ORE CHIMNEY GOLD MINE

MICHELE GOLD MINES LIMITED

REPORT ON 1987 EXPLORATION PROGRAM

July 15, 1988

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INTRODUCTION

Commencing in February, 1987, an extensive program was undertaken by "Sands Minerals Exploration" to explore the geophysical and geological characteristics of the "Ore Chimney Gold Mine".

The Mine property is comprised of three patented mining claims, EO28666, EO29634 and EO28664, located in the extreme south west corner of Barrie Township, Frontenac County, in South Eastern Ontario.

This location places it in the vicinity of the Madoc mining area.

The claims are located one mile east along the Harlowe Road, which intersects highway No. 41 at a point 2 miles north of the town of Northbrook, which is 8 miles north of Kaladar with the intersection of No. 41 and No. 7 highways.

As a preliminary measure for commensing exploration, a rectangular area of the property, some 4000 feet by 1000 feet, was covered with a grid line control system, consisting of cut, chained and picketed traverse lines. These were established at 200 foot intervals along a 4000 foot base line run at a bearing of N35^{O}EAST. The grided area covered the greater portion of the north west parts of claims EO28666 and EO29634, lying north of a hydro power line, extending across these claims. The central or 0+0 point of the grid is located on the base line at 45 feet north east of the "Ore Chimney" shaft.

Exploration commenced with three geophysical surveys using magnetic, electromagnetic and self potential techniques.

Early in June, a semi-detailed geophysical survey was carried out over the grid system by the writer. In October a detailed survey of a trenched area was made by P. Lebaron of OGS Tweed.

Late in June a program of back hoe trenching was commenced to explore the possible morth easterly extensions of the "Ore Chimney" mineralized shear zone, lying to the east of the only known surface exposures, at 395 feet east of the shaft. The trenching was carried out along the possible extension of known gold mineralization, to a point some 950 feet east of the shaft. The trenching was largely completed east of the shaft by July 15th, 1987. Two trenches were excayated west of the shaft, later in July.

Channel sampling of the trenches was commenced on July 10th and went on almost continuously to the first week of November, 1987.

A 4000 foot diamond drilling program of the mine area of the "Ore Chimney" property was commenced on July 15th and completed on September 18th, 1987.

In all, 3174 feet of drilling was done, to explore the mine area of the known ore body, to a vertical depth of 500 feet. In addition, 1244 feet was drilled to explore the possible easterly extensions of mineralization, from 450 feet to 900 feet east of the shaft, in the area covered by surface trenching of 1987.

The field work of the 1987 exploration program of the "Ore Chimney Mine" property was terminated on November 10th, 1987. From that date until the present time, technical work requirements of exploration have been largely carried out on contract by James Wade Engineering Ltd. Some limited participation by the writer has continued, such as the writing of this report and consultations.

HISTORY OF THE ORE CHIMNEY MINE

A detailed background ot the mine's history has been presented in an historical compilation prepared, in January 1987, by Donald A. Bourne, for Sand Minerals Corporation, therefore only a brief summation is presented herewith.

In about 1909, a gold showing on the property was discovered in the north west corner of what is now designated as Claim EO29634. Extensive underground development was carried out on the discovery during the 1909 - 1915 years. A 20 stamp mill was constructed but produced very little concentrate. Between 1932 - 1936 further underground work and sampling of the mine drifts was carried out by Bey Mines, under the supervision of Colin A. Campbell. Productive underground work appears to have terminated about 1936.

In 1983, the shaft was dewatered to slightly below the 150 foot level. Back sampling and geological mapping of the 150 foot level drift was carried out by Mr. Albert Banner and geologist, Paul Kingston, of the OMNR, Tweed branch.

Following this program, the mine was allowed to flood and the mine shaft was capped. No further underground exploration work has been carried out on the "Ore Chimney Mine" property until the commencement of the 1987 diamond drilling exploration program by Sands Minerals Corporation, as briefly described in the following report.

The 1987 exploration program also included surface geophysical surveying and geological mapping, followed by surface trenching and sampling of the possible extension areas of the known "Ore Chimney" ore zone.

These procedures and the results are described in the following report.

GEOLOGY OF ORE CHIMNEY MINE

The deposit is a veined and quartz flooded shear zone in basaltic meta volcanics that is mineralized weakly with disseminated sulphides, including pyrite, galena, sphalerite and chalcopyrite. Pyrite is the most common and abundant sulphide. Trace to moderate gold values and silver in the ounces, are in places, associated with the sulphides. Nugget gold has been reported to occur, but none was observed by the writer.

The mineralized shear zone occurs in the volcanics, close to their unconformable contact with a complex of quartzitic and conglomeratic meta sediments, of the Flinton Group.

Locally the volcanics are referred to as the Tudor Formation of the Hermon Group of Grenville Age. These are separated, by the Ore Chimney Formations, from the unconformable Bishop Corners meta sedimentary rocks of the Flinton Group (see chart A of reference No. 2).

In the vicinity of the mine site, the above formational assemblage is deformed by a local S shaped, steeply easterly plunging fold, the lower limb of which is thought to be truncated by an assumed strike fault.

GEOLOGICAL SURVEYING OF THE ORE CHIMNEY MINE PROPERTY

In June, 1987, the writer carried out a semi-detailed to reconnaissance geological mapping of the portion of the mine property that was included within a grid control area of 4000 feet in length by 1000 feet in width (see plan No. 3). The grid was oriented with the long axis trending N 35^{o}E, which is about the dominant strike of the underlying rock formations. The 0+0 station of the base line was located at 45 feet north east of the centre line of the Ore Chimney shaft. The base line passes about 10 feet north of the centre of the shaft.

All of the area north of the base line was found to be largely underlain by basaltic meta volcanics, mostly composed of fine to medium grained hornblendic amphibolites containing some slight interstetial silica and carbonate. Occasional very course, erratically oriented amphibole, in layers, were found associated with the finer grained amphibolites, at 500 to 600 feet north of the base line, at 400 feet east. A similar, fairly continuous zone of course, disoriented, amphibole development was found, over several feet in width, south of the surface exposure of the Ore Chimney mineralized zone and its possible extensions in trenches 1,2 and 3.

In mapping carried out in October, after the trenching had been completed, the course amphibole alteration feature was found to extend for 200 or more feet, with widths up to 20 feet adjacent to and south of the quartz veined zones of mineralization, which form the "Ore Chimney" gold deposit. The coursely amphibolitized zones were found to be very sheared and prone to gossan development. P. Labaron, a geologist who carried out mapping of the trenches for the MNDV, Tweed branch, has classified these amphibolites as meta sediments or tuffs. Eventually to the south and east, such rocks are found in contact with more massive finer grained basic volcanics.

In the sheared amphibolite sections, stringers and pods of vein quartz occasionally occur concordantly with the trend of shearing. In trench No. 1, a one to six inch wide quartz vein, well mineralized, with galena, chalcopyrite, sphlerite and pyrite was found to contain from 0.01 to 0.03 oz. Au and 0.18 to 8.61 oz. Ag per ton. This vein is believed to be the Ore Chimney vein, as encountered in the 150 foot level stope.

One exposure of pillowed basalt in contact with crystal tuff was mapped at 150 feet south of the shaft. Occasional, narrow, thinly bedded tuffaceous or sedimentary layers were found to be interbedded with the basaltic meta volcanics, such as the occurrence at 450 feet east, 500 feet north of the shaft and base line.

South of the basic meta volcanic assemblage of rocks, a fairly continuous, 2000 foot long, zone of "Ore Chimney" formation rocks have been mapped. These rocks are characterized by their micaceous foliation, resulting from an excessive content of micaceous minerals ranging from intermingled biotite, sericite and muscovite. Biotite is more prevalent near their meta volcanic contact and sericite muscovite near the overlying Flinton quartzites and conglomerates. A good exposure occuring at 250 feet east and 250 feet south of the shaft looks like greywacke with layers of small pebbles or volcanic ejecta (lapille).

The southern part of the grid area, which is south of the base line, is largely underlain by Flinton Group - Bishop Corners Formation - interbedded quartzites and quartzitic conglomerates. Within these younger sediments, it appears that there occur several horizons of Ore Chimney type, formation, such as micaceous wackes and small pebble conglomerates.

Hap-hazard vein quartz emplacements commonly occur in the sediments, but so far they have not been found to carry more than traces of gold.

STRUCTURAL GEOLOGY

The most prominent structure of the Ore Chimney area is a large S shaped drag fold. This structure wraps around the south west end of a large quartzite-conglomerate ridge., which extends immediately north east of the Ore Chimney Mine road. The old mill site is located on the easterly flank of the ridge. Near this location strong vein quartz emplacements, of large pods and irregular fracture fillings in quartzite, were noted. Again at 900 feet west and 550 feet south, considerable minor drag folding was noted in quartzites. The lower limb of the S fold appears to have been truncated by a strong N 50^{o} E trending fault. The fault has been assumed, from physiographic indications. It crosses through the mine area, starting at about 1600 feet west on the base line and extends to

1500 feet east, 700 feet south of the base line. At its west projection, the fault is suggested by a prominent, deep, narrow valley bounded on the north by vertical scarp-like structuring of foliated micaceous, vertical rock out crops.

Along its NE course, the assumed fault passes through a broad, relatively flat valley, occupied by beaver meadow terrain, underlain by recent accumulations of sand and deep black humous-like soil. Further NE as in claim EO28664, the fault passes into a broad marsh filled depression, lying south of the prominent quartzite conglomerate ridge that occurs in that vicinity. Some closer investigation over a quartzite outcrop, crossed by the fault, just east of the mine road, might reveal some more conclusive evidence to substantiate the presence of a postulated fault.

The writer subscribes to the possibility of an assumed north west trending fault zone which is indicated physiographically to extend north-north west along the side of the beaver meadow valley, which crosses the base line about 350 feet east of the shaft. The possibility of such a fault was assumed by V.B. Meen (see Map NO. 51d of reference No. 3).

One of the most pronounced tectonic features in Barrie Township and the area in general, is the Mazinaw Lake fault; that structure passes about 4000 feet east of the possible fault referred to above. This lesser fault could be a similar occurrence of a lesser splay off the Mazinau Fault. It is noteworthy because it may have some bearing on the structure of the Ore Chimney, pipe-like, ore shoot.

GEOPHYSICAL SURVEYING OF THE ORE CHIMNEY PROPERTY

The geological mapping program was preceeded by VLF and magnetometer surveys of the whole gridded area of the "Ore Chimney" Mine property. These surveys were carried out in February, 1987 by R.H. Henning, P. Eng. for Minex Exploration Services (see ref. No.4 for a full report on details of this survey). Part of Henning's summation on the results of his survey reads as follows:

"The VLF survey detected a number of very weak to moderately strong conductors, nearly all of which are interpreted to be caused by surfical conductivity..... .The survey did not reveal the existance of any significant bedrock conductors, except for an isolated, weak anomaly located near the shaft, which appears to be due, to a part of the mineralized shear."

The near shaft VLF anaomaly was not indicated to be magnetically anomalous.

SELF POTENTIAL SP SURVEY

A SP survey was carried out over the gridded area in June, 1987 by Hussey Geophysics of Toronto. This survey reflected the near shaft anomaly indicated by the VLF survey. Further interpretations of the SP survey have been made by the writer as follows:

An SP anomaly was reflected where the Ore Chimney mineralized shear zone and quartz vein system outcrop just south of the base line at 350 feet east on the grid, and also at locations 400, 600 and 800 east.

At four other locations, as at grid stations, 1600W - 450N, 1400W - 100N, 1000W - 300N, and 600W - 400N, prominent SP anomalies have been located. Two of these are associated with centres of anomalous magnetic intensity. Another set of anomalour SP and magnetic highs occur between 200E to 1000E at 300 to 400 feet north of the base line. These are in alignment with two VLF anomalies located at 200 east to 400 east and 1000 east to 1400 feet east.

An SP anomaly occurring between 800 and 1200 east and 100 feet north of the base line was found to be associated with a high magnetic centre at 1000 east and a weak VLF anomaly at 1400 east. An eventual investigation of this anomaly by trenching revealed a narrow quartz flooded shear zone and moderate pyrite mineralization in meta gabbro. Sampling of this occurrence has revealed only meager gold and solver content.

The anomalous SP zone extending from 400 feet to 800 feet east and 50 feet south of the base line has been investigated by trenching, rock sampling and shallow diamond drilling.

Other SP anomalous zones, that were found during the survey and are referred to above, have not been investigated to date.

TRENCHING AND SAMPLING OF ORE CHIMNEY GOLD DEPOSIT

The Ore Chimney Mine underground workings are overlain on surface by post glacial and recent sands and organic peaty sediments for a distance of 325 feet east of the shaft centre. Consequently, no surface trenching was attempted over this area. However, to explore the possible surface extension of the deposit beyond that region, a series of back hoe trenches were excavated along the probable strike for a distance of 325 to 900 feet east of the shaft centre. In all 16 trenches were excavated to bedrock, east of the shaft and 2 at 110 and 200 feet west of the shaft (see plan No.5 for location of the trenches).

During the early 1900's, a 10 x 18 foot pit had been excavated on the surface exposure of the vein system for a depth of about 20 feet. This excavation was still open for examination in 1987. Further to the east several other old caved trenches were noted, but not examined in any detail.

The trenching was carried out to expose the underlaying bedrock formations across their probable strike along a distance of 650 feet or to almost 1000 feet east of the mine shaft. The maximum width of rock formations exposed for sampling was about 300 feet, at 150 feet east of the shaft.

The bedrodk of the trenches was channel sampled using slots cut with a diamond bladed "Still" cut off saw. The sample interval of the channels was held to a routine 30 inch width, except in a few areas where closer (or wider) sampling was found to be expedient.

During the sampling program, a detailed geological mapping of the bedrock in the trenches was carried out by geologist, Mr. P. Lebaron of the OSC Tweed branch. His mapping is not included as part of the writer's report, but it has been referred to and is on file in the head office of Michele Gold Mines Ltd., Toronto.

TRENCH SAMPLING RESULTS

In all 237 bedrock samples were cut in the trenches excavated east of the shaft and 19 from trenches west of the shaft. The results of the sampling program are displayed or Plan No. 5. The precious metal content of the samples was assayed and reported in troy ounces of gold and silver per short ton.

The gold content of the samples was found to be consistently low. In general it ranged $\frac{1}{1000}$th of an ounce from less than 0.001 to a high of 0.009 troy ounces per ton. One exception to this was a 0.026 oz. Au/T assay over 30 inches in trench No. 14, at 800 feet east and 90 feet north of the baseline. This sample is thought to have been taken from a narrow quartz flooded, lightly mineralized, shear zone that contained fine grained pyrite. The mineralization zone was indicated by an anomalour SP reflection. Diamond drill hole No. OC87-9, drilled to investigate the anomalous zone, intersected two feet of quartz calcite vein matter containing no visible sulphide mineralization. (The section was not sampled).

In general, the overall content, in the trenches, of silver was found to be only in the 100th of an ounce category, ranging from <0.01 to a high of 0.08 oz./T. However, some much higher values were encountered in isolated areas, such as in the pit located 40 feet east of trench no. 1. Here a heavily mineralized section of the quartz vein system contained copious amounts of galena, sphalerite, chalcopyrite and pyrite. A sample section of this averaged 1.07 oz. Ag/T. over 12.0 feet, including one 2.5 foot section which assayed 2.73 oz. Ag/T. A sample taken from this section by P. Lebaron

at 200 feet east of the pit, (a 30 foot section in trench No. 6) contained 0.16 oz. Ag/T. in a somewhat sheared amphibolite section of the south end of the trench.

A section in the north end of trench No. 16 near the baseline at 110 feet west of the shaft contained gold values of only $\frac{1}{1000}$ths of an ounce range. However, a sample section of 5.0 feet averaged 0.03 oz./T. in silver (see plan No. 5).

DIAMOND DRILL EXPLORATION - ORE CHIMNEY MINE

Before 1934, a number of holes were drilled by Bey Mines Ltd., from surface locations near the shaft area and from underground from the 400 foot level x cut. (see ref. No7). The deepest intersection of the mineralized-veined shear zone of the gold deposit, was made at 825 feet vertically in hole No. 4., and also at 725 feet vertically in hole No. 5. Surface hole No. 3 cut the mineralized zone at 605 feet vertical depth, where 0.038 oz. Au/T. over 1.6 feet was recorded (see ref. No. 7.). Holes Nos. 1 and 2 from surface were not drilled deep enough to reach the mineralized shear zone of the "Ore Chimney" deposit. The casing of surface hole No. 3 - 1932 is in place, but despite several attempts, the writer has been unable to find the locations of surface holes Nos. 1 and 2 - 1932.

On June 16, 1987, a surface diamond drilling program was commenced to explore the probable location and nature of ore in the "Ore Chimney" Gold/Silver deposit between drift levels of the underground working, down to the 500 foot level, or lower.

In all, some 3174 feet of BQ size core was drilled for this purpose in eight diamond drill holes, the locations of which are shown on plan No. 4. The location of old surface hole No. 1930 - 3 is shown as well.

The summary of the purpose and results of the holes drilled is as follows:

Hole No. OC 87-1

The hole was drilled to investigate the vertical extension of a surface exposure of the mineral zone (MZ), located at 415 feet east of the "Ore Chimney" Mine shaft. It intersected the MZ at a vertical depth of 70 feet below the elevation of the shaft collar (SC). The 3 feet of core assayed 0.21 Oz. Au and 3.93 oz. Ag/T.

Hole No. OC 87-2

This hole was drilled to cut the MZ about 50 feet below the 87-1 intersection. Due to misinformation regarding the degree and direction of dip of the MZ, the hole drilled into an old stope, located above the 150 foot drift. Three feet of mineralized rubble (muck) was recovered which assayed 0.09 oz. Au/T. and 0.25 oz. Ag/T.

Although the MZ was intersected at about 20 feet above the 150 foot drift, the tenor of the MZ is inconclusive.

Hole No. OC 87-6

The hole was drilled under hole 87-2 and an intersection of the MZ was made at 200 feet vertically below SC elevation. The core assayed 0.028 oz Au/T. and 0.745 oz. Ag/T over 5.0 feet. This was adjoined by core assaying 0.0039 oz. Au/T. and 1.26 oz. Au/T over the following 2.4 feet.

Hole No. OC 87-3

Hole 3 was drilled to intersect the mineralized zone at 335 feet east of the shaft section and about 200 feet vertically below the SC collar elevation. A quartz vein mineralized with pyrite, chalcopyrite and galena was intersected at 185 feet vertically. The core assayed 0.004 oz. Au/T. and 0.008 oz. Ag/T. over a 3.0 foot section of core.

Hole No. OC 87-4

Hole 4 was drilled to intersect the mineralized zone at 295 feet east of the shaft section and at a vertical depth of 300 feet below SC elevation. At 290 feet vertically a quartz vein was intersected which assayed $\leq$0.001 oz. Au/T - $\leq$0.01 oz. Ag/T over a core lenght of 0.8 feet.

Hole No. OC 87-5

Hole No. 5 was drilled to intersect the mineralized zone at 270 feet east of the shaft and at a vertical depth of 350 feet below the SC elevation. A mineralized section containing vein quartz, fracture filling and flooding with fine grained pyrite, chalcopyrite, coarse galena and slight sphalerite, was intersected at a vertical depth of 398 feet. Allowing for a flattening of the hole, the intersection was probably made about 350 feet vertically. Assay of 5.0 feet of core was 21 PPB Au and 3.7 PPB Ag.* NOTE: The records of dip tests on this hole were not obtained, but some flattening is assumed to have occurred as it did in all other holes.

Hole No. OC 87-7

Hole No. 7 was drilled to intersect the MZ about 245 feet east of the shaft and at a vertical depth of 450 feet below the SC elevation. The intersection of vein quartz at this elevation, mineralized with pyrite, galena and sphalerite assayed 0.01 oz. Au/T - 0.74 oz. Ag/T over 3.5 feet of core.

NOTE: * 21PPB = 0.0006 oz Au/T
3.7PPB = 0.107 oz. Ag/T.

Hole No. OC 87-8

Hole No. 8 was drilled to attempt to intersect the mineralized zone at 245 feet east of the shaft and about 50 feet below the 500 foot level of mine workings. However, not enough allowance was made to compensate for flattening of the hole. Consequently, an intersect of a mineralized zone was made at 480 feet vertically below SC elevation. The vein quartz intersected, with galena and sphalerite mineralization, assayed 0.20 oz. Au/T - 3.17 oz. Ag/T - 0.028 %Cu/T - 0.98 %Pb/T - 2.60 %Zn/T over 0.7 feet of core.

Holes Nos. OC 87-9 to 87-14 inclusive

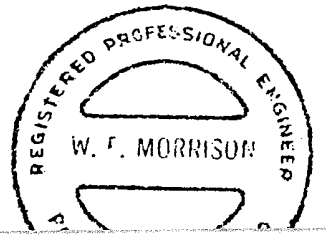
Six diamond drill holes were drilled to explore the possible easterly extension of the "Ore Chimney" mineralized zone along 190 feet of strike length, from 705 to 895 feet east of the shaft. In all 1244 feet of BQ core was drilled in this area. (For location see plan No. 4 trenching and diamond drilling. For details see drill hole logs OC 87-9 to OC 87-14).

A SUMMARY OF DIAMOND DRILL HOLE RESULTS IN HOLES OC 87-9 to 87-14

Holes 87-9 to 11 were drilled to explore an SP anomaly occurring between lines 800 E to 1200 E at 100 feet north of the baseline. Surface trenching of the anomaly had disclosed a narrow quartz vein mineralized with fine grained pyrite in a narrow shear zone.

Hole 87-9

Four narrow quartz calcite veins were cored, but none of them contained more than 0.005 oz. Au/T. or 0.02 oz. Ag/T. Another intersection at 82.5 - 84.5 feet of quartz calcite vein matter without sulphide mineralization may account for the SP anomalous zone.



Hole No. 87-11

This hole was drilled to replace No. 10 which was abandoned at 111 feet due to heavy caving and stuck rods, which could not be retrieved.

Hole 11 intersected a narrow calcite filled fracture zone, mineralized with fine grained disseminate pyrite at 106 feet and also one inch of massive pyrite at 110 feet. Neither intersection contained more than 0.005 oz. Au/T. and Tr Ag/T. The intersections appear to reflect shearing and weak quartz fracture filling encountered in trenches 10, 11, 12 and 13.

Hole No. 87-12

This hole was drilled to investigate the unconformable contact zone of the basic meta volcanics and quartzite conglomerate of the meta sedimentary complex.

from 107.5 - 115.5, vein quartz with inclusions of hornblende schist, well mineralized with pyrite, was intersected in the "Ore Chimney Formation". This section of core assayed 0.006 oz. Au/T. and 0.04 oz. Ag/T.

Hole No. 87-13

This hole was drilled to investigate the possible extensions of quartz veining and shearing exposed in trench No. 9 and adjacent trenches. A zone of ribbon like quartz calcite stringers, encountered about 100 feet, may reflect the extension of a stronger 2 foot quartz vein located in trench 9. Commencing at 136.5 feet, six quartz to quartz calcite veins with fair pyrite mineralization and widths up to 7 feet were intersected down to 268 feet. No significant gold mineralization was found, the best section being 0.5 feet assaying 0.064 oz. Au/T., others were less than 0.007 oz Au/T.

Hole No. 87-14

This hole was drilled under trench No. 7 to investigate some exposed quartz stringers and veining and also a zone of strong chloritic amphibolite development encountered near the south end of trench 7 and adjacent trenches to the west. Such alteration was encountered adjoining the "Ore Chimney" mineralized zone as exposed in trench No. 1 Two sample sections in the alteration zone assayed less than 0.008 oz. Au/T. - NIL Ag.

CONCLUSIONS

The 1987 diamond drilling program, whilst achieving the planned objectives of investigating the probable continuity of the "Ore Chimney" ore body between the known occurrences encountered on the various drift levels, did not contribute any further additions to the historically defined ore reserves, developed up to 1936.

Drill hole OC 87-8, which had been expected to make an intersection of the ore zone at about 550 feet below SC, flattened more than anticipated, causing the ore intersection to be made slightly above the 500 foot level drift. Since the drilling program had been limited to 4000 feet of core, it was not considered to be expedient to drill another deep hole in the area of the ore zone. Instead it was considered adviseable to expend the remaining drilling footage to investigate the unexplored, possible extensions of the mineralized zone, lying east of the most easterly mine workings. Drill holes OC 87-9 to 87-14, drilled in this area failed to encounter any gold or silver bearing mineralization of an ore category, the best intersection being 0.5 feet assaying 0.064 oz. Au/T. Silver content was commensurably low.

The surface area in the vicinity that was drilled was closely trenched and sampled before drilling was commenced. None of the samples taken contained sufficient amounts of gold or silver to be classified as ore grade materials and on average were only slightly above background, which might range about 0.001 oz. Au/T. and 0.01 oz. Ag/T. However, an exception to this overall average occurs in trench No. 6 where the silver values over a width of 105 feet averaged 0.14 oz/T. over 2.5 feet. In this connection it is significant to ponder the results of deeper diamond drilling, done in 1956, below the trenches presently under consideration. Three holes drilled about 80 feet east of the 400 level drift made intersections of mineralization at vertical depths of of 350 to 410 feet below SC. These intersections ranged in silver content

from 2.90 to 15.53 oz. Ag/T. over widths of 2.0 to 1.8 feet respectively. In this drilling other significant zones of mineralization were encountered in the hanging wall and footwall at some distance from the main "Ore Chimney" zone. From such indications, it might be concluded that more favourable ore deposition features are to be encountered in deeper horizons of the ore bearing structure.

While exploring the possibility of down dip extensions of the Ore Chimney gold deposit, the 1987 diamond drilling program failed to provide any positive information about the ore deposit below the 500 foot level. However, some conclusions regarding the ore occurrence below the 500 foot level were provided by the drilling of hole No. 3 from surface in 1930 by Bey Mines Ltd. That hole, at a vertical depth of 605 feet below SC, intersected 3.6 feet of mineralization which assayed 0.24 oz. Au/T., with 14.60 oz. Ag/T. and 3.73% Zn and 6.35% Pb. It is assumed that the intersection was made in the down plunge extension of the high grade ore shoot of the "Ore Chimney" polymetallic gold deposit.

RECOMMENDATION

The probable extensions of the Ore Chimney high grade shoot below the 500 foot level drift should be investigated by further diamond drilling from surface to a vertical depth of about 1000 feet below SC. This could be accomplished by drilling about four holes ranging from 700 to 1500 feet in depth. Such a program would require about 4000 feet of BQ diamond drilling.

Consideration should also be given to investigating the gold deposits possible extensions to the east of the mine's underground workings and in the vicinity of where ore intersections were obtained in holes drilled in 1956 by Cavalier Mining Corporation, according to Colin A. Campbell's report. This phase of exploration would require a minimum of 2000 feet of BQ drilling in three to four holes.

Respectfully submitted: W. F. Morrison

W.F. Morrison, P. Eng.

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2 Ontario Geological Survey Report 238. Geology of the Marble Lake Area. By J.M. Moore Jr and R.L. Morton. 1986

3 Ontario Department of Mines Vol 51 Pt 4 1942
Geology of the Grimsthorpe--Barrie Area by V.B. Meens

4 Report on a Geophysical Survey of the Ore Chimney Mine Property by R.H. Henning, March 1987.

5 Plan of Self Potential Survey by F. Hussey Geophysical Surveys June 1987.

6 A Geological Map Of Trenched Areas of Ore Chimney Mine, by P. P. Lebaron of OGS, Tweed Branch, Oct 1987.

7 A composite transverse vertical Section showing DDH drilled from surface and underground at the Ore Chimney Mine by Bey Mines Ltd, 1932

8 A composite plan of the underground workings of The Ore Chimney Mine 1932.

PLANS AND SECTIONS

1 Geophysical surveys, VLF and Mag from R.H. Henning report of March 1987.

2 Geophysical SP survey plan by F. Hussey June 1987

3 A geological plan of the grid area around the Ore Chimney Mine by W.F. Morrison, June 1987.

4 Plan of surface trenching and DDH locations 1987.

5 Plan of Trench sampling of Ore Chimney Mine 1987

6 Vertical sections of DDH,S number OC 87-1 to OC 87-8 incl.