A REPORT ON THE
CAR LAKE PROPERTY
OF ST. MARY'S EXPLORATIONS LIMITED
IN SKINNER TOWNSHIP, ONTARIO

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MINING LANDS SECTION

Sudbury, Ontario
June 30, 1979

G. J. Hinse, P.Eng.
SUMMARY

This report has been prepared in accordance with the instructions of St. Mary's Explorations Limited. The report summarizes the geological information, the exploration and development work done on the property held under option by St. Mary's Explorations Ltd., located in the Car Lake area of Skinner township, Red Lake Mining Division, Northwestern Ontario. The property consists of 12 contiguous mining claims comprising approximately 480 acres. Two of the claims have been recently surveyed and an application for lease is in progress. The remaining 10 claims are unsurveyed.

Gold was discovered on the property in 1926 and subsequent surface work uncovered several gold-bearing quartz veins, one of these, the No. 3 vein was explored underground through a 2-compartment shaft to a depth of 420.0 feet with levels at 200 and 300 feet. A ten t.p.d. Tremaine stamp mill was in operation sporadically in 1929, 1932, and 1936. Production figures reported vary, but it is reasonable to assume that at least 500 tons of material were milled from underground development and a rich pocket on surface assumed to have been mined from the Discovery vein. Gold produced is reported as $2,500.00 or $3,107.00 in 1929; $1,500.00 in 1932 and 84 or 120 ounces in 1936. Work was abandoned in 1937 and the property remained dormant until the patents on those claims lying south of the shaft lapsed in the late 1950's. From this date to 1972-73, this part of the property was covered with line cutting, geophysical surveying and limited diamond drilling aimed chiefly at testing the base metal potential of the claims. The claims covering the camp area and the No. 3 vein lapsed in 1972 and were acquired together with the above south claims by a group of four prospectors who held the claims until their option to St. Mary's Explorations Ltd. Work done by this group consists of stripping and rock trenching. In 1973, Selco Exploration Corp. Ltd. held the claims shortly under option and did line cutting, geology and drilled 6 X-Ray holes.

The property is a gold prospect where finely disseminated to coarsely crystalline gold occur in quartz veins found associated with shear zones in basalt and/or gabbro. Sulfide mineralization consisting of pyrite, pyrrhotite,
chalcopyrite, galena, and minor arsenopyrite is ubiquitous in all the quartz veins. The veins are composed of milky white glassy quartz, granular white quartz and smoky grey vitreous quartz. Veins occur along two main trends; a north-south trend parallel to the west contact of a large gabbro intrusive found in the east half of the property and along east-west trends in the vicinity of the gabbro-basalt contact. The contact is characterized by a wide shattered, chloritic, carbonated and sheared zone in basalt containing several quartz veins, one of these assaying 0.42 oz. of gold per ton across 3.0 feet. The shear zone also contains up to 10% sulfides.

The area has been subjected to severe polyphase deformation; the granular cataclastic texture of some of the quartz veins being diagnostic of severe pressure metamorphism. Thus mobilization of quartz veining and related gold values was widespread and their present configuration and location controlled by a structural pattern with a definite areal westerly plunge.

Assay results vary from low values to several ounces in samples where fractured quartz was included. However, upon examination of the showings, the omnipresence of coarse gold suggests that the high values obtained should be taken into consideration in assessing the merit of the property. This is confirmed by the results that Erie Canadian Mines, Limited obtained on the No. 3 vein. On surface, this vein is reported to average 1.50 ozs. of gold per ton across 2.0' for a length of 165 feet and on the 200' level, 0.52 oz. of gold per ton across 3.5' for 180.0 feet.

By analogy to the numerous economic gold zones known to be related to periods of structural deformation of intrusives and the high assay returns obtained in grab samples picked up at random over several veins, the property has excellent exploration potential and warrants further work. It is therefore recommended that a program of work be implemented to test the potential of the property. This work ought to consist initially of X-Ray drilling to acquire a better knowledge of the structural pattern controlling the gold-bearing quartz veins and to test the continuity of the No. 3 vein between surface and the 200-foot level. If further work is warranted, the initial stage should be followed up by additional drilling at deeper levels; and the feasibility of small scale production should be studied, including dewatering the present underground workings in view of mining.

G. J. HINSE, P. ENG.
The initial phase of the program is estimated to cost $50,000.00 with further expenditures dependent on the results obtained.
INTRODUCTION

At the request of St. Mary's Explorations Limited, we have prepared this report on the property held under option by that Company in the vicinity of Car Lake in Skinner township of the Red Lake Mining Division, Northwestern Ontario. The property is located 42 miles east of the town of Red Lake and 11 miles northwest of South Bay mine.

The Car Lake property includes 12 mining claims comprising approximately 480 acres. The property is made out of two claims, recently surveyed and being brought to lease and 10 unsurveyed claims. All the claims are in good standing. 3 claims are under an extension to apply and pay for lease until June 8, 1980. The remaining 7 claims are due for lease in July of this year. The claims are held in the name of G.D. Strilchuck and A. Bertram pending the transfer of escrowed shares as provided under the option agreement.

The property is a gold prospect known as the "Old Bathurst Mine". Gold was discovered on the property in 1926. The discovery lies 700 feet west of the northwest bay of Car Lake. It is described as being spectacular and consisting of coarse gold grains, the largest of which being about 1 inch found in white sugary quartz. This discovery has been known over the years as the "Golden Sidewalk". Subsequent work uncovered several gold-bearing quartz veins. In late 1927, Bathurst Mines, Limited was organized to take over the property. At that time, a shaft was sunk to explore underground the No. 3 vein. Lack of capital forced the re-organization of the Company into Bathurst Gold Mines, Limited in 1934. Late in the same year, Erie Canadian Mines, Limited secured an option on the property and carried extensive surface and underground exploration work. In 1935, Erie Canadian lost titles to the property which reverted to Bathurst. In 1936, the property was optioned to the Car Lake Syndicate which formed Gleemar Gold Mines, Limited.
Figure 1

PROPERTY MAP
of the
CAR LAKE PROPERTY
of
ST. MARY'S EXPLORATIONS LIMITED

in Skinner Township, Northwestern Ontario
From 1937 on, the property was dormant until part of the property lapsed in late 1950's. This part of the property was subsequently covered with line cutting, geophysical surveying followed with limited diamond drilling. In 1972, the remaining original claims of Bathurst Mines lapsed and were acquired by the optionors together with additional claims which form the actual property. The property has been held by the optionors continuously to this date except for a 6-month option to Selco Exploration Corp. Ltd. in 1973.

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

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

The data used in this study has been acquired through a recent visit to the property and from various records and information, both published and unpublished, supplied by St. Mary's Explorations and the optionors. This includes records of exploration and development work, published geological maps and reports and assessment work files.

DESCRIPTION OF PROPERTY, LOCATION, ACCESS AND FACILITIES

The property held under option by St. Mary's Explorations Ltd. includes 12 contiguous claims totalling approximately 480 acres. Two claims have been surveyed and are currently being brought to lease. The work requirements necessary to bring the remaining ten claims to lease have been completed. Three claims are presently under an extension of time to apply and pay for lease until and including June 6, 1980. The status of the remaining seven claims and a complete listing of the claims is given in Appendix 1 to this report.

The property is located in the northeast quarter of Skinner township of the Red Lake Mining Division. The property lies 42 miles east of Red Lake and 11 miles northwest of the South Bay mine, a copper-zinc producer owned by Selco Mining Corp. Limited and operating at 500 t.p.d. in Dent township.
Access to the property can be gained by float-equipped plane to Car Lake from Red Lake or Ear Falls. Access can also be gained by boat from the South Bay mine access road through Woman Lake and Narrow Lake, with a short well-cut portage between Woman Lake to Narrow Lake. The west end of Narrow Lake is 2½ miles south of the camp found on the property.

Electric power would be available from the South Bay mine power line. Water is readily available either from Car Lake or Bathurst Lake. A trunk line from the CNR main line extends north to the Bruce Iron Mine, 36 miles southwest of the property. The town of Red Lake provides a complete infrastructure to a mining operation.

**HISTORY OF EXPLORATION**

Gold was first discovered on the property in 1926. Surface exploration was carried on until 1927 when Bathurst Mines, Limited was organized to take over the development of the property. A mining plant was brought in on a winter road in early 1928 and a 10-ton Tremaine stamp mill in early 1929. When operations were suspended in late 1929, a vertical 2-compartment shaft was sunk on the No. 3 vein to 420.0 feet with levels at 200 and 300 feet. Drifting totalled 2,046 feet and crosscutting 1,109 feet. Production from a rich pocket on surface and some underground material amounted to $3,107.00. During 1932, a Jack Nutt mill was flown in and production totalled $1,500.00. Operations ceased before the end of the year.

In 1934, Bathurst Mines, Limited was re-organized into Bathurst Gold Mines, Limited and shaft deepening to 600 feet was in progress. In March 1935, Erie Canadian Mines, Limited advanced some monies to Bathurst secured by a first mortgage and an option of the property. Erie Canadian carried an aggressive surface exploration and underground sampling program until June 30, 1936 at which time, they appear to have lost titles to the property.

In July 1936, the Car Lake Syndicate held the property under option from Bathurst Gold Mines, Limited. They dewatered the mine and carried a limited program of underground development on the 200-foot level. Milling was resumed and 320 tons of material obtained from development and from the surface dump...
were treated for a recovery of 120 ozs. of gold. In December, the operations were on standby pending the formation of a new Company. Underground operations were resumed on March 13, 1937 by Gleemar Gold Mines, Limited and continued until June 14. No milling was done.

The property appears to have remained dormant until the patents on those claims lying south of the shaft were cancelled in late 1950's.

From the late 1950's to 1972, these claims were held successively by Bathurst Selective Mines Securities Limited who did surface prospecting and drilled 6 X-Ray holes on the No. 5 and 7 veins; Gordon Jones, line cutting, magnetic and V.L.F. (Very Low Frequency) electromagnetic surveying; Victoria Algoma Mineral Co. Ltd., 1 drill hole for 901 feet drilled on No. 7 vein; Kendon Copper Mines Limited, 5 drill holes drilled on the No. 7 and 8 veins.

In 1972 and 1973, the present property was acquired by staking by the optionors who did stripping, test pitting and rock trenching over most of the gold-bearing quartz veins. The property was under option for 6 months in 1973 to Selco Exploration Co. Ltd. who did line cutting, geology and drilled 6 X-Ray holes.

**GEOLOGY**

The property lies within the Uchi-Confederation Lakes Metavolcanic-Metasedimentary belt which is a "greenstone" belt of Early Precambrian age within the Uchi Subprovince of the Superior Province of the Canadian Shield. The rocks on the property belong to the lowest cycle of the belt and consist of pillowed basaltic flows, rhyolitic flows, gabbro, granite and related intrusives.

Basalt is the most common rock exposed on the property. It is usually massive and pillowed locally. Pillows are stretched in a north-south direction, are overturned with dips to the west averaging 60-70°. The basalt weathers dark grey, is very fine grained, dark grey-green in color and is composed of feldspar, chlorite, actinolite, carbonate with traces of pyrite.
Rhyolite is only exposed at the north end of line 0. It weathers white, is bluish-grey in color, fine grained and is composed of feldspar, quartz and 2-3% interstitial chlorite. A boulder of porphyritic rhyolite was found on T.L. 10N at 750E. This rock contains 3-5% 1-2 mm rounded quartz eyes in a rhyolite groundmass.

The gabbro is exposed in an area extending north-south in the vicinity of line 0 to 800E. The gabbro weathers dark grey to black, is fine to very coarse grained and is composed of amphibole, chlorite and 10-40% feldspar. A coarse grained (3-4 mm) amphibole-rich facies of the gabbro is exposed in the vicinity of lines 400 to 800E. Border facies diorite dikes with chilled contacts are mentioned in the log of hole no. 1 drilled by Victoria Algoma near the south end of No. 7 vein.

The volcanic rocks on the property are in contact with a large mass of granite near the west boundary of the property. The contact extends along a north-south direction. At the end of the base line, the granite is white to low creamy-white in color, porphyritic, very coarse grained (3-5 mm) and is composed of 60 to 70% feldspar, 20-30% quartz and 10% hornblende and biotite.

At the old pump site at 370N, 350E, a small outcrop of granite dike is exposed. At this location, the granite is low grey, porphyritic, coarse grained and is composed of 50% feldspar, 40% quartz, 10% chlorite.

A felsite dike is found parallel to the No. 2 and 3 veins. The felsite is massive to well laminated locally and consists of a fine grained equigranular rock composed of quartz, feldspar and minor mica.

**STRUCTURAL GEOLOGY**

The area has been subjected to polyphase deformation and two periods are recognized on the property. The earliest deformation occurred along a north-south axis with a left-handed torsional movement. This period of deformation stretched the pillows in a north-south direction and caused the rocks to fracture and shear. Some of the gold-bearing quartz veins are related to this period. The second period resulted in east-west shearing and faulting,
followed by the emplacement of granitic material along the depletant areas and finally the quartz-bearing veins. Further fracturing mobilized some of the gold along fractures in the quartz with or without sulfides.

Where observed, pillows are highly deformed and flattened in a north-south direction. The upper contact of the pillow is parallel to the lower contact with the upper contact displaced to the north in relation to the lower contact. Pillows are facing east, overturned and dipping 60-70° to the west. The dip of the pillows is regional and all the north-south striking shear zones and veins conform to this dip. In addition to this the east end of the No. 2 and 3 veins appears to rake from 45 to 60° to the west suggesting that the overturning of the pillows occurred in the final stages of the late deformation. Thus the rake is areal and could control the attitude of all the east-west striking quartz veins.

The granular texture of the Discovery and No. 7 veins is interpreted as a cataclastic texture caused by severe pressure metamorphism. The No. 3 and 2 veins together with the adjoining felsite dike are locally coarsely laminated with coarse gold found in small gash fractures in the quartz. In the No. 5 vein, coarse gold was found along sulfide-rich fractures in quartz near the outer contact of the veins. Thus the occurrence of coarse gold along fractures and the texture of the quartz suggest mobilization of gold and silica under severe confining pressures. The mobilization of the vein material occurred mostly along east-west and north-south trends, but locally it extended in near horizontal contorted fractures. Moreover, it is believed that the veins conform to a regional structural pattern defined in general by an areal westerly plunge. Similarities to this can be found in the Val d'Or area where Lamaque Mining Co. Ltd. and Sigma Mines (Quebec) Ltd. are mining "flats" i.e. visible gold in flat-lying quartz veins.

MINERALIZATION

Gold-bearing quartz veins occur at several locations on the property associated with zones of shearing striking east-west and north-south. Sulfide mineralization is restricted to a north-south striking shear zone, but it is also an ubiquitous accessory to the gold-bearing quartz veins.
The quartz of the veins is vitreous smoky cherty grey or milky white; or granular milky white. All three types of quartz contain gold in visible quantities, as coarse grains or in fine disseminated form, sometimes invisible to the unaided eye. Accessory sulfides found predominantly along fractures consist of chalcopyrite, pyrite, galena and minor arsenopyrite. Gold also occurs in the sulfide zone found to the east of line 0 from 1200 to 2500S. This zone, the No. 7 vein, is a wide shattered and sheared zone containing approximately 10% sulfide. Near the north end of this zone, gold is found in a granular quartz vein.

It seems reasonable to correlate No. 3 and 2 veins as they follow a well defined shear zone containing several parallel felsite dikes. Although the No. 3 vein appears to turn towards the Discovery vein at its west end, such a warp in schistosity was not found in outcrops visited on surface. It is possible thought that displacement could have occurred along north-south striking shear zones such as the one found at 400N on line 300W. Likewise, the strike of the north-south shear zones such as the one hosting the No. 9 vein vary considerably but it is possible that they could correlate with minor displacement on the east-west striking shear zones.

All the veins are designed by numbers which respect the original designation. Where a number is missing, the vein is not considered important or has not been worked on since it was found. The north end of No. 7 vein was called No. 10 vein. As the two veins are only one vein, No. 10 was deleted.

A brief description of the individual veins and a general outline of the work done on each vein is given as follows. Unless otherwise mentioned, sulfides are an ubiquitous accessory mineral and assays reported are the results of samples taken by the writer.

The Discovery vein, also known as the "Golden Sidewalk", is found at 600N on line 500W. It consists of a white granular quartz vein having a width of 11 feet where exposed. The vein lies in highly sheared basalt and is only exposed in deep pits which were full of water when the writer visited the property. The vein was tested with two X-Ray holes drilled by Selco Exploration Co. Ltd. The best values reported are 0.10 oz. of gold per ton across a core length of 2.0 feet. An old casing was found at 450N, west of line
500W. No details are available of this drill hole. The following description is borrowed from Greig (1927):

"The quartz of this lens or dome is fine grained and sugary. Under the microscope it is a uniform-grained mosaic, which is quite unlike the quartz veins already described. Cutting across it are tiny stringers of white mica and chlorite. Feldspar was recognized in the hand specimen. Sulphides are scarce near the gold, but the edge of the lens is well mineralized. Pyrite, sphalerite high in iron, chalcocite and galena were recognized".

Vein No. 1 occur near the base line at 850E in an old trench which has not been cleaned out. No information is available.

No. 2 vein is exposed at 060N between lines 500 and 600E. At this location two pits were sunk on the vein which consists of cherty grey quartz, 10 to 16" across. Two representative grab samples returned 1.258 and 0.482 ounces of gold per ton respectively. The sheared wall rock exposed in the pit near line 600E was also sampled and returned 0.034 and 0.055 oz. of gold across 3 feet on either side of the vein. One X-Ray hole drilled by Selco Exploration Co. Ltd. returned 0.87 ounce of gold per ton across a core length of 5.0 feet. Another hole, collared to the north of this hole by the optionors has not been completed as yet. Erie Canadian reports on the 200-foot level for this vein 0.54 oz. of gold per ton across 4.72 feet for a length of 37.5 feet.

No. 3 vein lies at 200N on lines 0 and 100E. It consists of dark cherty quartz carrying very finely disseminated gold and coarse gold found along gash fractures in the vein. Accessory sulfide mineralization is found mainly along fractures in the vein and at its contact with the sheared basalt or felsite. The vein was explored underground through a vertical 2-compartment shaft with levels at 200 and 300 feet. Erie Canadian Mines, Limited who carried a sampling program of all the veins in 1934-35 reports an average of 1.50 ozs. of gold on surface across 2.0 feet for a length of 165.0 feet. On the 200-foot level, they report 0.52 oz. of gold per ton across 3.5 feet for a length of 180.0 feet. Most of the development work on the 300-foot level was done later in 1937 by Gleemar Gold Mines, Limited and did not go far
enough west to explore the vein. Six representative grab samples of the vein taken on surface returned an average 1.24 ozs. of gold per ton. These results are in agreement with those reported by Erie Canadian Mines, Ltd.

No. 5 vein is found at 2550S near line 0. It consists of white glassy quartz with coarse visible gold found on fractures in the quartz with weathered disseminated sulfides. Where exposed on surface between pits sunk by Erie Canadian, the vein dips close to vertical and has a width of 5.0 feet. A grab sample of the vein taken at random on surface returned 3.804 ozs. of gold per ton while two selected samples of the vein without any fractures or sulfides returned 0.052 and 0.001 oz. of gold per ton. An X-Ray hole drilled at the east end of the trenched area by Bathurst Selective Mines is reported to have intersected 1.33 ozs. of gold per ton for a width of 1.6 feet. They also report 0.71 oz. of gold per ton for a width of 4.0 feet on surface.

No. 7 vein is exposed east of line 0 from 1200 to 2500S. This vein is also called the Sulfide zone and the north end of the zone, the No. 10 vein. The vein extends in a north-south direction for 1300 feet and consists of a wide mineralized shear at the contact between gabbro and basalt. The shear is composed of chloritized and carbonatized basalt with irregular quartz veining and is mineralized with up to 10% sulfides, mostly pyrite and pyrrhotite and minor chalcopyrite. Mineralization is disseminated and occurs along slip planes and slickensides. The south end of the zone is known as the "Copper Trench" area and was tested by drill holes drilled by Victoria Algoma Minerals, Bathurst Selective Mines and Kendon Copper Mines.

The north end of the zone is exposed in a trench at 1800S, east of line 0. At this location a granular white quartz vein found at the east end of the trench returned 0.42 oz. of gold per ton across 3.0 feet. An assay of 0.50 oz. of gold per ton across 62 inches is reported by P.J. Shanton in a report on the property dated Nov. 5, 1964. The trench was tested with 2 X-Ray holes drilled by P.J. Shanton in 1963. The logs show that some quartz-rich sections were sampled, but no assays are reported.

No. 8 vein occur at 3000S on line 300W. This vein is not reported to carry
any gold and consequently, it was not examined. The vein was tested with one drill hole by Kendon Copper Mines Ltd. No values are reported.

No. 9 vein is found at 1000N on line 300W. The vein consists of a 3 to 4-foot wide milky quartz vein in basalt. A grab sample taken at random where the vein is exposed returned 3.802 ozs. of gold per ton.

No. 11 vein is exposed at 1300E on tie line 1000N. It consists of milky quartz having a width of 2 to 3 feet. The vein was tested with two X-Ray holes by Selco Exploration. A representative grab sample returned only 0.008 oz. of gold per ton.

No. 12 vein is found at 400N between lines 300W and 500W. The quartz vein has a width of 6 to 12 inches. A representative grab sample taken at random returned 1.956 ozs. of gold per ton.

The quartz vein lying on base line 500E was sampled and returned 0.235 oz. of gold per ton across 16 inches. Another quartz vein found at 3100S on line 0 returned 0.086 oz. of gold per ton across 4.0 feet.

**PAST PRODUCTION**

Past production figures reported in Ontario Department of Mines Annual Reports are for 1929, $2,500.00 produced from material taken from a rich pocket on surface and some material from underground development; $1,500.00 for 1932 and finaly production for 1936 is 432 tons recovering 84 ounces of gold and 36 ounces of silver. All production figures reported do not all agree. In 1929, $3,107.00 is also recorded and in 1936, a figure of 320 tons is also reported for a recovery of 120 ounces of gold.

The surface configuration of the tailing pond suggests an overall tonnage of approximately 500 tons. Some tailings appear to have washed away towards the lake, but the extent of this is not known. However, there are no ore dump on the property and assuming that all underground ore was milled, a figure of 500 tons is a reasonable minimum estimate.
O.01/2.0' of white-granular Quartz in highly sheared Basalt, traces of py, cp, gl, V.G.

DISCOVERY VEIN
"GOLDEN SIDEWALK"
ST. MARY'S EXPLORATIONS LTD.
No. 2 VEIN

Scale: 1" = 20'
June 1979
Figure 4.
ST. MARY'S EXPLORATIONS LTD.
Skinner Twp.
No. 3 VEIN
Ontario

Scale: 1" = 20'
June 1979
A representative sample of the tailings on surface returned 1.065 ozs. of gold per ton. At one location, the tailings were sampled at a depth of 1.0, 2.0, and 3.0 feet below surface and returned 0.717, 0.613 and 0.780 oz. of gold per ton. Undoubtedly, the results are probably not representative and were taken in the zone of surface enrichment.

CONCLUSIONS

The occurrence of substantial gold values associated with quartz veining is widespread on the property.

The cataclastic texture exhibited in the Discovery and the No. 7 veins, and the high degree of mobilization evident in the other veins suggest a structural control of the gold mineralization.

The underground work done on the No. 2 and 3 veins shows that the veins plunge to the west at 50 to 70°, a plunge conformable to the apparent dip of the overturned pillows implying that an overall areal rake would control the gold and quartz mineralization. With the exception of the No. 2 and 3 veins, all work to-date has not tested the continuity of the veins to the west and down plunge.

Field evidence and the limited drilling done does not support the early structural interpretation of the Discovery and the No. 5 veins. Instead a vertical attitude of the veins is indicated with lateral mobilization of the quartz in contorted horizontal depletant areas, branching out from the main vertical vein. Such attitude would somehow be similar to the ore zones called "flats" mined at Lamaque Mining Co. Ltd. and Sigma Mines (Quebec) Ltd. in the Val d'Or area.

The rhyolite found near the north boundary and the porphyritic rhyolite boulder found on tie line 1000N indicates a favorable geological environment for massive sulfide deposits.

Due to the high degree of mobilization of gold and sulfides found on the property, future sampling should include the immediate part of host rock in contact with the quartz veins.

G. J. HINSE, P. ENG.
**RECOMMENDATIONS**

It is recommended that a program of surface work be implemented to permit a more comprehensive assessment of the property. This program is to consist initially of an X-Ray drill program to test the No. 3 vein between the 200-foot level and surface to assure the continuity of this vein prior to the mobilization of a small mill to the property. This initial program also includes some X-Ray drilling to be performed on the Discovery, the No. 2 and 5 veins to test a possible plunge of these veins to the west.

As a continuity of this program, limited X-Ray drilling is also to be done on No. 9 and the north end of No. 7 veins.

If results warrant, a follow-up program which would consists of deeper drilling of the most favorable targets. In the meantime, the feasibility of mobilizing a small mill to the property will be studied.

**Stage 1.**

- X-Ray drilling of the No. 3 vein at 50' centre to test the zone at 100 feet below the shaft collar:
  - 370 feet @ $15.00/ft. = $5,550.00

To drill the above zone at closer intervals if the preliminary results are too erratic:

- 350 feet @ $15.00/ft. = 5,250.00

X-Ray diamond drilling of the Discovery, No. 2 and No. 5 veins:

- 520 feet @ $15.00/ft. = 7,800.00

X-Ray diamond drilling of the No. 7 and 9 veins:

- 400 feet @ $15.00/ft. = 6,000.00

Detailed geology of the No. 2, 3, 5, 7, 9 vein areas:

- 3,000.00
Outlining of tailings area and additional sampling: 1,000.00

Further diamond drilling, depending on the results obtained:
500 feet @ $15.00/ft. 7,500.00

Management, supervision, etc.: 10,000.00

Incidentals: 3,900.00

STAGE 1. TOTAL $50,000.00

STAGE 2.

To study the feasibility of bringing the property to production, metallurgical testing, etc.: 10,000.00

To dewater the underground workings, power plant, headframe, hoist, etc.: 200,000.00

To mobilize and install a 50 t.p.d. mill: 100,000.00

To deep diamond drilling of the best targets:
10,000 feet @ $20.00/ft. 200,000.00

Management, supervision: 100,000.00

Incidentals 60,000.00

STAGE 2. TOTAL $670,000.00

TOTAL STAGE 1. and STAGE 2. $720,000.00
APPENDIX 1.

List of Claims under Option by St. Mary's Explorations Limited.

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The above claims are held in the name of A. Bertram and G.D. Strilchuck. KRL 306685 and KRL 321974 are surveyed and being brought to lease. KRL 322456, KRL 322457 and KRL 322458 are under an extension of time to apply and pay for lease until and including June 6, 1980. An application has been made covering the remaining seven claims for an extension of time to apply and pay for lease.
APPENDIX 2.

References and Sources of Information:


Published Geological Maps and Reports.