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MINING LANDS BRANCH

REPORT ON THE SHARP LAKE PROPERTY BUCKE TOWNSHIP FOR GOODGOLD RESOURCES LTD.

LARDER LAKE MINING DIVISION
ONTARIO
NTS 31M/5

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SUMMARY

Goodgold Resources has obtained the right to earn an interest in the Sharp Lake property from Bethlehem Resources Corp. The Sharp Lake Property is located in Bucke Township near Haileybury and New Liskeard, in northeastern Ontario. The property is located along the Timiskaming Structural Zone, a rift system that hosts the Kirkland Lake/Larder Lake kimberlite field 90 kilometres to the northwest. The property is in part adjacent to the Bucke kimberlite pipe recently found to contain diamonds.

Kimberlite boulders discovered in gravel pits in Bucke

Township nearby are of different composition than the known Bucke

Pipe and far enough away that an alternative source is inferred.

In addition, the Bucke Pipe is far enough from the kimberlite field

at Kirkland Lake/Larder Lake that a separate field in the

Haileybury area is indicated so the prospects of finding more pipes

in the area appear to be good.

An exploration program for diamonds consisting of airborne geophysics followed by verification ground geophysics and diamond drilling to test the targets outlined and obtain samples is recommended. Cost of the Phase I program is estimated at \$75,000. Grade estimates based on the composition of the samples will be used to determine whether Phase II bulk sampling is warranted.





TABLE OF CONTENTS

	Page#
Summary	
Introduction	1
Locations, Access and Physiography	1
Claim Status	3
Geological Environment for Diamonds	4
Regional Geology and Mineralization	8
History and Previous Work	12
Property Geology and Mineralization	13
Exploration Procedures	17
Conclusions and Recommendations	19
Statement of Qualifications	
T Y Tanal W Was	

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References

LIST OF FIGURES

Figure 1	Location Map	Following	Page	1
Figure 2	Claim Map	Following	Page	3
Figure 3	Kimberlite Model	Following	Page	4
Figure 4	Regional Geology	Following	Page	8
Figure 5	Property Geology	Following	Page	13

INTRODUCTION

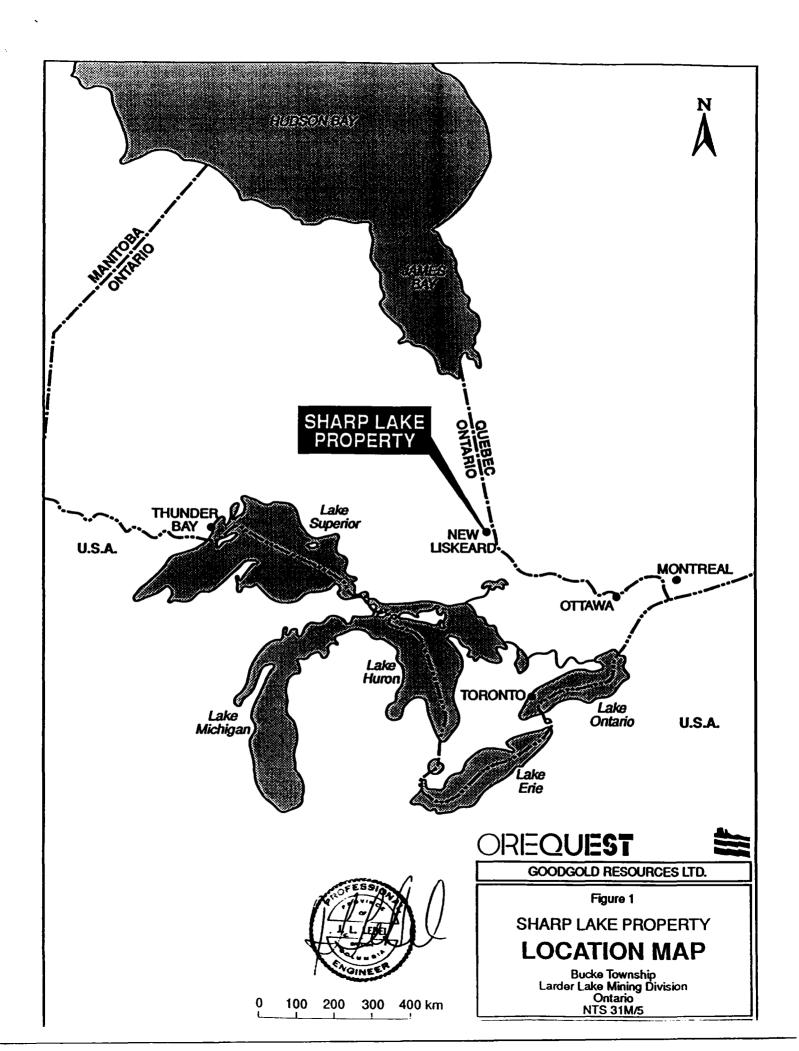
This report presents an evaluation of the Sharp Lake Property which is under option to Goodgold Resources Ltd. from Bethlehem Resources Ltd. and makes recommendations as to further exploration work warranted on the property.

The Sharp Lake Property located in Bucke Township west of the Haileybury and New Liskeard, Ontario, is a diamond exploration opportunity. The claims are in the vicinity of and adjacent to the Bucke Kimberlite pipe and are situated in the Timiskaming Structural Zone which hosts the Kirkland Lake/Larder Lake Kimberlite field some 90 kilometres to the northwest.

Neither of the authors have been to the subject property, but both have individual experience relevant to the project. Author Cavey has worked in the Timmins-Larder Lake area on exploration projects focused on base and precious metals. Author LeBel is a geophysicist with over 20 years experience with almost every geophysical method currently used in exploration and who has also worked on many geophysical programs in northern Ontario.

LOCATION, ACCESS AND PHYSIOGRAPHY

The property is 5 kilometres west of the farming community of New Liskeard and the town of Haileybury (Figure 1) in northeastern Ontario about 90 km south of Kirkland Lake.



Access to the area is afforded by Highway 11 (Trans-Canada Highway) which cuts across the area from northwest to southeast, by Highway 558 (the Haileybury Road), which crosses the area from east to west, and several concession roads. A Northern Ontario Natural Gas pipeline and an Ontario Hydro powerline right-of-way also cross the area (Figure 2).

The property is on the southern end of the "Little Clay Belt"; a plain of Pleistocene lacustrine clay deposits from glacial Lake Barlow-Ojibway. The clay has provided a good soil base for farming. Though various crops have been experimented with in the area over the years, the growing season is short, and presently most of this farming area produces dairy and beef cattle.

Approximately 10% of the claim area is presently cleared grazing land, the rest is marginal farmland that has been allowed to return to its natural state. The southern and western claims are covered by stands of mature aspen, poplar, birch, jackpine and spruce.

Topographic relief on the property varies considerably.

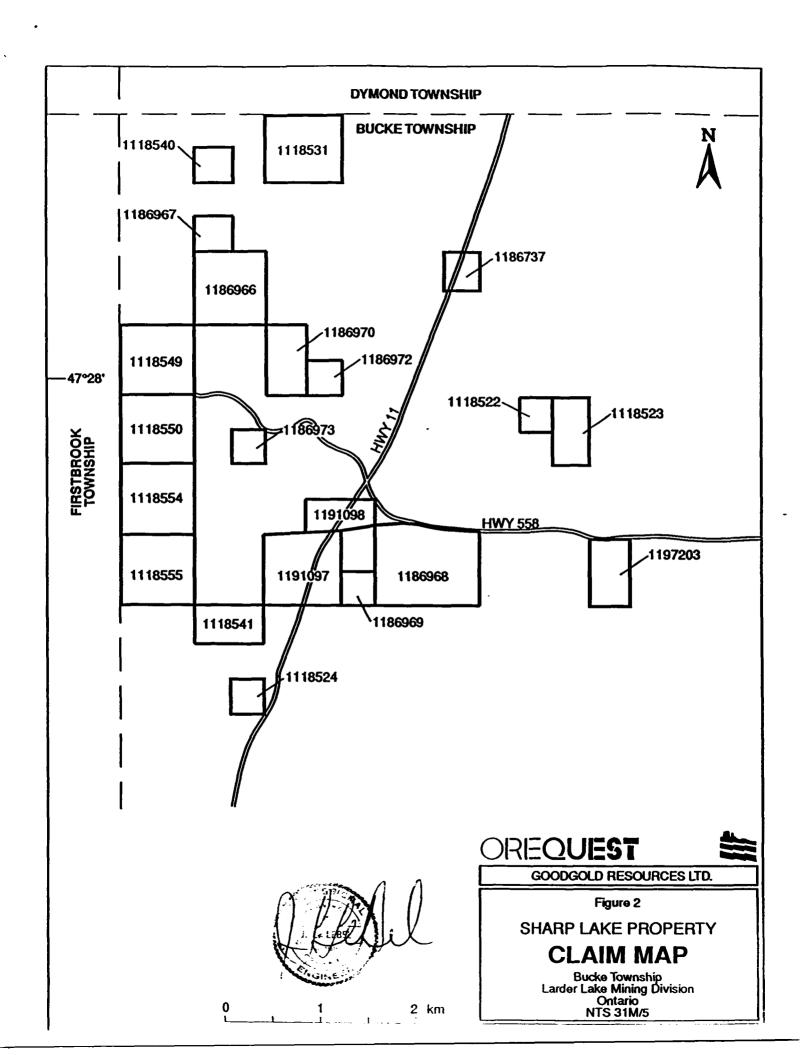
Generally, this area of the Timiskaming Region steps down from southwest to the northeast across a series of parallel northwest trending graben faults into the plain of the Wabi River Valley and Lake Timiskaming. The topographic relief on each adjacent fault block becomes successively more subdued. Southwest of one of these faults, the Cross Lake Fault, which bisects the property area from northwest to southeast, are several bald outcrop ridges of 30-40

metres height. Across the fault to the northeast, there is a drop of some 40 metres in mean elevation, and topographic relief is generally much more subdued with only minor rock outcroppings. An exception is Dickson Creek, which runs north-south on the eastern edge of the claims area and occupies a narrow 30 metre deep gorge.

CLAIM STATUS

The property consists of 21 unpatented mining claims representing an aggregate of 52, sixteen hectare, 400 metre by 400 metre units. They are located in Bucke Township, Town of Haileybury, Larder Lake Mining Division, Timiskaming District, Northeastern Ontario. Most of the claims are non-contiguous and surrounded by farm patents (Figure 2) The surface rights of most of the claims are alienated. Status of the claims is as follows:

CLAIM #	UNITS	AREA (ha)	DATE STAKED	EXPIRY DATE
L1118522	1	16	Oct. 30/92	Oct. 30/93
L1118523	2	32	Oct. 30/92	Oct. 30/93
L1118524	1	16	Oct. 30/92	Oct. 30/93
L1118531	4	64	Sep. 21/92	Sep. 21/93
L1118540	1	16	Nov. 09/92	Nov. 09/93
L1186541	2	32	Oct. 30/92	Oct. 30/93
L1186737	1	16	Oct. 21/92	Oct. 21/93
L1186966	4	64	Oct. 27/92	Oct. 27/93
L1186967	1	16	Oct. 17/92	Oct. 27/93
L1186968	6	96	Oct. 27/92	Oct. 27/93
L1186969	1	16	Oct. 27/92	Oct. 27/93
L1186970	2	32	Oct. 27/92	Oct. 27/93
L1186972	1	16	Oct. 27/92	Oct. 27/93
L1186973	1	16	Oct. 27/92	Oct. 27/93
L1191097	4	64	Oct. 30/92	Oct. 30/93
L1191098	2	32	Oct. 30/92	Oct. 30/93
L1118549	4	64	Jan. 25/93	Jan. 25/94
L1118550	4	64	Jan. 25/93	Jan. 25/94
L1118554	4	64	Jan. 25/93	Jan. 25/94
L1118555	4	64	Jan. 25/93	Jan. 25/94
L1197203	2	32	Jan. 25/93	Jan. 25/94

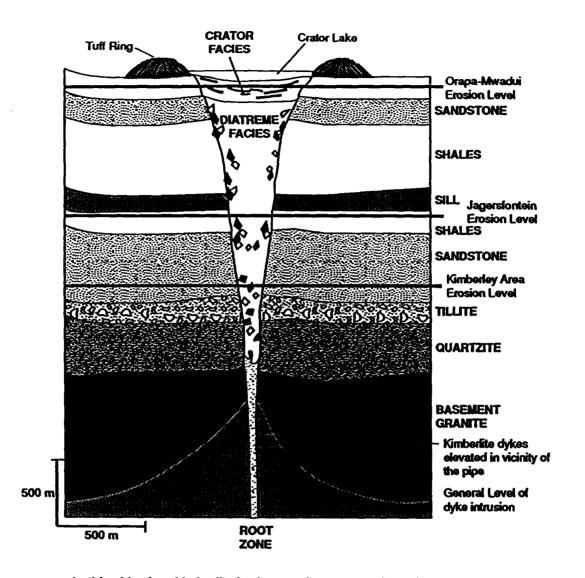


Some of the claims are under option to Bethlehem Resources
Corporation, from several individuals, under an agreement of
January 20, 1993 and some of the claims were staked by Bethlehem
Resources Corp. The claims have been pooled and an area of
influence 1 kilometre from the extremities of the claim area is
also part of the project. Bethlehem has the right to earn a 100%
interest, subject to a 1.5% gross proceeds return royalty.
Goodgold Resources Ltd. has the option to acquire 50% interest from
Bethlehem by undertaking certain option payments and work
commitments (Goodgold Resources, 1993, McAndless, 1993).

GEOLOGICAL ENVIRONMENT OF DIAMONDS

Diamonds form under specific pressure and temperature conditions deep in the earth's crust and are transported to the surface by rapid explosive magmatic intrusions, the most common of which are called kimberlites (Figure 4). The most widely accepted definition of kimberlite as proposed by Clements, Skinner and Scott-Smith (1984) reproduced by Fipke (1990) is as follows:

Kimberlite is a volatile-rich, potassic, ultrabasic igneous rock which occurs as small volcanic pipes, dykes and sills. It has a distinctively inequigranular texture resulting from the presence of macrocrysts set in a finer grained matrix. This matrix contains, as prominent primary phenocrystal and/or groundmass constituents, olivine and several of the following minerals: phlogopite, carbonate (commonly calcite), serpentine, clinopyroxene (commonly diopside), monticellite, apatite, spinels, perovskite and ilmenite. The macrocrysts and anhedral, mantle-derived, ferromagnesian minerals which include olivine, phlogopite, picroilmenite, chromium spinel, magnesian garnet, clinopyroxene (commonly chromium diopside) and orthopyroxene (commonly enstatite). Olivine is extremely abundant relative to



In this side view, kimberlite is shown to be a carrot-shaped structure, the top of which may be likened to a souffle — as the gases within the kimberlite escape upon hitting the atmosphere, the top usually collapses to form a crater. On the surface, kimberlite is usually heavily weathered and yellow in color. At greater depths, the kimberlite changes color, giving way to what is known as "blue ground".







Figure 3

SHARP LAKE PROPERTY

KIMBERLITE MODEL

Bucke Township Larder Lake Mining Division Ontario NTS 31M/5



other macrocrysts and relatively early-formed matrix minerals are commonly altered by deuteric processes, mainly serpentinization and carbonatization. Kimberlite commonly contains inclusions of upper mantle-derived ultramafic rocks. Variable quantities of crustal xenoliths and xenocrysts may also be present. Kimberlite may contain diamond but only as a very rare constituent.

Natural or primary diamond deposits are found within the earth's stable cratonic belts of Precambrian age (1.5 - 3.0 billion years). These areas are believed to have been subjected to zones of uplift and are located in the vicinity of major faults and dyke swarms. Within these areas both diamondiferous and barren kimberlite pipes occur. Kimberlites occur in clusters of 3 to 50 or more and often encompass a region stretching for 50 kilometres commonly known as a field which is located in a geologically favorable environment called a province.

Kimberlite pipes vary in size from a few square metres to 217 hectares (the M1 kimberlite pipe in Botswana). The individual pipes are generally elliptical to circular in shape and carrot shaped in cross section, hence the term "pipe" (Figure 3). The largest pipe in a cluster is the one generally more likely to be economic, although there are two clusters of pipes in South Africa that contain more than one economic pipe. Also, diamondiferous pipes within a kimberlite cluster do not appear to have a predictable distribution pattern, likely due to the explosive nature of emplacement.

Recent geochronological work on inclusions in diamonds (Kirkley et al, 1991), has determined that the diamonds are much older than the kimberlitic pipes which carry them to the surface. Kirkley et al (1991), further conclude that diamonds have been crystallized throughout most of earths' natural history and are not genetically related to the kimberlitic or lamproitic rock that has brought them to the surface. Current geological thinking seems to agree with these conclusions.

There are approximately 5,000 known kimberlite occurrences in the world of which 50 contain mineable concentrations of diamonds or one out of every 100 is economic. The rewards of an economic diamond deposit are excellent, therefore this risk level to exploration companies is acceptable.

Economic diamond deposits are low grade compared with gold occurrences, even low grade heap leach gold deposits. The abundance of diamonds in the economic deposits of Southern Africa generally range from 0.06 - 1.32 ppm, a typical economic gold deposit would range from 4 ppm (0.05 oz/ton) in a heap leach mine to 10.3 ppm (0.3 oz/ton) in an underground mine. Economic deposits of diamond derived from natural or "primary" occurrences account for approximately half of all worldwide production, the remainder of diamond production occurs in secondary, alluvial deposits predominantly derived from weathered and eroded kimberlite source rocks. Glaciation in Canada has likely obliterated any economic

concentrations of alluvial diamond occurrences and subsequently dispersed any diamonds along the glacial path.

Successful prospecting for kimberlites does not necessarily involve finding diamonds in the field but entails following the more abundant kimberlite or lamproite indicator minerals to their source as was successfully done by Dia Met in their Lac de Gras discovery where glacially dispersed indicator minerals were traced some 800 kilometres from their first detection to the Point Lake kimberlite pipe. Geochemically, the most significant indicator minerals are garnets low in calcium and high in chromium, referred to as G10 garnets (Gurner and Moore, 1990). Recent petrological studies completed in Russia and South Africa indicate that with detailed microprobe work, the quality and chemistry of the indicator minerals can indicate whether or not the source kimberlite is diamondiferous. Once an indicator mineral anomaly has been identified by micro-chemistries that fits the model for diamond-bearing kimberlites, a combination of airborne and ground geophysical surveys are normally used to pin point the kimberlite for surface and subsurface sampling.

Weathering also has an effect on diamond concentrations.

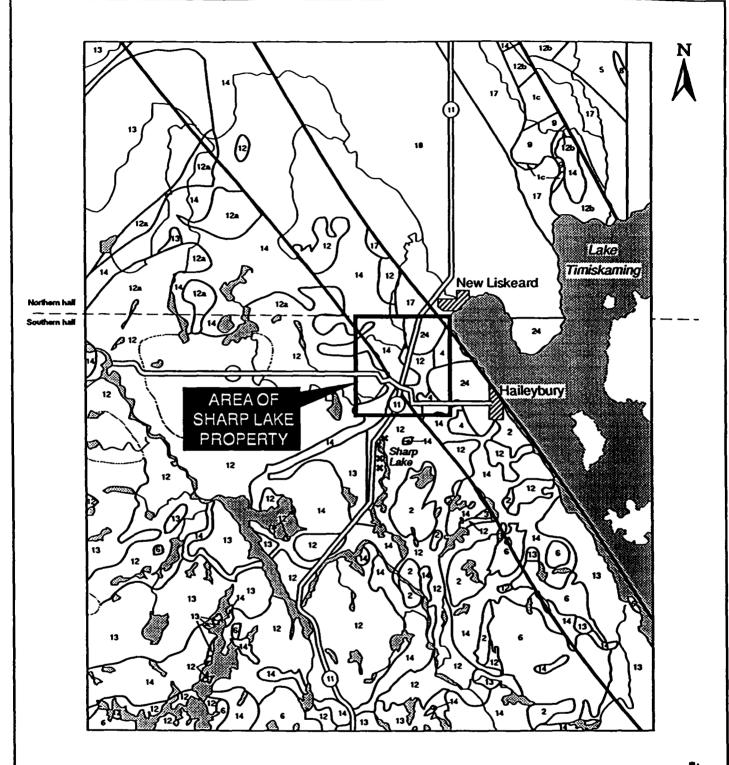
Generally, in the case of the southern African pipes, the more a pipe has been subjected to weathering the less productive it tends to be, although different facies of the pipe differ in homogeneity of diamond grade. The deposits in Botswana, such as the Orapa and Mwandui (in Tanzania), are not eroded whereas the deposits in South Africa such as Jagersfontein and Kimberley have been subjected to

deep erosion (Figure 3). The erosional level in the Timiskaming area is somewhat controversial because both kimberlite pipes and dykes which feed the pipes, occur in proximity.

REGIONAL GEOLOGY AND MINERALIZATION

The area occurs on the northern margin of the Cobalt Embayment (Figure 4). The embayment is composed of late Precambrian Huronian Supergroup sediments and Paleozoic sediments. These formations unconformably overlie early Precambrian, Archean basement volcanic, volcaniclastic, sediments and igneous rocks which form the Abitibi Greenstone Belt just to the north. The Huronian Supergroup is divided into the Lorrain and Gowganda Formations. The Lorrain Formation is composed of sandstone and arkose. The underlying Gowganda is subdivided into the Firstbrook Member, composed of thinly laminated argillite and the Coleman Member, composed of coarse basal conglomerate. The Paleozoic rocks form an outlier of Sulurian and Ordovician limestones and dolomites. The outlier is preserved in a graben structure controlled by northwest and northsouth faults. Both the Archean basement and Huronian sediments are intruded by diabase dykes and sills known as the Nipissing diabase.

For kimberlite diatremes, structural conditions and the gross geology are generally more important than the detailed geology because the emplacement of kimberlites are controlled by deepseated fractures which tap the keel zones of continental cratons



NOTE: See next page for legend.

0 5 10 km

OREQUEST



GOODGOLD RESOURCES LTD.

Figure 4
SHARP LAKE PROPERTY

REGIONAL GEOLOGY MAP

Bucke Township Larder Lake Mining Division Ontario NTS 31M/5 Legend for northern half of map

LEGEND FOR REGIONAL GEOLOGY FIGURE 4

Legend for southern half of map LEGEND UNCONFORMITY **PALEOZOIC ORDOVICIAN AND SILURIAN** 24 Guelph, Lockport-Amabel Formations; Clinton, Cataract Groups; Queenston, Wekwemikonsing Formations. Dolomite, limestone, shale. INTRUSIVE CONTACT (?) **PRECAMBRIAN PROTEROZOIC POST HURONIAN** MAFIC AND RELATED INTRUSIVE ROCKS f 14 Gabbro, diabase (Nipissing-type); metagabbro, amphibolite (Sudbury-type gabbro). INTRUSIVE CONTACT HURONIAN **COBALT GROUP LORRAIN FORMATION** 13 13 Quartzite, arkose, siltstone, conglomerate. **GOWGANDA FORMATION** 12 Conglomerate, argillite, arkose. UNCONFORMITY **ARCHEAN** FELSIC INTRUSIVE ROCKS d 6 Undifferentiated. Granite, syenite. 6a 6 Quartz monzonite, granodiorite. **6b** Migmatite, quartzo-feldspathic gneiss. INTRUSIVE CONTACT **METASEDIMENTS b** 4 Conglomerate, greywacke, slate. UNCONFORMITY MAFIC METAVOLCANICS & Undifferentiated. 2 2a Andesite, basalt. Interflow sedimentary rocks.

Gravel pits where Kimberlite boulders found.

LEGEND

INTRUSIVE CONTACT PALEOZOIC

LOWER AND MIDDLE SILURIAN

18 Thomloe Formation: limestone, dolomite, sandstone.

Wabi Formation: limestone, shale.

MIDDLE AND UPPER ORDOVICIAN

17 Dawson Point Formation: shale.
Farr Formation: limestone.
Bucke Formation: limestone, shale.
Gulgues Formation: sandstone.

UNCONFORMITY

PRECAMBRIAN

17

LATE PRECAMBRIAN

MAFIC INTRUSIVE ROCKS

16 16 Diabase: dikes.

INTRUSIVE CONTACT MIDDLE PRECAMBRIAN

MAFIC INTRUSIVE ROCKS &

14 Diabase, granophyre: sheets and dikes.

INTRUSIVE CONTACT HURONIAN SUPERGROUP

COBALT GROUP

Lorrain Formation

13 13 Quartzite, arkose.

Gowganda Formation

12 12 Unsubdivided.

12a Firstbrook Member: argillite, greywacke, siltstone, arkose.

12b Coleman Member: conglomerate, arkose, greywacke, quartzite, argillite.

INTRUSIVE CONTACT EARLY PRECAMBRIAN

FELSIC INTRUSIVE ROCKS c

9 9 Syenite, monzonite, feldspar porphyry d.

METAMORPHOSED MAFIC
AND ULTRAMAFIC ROCKS &

8 Gabbro, diorite, lamprophyre.

INTRUSIVE CONTACT METASEDIMENTS q

5 Greywacke, siltstone, slate, argillite and minor pebble conglomerate J.

METAVOLCANICS g

INTERMEDIATE AND MAFIC METAVOLCANICS /

1 1c Mafic flows and pyroclastic rocks.

where temperature and pressure conditions permit the formation of diamonds.

Structurally, the area lies within the Lake Timiskaming Rift Valley (Lovell and Caine, 1970), renamed the Timiskaming Structural Zone (Brummer et al, 1992). The Timiskaming Structural Zone extends from Ville Marie in Quebec southeast of the property to the northwest to Smooth Rock Falls, for a distance of over 300 kilometres. It is bounded on the west by the Net Lake Fault/Jacobs Lake Fault and on the east by the Quinze Dam Fault. It varies in width from 60 kilometres to 90 kilometres and incorporates a number of parallel faults like the Cross Lake Fault which passes through the Sharp Lake Property discussed, herein. The presence of Ordovician and Silurian rocks indicates the faults were active after the Paleozoic which is vital since kimberlite diatremes are invariably younger than their host lithologies. The Timiskaming Structural Zone then, has many features which are favorable for the emplacement of kimberlites.

The Sharp Lake property is located in the Cobalt Camp historically important for its silver production. More recently this area among others in Canada, has been the focus of diamond exploration activity. Because of the glacial history of this part of North America, the Hudson Bay region has been considered the likely source of diamonds found in terminal moraines in the northern U.S. in the late 1800's (Brummer et al, 1992a). In 1948,

a kimberlite dyke was identified in Michaud Township to the northwest of the property. Kimberlite dykes are recognized to be the feeders to kimberlite diatremes. Sampling along the Munro Esker, near Larder Lake, in 1965 located a number of kimberlite indicator minerals which were quite angular and suggested a nearby source. Another kimberlite dyke found underground in the Upper Canada Mine in Gauthier Township fuelled diamond exploration in the area lead by Monopros, a subsidiary of De Beers, Lac Minerals and Falconbridge, starting in the 1970's (Brummer et al, 1992b) which led to the discovery of the Kirkland Lake/Larder Lake kimberlite field.

There are currently 19 kimberlite intrusives confirmed in the Timiskaming area of which 13 are diatremes or pipes. In the Kirkland Lake area, the C-14, A-4 (Alfie Creek #1), B-30 (Nickila Lake) and the Diamond Lake #1 pipes are diamondiferous with the largest specimens at 0.17 carats and 0.135 carats coming from the C-14 and A-4 pipes respectively. Regal Goldfields Ltd., currently owns the C-14 diamondiferous kimberlite pipe. A 100 tonne buld sampling program is underway.

The Bucke pipe is situated in Bucke Township near New Liskeard in the immediate vicinity of the Sharp Lake property. This pipe was delineated by a 1982 airborne geophysical survey carried out by Monopros. In the airborne survey the pipe is signatured by a bull's eye magnetic high and a coincident electromagnetic

conductor. Subsequent ground geophysics by Monopros resolved this feature into three separate zones. In 1983, Monopros drilled two reverse circulation holes, one of which appears to have intersected the Nipissing diabase between the two known pipes. Diamond drilling by Monopros on the west pipe in 1985 intersected kimberlitic material. Lac Minerals staked the Bucke pipes, after Monopros abandoned its claims, and carried out a ground magnetic survey and diamond drilled the east pipe. In recent exploration on the Bucke Pipes, KWG Resources and Spider Resources, reported finding four macrodiamonds and one microdiamond from a partially processed 25 tonne sample (Northern Miner, 1993). Part of the Sharp Lake property (claim #L1186737), is immediately adjacent to the Bucke Pipe property.

HISTORY AND PREVIOUS WORK

The Sharp Lake property is located on the outskirts of the famous Cobalt Silver Camp and most of the exploration in the area has been focused on base or precious metals until recently when the diamond potential of the area was identified. The silver occurs in the native form along with safflorite, nickelite, cobaltite, arsenopyrite and skutterudite in high grade veins in or near the contacts of Nipissing diabase sills. There are only two known significant metal occurrences in the immediate vicinity of the property; the Beanland Shaft on the west side of Highway 11 (SW\formall of S\formall . Lot 3, Concession III, Bucke Twp.) with up to 13\formall cobalt, 7 oz/ton silver from quartz-calcite-ankerite veins and the Dotsee

Mine (NW1 of S1, Lot 1, Concession II, Bucke Twp.) which produced a limited amount of cobalt from disseminations of cobaltite in diabase and in quartz veins. The metallic mineral potential of the property, although interesting, is considered of secondary importance to the diamond potential at this time.

With the exception of claim L1186737, most of the previous work on the property was directed at metallic minerals rather than diamonds. Claim L1186737 was once part of a two claim property held by Falconbridge on which ground magnetic surveys were conducted in 1989. The southern claim (L1112063) of this holding is still in good standing. The magnetic surveys outlined two magnetic circular anomalies along the eastern boundary of this claim. Claim L1186737 lies immediately east of the Bucke pipes. Other exploration activity on the property includes:

Claim L1118540

30 ft. pit on quartz-calcite veinlet, traces of chalcopyrite and hematite

Claim L1186966

Magnetometer survey by Colebucke Mines Ltd. 1948-49. T.C. Keefer assessment report mentions trace pyrite, chalcopyrite and cobalt bloom (erythrite) in quartz-calcite and aplite.

Claim L1186972 Conc.V, Lot 3

Two shafts, one possibly 50-100 ft. depth and numerous pits on quartz-calcite veins in diabase noted by Thomson. Trace chalcopyrite in dump material.

Claim L1186973

Part of this claim included in an airborne survey in 1952 by International Nickel Co. of Canada Ltd.

Claims L118550, L118554

Ground magnetometer survey done on part of these claims in 1949 by Colebucke Mines. Traces of chalcopyrite, pyrite, chalcocite and galena noted on the contacts of the Sharp Lake diabase dyke.
(T.C. Keefer, Assessment work report).

Claim L1118555

Numerous prospecting pits on quartz veins with trace pyrite and chalcopyrite in both Nipissing diabase and Firstbrook sediments noted by Thomson.

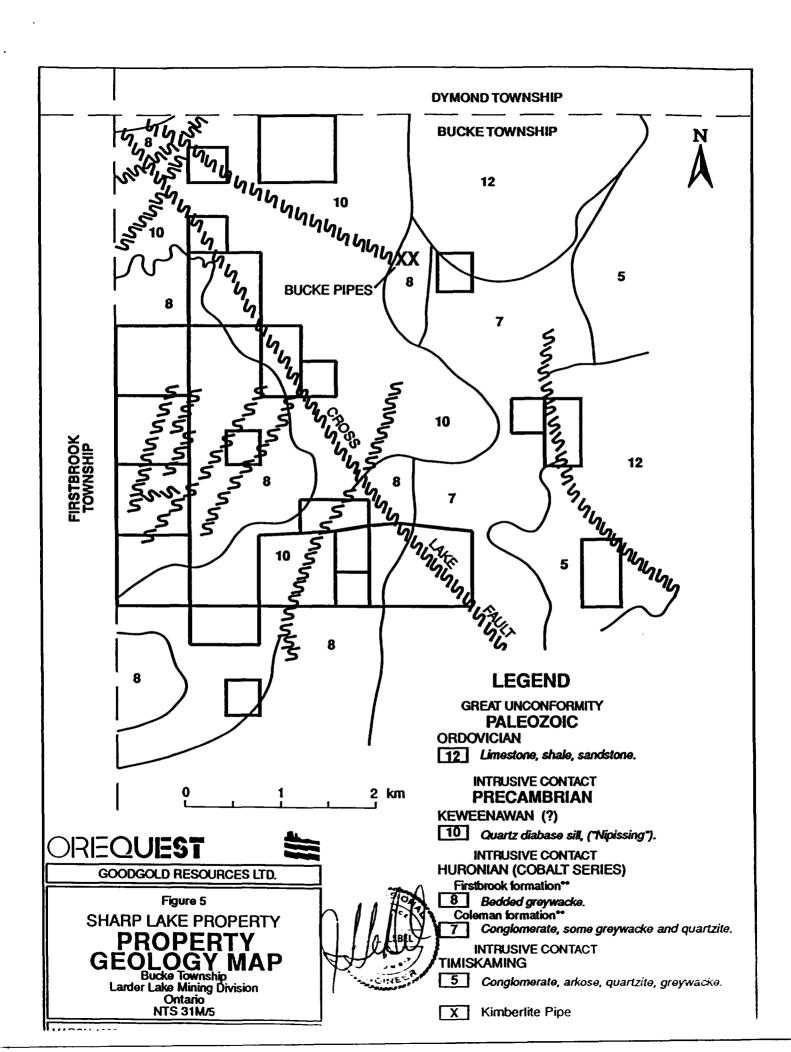
Claim L1191097

3 diamond drill holes put down in 1953 but no results reported.

The base metal potential of basement Archean volcanics underlying the Huronian Supergroup cover rocks has been of interest to Falconbridge Ltd. since the early 1980's (Barron, 1993). These rocks are exposed in a window along the southern boundary of Bucke Township at Sasaginaga Lake. A ground magnetic survey done by Falconbridge, on some of its former land holdings, outlined a small, poorly defined circular high just west of Highway 11 on claim L1191097 presently part of the Sharp Lake property. Magnetic highs are the typical signature of kimberlitic intrusion in the Timiskaming area.

PROPERTY GEOLOGY AND MINERALIZATION

Individual claims of the Sharp Lake Property are underlain by various lithologies, such as: Paleozoic limestone of the Farr Formation, Huronian sediments specifically Lorrain and Gowganda Formation, Nipissing diabase and Archean felsic basement rocks (Figure 5). Since the Bucke East Pipe is Jurassic in age (Brummer



et al, 1992b), any rock type on the property could be a prospective host for kimberlite.

The northwest corner of Bucke Twp. is taken up by a nearly flat-lying Nipissing diabase sill. The sill dips shallowly off to the west, and a significant amount of Firstbrook shale and argillite is preserved over the central portion of the sill.

The Nipissing sills, which average 300 metres in thickness, would probably present an impenetrable barrier to the rising kimberlite diatreme except at the edges of the sill where it is thin and where fracturing has created zones of weakness.

The Cross Lake fault, one of the numerous north-northwest faults of the Timiskaming Structural Zone, crosses the property and provides the needed structural ground preparation. Subsidiary faults such as a west-northwest fault along South Wabi Creek and a north trending fault along the western edge of the Paleozoic Outlier, create additional structural preparation. The Bucke Pipe appears to have been emplaced at the intersection of these two faults. This promotes the numerous fault intersections covered by the claims (Figure 4) into prime exploration targets.

There are no known kimberlites on the Sharp Lake claims but the area is heavily drift covered. In glaciated terrain, prospecting directly for kimberlites is commonly accomplished by

finding indicator minerals which are more abundant than diamonds themselves in glacial deposits and using the glacial history of the area to pinpoint the source. Kimberlite boulders found in the Munro Esker in the Kirkland Lake area pointed to a favorable area which has led to the discovery of several pipes to date. A sand and gravel esker, very similar to the Munro Esker, runs along a north-south fault on the west edge of Sharp Lake in the southwest corner of Bucke Township (Figure 4). Gravel pits along this esker have yielded 17 kimberlite boulders (Barron, 1993) ranging in size from fist-sized to 1 metre in diameter. Because kimberlite is soft and friable, it cannot travel very far before disintegrating. Although the boulders could have travelled a considerable distance incorporated in the glacial ice before being redeposited in the esker their existence is also consistent with a local source. closest of these kimberlite samples to the Bucke Pipe is 8.5 kilometres away. This distance is greater than the 5 kilometres distance a friable kimberlite boulder is able to survive intact before disintegrating in a subglacial waterway, so a source for these boulders other than the Bucke Pipe is suggested. Xenoliths of Nipissing diabase (Barron, 1993) in these boulders indicate their diatreme source passed though a sill or dyke during emplacement. Therefore, exploring in the vicinity of a sill for the source of these particular samples provides additional focus.

Kimberlites normally occur in clusters commonly within a 50 kilometre radius (Jennings, 1990). The Bucke Pipe is 90 kilometres

from the pipes in the Kirkland Lake/Larder Lake area, so another kimberlite cluster in this part of Ontario is suggested by the Bucke Pipe.

Several of the pipes in the Kirkland Lake/Larder Lake area were found by airborne geophysical surveys once favorable indicator minerals had been identified in the glacial tills (Brummer et al, 1992). The kimberlites are signatured by small, subtle circular magnetic highs due to their magnetite content. Some kimberlites elsewhere, for example in the Lac de Gras area, have magnetic lows presumably reflecting remnant magnetism acquired when the geomagnetic field was reversed in polarity. Kimberlites are also known to have no magnetic signature. In a kimberlite field with similarly aged intrusions, a consistent magnetic signature is anticipated. Kimberlites often produce an electromagnetic anomaly or resistivity low because they are porous and friable allowing groundwater saturation with resulting low resistivity. Clay content formed by weathering also reduces the electrical resistivity. They also occupy paleotopographic depressions due to erosion which subsequently become filled with low resistivity overburden or fluvial sediments again producing an EM anomaly or a resistivity low.

Bucke Township has been surveyed by regional GSC magnetic coverage (GSC Map 1492G-Cobalt). Parameters of the survey, ½ mile line spacings and terrain clearance of 1000 feet, are generally too

coarse to resolve the small subtle anomalies associated with kimberlites. This survey did outline four small potentially interesting magnetic highs in the area but none of them occur on the Sharp Lake claims. Also, there is no evidence of the Bucke Pipe in this survey. A previous ground magnetic survey by Falconbridge on claim L1191097 which is now part of the property outlined as a small high just west of Highway 11. Highway 11 appears to have curtailed the complete definition of this feature. The magnetometer survey revealed considerable variations in the magnetic relief despite the largely sedimentary formations which presumably have low and uniform magnetic susceptibility. Careful screening and interpretation of magnetic surveys would appear to be necessary to discern kimberlite pipes.

EXPLORATION PROCEDURES

Due to the recessive nature of kimberlites and lamproites and the unique way in which diamond deposits are formed, diamond exploration requires an integration of petrology, mineralogy, geochemistry, geophysics and remote sensing.

In Northern Canada, heavy mineral indicator (minerals unique to diamondiferous occurrences) methods should be the most effective diamond exploration tool. In a cold climate the indicator minerals are not rapidly altered by chemical degradation processes. As has been demonstrated by Dia Met Minerals Ltd. with the Lac de Gras discovery, indicator minerals such as pyrope garnet, picro-

ilmenite, chromite and chrome diopside found in heavy mineral concentrate samples can lead to the discovery of hidden diamond bearing kimberlites. Lamproite indicator minerals include low-chromium garnets, chromites, ilmenites and low-chromium clinopyroxenes. Recent petrological studies completed in Russia and South Africa indicate that with detailed microprobe work, the quality and chemistry of the indicator minerals can indicate whether or not the source kimberlite or lamproite is diamondiferous.

Exposed pipes and diatremes may be recognizable from the air because of the contrast with the rocks they are intruding. feature makes landsat imagery, aerial photographs and reconnaissance mapping useful exploration tools. When the kimberlites or lamproites are not exposed, as is the case on the Sharp Lake property, geophysical surveys responding to the contrast in magnetic susceptibility and density, for example, between the pipes with that of the surrounding host rocks are vital. When the host rocks are volcanic flows, diabase dykes, intrusive bodies or magnetic iron formations this contrast is not as pronounced as when the host rocks are sedimentary. The combination of total field magnetics, high frequency resistivity surveys and electromagnetic surveys can identify signatures indicative of kimberlite or lamproite pipes. Other surveys such as seismic, induced polarization and gravity can also be useful in delineating these ultramafic intrusions. In situations where Paleozoic rocks form a

thick blanket over the Archean basement, these rocks should exhibit a uniform geophysical signature and any intruding kimberlites or lamproites should produce a distinctive geophysical signature.

Heavy mineral concentrate sampling is a primary exploration tool. The importance of sample collection procedures and sites can not be over emphasized, poorly collected samples and poorly planned sample sites will lead to meaningless results. Airborne magnetic surveys can be used to assist in choosing sample sites in a down ice direction from concentric magnetic features or the confluence of conjugate structures identified by the magnetics. More detailed geophysics, prospecting and geological mapping should be used to aid exploration in areas defined as being of interest as a result of the discovery of the presence of kimberlite or lamproite indicator minerals. Once a kimberlite or lamproite is identified, surface sampling, drill core sampling and ultimately bulk sampling will be necessary to determine the diamond content.

CONCLUSIONS AND RECOMMENDATIONS

The Sharp Lake Property claim holdings are located near Haileybury, in northeastern Ontario, in the vicinity of and adjacent to the diamondiferous Bucke Kimberlite pipe.

The property is underlain by Precambrian continental craton lithologies that host all the world's known kimberlite pipes.

The property occurs in the Timiskaming Structural Zone which hosts a cluster of kimberlite pipes 90 kilometres to the northwest at Kirkland Lake/Larder Lake. The north-northwest Cross Lake Fault and subsidiary west-northwest and north trending faults vital to the emplacement of kimberlite diatremes cross the property. An outlier of Silurian and Ordovician rocks preserved nearby in a graben feature, indicate the faults were active to at least Paleozoic times, thereby creating structurally weakened conduits for kimberlite emplacement.

Kimberlite boulders found in an esker south of the land holdings suggest a possible local source different from the known Bucke Pipe and support the possibility of a cluster of pipes in the area.

An exploration program for the property is recommended. The program should consist of a high resolution aeromagnetic survey followed by verification and detailing ground geophysical surveys on any permissive anomalies recorded. East-west line direction on the surveys is recommended to respect the northerly oriented structural controls in the area. Phase Ib would consist of a diamond drilling program to test for kimberlite pipes and obtain samples. Petrographic and microprobe studies of any kimberlite material obtained would be used to determine if Phase II bulk sampling is necessary.

BUDGET ESTIMATE

(prices include G.S.T.)

PHASE Ia: Airborne and Ground Geophysics

Airborne Geophysics	\$13,000
Line Cutting	12,000
Ground Geophysics	6,600
TOTAL PHASE Ia	\$31,600

PHASE Ib: Diamond Drilling and Analysis

Mob/Demob	\$ 2,000
Project Manager	2,800
Project Geologist	7,440
Accommodation and Supplies	2,060
Vehicle	900
Communication and Freight	400
Diamond Drilling	15,000
Analyses	6,000
Report Preparation	<u> 2,980</u>
TOTAL PHASE Ib	\$39,580
Contingency	\$ 3,820

MOMENT DUE ON TO AND THE

TOTAL PHASE Ia and Ib \$75,000

PHASE II: Bulk Sampling

No estimate made at this time

STATEMENT OF QUALIFICATIONS

- I, J. L. LeBel, of 2684 Violet Street, North Vancouver, British Columbia hereby certify:
- 1. I am a graduate of the Queens University (1971) and the University of Manitoba (1973) and hold a BSc. degree in geological engineering and a MSc. degree in geophysics.
- 2. I am a Professional Engineer registered with the Association of Professional Engineers and Geoscientists of British Columbia, Vancouver, British Columbia.
- 3. I have been employed in mining exploration with various companies since 1972.
- 4. The information contained in this report was obtained from the documents listed in the references and knowledge of the area.
- 5. I own no direct, indirect shares or securities of Goodgold Resources Ltd. or Bethlehem Resource Corp. and do not expect to receive any contingent interests in the Sharp Lake property.
- 6. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document, providing the report is used in its entirety or any summary thereof is approved by the author.

J.I. Level P.Eng

DATED at Vancouver, British Columbia, this 15th day of March, 1993

STATEMENT OF QUALIFICATIONS

I, George Cavey, of 6891 Wiltshire Street, Vancouver, British Columbia hereby certify:

- 1. I am a graduate of the University of British Columbia (1976) and hold a B.Sc. degree in geology.
- I am presently employed as a consulting geologist with OreQuest Consultants Ltd. of #306-595 Howe Street, Vancouver, British Columbia.
- 3. I have been employed in my profession by various mining companies since graduation, with OreQuest Consultants Ltd. since 1982.
- 4. I am a Fellow of the Geological Association of Canada.
- 5. I am a member of the Canadian Institute of Mining and Metallurgy.
- 6. I am licensed to practice as a Professional Geologist in Alberta.
- 7. I am a member of the Professional Engineers and Geoscientists of British Columbia.
- 8. The information contained in this report was obtained from a review of data listed in the references, in addition to a general knowledge of the area.
- 9. Neither OreQuest Consultants Ltd. nor myself have or expect to receive direct or indirect interest in the Sharp Lake property nor in the securities of Goodgold Resources Ltd. or Bethlehem Resource Corp.
- 10. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public document, providing the report is used in its entirety or any summary thereof is approved by the author.

George Cavey, P.Geo., F.G.A.C.

DATED at Vancouver, British Columbia, this 15th day of March, 1993

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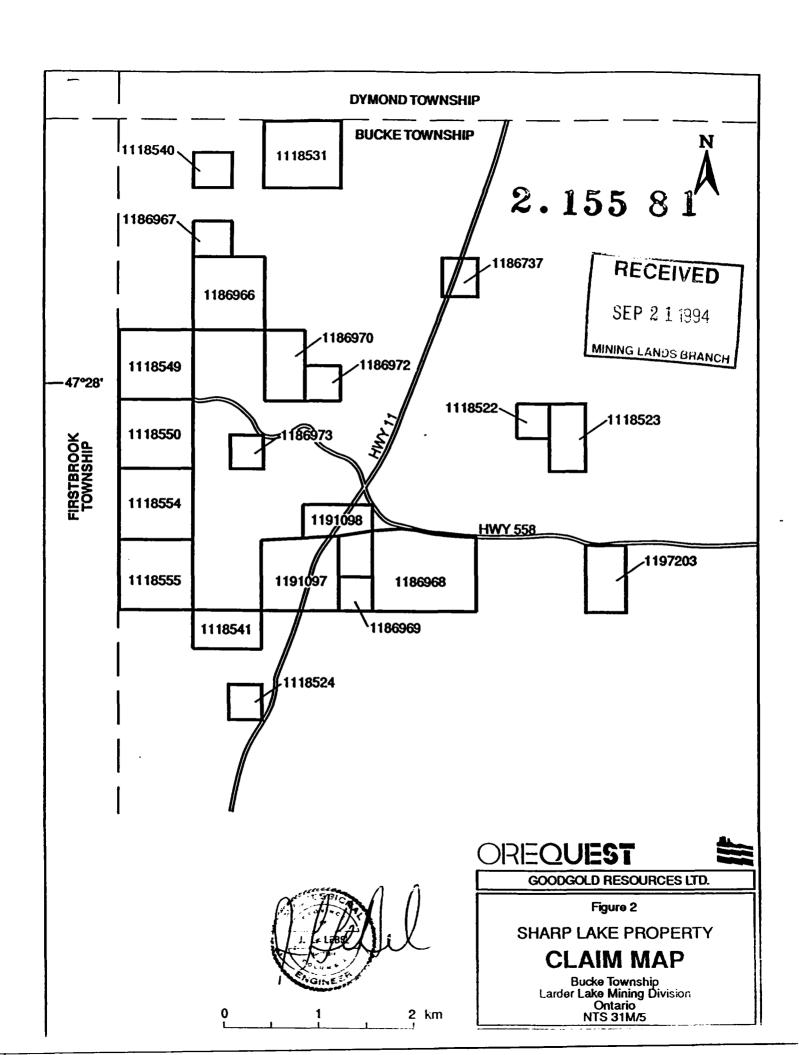
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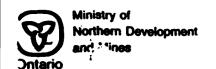
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Report of Work Conducted After Recording Claim

Transaction Number

Mining Act

Personal information collected on this form is obtained under the authority of the Mining his collection should be directed to the Provincial Manager, Mining Lands, Ministry of Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.



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nstructions: - Please type or print and submit in duplicate.

- Refer to the Mining Act and Regulations for requirements of filing assess
Recorder.

A separate copy of this form must be completed for each Work Group. - Technical reports and maps must accompany this form in duplicate.

- A sketch, showing the claims the work is assigned to, must accompany this form.

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Claim Number	Number of Claim units	Value of Assessment Work Done on this Claim	Value Applied to this Claim
L1186973	1	\$ 94.00	\$ 94.00
L1118549	4	\$ 376.00	\$ 376.00
L1186737	1	\$ 94.00	\$ 94.00
L1118550	4	\$ 376.00	\$ 376.00
L1118531	4	\$ 376.00	\$ 376.00
L1186966	4	\$ 376.00	\$ 376.00
L1186967	1	\$ 94.00	\$ 94.00
L1118540	1	\$ 94.00	\$ 94.00
L1186970	2	\$ 188.00	\$ 188.00
L1186972	1	\$ 94.00	\$ 94.00
L1118554	4	\$ 376.00	\$ 376.00
L1118555	4	\$ 376.00	\$ 376.00
L1118541	2	\$ 188.00	\$ 188.00
L1118524	1	\$ 94.00	\$ 94.00
L1191097	4	\$ 376.00	\$ 376.00
L1191098	2	\$ 188.00	\$ 188.00
L1186969	1	\$ 94.00	\$ 94.00
L1186968	6	\$ 564.00	\$ 564.00
L1197203	2	\$ 188.00	\$ 188.00
L1118522	1	\$ 94.00	\$ 94.00
L1118523	2	\$ 188.00	\$ 188.00

Total Number of Claims 21 Total Value of Work Done = \$ 4,891.00 Total Value Work Applied = \$ 4,891.00

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RECEIVED

SEP 21 194

MINING LANDS BRANCH



Ministry of Northern Development and Mines

P ère du Developpement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No.Nº do Warranton
W9480.00459

2.155 81

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4º étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7284.

1. Direct Costs/Coûts directs

Туре	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's	GECLOCAICAL	4891-00	,
Fees Droits de l'entrepreneur	REVERT.		
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Supplies Used Fournitures utilisées	Туре		
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Equipment Rental	Туре		
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2. Indirect Costs/Coûts Indirects

Note: When claiming Flehabilitation work indirect costs are not allowable as assessment work.
Pour le assessment des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux

Туре	Description	Amount Montant	Totals Total global			
Transportation Transport	Туро					
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	Sub Total of Indirect Costs Total partiel des coûts Indirects					
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Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivent une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

- Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

- Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valour totale susmentionnée du crédit d'évaluation.
- Les travaux déposés trois, quatre ou cinq ans après leur achévement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Evaluation totale demandée
×	0,50 =

Certification Verifying Statement of Costs

I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as (Recorded Holder, Agent, Position in Company)

Attestation de l'état des coûts

J'atteste per la précente :

que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

ŧ	t qu'à titre de		ie	suis	autorisé
	(titulaire enregistré, représentant, post	e occupé dans la	CONT	pegnic)

à faire cette attestation.

Dete
na Sept 14/1

to make this certification

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



Ministry of Northern Development and Mines

December 29, 1994

Ministère du Développement du Nord et des Mines Geoscience Approvals Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario

P3E 6B5

Telephone: (705) 670-5853 Fax: (705) 670-5863

Our File: 2.15581

Transaction #: W9480.00459

Mining Recorder
Ministry of Northern
Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Mr. Spooner:

RE: APPROVAL OF ASSESSMENT WORK SUBMITTED ON MINING CLAIMS L1186973 IN BUCKE TOWNSHIPS.

A Notice of Deficiency was not issued on these Reports of Work prior to the 90 day deemed approval date and as outlined in subsection 6(5) of the Mining Act Regulations this Report of Work is deemed approved as of December 13, 1994. The Assessment credits are as listed on the original submission.

Please indicate this approval on the claim record sheets.

If you require further information please contact Dale Messenger at (705) 670-5858.

ORIGINAL SIGNED BY:

Yours sincerely,

Ron C. Gashinski

Senior Manager, Mining Lands Section Mining and Land Management Branch

Mines and Minerals Division

Ron cooked.

DEM/dl

cc: Assessment Files Office / Sudbury, Ontario

Resident Geologist Cobalt, Ontario

