SUMMARY REPORT

BISLEY TOWNSHIP PROSPECTING PROJECT 1992

DISTRICT OF TIMISKAMING, ONTARIO

LARDER LAKE MINING DIVISION

NTS 42A/8E, 32D/5W

Funding provided by a grant under the
Ontario Prospectors Assistance Program (OPAP)

File No. OP92-689

Dean R. Cutting, BSc
Geologist

Rouyn-Noranda (Quebec)
January 1993

Euclyde Duquette
Prospector/Grantee

C.P. 24, Rouyn-Noranda (Québec) J9X 5C1
Tel/Fax: (819) 797-2430
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Compilation Plan - 1992 Prospecting Project, Bisley Township, Ontario, Scale 1:15, 840 .......................... 1
SUMMARY

Bisley Township is located in the District of Timiskaming, Ontario, Larder Lake Mining Division. It is immediately to the north of the town of Kirkland Lake at a distance of approximately 20 km.

The study area is underlain by intermediate to mafic volcanic rocks of the Blake River Group and associated mafic intrusive bodies. These rocks have undergone low-grade regional metamorphism to the lower greenschist facies rank. In addition to having been subjected to significant folding, the area is transected by several strong faults of west, north-west, north-east, and north orientations.

The overall objective of the project was to broadly prospect and sample some of the poorly explored areas of Bisley Township, which, up to recent years, has only had limited ground-based accessibility. The principal geologic targets for the project area were lode gold deposits (Francoeur-Mine Type), volcanogenic massive sulphide deposits (Iso-Magusi Type), or possibly Cu-Ni-Pt mineralization associated with the mafic intrusions.

During the spring and early summer of 1992, a staking rush of sorts for Diamond speculation unfortunately removed a large part of the northern band of felsic rocks from prospecting access. Although much of the area was removed from prospecting, some time was still spent in general verification between the claim blocks. The major part of the work program was moved to the more south-west and south-central areas of the township.

During the summer field season, approximately 45 man-days of prospecting activities in the rugged area were completed. Of the many samples collected, the geologist selected 21 with ample sulphide content or geologic interest to be sent for assay evaluation. No anomalous values were obtained from the samples assayed.
The details and results of this 1992 prospecting project funded by a grant from the Ontario Prospectors Assistance Program (OPAP) File No. OP92-689 are presented in this report. A copy of the OPAP Final Submission Form 1992 can be found in Appendix I.
1.0 INTRODUCTION

This report is a review of the information collected from the reconnaissance prospecting work completed in the southern and western areas of Bisley Township (NTS 42A/8E, 32D/5W) during the 1992 field season. Funding for this program was provided by a grant from the Ontario Prospectors Assistance Program (OPAP). The area is situated in the District of Timiskaming, Ontario (Figure 1).

The medium to long-term objective of the "regional" prospecting project was to locate sound mineral exploration targets (hopefully with mineral showings) for staking with an intent to eventual option to a company for more advanced exploration work.

Exploration work in the past (including ground prospecting) has identified many mineral showings in the rocks of the Blake River Group volcanic assemblage between the Destor-Porcupine (to the north) and the Cadillac-Larder Lake (to the south) deformation corridors on the Quebec side of the border. As one moves away from the regional fault corridors toward the central part of the fault block and west into Ontario, the number of identified showings decreases markedly.

It was reasoned that although the rocks of the Blake River Group do not appear to change radically (on a regional scale) crossing the artificial provincial border there must be another explanation for the lower number of showings in Ontario, likely due in part to a lack of ground work in the area (between the main deformation corridors to the north and south) caused by the difficulty of terrestrial access during the summer season. In recent years, logging operations have facilitated, in a limited way, the access to most of Bisley Township.

Several possible mineral exploration targets in the study area were identified using Ontario Government geological mapping and compilations. The 1992 program
Figure 1.
General Location of 1992 OPAP Prospecting Project.
Adapted from Jensen 1972.

Scale 1" = 25 miles
Drawn by N.C. Bisley
Date: Dec. 1992

Township approved
proposed prospecting and sampling in the area concentrating on units believed to host possibly, or relate to, the following types of mineral deposits:

a) Cu, Zn massive sulphides or stringer zones associated with felsic volcanic units or felsic/mafic volcanic unit contacts;

b) Au mineralization possibly associated with the numerous faults or shears crossing the area;

c) Cu-Ni (?Pt) mineralization associated with the "large" mafic intrusions into the Blake River volcanics. Several of these types of bodies have been found to be enriched in Pt/Pd in Quebec. Occasionally, these bodies have been found to host, or be in proximity to, gold deposits (ie., Francoeur Mine or El Coco Deposit).

During the 1992 field season, approximately 45 man-days of direct ground prospecting were completed in and around the study area. A total of 40 samples were collected in the field with 21 being selected by the geologist for assaying based on their sulphide content or geological interest. The samples were assayed geochemically for a spectrum of elements including Au, Ag, Co, Cu, Fe, Mn, Mo, Ni, Pb, and Zn.
2.0 AREA DESCRIPTION

2.1 Location and Access

The 1992 prospecting area lies near 48° 18' north latitude, 79° 58' west longitude in the southern and western parts of Bisley Township, District of Timiskaming, Ontario. The area, of approximately 25 square miles, lies 10 miles (16 km) north of the town of Kirkland Lake (Figure 2).

The property is accessed on the ground in three ways (Figure 3). The first access, to the southwest part, is by a gravel road north from the town of Kirkland Lake terminating at the western end of Lauramay Lake. A branch to the east from this road accesses the area to the south and east of Mount Blewett.

The other two accesses are gravel logging penetration roads from Highway 672 which passes to the west of Esker Lakes Provincial Park. One of these roads forks off to the west just to the south of the park. This road opens the area of the south-east extremity of the township. The northern part of the township is accessed by another logging penetration road which forks off to the west immediately north-east of the north-east corner of the park.

Final access to the areas prospected was by ATV machines on spur roads or freighter canoes on the bodies of water, followed by overland foot traverses. Currently, essentially all areas of Bisley Township are more or less accessible by terrestrial means.

2.2 Topography and Vegetation

The prospecting area of Bisley Township is covered by lake sediments and esker deposits of glacial origin through which the bedrock is exposed. Good rock exposures occur in the central and western parts of the township. The large outcrop exposures form knobs or ridges separated by swamps. Topographic relief in
the area is on the order of 25 to 175 feet (7.5 m to 54 m). General topographic features of the area are shown in Figure 3.

Vegetation in the area is variable ranging from spruce swamp to jack pine, spruce, poplar, and birch ridges. The spruce budworm epidemic a number of years ago killed off most of the balsam fir in the area leaving a large number of blowdowns covering the forest floor. Logging operations harvesting wood from several areas has helped with general access; however, thick slash left on the ground and heavy undergrowth makes traversing locally very difficult.
3.0 PREVIOUS WORK

An exhaustive file search regarding previous geological survey work in Bisley Township was not completed as an integral part of this project. No work is on file in the Ministry of Natural Resources office in Kirkland Lake pertaining to the area of primary interest, the southwest corner of the township, except for some airborne magnetic and electromagnetic surveys immediately to the northeast in the township.

The previous work in the township appears to have been concentrated along the bands of felsic volcanic rocks in north-central and south-east areas, the most likely targets for base-metal mineralization. Most of the work reported is ground geophysical surveys, mostly magnetics and electromagnetics. Only a few days of this project were spent prospecting in the vicinity of these felsic volcanic units due to the fact that the principal exposures of the bands were already staked, thus were not available. Time was not expended completing detailed compilations of the previous works.

The entire area has been covered over the years by the usual spectrum of government regional airborne surveys (Aeromagnetic, Electromagnetic, Input, and Gravity). The most applicable previous work reference for this program has been the regional geologic mapping by L.S. Jensen in 1968, published in 1972 under ODM GR 103 (refer to Section 7.0).
4.0 GEOLOGICAL SETTING

4.1 Regional

The Bisley Township prospecting area is located in the Abitibi Subprovince of the Superior Structural Province of the Canadian Precambrian Shield. The area is underlain by Early Precambrian (Archean) volcanic and intrusive rocks forming part of the Abitibi Greenstone Belt. The Abitibi Greenstone Belt is approximately 800-km long and 240-km wide extending from east of Chibougamau, Quebec, to west of Timmins, Ontario. The belt is composed of volcanic rocks and lesser amounts of sedimentary rocks which have been intruded by rocks of ultramafic to felsic composition (Jensen, 1972).

The precambrian rocks of Bisley Township consist of a meta-volcanic assemblage which has been intruded by mafic dykes and stocks. The rocks have been regionally metamorphosed to lower greenschist facies rank. Locally, in proximity to the intrusions, the volcanics exhibit some evidence of contact metamorphism.

4.2 Local

The rocks of the prospecting area have been included as a part of a series of studies by a number of geoscientists over the last 20 to 25 years. The most relevant of these studies to the objectives of this project has been the mapping and interpretation by L.S. Jensen as reported in ODM GR 103 in 1972. Detailed geological mapping was not included as an integral part of the current project; therefore, the geological information base will be adapted from Jensen's work. If a more detailed treatise of the geological interpretation of the area than is presented in the summary is required, readers are invited to refer to the above-mentioned report.

Jensen reports that the project area is part of a larger block of volcanic and intrusive rocks lying between two major deformation corridors, the Destor-Porcupine, to the north, and the Cadillac-Larder Lake Fault, to the south. This area is believed
to be the site of volcanism during the Early Precambrian and is now included in the central part on the western end of a large east-trending (east opening) synclinonium.

The volcanic rocks observed in the study area belong to the Blake River Group, the intrusives being of syn-volcanic or later origin. The volcanic rocks observed during the course of this project were generally of intermediate to mafic composition (andesites or basalts) of massive, breccia, or pillowed character, generally accepted to be in the lower part of the sequence. Many of the flow units described by Jensen are interpreted to be very thick, in the order of several hundred feet.

Felsic volcanic rocks (dacite or rhyolite) are apparently quite scarce in the area prospected. Little was observed during the project, only seen in the extreme south-east of the township and in the band to the north.

The intrusive stocks, sills, or dykes in the study area are generally quite large and of intermediate to mafic composition (diorite or gabbro). The mafic intrusives observed while prospecting appear to be extremely massive with a medium to fine grain size. Although no contacts with the country rock were seen, it is generally believed that contacts are likely steep. Table 1 summarizes the lithologic units of the area as interpreted by Jensen (1972).

The regional metamorphic effects on the rocks observed have been minimal to the lower greenschist facies rank. Locally, some light chlorite alteration was noted.

Structurally, the area is quite complex lying on the southern limb of the large east-west synclinion. The southern part of Bisley Township has been refolded in a series of south-east trending doubly plunging folds. The effect on the rocks has been minimal with very little observed schistosite or stretching. Numerous faults of variable orientations are interpreted to cross the area although few have been directly
<table>
<thead>
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<th>Table of Lithologic Units, Bisley Prospecting Project Area.</th>
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<th>Table 1.</th>
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<tr>
<td>TABLE OF LITHOLOGIC UNITS MELBA AND BISLEY TOWNSHIPS</td>
</tr>
</tbody>
</table>

**CENOZOIC**

**RECENT**
- Peat, alluvium

**PLEISTOCENE**
- Gravel, sand, silt, varved clay

**Unconformity**

**PRECAMBRIAN**

**ARCHEAN**

**LATE MAFIC INTRUSIVE ROCKS**
- Quartz diabase (dikes)

**Intrusive Contact**

**FELSIC INTRUSIVE ROCKS**
- Hornblende diorite, monzonite porphyry

**Intrusive Contact**

**EARLY MAFIC INTRUSIVE ROCKS**
- Gabbro, quartz gabbro, hornblende gabbro

**Intrusive Contact**

**FELSIC VOLCANIC ROCKS**
- Pillow lava, flow breccia, pyroclastic rocks

**INTERMEDIATE VOLCANIC AND SEDIMENTARY ROCKS**
- Massive lava, pillow lava, flow breccia, pyroclastic rocks, argillite

**MAFIC VOLCANIC ROCKS**
- Basalt, andesite, massive lava, pillow lava, flow breccia
observed. Figure 4 presents the principal structural elements of the area and Figure 5, the general geological features.

4.3 Economic

No economic mineral mineralization has to date been discovered in Bisley Township. The area has been prospected off and on for gold and base metals over the years since the gold discovery in Kirkland Lake in 1906.

In the area, locally, quartz-carbonate veining has been found to have sulphides associated with minor values of gold and copper. Disseminated and locally massive sulphides (generally pyrite) have been noted in association with the intermediate and felsic flow units.

The discovery of kimberlite pipes hosting diamond mineralization in the Blake River volcanics has prompted a significant staking rush in the area during the spring/fall season this year. Punctual aberrations in the aeromagnetic surveys have, as a rule, been staked. To date, this staking is speculation, no economic diamond mineralization has been identified in Bisley Township.

Numerous mineral showings and/or mines in rocks similar to those of the prospected area are present within a radius of 30 miles (50 km). Although prospecting over the years (reported or unreported) has not discovered any economic mineralization, factors such as the local presence of disseminated sulphides, structural deformation, quartz-carbonate-sulphide veining, and favorable lithologies lead to the belief that the area does have a potential to host an economic deposit. Further investigation will be required.
Bisley Prospecting Area

Figure 4. Principal Structural Elements

Adapted from Jensen 1978.
5.0 PROSPECTING WORK PROGRAM

5.1 Method

Broad-based regional reconnaissance prospecting was the primary objective of this 1992 OPAP project. During the field season, a total of 45 man days representing approximately 45 km of traverse was accomplished. Forty hand samples were collected during the course of the field work. After examination by the project geologist, 21 were selected for mult-element geochemical analysis based upon sulphide content or geological interest features (i.e., veins, alteration, etc.). The work covered several sections of Bisley Township (refer to Plan #1 in the pocket for detailed information). Due to poor weather conditions during the 1992 field season, the time schedule was retarded and transportation costs (mileage) were increased from initial budget estimations.

Prospecting was done using 1" to 1/4 mile (or 1/2 mile) scale geological base maps; 1:50,000 topographic maps; or for the south-east corner of the townships where the recent network of bush roads was required, air photographs (1:20,000 scale) were used for ground control and data plotting (the author wishes to express at this point a sincere thanks to the Forest Inventory Branch of the Ontario Ministry of Natural Resources for kindly providing the project with photocopies of the four photographs required to facilitate the work program without endless red tape and administrative problems). Individual traverses were run using standard compass and topofil methods. "Grub-hoe prospecting" was done along traverse lines and around any outcrop exposures encountered. Sampling sites where rocks of possible economic interest (i.e., containing sulphides) or geologic interest (i.e., changes in rock types) were collected, numbered, and orange-flagged.

5.2 Results

The prospector, technician, and geologist on the project each have many years of experience and can recognize the geologic features with economic potential (veins,
faults, sulphides, and certain alterations). To save time and money, only samples believed to be of potential or rock type changes where collected in the field. The samples were returned to the geologist for a more detailed examination and description before being selectively sent for multi-element geochemical analysis. Sending rocks with no sulphide content for analysis in this geologic setting was believed to be wasteful and was, as much as possible, avoided. Summary descriptions and results are presented in Table 2. Detailed sample descriptions will be found in Appendix II, assay certificates in Appendix III. Sample locations are presented on the General Compilation Plan in the Pocket of this report.

An evaluation of the results presented in Table 2 makes it quite clear that except for a couple of minor geochemical aberrations, no significant economic values were obtained from the prospecting samples. Results were rather disappointing, keeping in mind that these 21 samples represented the "best-looking" rocks encountered over the kilometers walked and the hundreds of "grub-hoe holes" stripped.
### TABLE 2. Summary Grab Sample Descriptions and Results

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Rock Type</th>
<th>Alteration</th>
<th>Mineralization</th>
<th>Au ppb</th>
<th>Ag ppm</th>
<th>Co ppm</th>
<th>Cu ppm</th>
<th>Fe %</th>
<th>Mn ppm</th>
<th>Mo ppm</th>
<th>Ni ppm</th>
<th>Pb ppm</th>
<th>Zn ppm</th>
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<td>13</td>
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<td>1.73</td>
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<td>Tr-1% Py, Tr Cpy</td>
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<td>61</td>
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<td>67</td>
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<td>24</td>
<td>29</td>
<td>5.27</td>
<td>600</td>
<td>&lt;1</td>
<td>83</td>
<td>2</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>96633</td>
<td>V1</td>
<td>L-M Car</td>
<td>Tr-1% Py, Tr + Cpy</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>29</td>
<td>51</td>
<td>4.90</td>
<td>565</td>
<td>&lt;1</td>
<td>123</td>
<td>8</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>96634</td>
<td>V1</td>
<td>L-M Car</td>
<td>Tr-2% Py, Tr + Cpy?</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>27</td>
<td>44</td>
<td>4.64</td>
<td>555</td>
<td>&lt;1</td>
<td>101</td>
<td>6</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>96635</td>
<td>V1/V2</td>
<td>L + Car</td>
<td>Tr-2% Py, Tr Cpy</td>
<td>45</td>
<td>&lt;0.5</td>
<td>52</td>
<td>29</td>
<td>6.72</td>
<td>530</td>
<td>&lt;1</td>
<td>96</td>
<td>460</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>96636</td>
<td>I3</td>
<td>Tr Ep</td>
<td>Tr Py</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>19</td>
<td>5</td>
<td>5.66</td>
<td>670</td>
<td>&lt;1</td>
<td>12</td>
<td>152</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>96637</td>
<td>I3</td>
<td>---</td>
<td>Tr Py</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>19</td>
<td>14</td>
<td>4.92</td>
<td>640</td>
<td>&lt;1</td>
<td>26</td>
<td>36</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>96638</td>
<td>I3</td>
<td>---</td>
<td>Tr Py</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>18</td>
<td>43</td>
<td>4.74</td>
<td>600</td>
<td>1</td>
<td>24</td>
<td>6</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>96639</td>
<td>V3</td>
<td>---</td>
<td>Tr Py</td>
<td>&lt;5</td>
<td>&lt;0.5</td>
<td>15</td>
<td>46</td>
<td>3.72</td>
<td>495</td>
<td>1</td>
<td>62</td>
<td>110</td>
<td>58</td>
<td></td>
</tr>
</tbody>
</table>

**Abbreviations:**

- V1: Felsic Volcanic
- V2: Intermediate Volcanic
- V3: Mafic Volcanic
- I3: Mafic Intrusive
- L: Light
- M: Medium
- Tr: Trace
- Sil: Silification
- Ser: Sericization
- Q/C: Quartz/Carbonate
- Sph: Sphalerite
- Py: Pyrite
- Cpy: Chalcopyrite
- Po: Pyrhotite
- Ep: Epidote
- Chl: Chloritization
- Car: Carbonatization
- Vts: Veinlets
6.0 CONCLUSIONS AND RECOMMENDATIONS

The objective of this project was to ground prospect in a "shotgun" pattern certain areas of Bisley Township for gold and basemetal mineralization associated with the rocks of the Blake River Group. This year saw significant staking activity in the north, central, and south-east areas of the township associated with diamond speculation acquisitions. Due to the intensity of the rush, block staking, and long-time periods before requirement to register, the claim map changed very frequently. Many of the more interesting proposed areas (particularly the band of felsic volcanics to the north) were not accessible to this project due to their having been staked during post-project proposal and pre-groundwork phases. We also found that in spite of our precautions (unfortunately and impractically not on a daily ministry verification basis) and much to our chagrin, a small part of the prospecting was mistakenly done on staked ground. Some areas were staked after this program had finished. All the traverses and results presented in this report will be freely made available to land title holders if requested.

No significant results were obtained from the prospecting samples collected during the project. This finding is generally disappointing, but well understood to be part of the mystique of prospecting. Many miles must be prospected to find a mineral showing; evidently our mile will be sometime in the future.

It is still believed that the Bisley Township area holds potential for hosting economic mineralizations. More thorough geologic mapping, geochemical surveys, geophysical surveys, and broad scale geological interpretation will be required to unlock the deep-seated treasures of the region.
7.0 REFERENCES

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1972: Geology of Melba and Bisley Townships, District of Timiskaming, Ontario Division of Mines, GR 103, 27 p. Accompanied by Map 2252, Scale: 1 inch to 1/2 mile.

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1975: Geology of Clifford and Ben Nevis Townships, District of Cochrane; Ontario Division of Mines, GR 132, 55 p. Accompanied by Map 2283, Scale: 1 inch to 1/2 mile.

Jensen, L.S.


Jensen, L.S. and Langford, F.F.

1985: Geology and Petrogenesis of the Archean Abitibi Belt in the Kirkland Lake Area, Ontario; Ontario Geological Survey, Miscellaneous Paper 123, 130 p. Accompanied by Maps P2434 and P2435, Scale 1:63,360 or 1 inch to 1 mile and sheet of microfiche.
8.0 STATEMENT OF QUALIFICATIONS

This statement certifies that:

- I reside at 644 Place du Cinquantenaire, Rouyn-Noranda, Quebec.
- I graduated from Dalhousie University, Halifax, Nova Scotia, with a Bachelor of Science in Geology in 1980.
- I have been practicing as a mining/exploration geologist since 1980.
- I am a member, in good standing, of the following associations:
  - Association professionnelle des géologues et des géophysiciens du Québec
  - Canadian Institute of Mining, Metallurgy, and Petroleum
  - Prospectors and Developers Association of Canada
  - L’Association des Prospecteurs du Québec
  - Porcupine Prospector’s Association
- This report considers all pertinent information available on the study area to the best of my knowledge as well as personal observations in its presentation, conclusions, and recommendations.

Dean R. Cutting, BSc
Geologist
APPENDIX II

Bisley Township Prospecting Project 1992
Detailed Sample Descriptions
Sample Sheet:
Location: Bisley Township
Name: Dacite/Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Qtz vein with Dacitic wall rock
- Sulfide, disseminated in both Qtz vein and wall rock

Names
Sample Number: 96619
Collected By: ED/JRC
Age
Archean
Huronian
Paleozoic
Pleistocene

Sample Type
Rock
Soil
Water
Sediment

Alteration
Chloritization
Sericitization
Silicification Tr
Carbonatization M+
Serpentinization
Greisen

Vein
Host Rock
Wall Rock

Sample Type
Channel Sample across

Sampled By
Paleozoic

Sampling Method
Inplace
Grab Sample, O.C., Dump, Float

Rock Type
Volcanic Intrusive Sediment
Felsic
Intermediate
Ultramafic

One Minerals
Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Utc, Mo, Py, Sch, Sph, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Assay

Assay

Laboratory

Chemex

Date Submitted
Dec. 1992

Comments

---------
Sample Sheet:
Location: Bisley Township
Name: Dacite/Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Mottled to light grey green color
- Local pumice fragments, subrounded, very porous.
- Disseminated fine sulphides throughout
- Alteration strongest close to fine hairline irregular black fractures (rock walls?)

Sampling Method
Channel Sample across
Inplace, Grab Sample, O.C., Dump, Float

Rock Type
Felsic
Intermediate
Ultramafic

Sample Number: 96620
Collected By: ED/IRC

Age
Archean
Huronian
Pleistocene

Vein
Host Rock
Wall Rock

Sample Type
Rock
Soil
Water
Sediment

Alteration
Chloritization
Sericitization
Silicification
Carbonitization
Greisen

Sample-Collection
Carbonatization
Serpentinitization
Greisen

Rock Type
Volcanic Intrusive Sediment

Ore Minerals
Aspy, Bo, Cpy, Fl, Gn, Gp, Hem, Htc, Ho;
Pn, Sch, Sph, Tell, VG, Tr-1

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

ASSAY
Au+ICP 9b

Laboratory
Chemex

Date Submitted

Comments
Sample Sheet:

Location: Bisley Township

Name: Depth/Adesite

Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Medium fl. grey green color
- Locally finely fragmented, O.5mm dark colored with bleached halos
- Pyrite in masses up to 1.0 mm Ø
- Vesicles up to 0.75 cm Ø subround and slightly elongate

Sampling Method
Channel Sample across
- In place, Grab Sample, O.C., Dump, Float

Rock Type: Volcanic Intrusive Sediment
- Felsic
- Intermediate
- Ultramafic

One Minerals
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mt, No;
- Py, Sch, Sph, Tell, VG

Gangue Minerals
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Sample Number: 96621
Collected By: ED/DRC

Age
- Archean
- Huronian
- Paleozoic
- Pleistocene

Sample Type
- Rock
- Soil
- Water
- Sediment

Alteration
- Chloritization
- Sericitization
- Silicification
- Carbonatization
- Serpentinitization
- Greisen

Lab A&py, Bo, Cpy* Fe, Gp, Hem, Mt, No, Py, Sch, Sph, Tell, VG

Date Submitted

Assay
- Ant ICP 96

Chemex

Comments
Sample Sheet: Rite Gossan Zone on Shore of Lake

Location: Riske Township

Name: Andesite

Description: (Including Color, Grain Size, Texture, Composition, Etc.)

- Dark green grey color, Massive
- Discrete pririt in masses and along fractures
- Strong Rust Weathering
- Dark Stringers again? Black Chlorite

Sample Number: 96622

Collected By: DRC/ED

Age

- Archean
- Huronian
- Paleozoic
- Pleistocene

Sample Type

- Rock
- Soil
- Water
- Sediment

Vein

- Host Rock
- Wall Rock

Alteration

- Chloritization
- Sericitization
- Silicification
- Carbonatization
- None
- Serpentinitization

Greisen

Rock Type

- Volcanic Intrusive Sediment
- Intermediate

Felsic

- Ultramafic

Ore Minerals

- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mtc, No;
- Py, Sch, Sph, Tell, VG, Tr-2

Gangue Minerals

- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

- Au + ICP 96

Sampling Method

- Channel Sample across
- In-place Grab Sample
- O.C., Dump, Float

Laboratory

- ASSAY
- Chemex

Date Submitted

Comments
Sample Sheet: Lake Shaving Cassan Zone
Location: Bisley Township
Name: Dach & Andrite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, light grey color
- Strong irregular carbonate veining
- Appears to be possibly fine, fragmented
- Generally carbonated
- Strong disc pyrite, very fine grained
- Large subrounded angules filled with very fine grained (amal-merous) pyrite
- Very strong rusted surface

Sampling Method
Channel Sample across
Inplace, (Grab Sample) O.C., Dump, Float

Rock Type:
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Op, Hem, Mtc, No,
Py, Sch, Sph, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Sample Number: 96623
Collected By: ED/DRG

Age
Archean
Harmonian
Pleistocene

Sample Type
Soil
Water
Sediment

Vein
Host Rock
Wall Rock

Alteration
Chloritization
Sericitization
Silicification
Carbonatization
Serpentization
Greisen

ASSAY
Au + ICP 96

Laboratory
Chemex

Date Submitted

Assay Results

Comments
Sample Sheet:
Location: Bisley Township
Name: Dacite / Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, light grey, colored
- Locally a mica schist in appearance
- Irregular Q/C veinlets
- Disseminated pyrite in masses up to 1 cm
- Dark black irregular fractures
- Moderately rusty, weathered,

Sampling Method
Channel Sample: across
In-place, Grab Sample, O.C., Dump, Float

Sample Number: 96624
Collected By: E.D. / DRC

Age
Archean
Huronian
Paleozoic
Pleistocene

Sample Type
Rock
Soil
Water
Sediment

Sample
Vein
Host Rock
Wall Rock

Sample
Alteration
Chloritization
Sericitization
Silicification
Carbonatization 1+
Serpentinization
Greisen

Rock Type
Volcanic Intrusive Sediment
Felsic
Intermediate
Ultramafic

One Minerals
Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Utc, No;
Py, Sch, Sph, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite,

Assay Results

Comments
Sample Sheet:
Location: Bisle Township
Name: Dacite/Icelandite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
  - Massive, Medium grey color
  - Dark fractures w/sulfides as well as disseminated and matrix.
  - Coarse (0.5 mm wide) carbonate veins:
    No sulfides, associated, irregular.
  - Light local foliation

Sampling Method
Channel Sample across
Inplace, Grab Sample O.C., Dump, Float

Rock Type Volcanic Intrusive Sediment
Felsic    Up    ✓
Intermediate
Ultramafic

One Minerals
Asy, Bo, Cpy, Fc, Gr, Gp, Hem, Mt, No,
Py, Sch, Sph, Tell, VG, ___ ___ ___
1-3% ___ ___ ___ ___ ___ ___

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite, ___ ___ ___

Assay Results

Comments
Sample Sheet:

Location: Bailey Township
Name: Deccite/Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, medium green color, fine grained
- Local epidote tinges
- Local carbonate patches
- Local open vesicles up to 2cmØ
- Tr -1% Pyrite in disseminations

Sample Number: 96626
Collected By: ED/DRC
Age: Archean
Host Rock: Huronian
Paleozoic
Pleistocene

Vein: Wall Rock

Sampling Method: Channel Sample across
In-place, Grab Sample O.C., Dump, Float

Sample Type: Rock
Soil: Water
Sediment: 

Rock Type: Volcanic Intrusive Sediment
Felsic
Intermediate
Ultramafic

Ore Minerals: Aspy, Ba, Cpy, Fl, Gr, Gp, Hem, Htc, Mo,
Py, Sch, Sph, Tell, VG, Tr -1%

Gangue Minerals: Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Au + ICP 96

Laboratory: Chemex
Date Submitted:

Comments
Sample Sheet:

Location: Biskay Township
Name: Diroth Gabbon

Description: (Including Color, Grain Size, Texture; Composition, Etc.)
- Medium coarse grained, massive equigranular mafic intrusive
- Nondescript rock

Sample Number: 96627
Collected By: ED/DRC

Age
- Archean
- Huronian
- Paleozoic
- Pleistocene

Vein
- Host Rock
- Wall Rock

Sample Type
- Rock
- Soil
- Water
- Sediment

 Alteration
- Chloritization
- Sericitization
- Silicification
- Carbonatization
- Serpentanization
- Greisen/No notable segregation

ASSAY
- Au + ICP 9b

Laboratory
Chemex

Date Submitted

Rock Type
- Volcanic
- Intrusive
- Sediment

Felsic
- Intermediate
- Ultramafic

- √

Ore Minerals
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Ute, Mo;
- Py, Sch, Sph, Tell, VG, Titch

Gangue Minerals
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Comments
Sample Sheet:
Location: Riske Township
Name: Jacin / Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, medium grey colored
- Local light fotation
- Local irregular fine quartz veins
- Possibly finely fragmental

Sampling Method
Channel Sample: across
Inplace Grab Sample, O.C., Dump, Float

Rock Type
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Op, Hem, Htc, No;
Py, Sch, Spk, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Comments
**Sample Sheet:**  
**Location:** Bisley Township  
**Name:** Andesite  
**Sample Number:** 96629  
**Collection by:** ED/JRC

### Description
- Med-Dk green grey color
- Massive, medium grained.
- Dark black irregular fractures
- Irregular dike parts

### Sample Type
- Rock
- Sediment

### Rock Type
- Volcanic Intrusive Sediment
- Felsic
- Intermediate
- Ultramafic

### Ore Minerals
- Aspy, Bo, Cpy, Fl, Gr, Op, Hem, Mte, Mo;
- Py, Sch, Sph, Tell, VG, — — — — — — —
- Tr+ disseminated

### Gangue Minerals
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite.

### Assay Results

### Sampling Method
- Channel Sample across
- Inplace, Grab Sample, O.C., Dump, Float

### Assay
- Au+ICP9b

### Alteration
- Chloritization L+
- Sericitization
- Silicification
- Carbonatization L+
- Serpentinitization
- Greisen

### Laboratory
- Chemex

### Date Submitted

### Comments
Sample Sheet:

Location: Biskup Township
Name: Andesite/Dacite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Lt-Medium grey green color
- Medium grained and massive in Texture
- Light irregular O/C veinlets
- Lightly fragmented py grains 0.5mm Ø
- Amygdales filled with Carbonate
- Fine disseminated sulphaides Rb(T-F?)

Sampling Method
Channel Sample across

Inplace, Grab Sample O.C., Dump, Float

Sample Type
Rock
Soil
Water
Sediment

Sample Number: 96630
Collected By: ED/DRC

Age
Archean
Huronian
Paleozoic
Pleistocene

Vein
Host Rock
Wall Rock

Wall Rock

Alteration
Chloritization
Sericitization
Silicification
Carbonatization L
Serpentinitization
Greisen

ASSAY
Au + ICP 96

Laboratory
Chemex

Date Submitted

Rock Type
Volcanic Intrusive Sediment
Felsic

Intermediate

Ultramafic


Ore Minerals
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mte, Mo,
- Py, Sch, Sph, Tell, VG,
- Fr-1% ass

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite,

Assay Results

Comments
Sample Sheet:
Location: Bisley Township
Name: Jack
Description: [Including Color, Grain Size, Texture, Composition, etc.]
- Very hard, conchoidal fracturing
- Light to medium green-grey color
- Massive, med-fine grained
- Local amygdales (Carbon filled)
- Black hairline irregular fractures
- Disseminated pyrite mineralization

Sampling Method:
Channel Sample: across
In-place Grab Sample: O.C., Dump, Float

Rock Type: Volcanic Intrusive Sediment
Felsic  ✓
Intermediate
Ultramafic

Sample Type:
Rock
Soil
Water
Sediment

Sample Number:
96631

Sampled By:
ED/DRC

Age:
Archean
Huronian
Paleozoic
Pleistocene

Host Rock:
Vein
Wall Rock

Occurrence:
Alteration
Chloritization
Sericitization
Silicification
Carbonatization
Serpentinization
Greisen

No good alteration noted

Assay:
Au + ICP 96

Laboratory:
Chemex

Date Submitted:

Ore Minerals:
Aspy, Bo, Cpy, Fl, Cr, Op, Hem, Wtc, Mo;
Py, Sch, Sph, Tell, VG;

- 12% ass

Gangue Minerals:
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite.

Assay Results:

Comments:
Sample Sheet:
Location: Biskra Township
Name: Diabase/Gabbro
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, medium grained intrusive
- Equigranular
- No obvious alteration
- Tr. chert pyrite mineralization

Sample Number: 96632
Collected By: ED/DRC

Age
- Archean
- Huronian
- Paleozoic
- Pleistocene

Sample Type
- Rock
- Soil
- Water
- Sediment

Vein
- Host Rock
- Wall Rock

Assay
- Au + ICP96

Sampling Method
Channel Sample across
- In-place
- Grab Sample O.C., Dump, Float

Rock Type
- Volcanic Intrusive Sediment
- Felsic
- Intermediate
- Ultramafic

One Minerals
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Utc, Mo,
- Py, Sch, Sph, Tell, VG, T.

Gangue Minerals
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Comments
Sample Sheet:

**Location:** Bisley Township

**Name:** Dacite

**Description:** (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, very hard, medium to light green grey color
- Black fractures give almost a breccia appearance, some very cpy traces.

**Sampling Method**
- Channel Sample
- In-place Grab Sample
- O.C., Dump, Float

**Rock Type**
- Volcanic
- Intrusive
- Sediment

**Felsic**
- Intermediate
- Ultramafic

**Ore Minerals**
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mt, No;
- Py, Sch, Sph, Tell, VG;
- T-1% air et fracture

**Gangue Minerals**
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

**Sample Number:** 96633

**Collected By:** ED/DRC

**Age**
- Archean
- Huronian
- Paleozoic
- Pleistocene

**Sample Type**
- Rock
- Soil
- Water
- Sediment

**Vein**
- Host Rock
- Wall Rock

**Alteration**
- Chloritization
- Sericitization
- Silicification
- Carbonatization
- Serpentinization
- Greisen

**Assay**
- Au + ICP 96

**Laboratory**
- Chemex

**Date Submitted**

**Assay Results**

**Comments**
Sample Sheet:

Location: Bisley Township
Name: Dacite

Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive, red-grey dacite as before described
- Amygdaloidal
- Possible light-fine fragment

Sample Number: 96634
Collected By: ED/DRC

Age: Archean
Vein: Host Rock
Wall Rock:

Sample Type:
- Rock
- Sediment
- Water

Sample Ttpe:
- Chock.
- Water.
- Sediment

Alteration:
- Carbonatization
- Silicification
- Chloritization
- Sericitization

ASSAY:
- Au + ICP 9b

Rock Type:
- Volcanic Intrusive Sediment
- Felsic
- Intermediate
- Ultramafic

Ore Minerals:
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mt, No;
- Py, Sch, Sph, Tell, VG;
- 2% dim and patches

Gangue Minerals:
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results:

Comments:

Sampling Method:
Channel Sample across
In-place, Grab Sample O.C., Dump, Float

Laboratory:
Chemex

Date Submitted:

Vein
Sample Sheet:
Location: Bisley Township
Name: dacite/Andesite
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
As Sample # 96622

Sample Number: 96635
Collected By: ED/DRC

Age
McChean
Huronian
Paleozoic
Pleistocene

Sample Type
Rock
Soil
Water
Sediment

Sample Type
Alteration
Chloritization
Sericitization
Silicification
Carbonatization
Greisen

Sampling Method
Channel Sample across

Rock Type
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Op, Hem, Mtc, No;
Py, Sch, Sph, Tell, VG

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

Assay Results

Comments
Sample Sheet:
Location: Biskay Township
Name: Gabbro
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Dark Grey
- Massive and Friable
- Tr Sulphide in thin. Prints.
- Non-Magnetic

Sampling Method
Channel Sample across
Inplace Grab Sample, O.C., Dump, Float

Rock Type
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Mtc, Mo,
Py, Sch, Sph, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite,

Assay Results

Comments
Sample Sheet:
Location: Bisley Township
Name: Dork/Cobbe
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Medium grained Dork/Cobble
- No Alteration Noted

Sample Number: 96637
Collected By: ED/DRC

Age
Archean
Huronian
Paleozoic
Pleistocene

Vein
Host Rock
Wall Rock

Sample Type
Sample
Rock
Soil
Water
Sediment

Alteration
Chloritization
Sericitization
Silicification
Carbonatization
Serpentinization
Greisen

Rock Type
Volcanic Intrusive Sediment
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Htc, No,
Py, Sch, Sph, Tell, VG,

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite,

ASSAY
Au + ICP 9b

Laboratory
Chemex

Date Submitted

Assay Results

Comments
### Sample Sheet:

**Location:** Biskey Township  
**Name:** Diotite/Gabbro

**Description:** (Including Color, Grain Size, Texture, Composition, Etc.)
- **Minerals:** Fine ground, non-magnetic Gabbro or Diorite
- **Color:** Dark grey or black color
- **Texture:** Irregular

**Sample Number:** 96638  
**Collected By:** ED/JRC  
**Age:** Archean  
**Vein:** Host Rock

**Host Rock**
- Paleozoic
- Pleistocene

**Sample Type**
- Rock
- Soil
- Water
- Sediment

**Sample Method**
- Channel Sample across
- Inplace Grab Sample, O.C., Dump, Float

**Assay**
- Au + ICP 96

**Laboratory**
- Chemex

**Date Submitted**

### Rock Type
- Volcanic Intrusive Sediment
- Felsic
- Intermediate
- Ultramafic
- Mafic

### Ore Minerals
- Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Htc, No,
- Py, Sch, Sph, Tell, VG

### Gangue Minerals
- Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite

### Assay Results

### Comments
Sample Sheet:
Location: Bisley Township
Name: Basalt
Description: (Including Color, Grain Size, Texture, Composition, Etc.)
- Massive and gray green basalt
- To air dry

Sample Number: 96639
Collected By: ED/DR
Age: Archean
Huronian
Paleozoic
Pleistocene

Sample Type
Rock:---------------
Soil:---------------
Water:---------------
Sediment:---------------

Vein:---------------
Host Rock:---------------
Wall Rock:---------------

Alteration:---------------
Chloritization:---------------
Sericitization:---------------
Silicification:---------------
Carbonatization:---------------
Serpentinitization:---------------
Greisen:---------------
No Notable Alteration:---------------
ASSAY:---------------
Au+AgICP96:---------------
Laboratory:---------------
Chemex:---------------
Date Submitted:---------------

Rock Type
Volcanic Intrusive Sediment
Felsic
Intermediate
Ultramafic

Ore Minerals
Aspy, Bo, Cpy, Fl, Gr, Gp, Hem, Htc, Mo;
Py, Sch, Sph, Tell, VG;

Gangue Minerals
Quartz, Carbonate, Tourmaline, Oxide, Sericite, Fuchsite,

Assay Results

Comments
APPENDIX III

Bisley Township Prospecting Project 1992
Assay Certificate
To: DUQUETTE, EUCLYDE

644 PL. DU CINQUANTENAIRE
ROUYN-NORANDA, QUEBEC
J9X 5Y9

INVOICE NUMBER 19226703

BILLING INFORMATION

Date: 23-DEC-92
Project: BISLEY PROJECT
P.O. No.: KCI

Comments: For analysis performed on Certificate A9226703

Billing: Payment due on receipt of invoice
1.25% per month (15% per annum) charged on overdue accounts

Please Remit Payments to:

CHEMEX LABS LTD.
212 Brookbank Ave.,
North Vancouver, B.C.,
Canada V7J 2C1

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<th># OF SAMPLES</th>
<th>CODE - DESCRIPTION</th>
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<td>12.98</td>
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Total Cost $ 272.58
(Reg# R100938885 ) GST $ 19.08
(Reg# 1001652083 ) QST $ 11.67

TOTAL PAYABLE (CDN) $ 303.33
CERTIFICATE A9226703

DUQUETTE, EUCLYDE
Project: BISLEY PROJECT
P.O. #: 

Samples submitted to our lab in Rouyn, PQ. 
This report was printed on 23-DEC-92.

TO: DUQUETTE, EUCLYDE
644 PL. DU CINQUANTENAIRE
ROUYN-NORANDA, QUEBEC
J9X 5Y9

Comments: ATTN: DEAN CUTTING

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<td>21</td>
<td>0-15 lb crush and split</td>
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<td>21</td>
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CERTIFICATION: [Signature]