the deeper holes drilled to test the dalmatianite intersected what could be interpreted as a volcanic pipe, with a related porphyritic intrusive at depth.

The zone of dalmatianite and its vicinities has been tested with 23 drill holes, the deepest, hole #63, drilled to a vertical depth of 1818 ft. The



QUARTZ
DIABASE
PORPHYRY
QUARTZ FELDSPAR PORPHYRY
DIORITE
SYENITE
DIORITE
ANDESITE
RHYOLITE, AGGLOMERATE & BRECCIA

PILLOW
SCHISTOSITY
BRECCIA
GEOLOGICAL CONTACT
FAULT
DRILL HOLE a) VERTICAL b) INCLINED
ROCK OUTCROP
SYNCLINE AXIS

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Figure 2.

GENERAL GEOLOGY OF THE VEZINA PROPERTY

LOTS 7-16, R. VI-VII, BEAUCHASTEL TWP.
NORTHWESTERN QUEBEC

0 1000
FEET

results of this drilling are summarized in Appendix 2. The results show that only local mineralization was intersected in a few holes.

Although the dalmatianite appears to have been well tested several areas remain untested and these areas could have potential to be confirmed by detailed geological mapping to identify the paleosurface of individual periods of rhyolitic volcanic activity.

The central zone, lot 9, was tested with 22 holes. Several interesting intersections were obtained in holes 21, 24, 29 and 34 in rhyolite breccia and in holes 27, 32 and 34 in diorite. Details of these intersections are given in Appendix 2. In rhyolite, sulfide mineralization is associated with zone of rhyolite breccia in a chlorite matrix while in diorite, zones of massive sulfides appear to be erratic.

The west zone was tested with 14 drill holes, most of them drilled to shallow depth. The purpose of this drilling was mainly geological and to test a geophysical anomaly. Little or no mineralization was intersected.

CONCLUSIONS AND RECOMMENDATIONS

The rock types found on the property are in all respects similar to those hosting economic massive sulfide deposits in the Noranda area.

Although dalmatianite such as found in the east zone is a typical alteration intimately associated with some ore deposits, it is not a pre-requisite as the Noranda and Quemont ore zones lie in rhyolite breccia associated with chlorite and sericite alteration halos. Chlorite alteration is found associated with rhyolite breccia in the Centre zone where the best values were intersected.

Volcanogenic sulfide deposits have been the subject of much research and study in recent years and their place in the stratigraphy is well understood.

A detailed geological mapping of the property would certainly provide usefull information on paleosurfaces of individual flows and thus, pinpoint favorable locations where sulfide deposits could be found.

The property was only covered with local electromagnetic surveys of shallow penetration, and the drill hole electromagnetic method used in 1945 has been considerably improved. This method now known as mise-a-la-masse has been successful in recent years to outline deep-lying sulfide zones provided that the transmitter could be lowered in deep drill holes. The East zone has drill holes to 1818 feet and the Centre zone to 1277 feet.

It is recommended that:

1) The property be covered with a line grid with lines 300' apart.
   Line cutting, 30 miles @ $200.00/mile $6,000.00

2) The property be covered with magnetic and deep penetration electromagnetic surveying.
   Geophysics, 26 miles @ $500.00/mile 13,000.00

3) The property be covered with detailed geological mapping, including re-logging of the available drill core.
   Geological work, 2 men x 2 months 15,000.00

4) The vicinity of hole #32 be trenched to find out the attitude and potential of the gold, zinc and copper values obtained in this hole.
   Bulldozing, 40 hrs. @ $35.00 1,400.00

5) That mise-a-la-masse geophysical work be done over the East and the Centre zones.
   Geophysics 10,000.00

6) The targets outlined by the above work be tested with diamond drilling, if warranted.

Diamond drilling, 4,500 feet @ $20.00/foot	90,000.00
Contingencies	14,600.00
Total	$150,000.00

APPENDIX 1.

List of claims held by Yvan Vezina in ranges V1 and V11 of Beauchastel township:

Claim Number	Range	Lot	Acres	Staking Date
366548 -2-	V11	S½ of lot 8	50	Jan. 29, 1979
366548 -3-	V11	S½ of lot 9	50	"
366548 -5-	V11	N2/3 of lot 13	82	April 6, 1978
366569 -4-	V11	N2/3 of lot 14	74	"
366727 -1-	V11	N½ of lot 16	65	"
366727 -2-	V11	N2/3 of lot 15	72	"
366727 -3-	V11	N½ of S½ of lot 12	25	"
366929 -1-	V11	N½ of lot 12	50	June 8, 1978
366929 -2-	V11	S¼ of lot 12	25	"
366929 -3-	V11	S¼ of lot 11	20	"
366929 -4-	V11	N3/4 of lot 11	80	"
367950 -1-	V11	S½ of lot 7	50	? périmé 10-08-79
367950 -2-	V1	N½ of lot 11	50	? périmé 10-08-79
380671 -1-	V11	N½ of lot 8	50	Feb. 2, 1979
380671 -2-	V11	N½ of lot 9	50	"
Total 15 claims		f o r	793 acres	

APPENDIX 2.

Summary of diamond drill logs (from a report to Gan Copper Mines Limited by L.S. Trenholme, dated July 24, 1954).

Hole No.	Year	Bearing	Dip	Depth	Remarks
1	1941-44	-	90°	1171	Dal., diss. chalco.
2	-	N 39° E	45°	500	As above
3	1944	-	90°	550	Dal., little chalco.
4 N	1945-48	-	90°	1854	Dal. to end.
4	1944	East	45°	747	Chalco at 100 feet. No fault or syenite.
5	-	South	?	?	
6	-	South	57°	804	Little chalco
7	-	North	57°	635	Chalco at 46'.
8	-	-	90°	505	Local fair mineralization.
9	-	North	50°	603	Chalco at 55', 78'.
10	-	N 45° E	45°	296	Dal., no chalco mentioned.
11	-	North	48°	504	No dal., to diorite contact.
12	-	South	45°	486	Local dal. Indicates lavas dip N.
13	1947	N 72° W	73°	787	Local breccia, local chalco.
14	-	North	88°	367	Local dal., negative chalco.
15	-	-	90°	1513	666-789 few spots chalco 1'. 789-1512 mainly porphyry. 1222-1226 fault at 30° to core.
16	-	-	90°	1183	Local dal., and chalco to 510'.
17	-	N 80° W	44°	656	Little chalco at 542, end in andesite?
18	-	-	90°	803	Diorite, central fault at 740'.
19	-	-	90°	685	Andesite to 671. Diorite to end.
20	1948	West	60°	1575	Local minor chalco, mainly in non-breccia, non-dal.

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Hole No.	Year	Bearing	Dip	Depth	Remarks
21	1949	North	43°	956	Chloritic, fair chalco to 498. At 240, 1.66% copper over 5.2 ft. At 270, 1.00% copper over 10.0 ft.
22	-	North	45°	820	Slight local chalco to 66 ft.
23	-	North	45°	322	Scattered chalco to 189.
24	-	South	50°?	575	Fair scattered chalco to 471. At 281, 3.4% copper over 1.0 ft.
25	-	N 80° W	47°	232	Little chalco at 120.
26	-	North	45°	443	Shear near diorite contact. Low chalco.
27	-	S 80° E	45°	144	At 65 ft., 0.73% Cu and 2.31% Zn over 2.8 ft.
28	-	S 35° E	44°	103	Negative chalco, no assays.
29	1949	South	45°	822	Weak chalco throughout. Fault 700 to 750. 531-534, 1.01% Cu.
30	-	North	63°	598	Weak chalco to 165. Stringers chalco at 268 and 432 ft.
31	-	-	90°	1277	Chloritic to 258. Scattered chalco. At 100.5, 4" heavy chalco.
32	-	N 80° W	65°	636	Casing 4.0-6.5, 0.40 oz. gold, 7.35% Zn, 0.65% Cu 35.5-40.5, 3.62% Zn (No Au assay?) Cahlco along shears in diorite.
33	-	S 80° E	?	132	Diorite, scattered chalco.
34	-	S 80° E	62°	370	Massive sulfide stringers at 233, 237, 295 with zinc plus copper, not assayed.
35	-	S 80° E	50°?	242	Diabase to 87, no chalco.
36	-	North	42°	150	Diabase? Lot 10.
37	-	-	90°	788	Fair scattered chalco to 271 ft. Clusters chalco at 272, 290, 310, 320 and 322 ft.
38	-	-	90°	478	Scattered chalco to 326. Clusters chalco at 356, 360, 476 ft.

Hole No.	Year	Bearing	Dip	Depth	Remarks
39	1949	S 80° E	45°	310	181.5-182.5 quartz with pyrite. No assay
40	-	South	40°	347	Rhyolite plus breccia, no chalco.
41	-	S 80° E	77°	398	Faulting, some chalco in diorite and diabase
42	-	S 80° E	60°	344	Faulting, minor chalco 230-272.
43	1951	South	52°	535	Minor chalco at 300 ft.
44	-	-	90°	21	Diabase, magnetite, little chalco.
45	-	-	90°	53	Diabase, magnetite.
46	-	-	90°	28	Rhyolite, diabase, magnetite.
47	-	-	90°	44	Rhyolite, little chalco, diorite.
48	-	-	90°	55	Flow breccia.
49	-	-	90°	80	Flow breccia.
50	-	-	90°	70	Rhyolite.
51	-	-	90°	82	Rhyolite, fault, local fair py.
52	-	-	90°	70	Breccia, minor chalco at end.
53	-	-	90°	75	Breccia, rhyolite.
54	-	-	90°	90	Rhyolite.
55	-	North	60°	241	Rhyolite, diorite, monor chalco, fault.
56	1951	-	90°	80	Rhyolite, broken, minor pyrite.
57	-	-	90°	104	Rhyolite, local fair chlorite and chalco.
58	-	South	45°	280	Rhyolite with minor chalco to 130. And., local chalco, fault at 210-280.
59	-	N 10° W	45°	208	Diorite, rhyolite, local chalco.
60	-	-	90°	17	Diorite.

Hole No.	Year	Bearing	Dip	Depth	Remarks
60-A	1951	-	90°	25	Diorite.
61	-	-	90°	562	Mainly massive rhyolite, no chalco.
62	-	-	90°	21	Rhyolite, slight chlorite.
B-5	1945	North	60°	848	461-463.5, 1.46% Cu
63	1957	-	90°	1818	1772-1787, minor cpy in rhyolite breccia.

APPENDIX 3.

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Assessment work files and records of work done by Gan Copper Mines Limited, Northern Canada Mines Limited, Denison Nickel Mines Limited, Odyno Exploration & Developpement Ltee.

Published geological maps and reports.