

41010NW0096 2.3962 HALCROW

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RECEIVED

JUN 25 1981

MINING LANDS SECTION

REPORT ON THE GOSSAN RESOURCES PROPERTY,

32 W. 100' x 100' R36 372

HALCROW TOWNSHIP,

DISTRICT OF SUDBURY,

ONTARIO

by

W. O. Karvinen Ph.D.

August 30, 1980

great on this file

SUMMARY

Based on the examination of surface exposures and boulders in till, the present survey reveals no encouraging gold mineralization on the twenty unpatented claims held by Gossan Resources Ltd. in Halcrow Township, District of Sudbury. A few outcrops suggest the presence of a rock type (carbonatized tuff) favorable for gold mineralization, but because of extensive overburden, does not merit further exploration at this time.

Gold-bearing vein quartz boulders discovered 2250 feet to the south of the group in the 1930's and now covered by patented claim S-22186 represent the best mineralization in the area. The present investigation indicates these boulders to come from a source only a few hundred feet to the north.

It is recommended that exploration be done on the Gossan claims only after patented claims S-22155, S-22186 and S-22187 are acquired and after the source of the mineralized boulders is located and tested by overburden prospecting and diamond drilling. If the initial results prove encouraging, an expanded program, extending eventually into Gossan ground is recommended. If the patented ground cannot be acquired at reasonable cost, then no further monies should be expended on the Gossan claims.

INTRODUCTION

In June 1980, Gossan Resources Ltd. staked 20 claims in Halcrow Township, near Chapleau, Ontario. The staking covered some old gold showings as well as an area speculated to be the source of some high-grade gold float found approximately 2250 feet to the south of the property.

In July 1980 the writer spent four days mapping the property and examining and sampling the known showings in order to evaluate its potential for economic gold mineralization. In addition, the high-grade gold float, which had been last investigated in the 1930's was also located and examined to determine its distance of transport.

PROPERTY DESCRIPTION, LOCATION AND ACCESS

The property comprises twenty unpatented claims numerically identified as P-574700 to P-574706 inclusive; P-574695 to P-574699 inclusive; P-572579 to P-572583 inclusive; and P-574612, P-574614 and P-574615. The claims are in good standing until July 2, 1981.

The claim group is located in the northwest quadrant of Halcrow Township, approximately 21 air miles east of the town of Chapleau (Fig. 1).

Access is by float-equipped aircraft to Shunsby Lake, the north end of which is located within the group. The nearest accessible logging road is at Sawbill Lake, approximately 5 miles to the south.

PREVIOUS WORK

The area was extensively prospected during the 1930's, particularly after the discovery of gold at the Halcrow-Swayze property, located approximately one mile to the south of Gossans claim group. The Halcrow-Swayze was intensely explored by surface and underground diamond drilling in 1933 and 1934. A shaft was put down to 371 feet and three underground levels established. The exploration and development indicated "over a million tons of low-grade gold-bearing material (grade unspecified)" of which "125,000 tons above the 350-foot level averaged 0.12 oz./ton" (Energy, Mines and Resources, Ottawa).

Signs of trenching and pitting are common on the Gossan ground. In addition to the earlier work, the area was carefully prospected and sampled by prospectors W. Hammerstrom and W. J. Koski in the mid-40's. Results of their work plotted on an old 1946 sketch map indicate five outcrops considered to be favourable for gold mineralization. All were sampled by Hammerstrom, but only one showing returned a value of \$4.20 (0.12 oz. Au/ton) from a grab sample. The favourable areas consisted mainly of sheared rusty zones, most measuring less than 10 feet in width.

Hammerstrom and Koski also sampled the high-grade gold float on patented claim S-22186 located 2250 feet south of the south boundary of the present claim group. A grab sample of a vein quartz boulder with pyrite and arsenopyrite yielded 3.65 oz. Au/ton. Based on their prospecting, Hammerstrom suggested the float could originate from beneath a pond, located

some 3500 feet north, near the area where their best gold showing existed in outcrop. His theory, however, was never tested.

As a result of an airborne electromagnetic survey to locate massive base metal deposits, one anomaly within the present claim group was drilled in 1977 by Granges Explorations AB. The drill hole, located on Gossan's claim P-574695, southeast of the pond postulated to be the source of the float, intersected "dacite tuff" and "graphitic argillite" carrying 10 to 30% pyrite over a few feet. No analyses for gold are reported.

Since the recent surge in the price of gold, most old prospects in the area have been re-staked, but no known active exploration is being carried out in the immediate area.

GENERAL GEOLOGY

Geologically, the Gossan property is located at the west end of the "Swayze Belt" which makes up part of the much larger Abitibi Greenstone Belt. The eastern boundary of the Kapuskasing Structural sub-province cuts across the western extremity of the claim group.

Rocks of the Swayze Belt consist of a typical sequence of Archean mafic and felsic volcanics and volcanioclastic sediments intruded by granitic stocks and smaller mafic bodies. In the vicinity of the Gossan property, the main rocks exposed have been mapped as andesitic flows and tuffs by Donovan (1968). According to his structural interpretation, the claim group covers part of the nose of an easterly-plunging syncline.

Mapping by the writer indicates the property to be underlain mostly by mafic tuff intercalated with ropey to pillowed

mafic lava (probably basalt). Granitic rocks are exposed in the northwest corner. An outcrop of sediments, located in the middle of the group (Donavan, 1968) was not examined.

On most outcrops, primary compositional layering is evident and on some exposures this can be seen cut by a later penetrative foliation. In some places, shearing along the foliation has completely obliterated the primary structures. Both planar features trend southeasterly. Mineral lineations indicate a steep (60 degrees) plunge to the southeast.

Although little evidence exists for the presence of a syncline in the area as suggested by Donovan (1968), the strong penetrative, tectonic fabric in the rock indicates at least one intense phase of deformation.

Quaternary deposits in the area consist of eskers and terminal moraines which cover a large part of the property. In remaining areas till is the predominant cover.

ECONOMIC GEOLOGY

A few exposures of bedrock on the property reveal the presence of an important rock type which could carry economic gold mineralization. This rock is a carbonatized tuff. On the enclosed map, it has been further sub-divided into ankeritic and delomitic (map units 2a and 2b). The quartz stringers from which Hammerstrom obtained a value of 0.12 oz. Au/ton as well as the predominant rock type in the basal till in which the high-grade float occurs consist of this material. As is common in many Archean gold areas, the main part of the carbonatized rock is ankeritic, whereas only few tens of feet of the

contact area are dolomitic. Sulfides, predominantly pyrite with traces of chalcopyrite are common.

Using boulders and the presence of dolomitic alteration in bedrock, the approximate position of the carbonatized tuff was determined as shown on the map. The carbonatized tuff near the high-grade float boulders is separated by 2500 feet of eskér material from similiar carbonatized tuff to the north at the pond, but their trends and similarity suggest they may be one and the same unit.

Contrary to Hammerstrom's suggestion that the float may originate from an area 3500 feet to the north, based on the writer's examination, it appears that the high-grade vein quartz boulders have travelled only a few hundred feet. Although the trenches and pits are old, they still expose a thick section of till from which a brief stone count revealed the clast population to consist predominantly (95%) of angular carbonatized tuff and vein quartz. Based on this and the fact that the vein boulders occur deeper in till in the up-ice direction, it appears that the source is in the swamp some 300 feet to the north. An old diamond drill hole casing (45 degrees in a southwesterly direction) put down under the boulders found on surface presumably missed the source.

Grab-samples of float material, consisting of ankerite and smokey quartz with pyrite and arsenopyrite yielded the following values of trace, 0.05 oz. Au/ton and 0.07 oz. Au/ton.

A grab sample of pyritic dolomitic tuff taken from an outcrop north of the boulders yielded no values in gold.

Grab samples of vein quartz material and pyritic carbonatized tuff from near the pond returned only trace values in gold.

Other areas of favourable outcrop as indicated by Hammerstrom and Koski were examined but found to be small and of no economic significance.

CONCLUSIONS

1. The high-grade gold float located on patented claim S-22186 does not appear to originate from the Gossan Resources Ltd. property.
2. The favourable rock from which the float originates appears to strike into Gossan ground and may actually be the same as that found in outcrop on that property. Even if this is the case, it does not mean that the entire length of the favourable carbonatized tuff, if any of it, carries economic gold mineralization. Many similar carbonatized rock units are known in the Archean volcanics of the shield which carry no economic gold mineralization but do contain many showings and prospects.
3. The proliferation of mineralized vein quartz boulders, some carrying high-grade gold, in good basal till on patented claim S-22186 suggests a source which could contain economic gold mineralization. The exact location of the source should be relatively easy to determine using modern overburden prospecting techniques.

RECOMMENDATIONS

1. The patented claims S-22155, S-22186 and S-22187 immediately south of the claim group should be acquired prior to any further exploration on the Gossan ground. If this is impossible, it is recommended that no further work be done on the property.

2. If the additional claims listed above are acquired, an exploration program consisting of overburden trenching by backhoe, overburden drilling and diamond drilling is recommended. First the location of the high-grade float source should be determined by overburden prospecting followed by diamond drilling. Cost of this initial phase of work would be: overburden trenching and exploration: \$10,000; diamond drilling: \$30,000. If results are encouraging, a second phase of work involving follow-up diamond drilling and further overburden prospecting along the carbonatized tuff zone to the north into Gossan ground is recommended.

Sources of Information

- Donavan, J. F. Geology of Halcrow-Ridout Lakes Area.
1968 Dist. of Sudbury, Ont., Dept. Mines,
GR 63, 45p.
- Kindle, E. D. Gold Occurrences of Ontario East of
1936 Lake Superior, Geol. Survey of Canada
Mem. 192, 167p.
- Laird, H. C. Recent Developments in the Swayze and
1935 West Shiningtree Areas; Ont. Dept. Mines
Vol. 44, Pt. 7, pp 38-47.
- Rickaby, N. C. Geology of the Swayze Gold Area;
1934 Ont. Dept. Mines, Vol. 43, pt. 3, pp. 1-36.
- Thurston, P. C., G. M. Siragusa and R. P. Sage
1977 Geology of the Chapleau Area, Districts
of Algoma, Sudbury and Cochrane.
Ont. Division of Mines, GR. 157, 292 p.

C E R T I F I C A T E

I, William Oliver Karvinen, of R. R. #2, Wahnapiatae, Ontario, a geological consultant and President of W.O. KARVINEN & Associates Ltd., do hereby certify that:

The information contained in this report is accurate and correct;

I have no interest directly or indirectly in the shares or securities of Gossan Resources;

I hold a Doctorate of Philosophy and an Honours B.Sc. in geology from Queen's University (1974 and 1968) and a Master of Science in geology from the University of British Columbia (1970);

I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.

W O Karvinen
W O Karvinen

Wahnapiatae, Ontario
August 30, 1980

Dr. W. O. Karvinen



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Jean Tremblay
Acting Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Madam:

We have received reports and maps for a Geological survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims P 572579 et al in the Township of Halcrow.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone 416/965-1316

js

cc: Gossan Resources Ltd.,
Winnipeg, Manitoba

August 11, 1981

2.3962

W.O. Karvinen
R.R. #2
Wahnapitae, Ontario

Dear Sir:

Re: Geological Survey submitted on Mining Claims P. 572579
et al, in Halcrow Township.

Enclosed are the plans (in duplicate) for the above-mentioned survey. In order to complete your submission, please show the following information on the plans and return them to this office:

- a) Signature of the person responsible for the work
- b) Claim lines and numbers
- c) Outcrop designated by colour and by a letter or number corresponding to the rock type as listed in the legend
- d) Character of the overburden (boulder, clay, gravel, sand, clay) and distribution of swamp, muskeg and forest cover.

For further information, please contact Mr. F.W. Matthews at 416/965-6918.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

AE/bk

Encl.

cc: Office of the Mining Recorder
Timmins, Ontario

1982 03 29

2.3962

W.O. Karvinen
R.R. #2
Wahnapiatae, Ontario
POM 3C0

Dear Sir:

Re: Geological Survey submitted on mining claims P 572579
et al in Halcrow Township

May I please have a reply to my letter of August 11, 1981,
a copy of which is enclosed.

If we have not received a reply by April 6, 1982, the mining
recorder will be notified and your credits will be deleted.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

J. Skura/amc

cc: James Willard Campbell
c/o Gossan Resources Limited
Winnipeg, Manitoba

cc: Mining Recorder
Timmins, Ontario

Encl.

*Campbell notified by
phone April 1/82
- data on way
- hold until received
from.*

W. O. KARVINEN & ASSOCIATES LTD.

Mineral Exploration • Consulting • Overburden Drilling

RR 2, Wahnapiatae, Ontario P0M 3C0

705-694-4307

April 1, 1982

Mr. F.W. Mathews

Re Geological Survey of claims P572579 et al.
in Hallow Township. (file 2.3962)

Herein please find two corrected/modified
geologic maps of the above group. Hope this is adequate.

Sincerely,

W. O. Karvinen

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APR - 2 1982

MINING LANDS SECTION

1982 04 06

2.3962

Mr. W.O. Karvinen & Associates Ltd.
RR2, Wahnapiatae
Ontario
POM 3C0

Dear Sir:

Re: Geological Survey submitted on mining claims P 572579 et al
in Halcrow Township

I regret that I must return these maps (in duplicate) to you again. However it is a requirement that traverse lines must be shown on these maps. Also where no outcrops have been found the character of the overburden (boulder clay, gravel, sand, clay) and distribution of swamp, muskeg, and forest cover must be shown.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

A. Barr/amc

cc: James Willard Campbell
c/o Gossan Resources Limited
Winnipeg, Manitoba

cc: Mining Recorder
Timmins, Ontario

February 16, 1983

2.3962

W.O. Karvinen
R.R. # 2
Wahnapitae, Ontario
POM 3C0

Dear Sir:

Re: Geological Survey submitted on Mining Claims P 572579 et al
in the Township of Halcrow

Enclosed is a copy of our letter dated April 6, 1982, requesting additional information for the above mentioned survey.

Unless you can provide the required data by February 26, 1983, the mining recorder will be directed to cancel the work credits recorded on June 23, 1981.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

D.Wice

Encl.

cc: Mining Recorder
Porcupine

cc: James Willard Campbell
Winnipeg, Manitoba

July 6, 1983

2.3962

W.O. Karvinen
R.R.#2
Wahnapitae, Ontario
POM 3C0

Dear Sir:

RE: Geological Survey submitted on Mining Claims P 572579
et al in the Township of Halcrow

Returned herein is the geological map (in duplicate) for the above-described survey.

In order to complete your submission please show the following information on the plans:

- a) signature of the person responsible for the work
- b) claim lines and numbers
- c) outcrop designated by colour corresponding to rock type as listed in the legend
- d) characteristic of overburden (boulder, clay, gravel, sand, clay) and distribution of swamp, muskeg and forest cover
- e) traverse lines to be shown

This is the second time these plans have been returned to you for the same information. If we do not receive a reply from you by July 22, 1983, the mining recorder will be directed to cancel the work credits recorded on June 23, 1981.

For further information, please contact Mr. F.W. Matthews at (416) 965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Blodk, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3

S. Hurst:mc
Encl.

cc: Mining Recorder
Timmins, Ontario

cc: James W. Campbell
Winnipeg, Manitoba

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2.3962

1983 08 10

Mr. William L. Good
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

James Willard Campbell recorded 40 days Geological assessment work credits on each of mining Claims P 574700 to 706 inclusive; P 574695 to 699 inclusive; P 574612; P 574614-15; P 574579 to 583 inclusive on June 23, 1981.

Additional information has been requested and not submitted.

You are hereby authorized to delete the work credits recorded on June 23, 1981 from each of the claim record sheets. Please inform the recorded holder accordingly.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-1380

S. Hurst:mc

cc: James Willard Campbell
c/o Gossan Resources Limited
52 Donald Street
Winnipeg, Manitoba
R3C 3Z6

cc: W.O. Karvinen
R.R.#2
Wahnapitae, Ontario
POM 3C0

2.3962

1983 08 16

2.3962

Ministry of Natural Resources
Resident Geologist
60 Wilson Avenue
Timmins, Ontario
P4N 3W2

Dear Sir:

RE: Geological Survey on Mining Claims P 572579
et al in Halcrow Township

Further to my letter of July 6, 1983, which requested additional information, the data has not been assessed as this additional information was not received.

Enclosed is a copy of the report and maps for your information.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

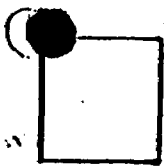
Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: (416)965-1380

S. Hurst:mc

cc: Mining Recorder
Timmins, Ontario



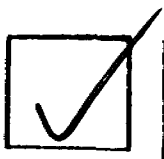
GEOLOGICAL BRANCH



MR. R. BARLOW _____ DATE OF APPROVAL _____ 19 _____

SIGNATURE _____

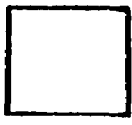
COMMENTS: _____



MR. C. KUJSTRA _____ DATE OF APPROVAL: July 23 1981

SIGNATURE: Kujstra

COMMENTS: _____



DR. I. THOMSON _____ DATE OF APPROVAL _____ 19 _____

SIGNATURE: _____

- maps to be returned
- not signed.
- no claim lines ✓
- no claim lines and numbers ✓
- no contours - designated by colour ✓
- no overburden ✓
- ~~Scale of map not right~~
anything else

scale OK.



Ministry of
Natural
Resources

60 Wilson Avenue,
Timmins, Ontario,
June 30, 1981.

Notification of recording

of assessment work credits

2,396.2

Lands Administration Branch
Mining Lands Section
Ministry of Natural Resources
Room 1617, Whitney Block
Queen's Park, Toronto
M7A 1W3

RECEIVED

JUL 2 1981

MINING LANDS SECTION

Date of recording of work: June 23, 1981.

Recorded holder: James Willard Campbell,

Address: c/o Gossan Resources Limited, 52 Donald Street,
Winnipeg, Man. R3C 3Z6

Township or Area: Halcrow Township

Type of survey and number of Assessment days credit per claim	Mining claims
Geophysical	
Electromagnetic _____ days	P-574700-706 incl.,
Magnetometer _____ days	P-574695-699 incl.,
Radiometric _____ days	P-574612,
Induced polarization _____ days	P-574614-615,
Section 86 (18) _____ days	P-574579-583 incl.
Geological <u>40</u> days	
Geochemical _____ days	
Man days <input checked="" type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/>	

Notice to recorded holder:

Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.

Reports and maps are being forwarded to the Lands Administration Branch with this letter.

Henry
Acting Mining recorder
c.c.Gossan Resources Limited.