# **Assessment Report**

# on the

# Sim Lake Property of

#### for

# **Canadian Superior Resources Inc.**

Sim Lake Area Thunder Bay Mining Division, Ontario N.T.S. 52 P 01/SE

2.30415 AUG 25 2005 SSMEN GEOSCIENCE

August, 2005 Thunder Bay, Ontario Brian Nelson, P Geo.

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#### **INTRODUCTION**

Clark Exploration Consulting of Thunder Bay, Ontario was contracted by Canadian Superior Resources Inc. of Calgary, Alberta to complete field exploration work, to author an assessment report and to provide recommendations for further exploration on the Sim Lake Property.

The Sim Lake property lies within the central portion of the English River sub province of the Superior Province of the Canadian Shield. The English River sub province is a linear, 800 kilometres long by 50 kilometre wide, east-west trending structural belt comprised predominantly of highly metamorphosed and migmatized clastic metasedimentary and plutonic rocks greater than 2698 Ma in age. The metasedimentary rocks which comprise 60 percent of the belt consist mainly of metamorphosed submarine fan turbiditic wackes and mudstones originally deposited in a fore arc basin to accretionary wedge type environment.

Exploration work by Superior Canadian Resources Inc. has outlined numerous geophysical EM anomalies and has indicated the presence of mafic-ultramafic intrusive rocks hosting anomalous Cu-Ni-Co-Pt-Pd mineralization.

#### **PROPERTY DESCRIPTION and LOCATION**

The Sim Lake property is located approximately 300 kilometers north-northeast of Thunder Bay, Ontario, 170 kilometers northwest of Geraldton, and 100 kilometers northeast of Armstrong (Figure 1). The claims are recorded within the Thunder Bay Mining Division on the Sim Lake Claim Map (G-400) (Figure 2).

The property consists of 37 unpatented, unsurveyed mining claims totalling 592 units (claim map G-400), comprising a land area of approximately 9472 hectares. The claims are listed in Table 1. The claim group is centred at latitude 51°04'30" and longitude 88°11' 10", within NTS block 52 P 01SE. The claims are held in good standing by Superior Canadian Resources Inc. and are owned 100% by them.

There are no known environmental liabilities or public hazards associated with the property, and work permits are not required in Ontario to perform the work prescribed in this report.

# Sim Lake Property

CLAIM NUMBER	SIZEDATEDATE(units/hectares)RECORDEDDUE		WORK REQUIRED	
· · · · · · · · · · · · · · · · · · ·	• · · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	······
TB 1247125	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247130	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247131	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247132	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247133	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247134	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247135	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247136	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247137	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247138	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247139	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247140	16/256	June 05, 2001	June 05, 2006	\$6400
TB 1247141	16/256	June 05, 2001	Oct 05, 2005	\$6400
TB 1247142	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247143	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247144	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247145	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247146	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247147	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247148	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247149	16/256	Feb 11, 2002	Aug 15, 2005	\$6400

# Table 1. Sim Lake Property Claims

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August 2005

**Clark Exploration Consulting** 

# Sim Lake Property

TB 1247150	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247151	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247152	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1247153	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248033	16/256	Feb 11, 2002	Mar 29, 2006	\$6400
TB 1248034	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248035	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248036	16/256	Feb 11, 2002	Aug 15, 2005	\$1930
TB 1248037	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248038	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248039	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 1248043	16/256	Feb 11, 2002	Aug 15, 2005	\$6400
TB 3012070	- 16/256	Feb 20, 2003	Feb 20, 2006	\$930
TB 3012071	16/256	Feb 20, 2003	Feb 20, 2006	\$6400
TB 3012072	16/256	Feb 20, 2003	Feb 20, 2006	\$6400
TB 3012075	16/256	Feb 20, 2003	Feb 20, 2006	\$6400

TOTALS 592/9472	\$226,860
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# <u>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and</u> <u>PHYSIOGRAPHY</u>

Access to Sim Lake is gained by float or ski-equipped aircraft from Armstrong, Nakina, Geraldton and/or Fort Hope Ontario. As of the summer of 2005 logging access roads skirt the western boundary of the property.

The property is characterized by low topographic relief, which seldom exceeds 20 meters above Sim Lake. Outcrop occurs predominantly along lakeshores and in recent forest fire burned areas, but is sparse over approximately 70% of the property, due to a cover of black spruce swamp or mature timber.

Vegetation consists of typical boreal forest cover, with mixed spruce, jack-pine and balsam. Lower areas are characterized by alders, mountain maple and labrador tea.

Supplies for preliminary exploration can be obtained in the towns of Armstrong, Geraldton or Nakina. A tourist cabin equipped with boats/motors is located on Sim Lake and may be used for accommodation during an exploration campaign.

A qualified and educated labour force is available in Thunder Bay. Water, sand and gravel are readily available in the immediate area. Future road access is possible via forest development.





#### <u>PROPERTY HISTORY</u>

The Sim Lake property has seen very little exploration activity in the past; most work done in the area has been on the claims owned by Doug Thibault and Basil Smith. These claims (TB 1231961 and TB 1216877, which will be referred to in this report as the "Smith-Thibault property") immediately adjoin, and are surrounded by, the claim block of Superior Canadian Resources. A search of the assessment and mineral deposit files in the Resident Geologist's Office in Thunder Bay revealed the following exploration history for the area:

1960: The Ontario Department of Mines flew a regional airborne magnetometer survey over the area comprising the Sim Lake property. The data was published as Geophysics Paper No. 962.

1969: Thurston et al carried out geological mapping and compilation for the Ontario Department of Mines as part of Operation Fort Hope, the results of which are published on two maps as follows: preliminary map No. P564, The Attwood - Caribou Lake Sheet, 1"=2 miles, and, Geological Map No. 2237, Fort Hope-Lansdowne House Sheet, 1"=4 miles.

1971: Addicks Canadian Properties Inc. completed line-cutting and a ground magnetic survey over the central portion of claim TB 1231961 on the west shore of Sim lake (the Smith-Thibault claims). The survey clearly outlined the dimensions of a small mafic intrusive body as a magnetic high, presumably caused by disseminated pyrrhotite and/or magnetite. The follow-up report mentions the existence of several trenches containing disseminated chalcopyrite and nickeliferous pyrrhotite however no assays were reported (Poulsen, K.N., 1971).

1995: Ian Campbell completed a property visit for Golden Trump Resources Ltd. to the Smith-Thibault claims. The property visit included sampling of the known sulfide mineralization on claim TB 1209555 (now TB 1231961). His field examination revealed the presence of sample tags and several claim posts indicating previous unreported exploration.

1997: The 1997 OPAP program on the Smith-Thibault property consisted of line cutting (15.8 kilometres), geophysics (magnetic and VLF-EM) and prospecting. The work was completed in two portions with prospecting between July 8<sup>th</sup> and 12<sup>th</sup> and August 30<sup>th</sup> and September 13<sup>th</sup>, 1997. All the work was completed on claims TB 1217101 and TB 1217103. The main nickel- copper showing was not acquired until the fall of 1997 after the prospecting program.

1998: The main copper-nickel showing was acquired as claim TB1231961. The 1998 OPAP program focused on the newly acquired claim and consisted of 17 kilometers of line-cutting, 16 kilometers of Magnetic and VLF-EM surveys and 25 man days of prospecting, stripping and blasting. The geophysical surveys completed outlined numerous anomalies that could correspond to sulfide mineralization and magnetic gabbroic units. The sampling of the blasted areas resulted in anomalous copper, nickel, palladium and platinum assays. The better assays are located within the original area of known sulfide mineralization. The best results were 3318 ppm Copper, 2332 Nickel, 56 ppb Palladium and 30 ppb Platinum.

1999: The 1999 OPAP program on the Smith-Thibault property included detailed prospecting, stripping, blasting and geological mapping on the existing Sim Lake grid (claim TB 1231961 of the Smith-Thibault property) and prospecting of magnetic high anomalies (Faircloth Lake and northeast arm of Sim Lake). The program was extremely successful at expanding the showing from its known length to greater than 800 metres and width of 300 metres. The intrusion was described as a mineralized gabbroic core surrounded by an outer zone of mineralized pyroxenite (Spence 1999), suggesting that the intrusion is layered. The work also located new disseminated and net-textured coppernickel-cobalt-platinum-palladium-sulphide mineralization. The best overall individual assay from the 1999 sampling was 6396 ppm copper, 8060 ppm nickel, 200 ppm cobalt, 668 ppb palladium, 21 ppb gold, 625 ppb platinum, 2 ppm silver and 1564 ppm chromium (employing the geochemical mass fire assay). Other samples ran as high as 1.95% Ni and 1.72% Cu; samples and assays from this work are shown in Spence's Compilation map.

2001: Operation Treasure Hunt, a program of geoscientific surveys conducted by the Ontario Geological Survey, released a lake sediment geochemical survey of the Fort Hope area conducted in August 2000. The survey results in the Sim Lake area containing "elevated to highly anomalous values of nickel and copper" as well as other elements. The report ranks the Sim Lake area #2 for the Fort Hope area survey, noting that "anomalies are loosely ranked by size and magnitude".

2003: Operation Treasure Hunt, a program of geoscientific surveys conducted by the Ontario Geological Survey' completed a regional Airborne magnetic Survey over a large area including the present claim block.

#### **REGIONAL GEOLOGY AND DEPOST TYPES** (the following is from Breaks, 1991)

"The Sim Lake property lies within the central portion of the English River sub province of the Superior Province of the Canadian Shield. The English River sub province is a linear, 800 kilometres long by 50 kilometre wide, east-west trending structural belt comprised predominantly of highly metamorphosed and migmatized clastic metasedimentary and plutonic rocks greater than 2698 Ma in age. The metasedimentary rocks which comprise 60 percent of the belt consist mainly of metamorphosed submarine fan turbiditic wackes and mudstones originally deposited in a fore arc basin to accretionary wedge type environment.

Numerous intrabelt granitic batholiths and stocks which intruded the metasedimentary rocks between 2560 and 2698 Ma comprise almost 40 percent of the belt, while enclaves of metavolcanic rocks and related tonalitic to granitic intrusives that range in age from 2.65 to 2.70 Ma comprise only 2 percent of the belt. The southern boundary of the English River sub province is largely defined by the northern edges of greenstone belts belonging to the Wabigoon sub province. Proterozoic diabase dykes and sills intrude all the supracrustal rocks and have not been affected by the regional deformational events described below.

The English River belt has been subjected to at least three phases of regional ductile deformation characterized by isoclinal, disharmonic, and, kink-like folds, which generated separate penetrative foliations defined on a regional and local basis. There is also the development of three regional scale faults systems of differing attitudes, which transect the ductile deformation events.

Metamorphism of the supracrustal rocks is predominantly granulite facies expressed as sillimanite-potassium feldspar-muscovite-cordierite-garnet mineral assemblages.

Mineral deposit types known to occur within the English River sub province include the formation of extensive iron formation of wacke-turbidite association, rare earth element pegmatites within sub province boundary zones, copper-nickel-cobalt-palladium-platinum bearing sulfides in meta-ultramafic pods in the Werner Lake fault zone (western English River), and, polymetallic volcanogenic massive sulphide mineralization within the greenstone enclaves."

Adjoining the Sim Lake Property is the Smith-Thibault property, which hosts a two-phase, mafic to ultramafic intrusive at least 350 metres by 800 metres in size, and bearing disseminated and net-textured copper-nickel-cobalt-platinum-palladium-sulphide mineralization. The intrusion was described as a mineralized gabbroic core surrounded by an outer zone of mineralized pyroxenite (Spence 1999), suggesting that the intrusion is layered. Previous work on this property has returned values up to 6396 ppm copper, 8060 ppm nickel, 200 ppm cobalt, 668 ppb palladium, 625 ppb platinum, 21 ppb gold, 2 ppm silver and 1564 ppm chromium (Spence 1999). This style geology and mineralization is the target of the past and proposed exploration for the Sim Lake property.

# **PROPERTY GEOLOGY and MINERALIZATION**

The geology of the Sim Lake Property is based on recent field observations and the work/reports done by P. Lassila during a 2001 exploration program; this work was limited to approximately the southwestern half of the property (claims 1247126, 1247127, 1247132, 1247133, 1247134, 1247135, 1247136, 1247138, 1247139, 1247140, and 1247141).

Most of the Sim Lake Property is underlain by granitoid migmatitic to gneissic rocks which hosts gabbroic units varying in size from small xenolith-like inclusions to over one hundred metres, with one being traced for at least 250 metres. Campbell (1995) suggests that the migmatitic rocks are migmatized metasediments.

The granitic rocks range from granite to granodiorite to quartz diorite in composition, with quartz-feldspar-biotite and/or quartz-feldspar-hornblende gneisses (Campbell 1995, and Lassila 2001). The granitic rocks occasionally occur as small, medium to coarse grained, massive units within the migmatite-gneissic complex.

Gabbroic rocks include hornblende gabbro, pyroxene gabbro and pyroxene-hornblende gabbro. As mentioned above, the gabbro outcrops vary in size from one to at least 250 metres in size, with the most common size range being from several to tens of metres. Ground cover often made accurate size determinations impossible. Where observed, the contacts of the gabbros with the granitic rocks are sharp. The smaller, xenolith-like units were often observed to be angular, which, together with the lack of chill margins, suggests they were emplaced by the dismemberment of a larger gabbroic body during the migmatization process (Lassila 2001).

The gabbroic units are generally medium to coarse grained, and are composed mainly of pyroxene, hornblende-pyroxene or hornblende, all with plagioclase feldspar. They range from non-magnetic to locally strongly magnetic, with some of the strongly magnetic locations also containing minor pyrrhotite and chalcopyrite.

# PREVIOUS SUPERIOR CANADIAN RESOURCES INC.'S EXPLORATION

In May of 2004, Aeroquest Limited completed 149.5 kilometres of helicopter-borne magnetic and electromagnetic survey over the Sim Lake property. In May of 2005, Superior Canadian Resources Inc. contacted Paterson, Grant & Watson Limited (PGW) of Toronto, Ontario to review the electromagnetic conductors delineated by the Aero TEM Survey and make recommendations for further work.

#### 2005 MAPPING AND SAMPLING PROGRAMS

In June and July of 2005, Clark Exploration Consulting carried out two separate mapping and sampling programs. Geological mapping and bedrock grab sampling near the PGW interpreted EM anomalies was completed. A number of bulk till samples were also collected proximal to interpreted Keating anomalies.

#### Hartley-LaFaive Fly-In Mapping and Sampling Program

In early June 2005, a two-man crew was flown into the east end of the property underlain by Hartley and LaFaive Lakes for approximately one week. The crew included: Brian Nelson (Geologist) and Bjorn Bjorkman (Assistant). The daily work log is attached in appendix I.

The Hartley and LaFaive Lakes fly-in job was completed in 9 days. This included, 4 days of mob-demob and 5 days mapping and sampling. The shoreline of Hartley and La Faive Lakes was mapped and all interesting rock outcroppings were sampled. A total of 11 grab samples of gabbro, varitextured gabbro, gabbro breccia and pyroxenite were collected. The best assay result returned 24 ppb platinum (see appendix II). Five bulk till samples were taken in close proximity to the Keating anomalies.

Less than 5% of the shoreline was outcrop, lots of boulder shores and swampy shallow bays. Both lakes are very shallow and contain numerous boulder reefs. Inland traverses were extremely difficult and exhausting, the result of an eight to ten-year-old forest fire. Half the trees are upright, black and leafless and the other half is horizontal or piled in disarray.

The most interesting rock exposures were found along the northwestern side of the large island within the northern portion of Hartley Lake and along the western and northern shorelines adjacent to this island. This location is approximately halfway between EM anomalies located in the northern portion of Hartley Lake. These exposures included gabbro to gabbro breccia to varitextured gabbro. The gabbroic rocks contain only a trace pyrite mineralization. Except for the occasional mafic to ultramafic dyke, the majority of the rocks are migmatitic gneiss.

#### Sim Lake Mapping and Sampling Program

In mid July 2005, a two-man crew was flown into Sim Lake for approximately one week. The crew consisted of Brian Nelson (Geologist) and Bjorn Bjorkman (Assistant). The extreme

#### August 2005

eastern arm of Sim Lake was accessed via small motor boat from a prospector's camp near the west end of Sim Lake. The mapping-sampling program covered the eastern portion of Sim Lake and a small reef filled lake located approximately one kilometre to the northeast. The daily work log property is listed in appendix III.

The Sim Lake fly-in job was completed in 7 days. This included, 2 days of mob-demob and 5 days mapping, rock and till sampling. The northeastern shoreline of Sim Lake was mapped and all gabbroic outcrop exposures were sampled. A total of 19 grab samples were collected and delivered to Accurassay Laboratories for analysis. The most significant grab sample assayed 227 ppb platinum (see appendix IV). Six bulk till samples were taken within close proximity to interpreted Keating anomalies.

Ouctrop exposure is quite extensive along the shorelines in the northeastern portion of Sim Lake. The vast majority of rock exposures were identified as migmatized granite-gneiss. Exposures of gabbro and gabbro breccia were found along the southern shore of a small reef filled lake located approximately one kilometre northeast of Sim Lake and along the most easterly arm of Sim Lake.

EM anomalies "PGW 5, PGW 4, PGW 2, Inco A, Inco B and PGW 6" were field checked. No significant sulphide mineralization or other conductive medium was observed that might result in the airborne EM response. All the airborne EM anomalies plot within water-covered areas. The rocks examined along the shorelines adjacent to most of the EM anomalies are migmatized granite-gneiss. Gabbroic rocks have been identified along the eastern flanks of EM anomalies "Inco A" and "PGW 4"

The most interesting exposures of gabbro breccia and gabbro were located along the southern shore of the small reef filled lake approximately 50 to 300 metres southeast of the "Inco A" anomaly. The rocks locally contain minor sulphide mineralization.

A second interesting outcropping of gabbro to gabbro breccia occurs just south of the "PGW 4" anomaly located within most easterly arm of Sim Lake.

## **SAMPLING METHOD and APPROACH**

Where rocks of interest were uncovered, in this case the gabbroic units; these were sampled by taking grab samples. Grab samples were taken of varying textures and compositions. The property was examined in two stages (using two different fly-in camps) and after each stage the samples were flown out and delivered to Accurassay Laboratories in Thunder Bay, Ontario.

# SAMPLING PREPARATION, ANALYSIS, and SECURITY

The sampling of the Sim Lake property to date, while sub-economic, has been adequate in showing the presence of anomalous Cu-Ni-Co-Pt-Pd in mafic intrusive rocks discovered throughout the property.

The assaying of the samples was performed by Accurassay Laboratories of Thunder Bay, Ontario. Accurassay is registered ISO 17025. Accurassay's procedure is as follows.

The samples are dried, if necessary, and then jaw crushed to -8 mesh, riffle split and pulverized to 90% -150 mesh, and then matted to ensure homogeneity. Silica sand is used to clean out the pulverizing dishes between each sample to prevent cross-contamination.

The homogeneous sample is then fired in the fire assay lab. The sample is mixed with a leadbased flux and fused for an appropriate length of time. The fusing process results in a lead button, which is then placed in a cupelling furnace where all of the lead is absorbed by the cupel and a silver bead, which contains any gold, platinum and palladium, is left in the cupel. The cupel is removed from the furnace and allowed to cool. Once the cupel has cooled sufficiently, the silver bead is placed in an appropriately labelled small test tube and digested using a 1:3 ratio of nitric acid to hydrochloric acid. The samples are bulked up with 1.0 ml of distilled deionized water and 1.0 ml of 1% digested lanthanum solution. The total volume is 3.0 ml. The samples are vortexed and allowed to settle.

Once the samples have settled they are analyzed for gold, platinum and palldium using atomic absorption spectroscopy. The atomic absorption spectroscopy unit is calibrated for each element in an air-acetylene flame. The results for the atomic absorption are checked by the technician and Quality Control Coordinator and then forwarded to data entry by means of electronic transfer and a certificate is produced. The Laboratory Manager checks the data and validates it if it is error free. The results are then forwarded to the client by fax, e-mail, floppy or zip disk, or by hardcopy in the mail.

#### Sim Lake Property

#### **Canadian Superior Resources Inc.**

# **INTERPRETATION and CONCLUSIONS**

The work undertaken on the Sim Lake Property indicates the presence of gabbroic mafic intrusives of various sizes. While initial sampling of the property has been sub-economic, it is the opinion of the authors that the occurrence of the mafic intrusives justifies further exploration of the property. The water covered EM conductors related to mafic-ultramafic-hosted Cu-Ni-Co-Pt-Pd mineralization discovered during the two phase fly-in mapping and sampling programs should be drill tested.

All significant airborne EM anomalies previously interpreted by Paterson, Grant and Watson Ltd. are water covered. The rocks exposed along the shorelines adjacent to three PGW interpreted anomalies are gabbroic intrusive rocks.

The three EM anomalies with associated gabbroic rocks include:

- Inco E-1 anomaly located at the north end of Hartley Lake. Outcrop exposures on the island just east of the EM anomaly included: massive gabbro to melanogabbro, varitextured gabbro, gabbro breccia and pyroxenite. The best assay result from this area was 24 ppb platinum.
- PGW 4 anomaly is located within the most easterly arm of Sim Lake. Outcrop exposures
  of gabbro, gabbro breccia, pyroxenite and diorite are located on the southern flank of the
  anomaly. Grab sampling produced insignificant assay results.
- 3) Inco A / PGW 2 anomalies located within the small reef filled lake are located approximately one kilometre northeast of the extreme northeastern portion of Sim Lake. Extensive oucropping of gabbro breccia, gabbro and melanogabbro occurs along the southern shore of the lake a short distance southeast of the airborne EM anomalies. The best assay result was 227 ppb platinum.

The latter two gabbro-gabbro breccia exposures related to PGW 4 and Inco A / PGW 2 are interpreted to align in a northeasterly trend along the southern flank of airborne EM anomalies. It is likely that these two EM anomalies are one continuous trend paralleling the gabbroic rocks. The airborne magnetic survey clearly outlines a curvilinear trend likely related to the gabbros and gabbro breccia.

The intrusive gabbroic units may dip to the northwest and sulphide mineralization may increase with depth. This could result in the interpreted surface EM signature.

#### Sim Lake Property

#### **RECOMMENDATIONS**

The Sim Lake property warrants further examination for mafic-ultramafic intrusives with Cu-Ni-Co-Pt-Pd mineralization. The next phases of exploration should focus on testing the EM anomalies proximal to the gabbroic intrusive breccias discovered during the mapping-sampling program. A short diamond drill program is recommended to test the gabbro breccias and associated flanking airborne EM anomalies.

#### **PROPOSED BUDGET**

Diamond Drilling (all inclusive)(helicopter support) 400 metres @ \$200/m	
Reports and Maps	
Contingencies	
TOTAL OF PROPOSED BUDGET	\$92,500.00

# 14.0 REFERENCES

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Sim Lake Property

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# **CERTIFICATE of AUTHOR**

I, Brian Nelson, H.B.Sc., do hereby certify that:

- 1. I am a consulting geologist currently employed by Clark Exploration Consulting Inc.
- 2. I graduated with a degree of Honours Bachelor of Science Geology from Lakehead University, Thunder Bay, in 1984.
- I am a member of the A.P.G.O. (#0303), a Fellow (F5851) of the Geological Association of Canada and a member of the Ontario Prospectors Association.
- 4. I have worked as an exploration geologist for a total of 20 years since my graduation from university.

Dated this 18<sup>th</sup> day of August, 2005

Brian Nelson, P.Geo.

Appendix I

Hartley-LaFaive Work Log

#### Sim Lake Project – Fly-In Job Work Log – June 7-June 15, 2005

#### Hartley and La Faive Lakes Work Log

Crew - Brian Nelson (Geologist) and Bjorn Bjorkman (Assistant)

June 7 - Loaded trucks, purchased groceries, drove to Armstrong and stayed overnight at the MacKenzie Motel.

June 8 - Flew into Hartley Lake with Huron Air, set up camp at south end of lake where dock exists at abandoned Moose Camp, spent remainder of day setting up sleeping tent and starting kitchen. Camp set up in 10 year old burn, only place on lake to set up camp.

June 9 - Spent whole day setting up and organizing camp, finished kitchen, storage area and outhouse. Planned shoreline work and staking.

June 10 - Brian and Bjorn spent day mapping, till sampling and rock sampling the shoreline of Hartley Lake and collected one till sample approx. 400 metres inland from the shoreline.

June 11 - Brian and Bjorn spent day mapping, till sampling and rock sampling the shoreline of Hartley Lake.

June 12 - Brian and Bjorn spent day mapping, till sampling and rock sampling the shoreline of La Faive Lake.

June 13 - Brian and Bjorn spent the day mapping and rock sampling the shoreline of La Faive Lake.

June 14 - Bjorn collected the last till sample located approx 350 metres west of the camp. Brian called Huron Air for pick-up and started tearing down camp. Brian and Bjorn dismantled and packed up the camp. Huron Air arrived at approx. 1 pm and we flew back to Armstrong base, packed up the trucks and returned to the Thunder Bay, arriving at 5:30 pm.

June 15 – Arrived at office at 8 am and un-packed Garry's stuff but couldn't drop off Stare's camp gear till following day.

Appendix II

Hartley-LaFaive

Sample Descriptions and Assay Results

# Hartley - LeFaive Sampling (Fly-In)

#### Rock Sampling and Assay Results

Sample #	UTM Co-ordinates (NAD-83)	Rock Type	Texture	Alteration	Mineralization	Au PPB	Pt PPB	Pd PPB	Co PPM	Cu PPM	Ni PPM
43151	0424810E/5660698N	Gabbro/melanogabbro	grey-black, coarse grained	weak rust?		<5	<15	<10	6	24	18
43152	0424818E/5660687N	Melangabbro	dark grey-black, corse grained		trace pyrite	<5	18	<10	32	47	198
43153	0424945E/5660597N	Gabbro/melanogabbro	coarse grained	magnetite	trace pyrite	10	<15	14	16	19	105
43154	0424594E/5660218N	Gabbro	medium grained to pegmatitic			<5	<15	<10	20	29	8
43155	0424655E/5660325N	Gabbro	coarse grained		trace pyrite	5	<15	<10	16	<u>1</u> 1	33
43156	0424661E/5660324N	Gabbro	pegmatitic		trace pyrite	7	<15	<10	12	10	21
43157	0424660E/5660319N	Mafic/Ultramafic Fragment	fine grained			<5	24	<10	30	33	470
43158	0424652E/5660327N	Gabbro	medium grained	weak magnetite		<5	<15	<10	20	34	7
43159	0424729E/5660221N	Gabbro	coarse grained	rusty, biotite		8	<15	<10	26	114	20
43160	0425765E/5661439N	Diorite/Gabbro pod	medium grained		trace pyrite	<5	<15	<10	17	8	28
43161	0425584E/5662000N	Ultramafic Dyke	black, medium grained			<5	<15	<10	15	7	25
						5	<15	<10	12	69	34

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#### Till / Overburden Sampling

#### Sample # UTM Co-ordinates

SLT-12 0424044E/5660800N

SLT-13 0425750E/5660723N

SLT-14 0425454E/5658514N

SLT-15 0425525E/5658202N

SLT-16 0424661E/5658334N

Appendix III

Sim Lake Work Log

#### Sim Lake Project – Fly-In Job Work Log – July 14 -July 20, 2005

Sim Lake Work Log

Crew - Brian Nelson (Geologist), Bjorn Bjorkman (Prospector)

July 14 - Loaded trucks with gear, supplies and groceries, drove to Armstrong, flew into Sim Lake and unpacked gear, food, etc. at Doug Thibault's camp (very nice set-up).

July 15 – It poured rain all morning, collected two bulk till samples from southwest area of Sim Lake in afternoon.

July 16 – Walked thru burn and blow-down to east shore at south end of String Lake to field check"PGW-6?" anomaly located under String Lake. The only rocks observed were granite-gneiss / migmatite. No evidence of source of airborne EM anomaly was encountered.

July 17 - Walked thru burn and blow-down to "Inco A" anomaly located within a small reef filled lake located approximately one kilometre northeast of the northeast corner of Sim Lake. Observed nice looking gabbro breccia along south shore of small lake. Quickly took numerous photos and four grab samples as a severe thunderstorm was approaching. Thunder, lightning with a severe down-pour, tried to wait it out under what little cover was available in the burn, got soaked (rain gear back in boat). Retuned to camp in pouring rain.

July 18 – Rained in morning, then headed out around 10 am. Shoreline mapping and sampling "PGW-5, PGW-4 and Inco B" anomalies. Most of rocks observed were granitegneiss / migmatite. Located a gabbro breccia along both east and west shorelines just south of PGW-4 anomaly. Locally this rock looks more like a banded gabbro to diorite gneiss. Collected ½ a dozen grab samples of gabbro. More unstable weather, were just missed by a few passing thunderstorms.

July 19 - Bjorn walked into small reef filled lake to further prospect and sample the gabbro breccia near "Inco A" anomaly. He collected an additional 8 to 10 grab samples. Brian completed mapping the "PGW-5, PGW-4 and Inco B" anomalies and collected 4 more grab samples. Four more bulk till samples were also collected proximal or down-ice of Keating anomalies within this area.

July 20 - Up at 5 am and packed up camp, Huron Air's Otter arrived at ~ 8 am. Returned to Thunder Bay and unpacked gear.

Appendix IV

Sim Lake Sample Descriptions and Assay Results

# Sim Lake (Fly-In) Rock Sampling and Assay Results

Sample #	UTM Co-ordinates (NAD-83)	Rock Type	Sample Description	Au PPB	Pt PPB	Pd PPB	Co PPM	Cu PPM	NI PPM
43101	0421753E/5660459N	Gabbro	Varitextured, fgr to mgr to cgr, non-magnetic, minor patchy rust, minor bleby to stringer pyrite, 50% feldspar and 50% amphibole	<5	<15	20	24	45	36
43102	0421789E/5660484N	Gabbro Breccia	Mgr to cgr, 50% non-magnetic gabbro and 50% melanogabbro, 1% disseminated pyrite within strongly magnetic melanogabbro fragments	9	<15	13	53	24	114
43103	0421819E/5660516N	Gabbro Breccia	70% cgr gabbro and 30% fgr melanogabbro / pyroxenite?, local strong yellow limonite staining, minor to locally 1% fgr disseminated pyrite	40	<15	15 .	28	164	77
43104	0420764E/5659479N	Gabbro	Mgr, black, non-magnetic, composed of 30% feldspar, 30% black amphibole and 40% black biotite, no sulphides, possibly dyke?	68	<15	10	31	46	80
43105	0420900E/5659634N	Gabbro/Leucogabbro	Cgr, non-magnetic, 50% feldspar, 10% quartz and 40% amphibole, almost leucogabbro, possibly gabbro breccia?	<5	<15	13	34	28	66
43106	0420929E/5659565N	Gabbro	Mgr, dark green-grey, local epidote, minor rust coating fractures, trace fgr disseminated pyrite, host rock- gabbro breccia	<5	<15	12	40	153	84
43108	0421595E/5660139N	Leucogabbro/Gneiss?	Light creamy white to grey, banded, cgr, poddy amphibole clusters, non-magnetic, no sulphides, possibly gneiss?	<5	<15	<10	14	11	18
43109	0421757E/5660412N	Pyroxenite/Norite?	Cgr, dark grey with brown (orthopyroxene?) weatherd surface, strongly magnetic, no sulphides, float-not bedrock	5	<15	15	82	85	454
43110	0421907E/5660587N	Gabbro/ Gabbro Breccia	70% mgr gabbro and 30% fgr melanogabbro, non- magnetic, no sulphides, outcrop is mainly massive gabbro cut by felsic veining, common 3x10 cm scale melanogabbro blotches/segregations?	29	227	58	28	60	86
43111	0421980E/5660656N	Gabbro	Cgr, massive, non-magnetic, equigranular, no sulphides, composed of 60% feldspar and 40% black amphibole	<5/<5	52/<5	17/10	24/28	39/40	62/66

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43112	0421971E/5660631N	Gabbro	Cgr, massive, containing melanogabbro/pyroxenite? fragments/segregations, strongly magnetic	<5	23	<10	42	164	85
43113	0421869E/5660532N	Intermediate Dyke	Fgr, brecciated, very locally weakly magnetic, minor to locally 1% disseminated pyrite, possible chalcopyrite?	<5	41	14	25	52	20
43114	0421822E/5660517N	Melanogabbro	Fgr, dark grey to black melanogabbro fragment hosted within cgr gabbro breccia, non-magnetic, no sulphides	<5	<15	<10	26	98	34
43115	0421822E/5660518N	Gabbro Breccia	Cgr to vcgr gabbro, 35% plagioclase and 65% amphibole, strong feldspathic veining, moderate brown to black biotite, trace fgr disseminated pyrite, same location as sample 43114 - gabbro breccia	<5	<15	<10	28	49	55
43116	0421823E/5660513N	Pyroxenite/Ultramafic?	Fgr, equigranular, brown-grey, non-magnetic, composed of amphibole and biotite, rusty, no sulphides, fragment within gabbro breccia		<15	15	47	24	446
41651	0420765E/5659486N	Gabbro Breccia	75% mgr to cgr gabbbro and 25% fgr melanogabbro, rusty stain coating fractures and surface	<5	<15	11	19	63	27
41652	0420755E/5659472N	Lamprophyre/Diorite Dyke	Porphyritic lamprophyre / diorite dyke, mgr, 10-15% mafic clots/fragments?, massive, no sulphides	<5	29	13	29	12	52
41653	0420905E/5659629N	Gabbro	Cgr, non-magnetic, equigranular, no sulphides, 50% feldspar and 50% amphibole, gabbro breccia	<5	<15	13	34	16	77
41654	0420906E/5659632	Gabbro/Melanogabbro	Fgr to finer mgr, dark grey (melanocratic), non- magnetic, no sulphides, same sample location as sample 41653 and taken ~ 8 metres south of sample 43105	<5	<15	<10	29	23	42
Till / Overb	ourden Sampling								
Sample #	UTM Co-ordinates								
CIT 17	10410110E/EGEG220NI								

Campic #	OTW OU-ORDINATES
SLT-17	0418118E/5656330N
SLT-18	0417026E/5658070N
SLT-19	0421040E/5659360N
SLT-20	0421069E/5658892N
SLT-21	0421008E/5658531N
SLT-22	0419559E/5659456N

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Appendix V

Assay Certificates

# Accurassay Laboratories Mineral Assay Division of Assay Laboratory Services Inc.



1046 GORHAM STREET THUNDER BAY, ONTARIO P7B 5X5 PHONE: (807) 626-1630 FAX: (807) 622-7571 EMAIL: assay@accurassay.com WEB: www.accurassay.com

# **Certificate of Analysis**

Wednesday, August 17, 2005

Clark Consulting 1000 Alloy Dr. Thunder Bay, ON, 0 P7A6G5	CA	Date Received : 11-Jul-05 Date Completed : 18-Jul-05 Job # 200541052 Reference : 200540891										
Ph#: (807) 622-3284 Fax#: (807) 622-4156 Email gjclark@tbaytel.net				Sample #: 3 Reject's				eject's				
Accurassay #	Client Id	Au ppb	Pt ppb	Pd ppb	Rh ppb	Ag ppm	Co ppm	Cu ppm	Fe ppm	Ni ppm	Pb ppm	Zn ppm
76891	43152	6	<15	<10			26	56		211		
76892	43153	<5	<15	<10			12	29		118		
76893	43157	<5	<15	<10			39	50		520		
76894 Ch	eck 43157	<5	<15	<10			39	64		514		

PROCEDURE CODES: AL4APP, AL4Co, AL4Cu, AL4Ni

Page 1 of 1

Certified By Derek Demianiuk H.Bsc., Laboratory Manager

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A DIVISION OF ASSAY LABORATORY SERVICES INC MINERAL ASSAY DIVISION



1070 LITHIUM DRIVE, UNIT 2 FAX (807) 623 6820 PHONE (807) 626-1630

THUNDER BAY, **ONTARIO P7B 6G3** EMAIL accuracy@tbaytel.net

WEB www.accurassay.com

# **Certificate of Analysis**

Monday, June 27, 2005

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Clark Consulting 1000 Alloy Dr. Thunder Bay, ON, CA P7A6G5 Ph#: (807)622-3284		Date Received : 20-Jun-05 Date Completed : 25-Jun-05 Job # 200540891 Reference :										
Fax#: (807) 622-4156 Email gjclark@tbaytel.net							Kock					
Accurassay #	Client Id	Au ppb	Pt ppb	Pd ppb	Rh ppb	Ag ppm	Co ppm	Cu ppm	Fe ppm	Ni ppm	Pb ppm	Zn ppm
70347	43151	<5	<15	<10			6	24		18		
70348	43152	<5	18	<10			32	47		198		
70349	43153	10	<15	14			16	19		105		
70350	43154	<5	<15	<10			20	29		8		
70351	43155	5	<15	<10			16	11		33		
70352	43156	7	<15	<10			12	10		21		
70353	43157	<5	24	<10			30	33		470		
70354	43158	<5	<15	<10			20	34		7		

PROCEDURE CODES: AL4APP, AL4Co, A 4<del>Cu.,</del>

Certified By Derek Demianiuk H.Bsc., Laboratory Manager

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approval of the laboratory

# Accurassay Laboratories Mineral Assay Division of Assay Laboratory Services Inc.



1046 GORHAM STREET THUNDER BAY, ONTARIO P7B 5X5 PHONE: (807) 626-1630 FAX: (807) 622-7571 EMAIL: assay@accurassay.com WEB: www.accurassay.com

# **Certificate of Analysis**

Wednesday, August 17, 2005

Clark Consulting 1000 Alloy Dr. Thunder Bay, ON, CA P7A6G5 Ph#: (807) 622-3284 Earth: (807) 622-3186		Date Received : 20-Jul-05 Date Completed : 27-Jul-05 Job # 200541141 Reference : Sample #: 19 Rock										
Email gjclark@tbaytel.net					•							
Accurassay #	Client Id	Au ppb	Pt ppb	Pd ppb	Rh ppb	Ag ppm	Co ppm	Cu ppm	Fe ppm	Ni ppm	Pb ppm	Zn ppm
80539	43101	<5	<15	20			24	45		36		
80540	43102	9	<15	13			53	24		114		
80541	43103	40	<15	15			28	164		77		
80542	43104	68	<15	10			31	46		80		
80543	43105	<5	<15	13			34	28		66		
80544	43106	<5	<15	12			40	153		84		
80545	43108-	<5	<15	<10			14	11		18		
80546	43109	5	<15	15			82	85		454		
80547	43110	29	227	58			28	60		86		
80548	43111	<5	52	17			24	39		62		
80549 Check	43111	<5	<15	10			28	40		66		
80550	43112	<5	23	<10			42	164		85		
80551	43113	<5	41	14			25	52		20		
80552	43114	<5	<15	<10			26	98		34		
80553	43115	<5	<15	<10			28	49		55		
80554	43116	<5	<15	15			47	24		446		
80555	41651	<5	<15	11			19	63		27		
80556	41652	<5	29	13			29	12		52		
80557	41653	<5	<15	13			34	16		77		
80558	41654	<5	<15	<10			29	23		42		

PROCEDURE CODES: AL4APP, AL4Co, AL4Cu, AL4Ni

Certified By:

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