# REPORT ON

# MURGOLD RESOURCES INC.

# PROPERTY

# CHESTER, BENNEWEIS AND ST. LOUIS TOWNSHIPS

# PORCUPINE MINING DIVISION ONTARIO

November 1983

Prepared by

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## APPENDICES

SUMMARY

Murgold Resources Inc. holds a group of 296 contiquous claims in Chester, Benneweis and St. Louis Townships, Porcupine Mining Division of Ontario. This property lies 10 miles southwest of Gogama, Ontario.

Fairly extensive field investigations including underground development, diamond drilling and trenching have been carried out intermittently by various interests since 1931.

Gold, the only mineral of economic interest yet found on the property, occurs associated with narrow quartz veins and stringers which occupy portions of narrow, long, through-going shear fracture zones which traverse the property.

From 1979 on Murgold Resources Ltd. has undertaken an exploration programme over this claim group. These investigations include geological mapping, extensive stripping, trenching, geophysical surveys, diamond drilling and the taking of a 656 ton underground bulk sample. The weighted average of this bulk sample is reportedly 0.34 oz. Au/ton.

Of the 8 shear zone structures seen by the writer, 2 in particular have indicated by diamond drilling and/or trenching interesting values in gold. These areas of considered interest are the central and western portion of the No. 3 zone and the eastern extension of the No. 1 zone.

A diamond drill programme of approximately 8,500 ft. is here: recommended to further investigate these zones of interest. In

addition a moderate scale geochemical survey over some of the VLF-EM indicated conductors is also recommended.

The estimated cost of these recommended programmes is $300,000.

INTRODUCTION

Hill, Goettler, De Laporte Limited was retained by Murgold Resources Inc. to undertake a review of their gold prospect located in Chester, Benneweis and St. Louis Townships, Porcupine Mining Division, Ontario.

The data reviewed as a base for this study is listed in Appendix "B". Hill, Goettler, De Laporte Limited accepted the material submitted as factual, excepting some discrepancies in the location of some old diamond drill holes. A short field examination was made of the various showings on October 20th, 1983 by N. Firth in the company of D. Hoy, Murgold's field geologist.

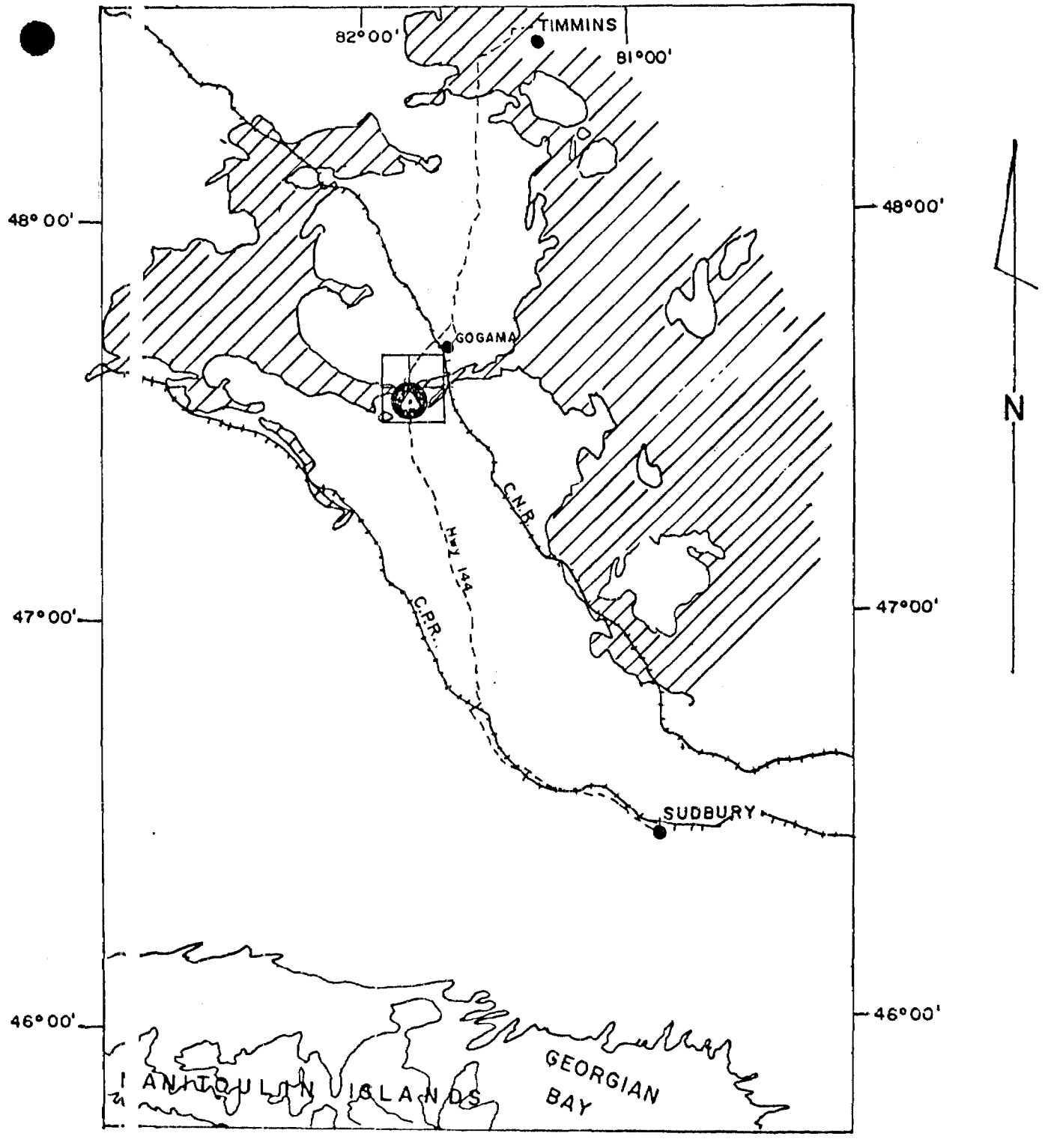
This report covers the results of the review undertaken.

PROPERTY

Location and Access (Map 1)

The property is located in Chester, Benneweis and St. Louis Townships, Porcupine Mining Division, Ontario. More specifically the claims are approximately centred at 47°33'N, 81°51'E (N.T.S. 41-P-12) some 30 miles southwest of the town of Gogama, Ontario.

Access to the property is very good as Highway 144, a paved, 2 lane road between Sudbury and Timmins, bisects the claims. To reach the Morgold Resources camp one drives 6.6 miles past the junction of Highways 144 and 560 to the Mesomikenda Lake road. Turning left it is 1.2 miles along this good gravel road to the turn off for the camp. One then goes for 1.9 miles over a rough bush road to the camp site on patented claims S20009.




MURGOLD RESOURCES INC..

LOCATION MAP

HILL, GOETTLER, DE LAPORTE LTD.

TORONTO CANADA

OCT 1983

MAP-No. 1

Claim :

The property reportedly consists of 296 claims in a contiguous block.

These claims are as follows.

| CLAIM NO. | NO. OF CLAIMS | TOWNSHIP |
|---|---|---|
| S199 2 (patented) | 1 | Chester |
| S200 9 (patented) | 1 | Chester |
| S121 94 (lease) | 1 | Chester |
| P471 52-471958 inclusive | 7 | Chester |
| P473 67-473746 inclusive | 80 | Chester & Benneweis |
| P515 48-515059 inclusive | 12 | Chester |
| P515 28-515330 inclusive | 3 | Chester |
| P515 35-515336 inclusive | 2 | Chester |
| P538 55-538059 inclusive | 5 | Chester |
| P538 82 | 1 | Chester |
| P538 85-538089 inclusive | 5 | Chester |
| P539 05-539129 inclusive | 25 | Chester & Benneweis |
| P539 36-539155 inclusive | 20 | Benneweis |
| P539 79-539298 inclusive | 20 | Benneweis |
| P539 08-539328 inclusive | 21 | Benneweis |
| P538 23-538525 inclusive | 3 | Benneweis |
| P539 04-539421 inclusive | 18 | Benneweis |
| P539 81-539183 inclusive | 3 | St. Louis |
| P507 67-507669 inclusive | 3 | St. Louis |
| P528 80 | 1 | Chester |
| P543 18-543824 inclusive | 7 | Chester |
| P543 27 | 1 | Chester |
| P543 93-543996 inclusive | 4 | Chester |
| P548 92 | 1 | Chester |
| P546 80-547000 inclusive | 21 | Chester |
| P549 01-549019 inclusive | 19 | Chester |
| P549 08-549117 inclusive | 10 | Chester |
| P549 94 | 1 | Chester |
| TOTAL | 296 | |

Titles and rights of these claims were not verified by the write with the Mining Recorder in Timmins.

Topography, Climate and Local Resources

The area is relatively high (±1,300 ft. above sea level) being near the height-of-land between James Bay and the Great Lakes. The topography of the area is typical of the Canadian shield peneplain, that is the land surface consists of rolling hills and ridges which, with minor exceptions rise not more than 100 ft. or so. The area under consideration is forested with a fairly dense growth of spruce, jack pine, balsam, birch and poplar.

The climate is characteristic of Northern Ontario, with long cold winters (up to -40°C) and short summers (±30°C). Heavy snow is common in the winter.

There is no sign of logging taking place in the immediate area, with the only resource being hunting and fishing.

HISTORY OF PREVIOUS WORK

Gold was first discovered in Chester Township in 1930 on the east shore of Three Duck Lakes. This discovery led to more intensive search in 1931 which located other gold bearing quartz veins, chiefly in the environs of Three Duck Lakes and Clam Lake.

Since then in Chester Township 6 prospects and 11 occurrences of gold have been found and briefly reported on (Mineral Deposit Circular 18). Three of the prospects are located within the Murgold claim group, these being the Kingbridge (Gomak), Strathmore, and Beaverbridge prospects. There are no known gold showings in Bennett or St. Louis Townships.

Since the initial discoveries there have been fairly extensive, though cyclic, investigations carried out within the claim group area. This work was principally in 3 areas, the Kingbridge (Gomak) which relates to the Murgold No. 1 zone, the Strathmore which relates to the east end of the Murgold No. 3 zone, and at the west end of the No. 1 zone.

In essence the first work was undertaken in the 1930's by Gomack Mines Ltd. on the No. 1 zone and by Strathy Basin Mines Limited on the No. 3 zone. From 1932 through 1938 Gomack M.L. did extensive diamond drilling, trenching and sank a 65° inclined shaft to a depth of 8 ft., from which 215 ft. of drifting was done on the 65 ft. level. Some 98 oz. of gold from 1,387 tons of ore was apparently produced at this time. In the same period of time Strathy Basin Mines Ltd. carried out exploration at the east end of the No. 3 zone. In 1937 a 116 ft. inclined shaft was sunk to the 100 ft. level and 286 ft. of development work was carried out. Channel sampling on this

level returned the following uncut values; for 95 ft. east of the shaft 0.30 oz. Au/ton over an average width of 3.13 ft., and for 120 ft. west of the shaft 0.89 oz. Au/ton over an average width of 2.6 ft.

The next known investigations were carried out by Chesgo Mines Limited from 1945 through 1948. This work was apparently mainly diamond drilling of which 8,000 ft. was completed along with some stripping and trenching. Of this drilling 3 holes totalling 512 ft. were at the Strathmore portion of the No. 3 zone and 16 holes totalling 4,785 ft. were at the west end of the No. 3 zone. It is not known for sure where the rest of the drilling was undertaken, though likely at the Gomack (No. 1 zone) location. The logs for these drill holes are very brief and there appears to be little correlation between the sampling and the rock descriptions given. Murgold Resources Ltd. found and surveyed in 3 of the Chesgo drill holes so that the locations can now be plotted more accurately than has been the case when the initial maps and sections were made.

In 1963 the Icon Syndicate (Kerr Addison Mines Ltd., Newmont Mining Corp., Gunnar Mines and Rayrock Mines) optioned the Strathmore showing (Rinaldi Option) and completed 4 diamond drill holes totalling 1,240 ft. at this location. The results obtained from their assaying were very low.

From 1970 through 1975 Kingbridge Mines Ltd. in conjunction with Olympian International Resources carried out an exploration programme which included geophysical surveys, bulk sampling, and diamond drilling. This work was apparently concentrated on the central portion of the No. 1 zone and the west end of the No. 3 zone.

From 1979 to the present, Murgold Resources Inc. has carried out a fairly extensive exploration programme. This includes bulldozer stripping of large areas, trenching, diamond drilling, VLF-EM surveys, soil geochemistry and geological mapping.

GENERAL GEOLOGY (Map 2)

The area under review is at the eastern extension of the Swaze-Ridout greenstone belt. This belt has been cut off in part by an intrusion of granite to diorite composition which occupies the greater part of Benneweis and a large part of central Chester Townships.

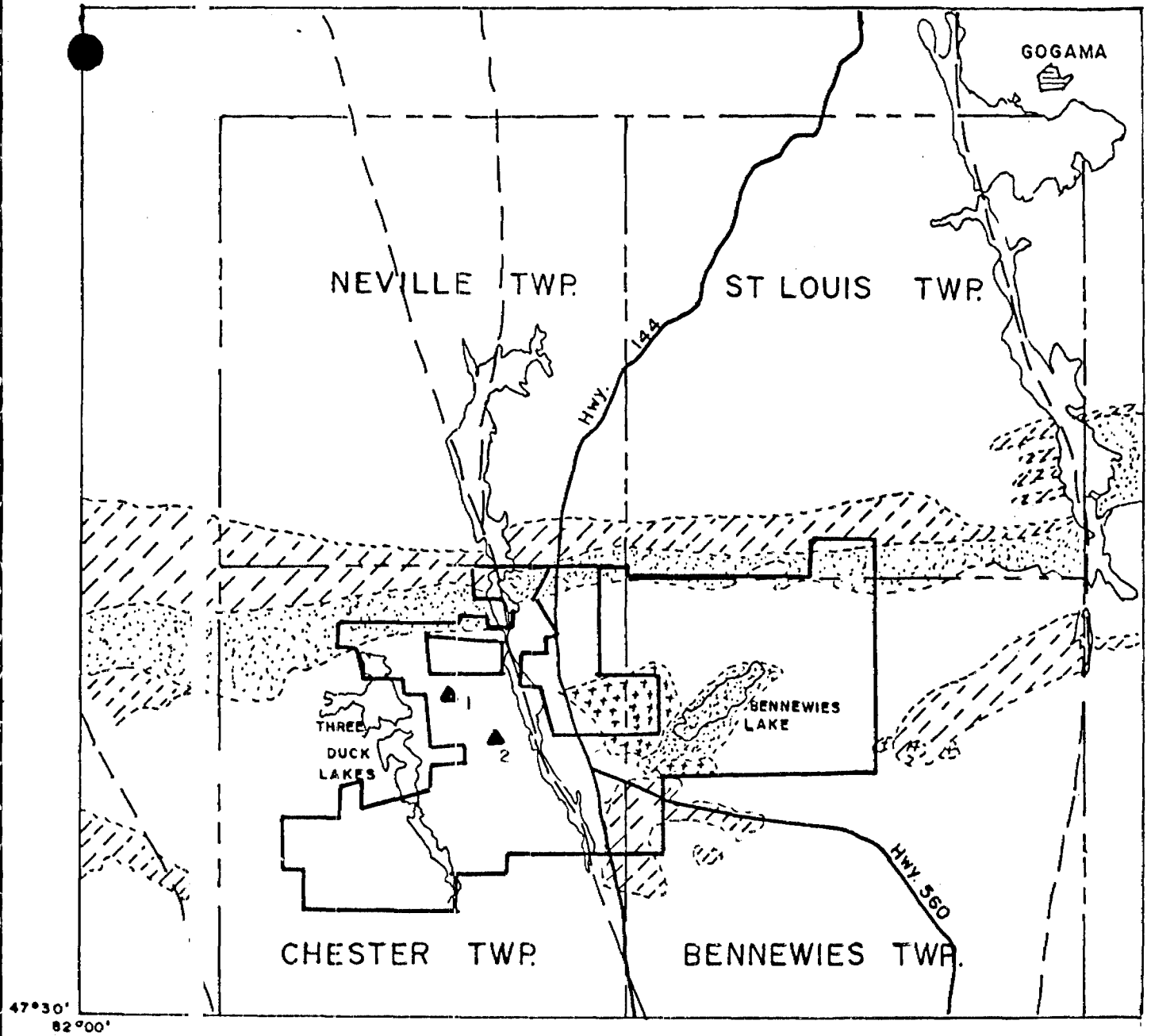
The northern fringe of the claim group is underlain by a thin band of east-west striking metasediments, principally greywacke in composition with some minor conglomerate sections. A second, small zone of metasediments lies around Benneweis Lake.

There is only minor Keewatin type basic volcanics within the general claim area, this consisting of a mile and a half long area, straddling the Chester-Benneweis boundary south-west of Benneweis Lake.

The majority of the claims are underlain by what Laird in his report calls the "Younger Granite". This intrusive has a number of variations ranging from alaskite granite, granodiorite and diorite. As Laird states "field observations seem to indicate that the granodiorite, granite and alaskite are contemporaneous, and that they represent differentiation phases of the same granite magma". All of the above rock types are cut by Keeweenawan diabase dikes.

Gold is the principal economic mineral found in the area to date. The main showings of gold occur within the granitic intrusive. The gold occurs in its native state in narrow quartz veins associated with narrow, throughgoing shear zones. The majority of the fractures strike in a direction a few degrees south of east and in general they

show regional parallelism. Though the shears appear to be persistent in length the quartz veining is erratic along strike, pinching and swelling and in part is completely absent. Pyrite and chalcopyrite are the common accessory mineralization.




Basic & Ultrabasic Rocks

Acid Intrusive Rocks.

Metasediments

Basic Volcanic Rocks

Fault (assumed)

Boundary of Claim Group

▲1 Kingbridge (Gomack)

▲2 Strathmore

N

SCALE

1 Inch = 2 Miles

0 1 2 4 MI.

MURGOLD RESOURCES INC.

# GENERAL GEOLOGY

HILL, GOETTLER, DELAPORTE LTD.
TORONTO CANADA

OCT. 1983

GEOLOGY FROM O.D.M. MAP No. P. 151

MAP-2.

ECONOMIC GEOLOGY

Gold is the only mineral of economic importance as yet found on the Murgold property, though copper mineralization is often present as an accessory mineral in the various showings. The gold occurs in or near narrow quartz veins and stringers, which occupy portions of long, through-going shear-fracture zones. These shears are not uniform along strike as they pinch and swell, increase and decrease in intensity and in places die out entirely. The most common strike direction for these shears is 110°-290°. The quartz veining associated with these shears is also quite erratic in distribution, forming more of a stockwork than one long vein. As such the writer would call these shears and their accompanying quartz veining zones rather than veins. In all 9 separate zones were seen during the trip to the property, the most important of which are considered to be the No. 3 and the No. 1 zones.

A synopsis of these investigations is as follows:

No. 3 Shear Zone:

This zone consists of 2 to 3 narrow parallel silicified shear zones containing gold bearing quartz veins which vary in width from a few inches to several feet as they pinch and swell along strike.

The zone has been traced for some 2,800 ft. along strike by means of surface sampling, underground investigations and diamond drilling. As per earlier reports, this zone can essentially be divided into 3 portions, an eastern, central and western part.

The eastern portion was investigated previously underground (old Strathmore) and by diamond drilling. In all 21 diamond drill holes, 7 by Murgold and 14 by other interests are located in this section of the shear. Assays obtained by drilling are with few exceptions quite low or negligible although the vein-shear zone is identifiable. In 1937 an inclined shaft was sunk to 116 ft. with 286 ft. of development being done on the 100 ft. level. Channel sampling on the 100 ft. level by Strathmore Gold Mines Ltd. returned the following uncut values; for a length of 95 ft. east of the shaft 0.30 oz. Au/ton over an average width of 3.13 ft. and for a length of 120 ft. west of the shaft 0.89 oz. Au/ton over an average width of 2.6 ft.

Murgold dewatered these workings in 1981 and chip sampled the back. This sampling, over an average 3 ft. width, gave uncut values of 0.18 oz. Au/ton for a 100 ft. section east of the shaft and 1.03 oz. Au/ton for a 100 ft. section west of the shaft. When a cut to 1.00 oz. Au/ton was made the average in the west drift was reduced to 0.38 oz. Au/ton. Subsequent to this sampling Murgold extended the level for 100 ft. to the east and west. Channel sampling of shear zone along these extensions apparently returned low values in gold.

Murgold then proceeded to take a 656 ton bulk sample from a stope developed in the better grade portion of the west drift, which sample reportedly average 0.34 oz. Au/ton. Chip channel (44) samples taken from the back of this stope over a 3.55 ft. average width averaged 0.69 oz. Au/ton uncut and 0.58 oz. Au/ton cut.

The old trench located just west of the shaft is now extensively filled with debris so no examination could be made. No

addit .onal investigations are recommended at this time for this locat .on.

The central portion of the vein system has been investigated by su rface diamond drilling only, as there are no surface exposures due t › overburden. All of the 18 drill holes in this 1,400 ft. long secti ın were drilled by Murgold. The shear-vein structure is readily disce nable through this section. Over a strike length of ±500 ft. 9 drill holes returned appreciable values in gold over fairly narrow width ;, these being:

| Hole No. | Uncut Oz. Au/Ton | Width (Ft.) |
|---|---|---|
| M-13 | 0.554 | 10.0 |
| M-14 | 0.002 | 6.0 |
| M-33 | 1.176 | 1.0 |
| M-31 | 0.387 | 1.0 |
| M-32 | 2.83 | 2.5 |
| M-10 | 2.06 | 0.5 |
| | 0.192 | 1.25 |
| M-11 | 1.49 | 1.5 |
| M-16 | 4.08 | 1.2 |
| M-8 | 0.106 | 1.5 |

These drill results are the most consistent of any drilling under aken at the property, and therefore this section of the zone is consi .ered as being the most promising from an exploration point of view.

Ten diamond drill holes, totalling 2,640 ft. have been recom ıended by the writer to further test this area to a depth of ±300 t.

The third part of the No. 3 zone, the western portion, is indi ated over a length of 800 ft. It has been investigated by tren hing and by 22 diamond drill holes, all of which were drilled prev ous to Murgold Resources Inc. acquiring the property. The two tren hes known as the West Watts and East Watts were sampled by Murg ld, with the West Watts trench indicating a zone of 133 ft. lengt averaging 0.49 oz. Au/ton over an average with of 3.2 ft. and the l ast Watts trench giving 0.203 oz. Au/ton for an average width of 3.03 over a length of 80 ft. Samples taken by Murgold from two pits sunk between the Watts West and East pits reportedly assayed 1.74 and 2.44 oz. Au/ton over 2 ft. The central parts of these 2 trenches were inacc ssible to the writer due to water from recent rains. At both ends of the trenching the shear with the associated quartz veining narrc s down and dies out. There is however an indicated strike lengt of 250 ft. at this locale.

Twenty-two diamond drill holes are located in the west end of th zone, 16 were by Chesgo (1947), 1 by Kingbridge (1970) and 5 by Olymp an (1975). Of these only 7 are in the immediate area of the trenc ing. As Murgold Resources Inc. has found and surveyed in 3 of the C esgo holes and 1 of the Olympian holes, the location of the other can be placed approximately. The logs of the Chesgo Mines Ltd. diamo d drilling are very basic and lacking in detail, and it would appea that intercepts of interest were not sampled in their entirety.

In 1974 Olympian International Resources forwarded 2 bulk sampl s to Noranda Mines Limited for testing. These samples from veins 3 and 3A comprising 46.74 tons and 48.92 tons returned 0.172 and 0.30 c . Au/ton respectively from estimated widths of 6 to 10 ft.

Eight diamond drill holes totalling 1,520 ft. have been recommended by the writer to further investigate this showing. Three of these holes will be advanced far enough to cross-section the trend of the parallel No. 4 zone (vein).

No. 1 Shear Zone

This zone, formerly known as the Kingbridge or Gomack showing, has now been traced over a strike length of 2,500 ft. In the central area of this zone, Gomack Mines Ltd. in 1935-1936 developed an 85 ft. deep inclined shaft with 215 ft. of drifting at the 65 ft. level. It is reported that 1,387 tons of ore returned 98 oz. of gold (0.07 oz./ton). A considerable amount of diamond drilling was apparently done by Gomack Mines Ltd. and Chesgo Mines Ltd. in the vicinity of the shaft but the results of this drilling are not known to the writer.

In a 200 ft. long trench, now filled with debris and water, extending west from the shaft, Jones ?? in 1939 averaged 2.04 oz. Au/ton uncut over an average width of 1.4 ft., while Murgold Resources Inc. in 1983 averaged 0.47 oz./ton Au uncut over an average width of 2.8 ft.

In an 80 ft. trench 800 ft. east of the shaft Murgold reports the following assays:

| Width | Assay |
|---|---|
| 6.0 ft. | 0.27 |
| 6.0 ft. | 1.03 |
| 2.0 ft. | 0.074 |
| 0.7 ft. | 1.42 |
| 4.0 ft. | 0.002 |

Drill hole M-18 was drilled under this trench and encountered a 6 ft. section that returned 0.146 oz. Au/ton.

Two hundred and eighty ft. further east a 50 ft. trench has been developed on a shear containing quartz, pyrite and chalcopyrite. Sampling results here were 0.066 oz. Au/ton over 1.5 ft. and 0.547 oz. Au/ton over 5.0 ft.

The shearing observed in these two trenches is of moderate intensity, with the quartz veining forming approximately ±20% of the zone.

Two trenches are located 900 ft. and 1,000 ft. west of the shaft. In the first of these trenches there is moderate shearing over a width of approximately 8 ft. The rock here is silicified and contains some pyrite and chalcopyrite throughout. There is only a small amount of quartz as thin veinlets here. Three separate grab samples assaying 0.204, 0.84 and 2.44 oz. Au/ton and one 8.0 ft. chip channel sample of 0.119 oz. Au/ton was obtained by Murgold at this site.

The second trench is developed on a very weak shear only. A grab sample here reportedly returned 0.75 oz. Au/ton.

Twelve diamond drill holes totalling 1,880 ft. are being recommended by the writer to further evaluate the east end of this zone from 900E to 1600E on the secondary grid baseline.

No. 2 Shear Zone:

This shear zone lies north of and parallel to the No. 3 zone. It has been opened by 4 trenches along strike, one just south of the new shaft collar, a second east near the location of diamond drill hole M-14, and 2 small pits just north of the road near survey pin 1-G. It appears as a weak shear containing intermittent quartz stringers and lenses which are estimated to form ±10% of the zone. Grab samples taken along the zone are reported to have returned 0.02, 0.155, 0.005, 0.78 and 0.12 oz. Au/ton.

No investigations are recommended by the writer for this zone at this time.

No. 4 Shear Zone:

This shear is parallel to and lies approximately 75 ft. south of the west end of the Watts trench. This not overly strong shear contains some irregular white glassy quartz veins. In all probability the Chesgo Mines Ltd. diamond drill holes Nos. 4, 6, 7 and 11 intersected this trend, with the only assay of note being 0.24 oz. Au/ton over 1.8 ft. from drill Hole No. 11.

Although this zone does not appear from indications to date to be too promising it is recommended that three of the diamond drill holes recommended for the west portion of Zone No. 3 be extended far enough to cross this shear.

No. 1 Shear Zone:

This shear lies to the west and on strike of the No. 3 shear. A large area, approximately 1,000 ft. by 100 ft. has been exposed by bulldozing. The shear, which can be followed along strike for some 800 ft. varies in intensity from weak to moderate to non-existent. It pinches and swells from less than 1 ft. wide to up to 5 ft. in width. The quartz veining is also quite erratic being seen in parts as minor stringers up to lenses 1 to 2 ft. in width and 5 to 10 ft. in length. There are some rusty, gossanous patches along this trend caused by minor disseminated pyrite and chalcopyrite. A few small trenches have been developed along this shear.

No additional investigations are recommended for this shear at this time.

No. 16 Shear Zone

An area of approximately 500 ft. by 100 ft. has been exposed by bulldozing running north-east from No. 16 shear to the access road. No extensive shearing was seen in this area, rather there are a few near east-west striking, very weak fractures noted, that is, they cross the clearing rather than strike along it. The outcrops are light-weathering intrusives with a few small slightly rusty patches on the surface. Two diamond drill holes M-39 and M-40 showed no significant mineralization. No further investigations are warranted at this location.

No. 1 Shear Zone

This 110° striking shear has been bulldozed clean along a length of approximately 800 ft. It lies north of and parallel to a diabase dike. This shear of moderate intensity at its west end but weakening to the east is approximately 2 to 3 ft. wide. As with the other shears seen the quartz veining associated with it is quite irregular and overall would form 10% to 15% of the zone. There is also a modest amount of pyrite and chalcopyrite associated with the shear. Four grab samples taken from small pits developed on its western end reportedly gave assay returns of 2.9, 3.30, 3.03 and 0.045 oz. Au/ton. Drill hole M-42 cross-cutting the shear in the vicinity of these assays returned 0.24 oz. Au/ton over a width of 0.5 ft.

Of note at this location is the presence of a persistent white quartz-carbonate vein 1 to 2 ft. in width lying approximately 20 ft. north of and parallel to this shear. There is apparently no mineralization i.e., pyrite, chalcopyrite, associated with this vein. Its intersection in the drill hole was not sampled.

No further investigations are recommended for this shear.

No. 2 Shear Zone

This area consists of a number of weak to moderate parallel shears that form the eastward continuation of the adjoining Chester No. 2 zone of Kidd Resources Ltd. These shears have only very limited quartz associated with them but are in part moderately mineralized by pyrite, chalcopyrite and pyrrhotite.

The adjoining Chester No. 2 zone has been extensively investigated by diamond drilling, the results of which are not known to the writer.

No further investigations are recommended at this time.

Highway Shear

A moderately strong shear 3 to 5 ft. in width is exposed on both sides of a rock cut in Highway 144.

Within the shear is a 3 in. to 6 in. quartz vein with modest pyrite and chalcopyrite mineralization. Assays of 0.20 and 0.76 oz. Au/ton have been obtained from this site.

No further investigations are recommended at this time for this location.

Beaverbridge Prospect

This prospect is a copper showing located in the north-west portion of the claim group at Weeduck Lake. It has been extensively investigated by geophysics and diamond drilling. No consideration was given to this prospect during the course of the investigation.

GEOPHYSICS

VLF-EM surveys were carried out over grids established at Nos. 1, 3, 20 and the highway shear. A number of conductors were indicated though in most instances they were not associated with the narrow shear zones in question. Geochemical soil samples over these conductors gave negative results.

It is recommended that some geochemical tests using organic humus material as the medium be carried out over the better portion of these VLF-EM conductors.

## CONCLUSIONS

From the review undertaken it appears that there are initially 2 zones, i.e., No. 3 and No. 1, that can be considered as interesting with regard to the possible development of viable gold deposits. As yet there is not enough available information for these two zones to base concrete opinions as to depth extensions, continuity of values, size etc. to warrant immediate underground investigations. The best method to acquire the additional data needed to further the evaluation is believed to be diamond drilling.

RECOMMENDATIONS

It is herein recommended that a diamond drill programme of approximately eighty-five hundred feet (8,500 ft.) be undertaken, broken down into the following:

1. Central portion Zone No. 3 - 10 holes totalling 2,640 ft.
2. West portion Zone No. 3 - 8 holes totalling 1,520 ft.
3. East end Zone No. 1 - 12 holes totalling 1,880 ft.
4. Allowance for drilling extensions, fill in et al 2,500 ft.

For details of 1, 2, and 3 see Appendix "A".

In addition it is recommended that some geochemical tests using organic humus material as the medium be carried out over the trend of known gold bearing shears, and over the best of the VLF-EM indicated conductors. For gold, this medium, being analysed by the neutron activation technique, provides better data than does soil sampling of the B horizon.

Estimated Cost of Programme

| | |
|---|---|
| Diamond Drilling 8,540 ft. @ $30/ft. | $256,200 |
| Assay | 5,000 |
| Report, Maps, Sections | 5,000 |
| Geologist & Helper | 12,000 |
| Geochemical Sampling & Analysis | 10,000 |
| | 288,200 |
| Contingencies | 11,800 |
| | $300,000 |

All of which is respectfully submitted.

HILL, GOETTLER, DE LAPORTE LIMITED

N. Firth

N. Firth, P.Eng.

Toror :o, Ontario

Noven ıer 1983

# CERTIFICATE OF QUALIFICATIONS

I, Norman Firth, hereby certify that:

1. I am a Professional Engineer, registered as a Consulting Engineer with the Association of Professional Engineers of the Province of Ontario.

2. I reside at 274 Juniper Avenue, Burlington, Ontario, L7L 2T3.

3. I graduated from the University of Toronto in 1950 with the degree of Bachelor of Applied Science in Mining Geology.

4. I have been engaged in mineral exploration and mine development for more than twenty-five years.

5. The Murgold claim group was visited by N. Firth on October 19th and 20th, 1983.

6. The foregoing report was based on data supplied by Murgold Resources Inc., and various Ministry of Natural Resources of Ontario reports.

7. I have no personal interest, nor do I expect to receive any interests, directly or indirectly, in the property or the securities of Murgold Resources Inc.

Dated at Toronto this 1st day of November 1983.

N. Firth

N. Firth, P.Eng.

# APPENDICES

APPENDIX "A"

RECOMMENDED DIAMOND DRILLING

| No. | Lat. | Dept. | Dip | Depth Ft. |
|---|---|---|---|---|
| Centre Portion Zone 3 | | | | |
| 1 | 29355N | 169660E | -45° | 150 |
| 2 | 29390N | 169750E | -45° | 215 |
| 3 | 29390N | 169750E | -65° | 285 |
| 4 | 29350N | 169900E | -60° | 300 |
| 5 | 29350N | 169900E | -75° | 365 |
| 6 | 29300N | 169955E | -45° | 210 |
| 7 | 29300N | 169955E | -62° | 260 |
| 8 | 29300N | 169955E | -75° | 350 |
| 9 | 29285N | 170045E | -45° | 230 |
| 10 | 29285N | 170045E | -60° | 275 |
| | | | Total | 2,640 |
| West Portion Zone 3 | | | | |
| 1 | 29600N | 168967E | -45° | 210 |
| 2 | 29600N | 168967E | -70° | 210 |
| 3 | 29618N | 168922E | -45° | 130 |
| 4 | 29635N | 168875E | -45° | 210 |
| 5 | 29635N | 168875E | -70° | 210 |
| 6 | 29580N | 169015E | -45° | 130 |
| 7 | 29565N | 169062E | -45° | 210 |
| 8 | 29565N | 169062E | -70° | 210 |
| | | | Total | 1,520 |
| East Portion Zone 1 (all S20°W) | | | | |
| 1 | 31060N | 168240E | -45° | 130 |
| 2 | 31060N | 168240E | -70° | 210 |
| 3 | 31090N | 168145E | -45° | 130 |
| 4 | 31120N | 168050E | -45° | 130 |
| 5 | 31120N | 168050E | -70° | 210 |
| 6 | 31155N | 167960E | -45° | 130 |
| 7 | 31185N | 167870E | -45° | 130 |
| 8 | 31185N | 167870E | -70° | 210 |
| 9 | 31220N | 167775E | -45° | 130 |
| 10 | 31030N | 168335E | -45° | 130 |
| 11 | 31000N | 168430E | -45° | 130 |
| 12 | 31000N | 168430E | -70° | 210 |
| | | | Total | 1,880 |
| Allowance for drilling of extensions, fill ins, etc. dependent on first results: | | | | 2,500 |
| | | | Grand Total | 8,540 |

/31.

## APPENDIX "B"

## DATA REVIEWED

1. ).D.M. Volume 41, Part 3, 1932.

   ;eology of the Three Duck Lakes Area by H.C. Laird.

2. [.N.R. - Mineral Deposits Circular 18.

   ;old Deposits of Ontario, Part 2 - 1979.

3. :he Chester, Benneweis and St. Louis Township Prospect of Murgold ;esources Inc. in Porcupine Mining Division District at Sudbury, )ntario by Watts, Griffis and McQuat Ltd. April 1983 (53 pages, ;6 maps and sections).

4. ;ook of diamond drill logs, Murgold, Chesgo Mines, Rinaldi )ption, Kingbridge Mine, Olympic Mine, Strathmore underground :hannels.

5. .983 Progress Reports D. Hoy.

6. ;urgold Resources Inc. - Map No. 1 Vein, by T.D. Brown.

7. ;cPhar Geophysics Induced Polarization and Resistivity Plan Map.

8. ;urgold Resources Inc. Surface plan diamond drill holes and ;ssays October 1980, Map No. 8.

9. ?reliminary map filtered VLF data.

# REPORT

# ON

# THE 1983 EXPLORATION PROGRAM

# MURGOLD RESOURCES INC. PROPERTY

# CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

# PORCUPINE MINING DIVISION

# ONTARIO

BY

D. Hoy, B.Sc.

JANUARY 1984

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## SUMMARY

Murgold Resources Inc. owns 296 contiguous mining claims totaling about 11,840 acres in area, located in Chester, Benneweis, and S. Louis Townships, Porcupine Mining Division, Ontario.

Parts of the present property were originally worked in the Thirties and according to government records, production totalled 98 ounces. Since 1979, Murgold has carried out extensive work on the claims, which has included surface exploration and underground investigations.

The 1983 exploration program was largely concentrated on investigating the No. 1 and No. 3 vein systems as primary targets. Exploration techniques employed during the program included core logging, trenching and sampling, geochemical soil sampling, VLF-EM 16 and magnetometer surveys in addition to geologic mapping.

The property is located on the south-eastern extension of the Shaze greenstone belt. The claims are largely underlain by an intrusive complex consisting of dioritic, quartz dioritic, granodiorite and alaskite phases. These are intrusive into rhyolitic volcanic and greywacke-type metasedimentary rocks. Diabase dykes are the youngest rocks on the property and cut all the aforementioned units.

To date at least 12 gold bearing structures have been identified on the property. The gold is hosted in relatively narrow quartz veins, occupying persistent shear-fracture zones which tend to pinch and swell along strike. The mineralization is structurally controlled, as the veins and ore shoots are hosted in shear, fracture, fault and contact zones. The most important gold-bearing structures

discovered to date include the Nos. 1 and 3 vein-shear systems, which have been traced over strike lengths of 2,600 and 2,800 feet respectively.

Hand and backhoe trenching was carried out at the site of the Nos. 1, 2, 3, 4, 8, and 20 vein-shear systems. The Watts portion of the No. 3 vein was sampled in detail and returned an average value of 0.09 oz/ton Au across a sampling width of 3.1 feet, along a strike length of 290 feet. Significant gold values were also obtained from the other veins sampled.

VLF-EM16 and magnetometer surveys were carried out over 3 grids covering portions of the Nos. 1, 3, 20, and highway vein-shears. A number of conductors were delineated in the surveys, however most were attributable to the presence of conductive overburden, rather than the shear structures. Magnetics was similarly unsuccessful in detecting the vein-shears.

On the order of 1,000 soil samples were collected on the grids to supplement the geophysics. The soils were analyzed for Au, Cu, and Ag. Generally, the soil sampling yielded negative results; which is probably the result of the presence of thick glacio-fluvial overburden covering large areas of the property.

The 1983 exploration program was a success from a geological point of view. Three zones in particular have been indicated by surface sampling and diamond drilling to be of economic interest. These include the Nos. 1, 3, and No. 20 zones.

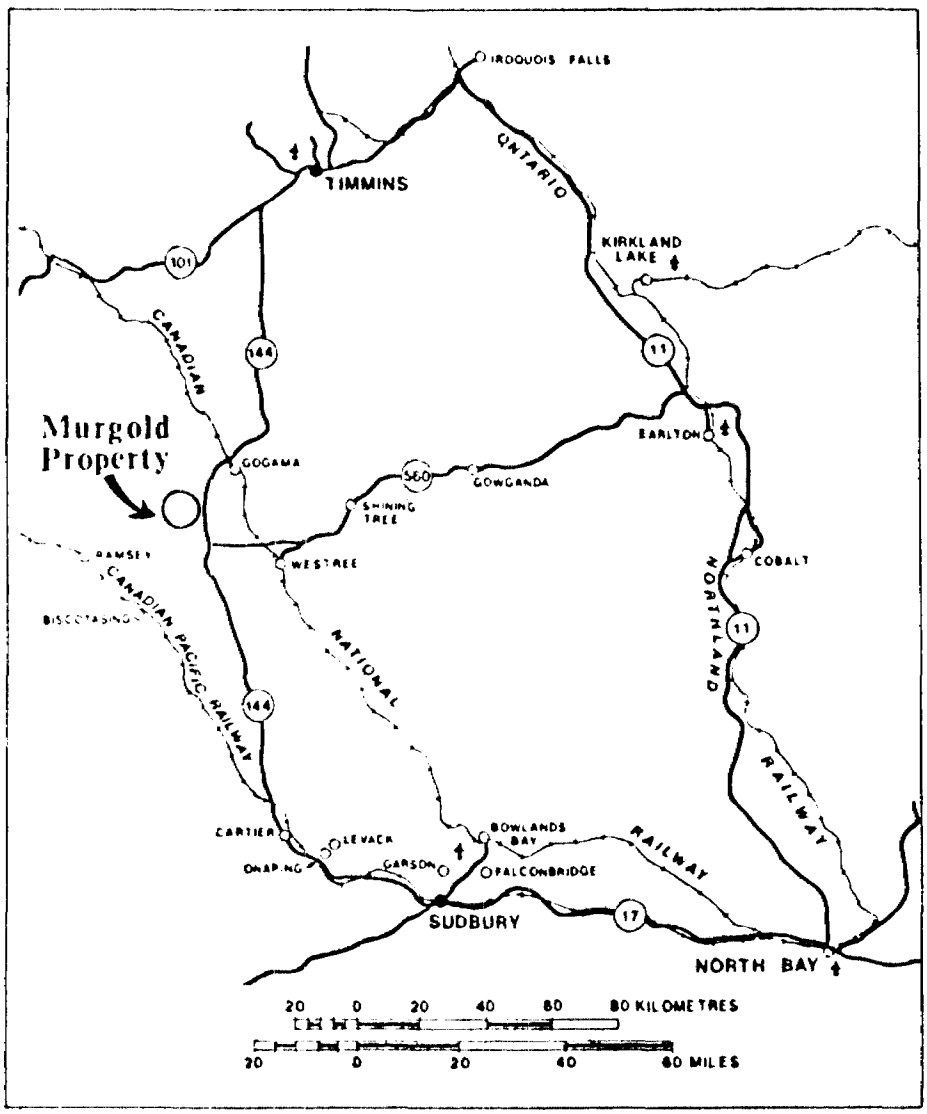
A program of diamond drilling and trenching in addition to geological, geophysical and geochemical surveys is recommended as the

next stage of exploration. The drilling would consist of a 10,000 foot program primarily directed at the Nos. 1, 3, and 20 zones. The estimated cost of the program is $338,250.

Murgold Resources Inc., owns 296 contiguous mining claims totall ng approximately 11,840 acres, in the Porcupine Mining Division of Nor hern Ontario. The property is 161 km north of the City of Sudbur and 97 km south of the City of Timmins on Highway 144.

During the summer and fall of 1983, a comprehensive ground explor tion program was conducted on the property by Murgold personnel. The ex loration techniques employed included surface trenching, geophysic l, geochemical and geological surveying, in addition to core relogg ng.

The purpose of this report is to outline the exploration progra and the results obtained, and to recommend further work on the su ject group of claims.




Sudbury and Timmins regions showing
Murgold property location.

Figure 1

David Ag BCo

## Location and Access

The property is located in Chester, Benneweis and St. Louis Townships, 161 km north of Sudbury and 97 km south of Timmins (Figure 1). Specifically, the centre of the claims is located 18 kilometres southwest of the town of Gogama at 47° 33' N, 81° 51' E.

The claims are bisected by Highway 144, thus providing excellent access to the property. A system of good gravel roads extend from Highway 144, a distance of approximately 5 kilometres to the location of the Murgold camp site. Alternate access is by means of air transport from Sudbury to Gogama, and from Gogama by ground transport to the camp. Numerous gravel roads and extensive areas of bulldozer stripping are present on the property, providing relatively easy access to all parts of the claims block.

## Claims Status

The property consists of a group of 296 contiguous mining claims in Chester, Benneweis and St. Louis Townships, Porcupine Mining Division, Ontario (Table 1 & Figure 2).

Two of the claims are patented (S19992 and S20009) and 8 are mining leases (S121594, S515048-515052, S515055-515056). This group of 10 claims covers the area containing the Nos. 1 and 3 vein systems, the portion of the claims in which the major thrust of the exploration program was directed.

The remaining 286 claims are unsurveyed and unpatented. An examination of government records indicates that all of the claims

TABLE 1

Claims List

| Claim No. | No. of Claims | Township |
|---|---|---|
| S19 92 (patented) | 1 | Chester |
| S20 09 (patented) | 1 | Chester |
| S12 594 (lease) | 1 | Chester |
| S51 048-515052 (leases) | 5 | Chester |
| S51 055-515056 (leases) | 2 | Chester |
| P51 053-515054 | 2 | Chester |
| P51 057-515059 | 3 | Chester |
| P47 952-471958 | 7 | Chester |
| P47 667-473746 | 80 | Chester & Benneweis |
| P51 328 -515330 | 3 | Chester |
| P51 335-515336 | 2 | Chester |
| P53 055-538059 | 5 | Chester |
| P53 082 | 1 | Chester |
| P53 085-538089 | 5 | Chester |
| P53 105-539129 | 25 | Chester & Benneweis |
| P53 136-539155 | 20 | Benneweis |
| P53 279-539298 | 20 | Benneweis |
| P53 308-539328 | 21 | Benneweis |
| P53 523-538525 | 3 | Benneweis |
| P53 404-539421 | 18 | Benneweis |
| P53 181-539183 | 3 | St. Louis |
| P50 667-507669 | 3 | St. Louis |
| P52 680 | 1 | Chester |
| P54 818-543824 | 7 | Chester |
| P54 827 | 1 | Chester |
| P54 993-543996 | 4 | Chester |
| P54 092 | 1 | Chester |
| P54 980-547000 | 21 | Chester |
| P54 001-549019 | 19 | Chester |
| P54 108-549117 | 10 | Chester |
| P54 294 | 1 | Chester |
| Total | 296 | |

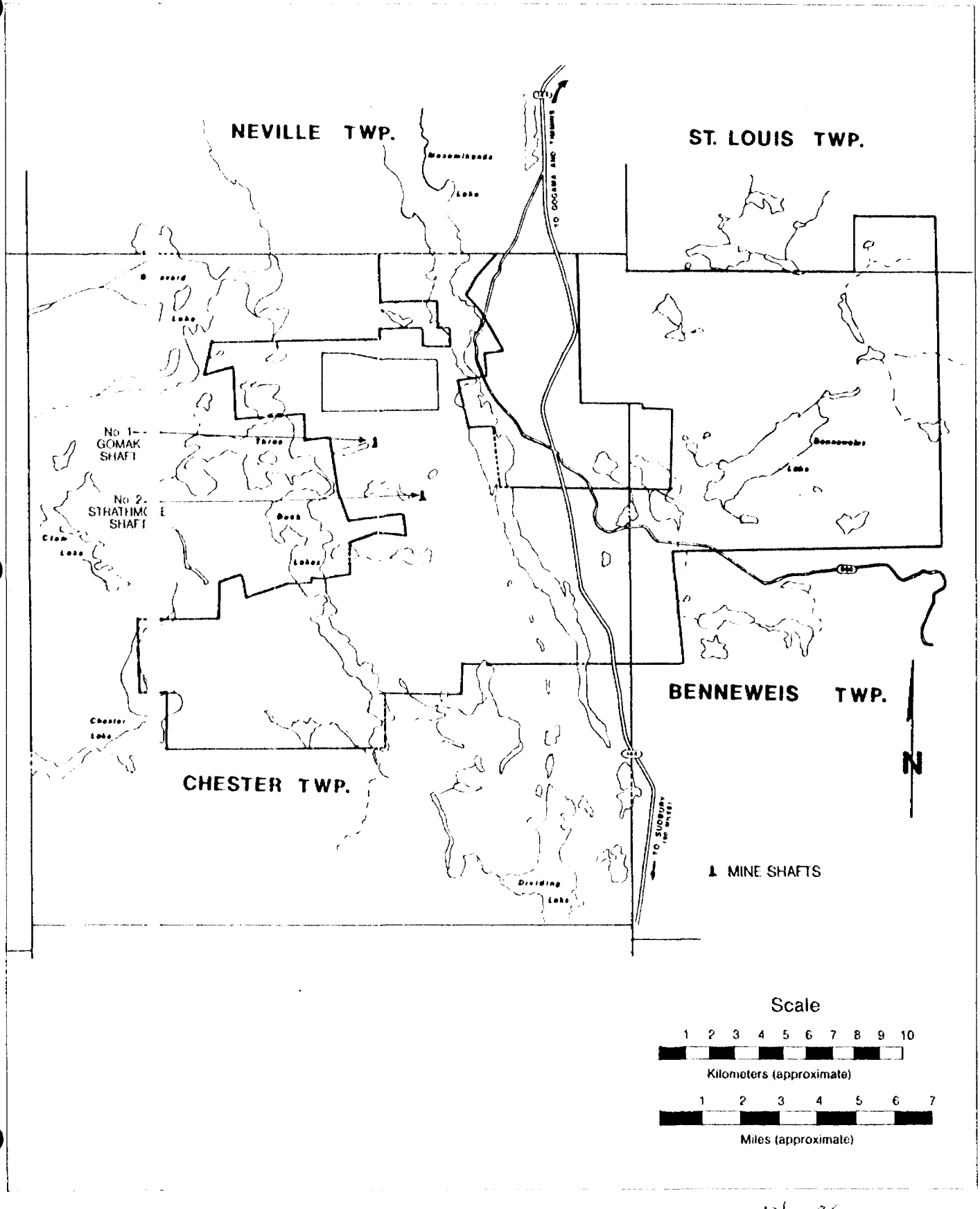

NEVILLE TWP.
ST. LOUIS TWP.
BENNEWEIS TWP.
CHESTER TWP.
No 1 GOMAK SHAFT
No 2 STRATHMO SHAFT
TO COCHRANE AND TIMMINS
TO SUDBURY
MINE SHAFTS
N
Scale
1 2 3 4 5 6 7 8 9 10
Kilometers (approximate)
1 2 3 4 5 6 7
Miles (approximate)

Figure 2

are in good standing, with sufficient work performed on them for application to lease.

Physiography and Climate

The area of the claims is relatively high (± 1,300 feet above sea level), and is located just to the north of the height of land delineating the interface between the Atlantic and Arctic watersheds. Topographic relief rarely exceeds 100 feet, and in these cases the high ground consists of boulder till and glacial outwash comprising eskers and kames. Generally, large areas of rock outcropping are sparse, with exposure largely limited to small rocky knolls. Overburden thickness is quite variable, however it is usually less than 10-15 feet.

Short, warm summers, and long, cold winters with abundant snow characterize the climate typical of this area of Northern Ontario. Temperatures are extreme with summer temperatures exceeding 30°C and winter temperatures reaching lows of -30° to -40°C. Precipitation is moderate with an average total rain and snowfall of 48 inches per annum.

The property is forested with relatively dense growths of poplar, birch, spruce, jack pine, balsam and cedar. Low lying areas abound with extensive areas consisting of willow and alder swamp.

The history of the property has been well described in previous reports prepared by Watts, Griffis & McQuat (April 12, 1983) and by Hill, Goettler, De Laporte (November, 1983), and need not be reported in detail here.

In summary, to date considerable work has been carried out on the block of 296 claims. Parts of the present property were originally worked in the Thirties with the original gold discovery in the area, being made in 1930 by Alfred Gosselin. Two small shafts were sunk in addition to numerous pits and trenches. Government records indicate that previous production totalled 98 ounces.

Since 1979, Murgold has carried out extensive work on the claims, which has included comprehensive surface exploration and underground investigations.

Surface exploration has included hand, bulldozer and backhoe trenching, geological mapping, geochemical sampling, airborne magnetometer, and VLF surveys, and diamond drilling. Geological mapping and VLF-EM 16 surveys were conducted over the entire claim block in 1981, however the major thrust of exploration has been directed at the No. 1 and No. 3 vein systems.

A total of 12,776 feet of diamond drilling comprising 42 holes was carried out by Murgold in 1982. Most of the total footage was used to drill the No. 3 vein system (about 8,000 feet), with the remaining footage directed at drilling the Beaverbridge showing and the Nos. 1, 2, 4, 15, and 16 vein systems. The drilling delineated a significant zone of mineralization in the central portion of the No. 3

vein system. Values ranging from .002 to 4.08 oz Au/ton over relatively narrow widths were intersected to a depth of 280 feet, over a strike length of approximately 400 feet. Included in these holes was hole M13 which returned a core length of 10 feet, assaying 0.554 oz Au/ton.

Underground exploration has included detailed sampling of the No. 1 vein at the site of the Gomak shaft and additionally on the eastern portion of the No. 3 vein system at the Strathmore shaft. Underground investigations were conducted on the east and west drifts on the 100 foot level at the Strathmore shaft in 1981. Detailed channel sampling, geologic mapping and the extraction of a large bulk sample (656 tons) were undertaken at that time.

In 1982, the No. 3 shaft collar was excavated to a depth of 60 feet and concreting of the collar was completed. This was work carried out in preparation for a three compartment shaft.

Camp Operations

The exploration program commenced on June 20, 1983 with the arrival of the students and project geologist. The exploration crew consisted of 10 employees as listed below.

| | |
|---|---|
| Project Manager | W. Derek Bullock |
| Property Manager | Ted D. Brown |
| Project Geologist | Don Hoy |
| Student | Keith Bullock |
| Student | Kevin Bullock |
| Student | C. Andrew McAlpine |
| Student | Michael Francis |
| Prospector-Labourer | Kenneth Monahan |
| Carpenter-Labourer | Bert Simpson |
| Cook | Lillian Therriault |

The field camp situated in patented claim S20009 was utilized as a base for the exploration program and to provide room and board for company employees. The camp facilities consist of 4 sleeping cabins, an engineering office, a fully equipped cookery, a generator shack, a core shack, and a trailer housing washroom and shower facilities. Fuel and supplies required to support the camp were obtained from Timmins and from the nearby town of Gogama on a regular basis.

Camp operations were suspended on November 30, 1983 for the winter months. A watchman has been retained on a temporary basis to make periodical checks on the camp facilities.

Approach to 1983 Exploration

Given the relatively short time frame of current management and the wealth of data available from previous operators, the major thrust of exploration in the past program was directed at verifying and follow-up work of this data base. This included geological and geophysical data, trenching and sampling data, and numerous diamond

drilling logs.

A report prepared for Murgold by the consulting firm of Watts, Griffis and McOuat (April 12, 1983) was designed to draw together and review the work carried out on the Murgold property and also to outline work recommendations and budget for the No. 3 vein. The report concludes that the No. 3 vein system is the most interesting with regard to the possible development of a viable gold deposit.

Our feeling on the No. 3 vein system at the onset of the 1983 program was that there was not enough available information for the zone to base concrete opinions as to depth extensions, structure, size and grade to warrant underground investigations. Accordingly, it was felt that the underground program proposed by WGM in their report was somewhat premature.

The 1983 exploration program was largely concentrated on investigating the No. 1 and No. 3 vein systems as primary targets. The investigations were designed to increase the strike lengths of the structures, obtaining a reasonable grade, and also to obtain a better understanding of the structural and geological controls governing mineralization. The findings of the program would supplement our earlier knowledge of the zones, in preparation for subsequent diamond drilling and eventual underground exploration.

The program basics as set out at the onset of the program were as follows:

1) Complete additional test-pitting, trenching and sampling on the No. 3 and No. 1 veins.

2) Relog all Murgold drill core, and resample any zones of interest for assay purposes. Develop a structural and

geological concept for the nature and mode of mineralization.

3) Conduct prospecting and grass-roots exploration surveys in the outlying and least explored areas of the claims.

4) Perform detailed confirmatory and follow-up geophysical, geological and geochemical surveys in order to confirm and more closely define the nature of the numerous VLF-EM 16 anomalies reported by Norminex.

Exploration Techniques

Exploration techniques employed during the 1983 program included core logging, trenching and sampling, geochemical soil sampling, magnetometer and VLF-EM 16 surveys and geological mapping. The various techniques are summarized below.

Murgold drilled a total of 12,874 feet during the 1982 exploration program. The cores were logged and sampled by the on-site managers at the time. It was apparent that the sampling of the core was confined to the zones comprising quartz veins and visible mineralization. During the early stages of the 1983 program all of the pre-existing Murgold core was relogged to test for wallrock mineralization and also as a means of examining the geological setting of the ore shoots. Further sampling of the core was carried out in wallrock alteration zones adjacent to the quartz veins where warranted.

Hand and backhoe trenching with subsequent sampling was conducted at a number of locales during the program. Trenching was carried out on the Nos. 1, 2, 4, and 8 vein-shear systems, the Watts trenches on the No. 3 vein-shear, and on the No. 20 shear-alteration zone. Additionally chip-channel sampling was conducted in the locale

of the Strathmore shaft at the site of the ore stockpile taken from the west drift of the Strathmore shaft and also the mine dumps.

Recent ground geophysical surveys conducted by Norminex Ltd., (1981) outlined a number of target zones delineated by EM-16 anomalies. Anomalies which coincided with a major structural linear (trending at 110°) and which were proximal to local showings were considered to be first priority targets for potential zones of mineralization. Given these parameters, follow-up surveys utilizing the EM-16 and magnetometer were conducted on 3 first priority anomalies to confirm the targets and further to determine the nature of the anomaly. Three grids (grids A, B and C) were cut and picketed to provide control for the follow-up work, on the No. 1, the No. 3, and the Highway vein-shear systems

Geochemical techniques that were employed during the program included lithochemical sampling and soil sampling. In the order of 1,000 soil samples were collected on the 3 above mentioned grids covering the anomalous zones reported by Norminex. The samples were collected to supplement the geophysical surveys and to assist in defining the nature of the EM-16 anomalies.

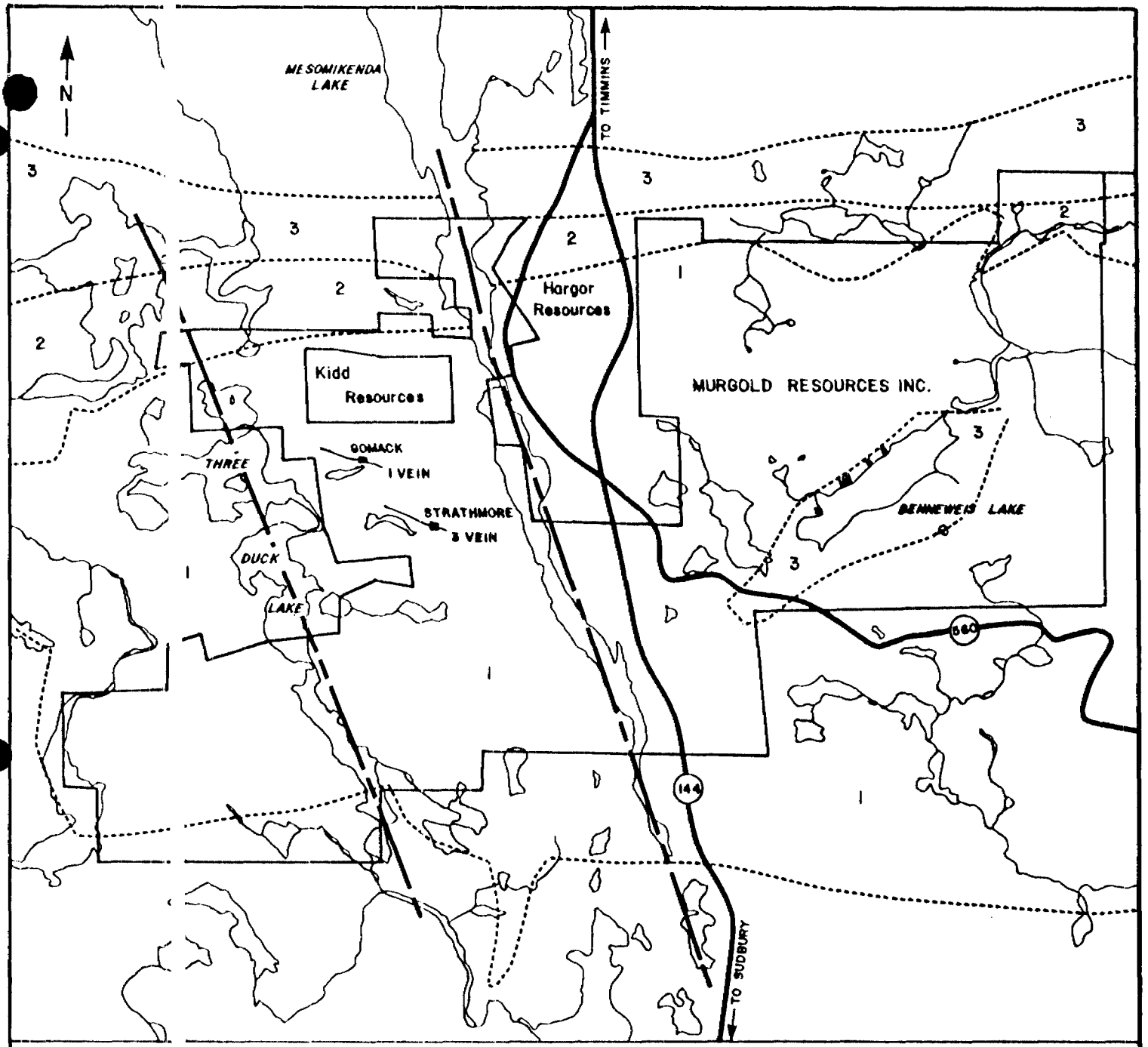
Similarly, geological mapping was carried out on Grids A and B to supplement the geophysical and geochemical surveys. Chip sampling was additionaly performed at a number of locales on the grids where warranted. Shortage of time towards the end of the program and snow cover prevented geologic mapping from being completed on Grid C.

The Murgold property is situated on the south-eastern extension of the Swaze greenstone belt. The greenstone belt is comprised of easterly trending bands of tightly folded Archean metasediments and metavolcanics, termed the Temiskaming Sediments and the Keewatin volcanics. These are intruded by later Archean intrusive stocks of granite and granite-greiss. All of the above rock types are cut by Keewee awan diabase dykes and sills.

Numerous gold deposits occur within the Swaze belt including past producers, the Kenty Mine, and the Jerome Mine. Additionally the Orefino deposit in the northern portion of the Swaze belt is currently under development.

The Murgold claim block is largely underlain by a large intrusive complex consisting of several phases including diorite, quartz diorite, granodiorite and alaskite. These rocks are intrusive into rhyolitic volcanic and greywacke-type metasedimentary rocks. The northern margin of the claims and an east-west trending zone around Benneweis Lake are underlain by greywackes and conglomerates. The rhyolitic volcanics are similarly restricted to these locales. The youngest rocks on the property are diabase dykes which occupy well developed fracture zones trending both north and north-west (Figure 3).

The quartz vein-shear systems found to date on the Murgold property are all hosted within the intrusive complex, largely in diorites and alaskite units. Visible gold is hosted in relatively narrow quartz veins associated with shear and fracture systems. The shear system on the property spans a width of 5-6,000 feet following a predominant azimuth of 100-120°. This system appears to extend from




KEWEENAWAN

Olivine d base

ALGOMAN

1 Chester y unger granite with porphoriti dioritic and grano-diorite facies

TEMISKAMING

2 Sediment schistose conglomerate greywacke arkose qu rtzite argillite serecite schist mica hornblend schist

KEEWATIN

3 Volcanics felsic to intermediate volcanic flows and pyroc stics

Fault (In rred)

| MURGOLD RESOURCES INC. | | |
|---|---|---|
| GENERAL GEOLOGY OF THE PROPERTY | | |
| SCALE: 1"=1 mi. | FIGURE : 3 | DATE: DEC. 83 |

Donald Hoy P.Eng.

the Young-Shannon property to the west to the Strathmore shaft on the east, with both ends still open on strike. The shear and fracture systems tend to display a regional parallelism.

To date, at least 12 gold bearing vein-shear structures have been identified on the property. The gold is hosted in relatively narrow quartz veins, which occupy persistent shear-fracture zones. The structures vary in width from a few inches to several feet in width and tend to pinch and swell along strike. The earlier gold discoveries appeared to be individual isolated occurrences, however it is now apparent that the veins are hosted in a system of parallel shear-fractures. The veins which are located in the area between Mill Pond and Arethusa Lake (Vein Nos. 1-5) are typical of this system of parallel structures (Drawing 1). Additionally, the quartz associated with the shears commonly occur as parallel veins or in branching veinlets, and as such should be referred to as vein-shear systems.

The dominant trend of the mineralized structures is prominent at 110°-290°, largely dipping steeply to the north. However, there are other mineralized shears on the property that trend at 045° (the No. 15 vein system) and also at 090° (the No. 20 vein system). The mineralization appears to be structurally controlled, as the veins and ore shoots are hosted in zones of weakness, such as shear, fracture, fault and contact zones. It is also apparent that there has been repeated and prolonged deformation along the 110° trend as the degree of alteration and the strength of the structures are most predominant at this azimuth. The persistent deformation was probably important in preparing the groundwork in providing a plumbing system for the mineralizing fluids.

The structures crosscut geologic contacts at various locales but appear to be strongest in gabbro-diorite hosts as opposed to the more felsic, alaskite host rocks. Similarly the types and degree of

alteration differ between these rock types. Various phases are evident in the gabbro-diorite rocks and this is due in part to alteration. The various phases of the mafics grade into one another without well defined contacts and range from relatively fresh diorites to intensely altered chloritic schistose rocks. These highly altered phases are intimately associated with the vein-shear zones. Alteration of the mafic rocks include propylitisation, chloritization, carbonatization and silicification in varying degrees of intensity. Proximal to quartz veining the alteration is intense and pervasive, involving the production of chlorite and biotite schists and the introduction of large quartz eyes into the host rocks.

In the more felsic granite-alaskite units, the alteration is restricted to silicification and sericitization adjacent to the veins and permeates the wallrocks for very short distances (1-2 feet). Generally, regardless of the rock type, there appears to be a positive correlation between the intensity of alteration and the gold content of the vein zones.

There are at least two distinct styles of gold and associated sulphide mineralization present on the property. The first is characterized by the occurrence of visible gold and associated pyrite, chalcopyrite and pyrhottite in relatively narrow quartz veins and veinlet networks. Most of the gold occurs as free gold, erratic in distribution, usually accompanied by sulphides. Copper appears to be a very good indicator mineral for the occurrence of gold and where chalcopyrite is abundant appreciable visible gold is usually present. In some instances it was reported that sampling of the wallrock adjacent to veining carried significant gold values. However, relogging and subsequent

sampli g of the 1982 drillcore did not support this concept. Alteration zones ontaining visible sulphide mineralization enveloping the veins were s mpled during the relogging and failed to indicate significant wall-rock g ld mineralization. Values ranged from trace to .016 oz/ton Au.

The second style of mineralization is characterized by the occurr nce of gold associated with disseminated pyrite, chalcopyrite and py: hottite in ore shoots. Locally the sulphides are semi-massive and ar commonly associated with quartz-carbonate veins. The mineral-ized z nes appear to be substantially wider than the veins discussed above. The host rocks for the mineralized zones are intensely altered includ: ng propylitic and silicic styles of alteration. The abundance of lar e opalescent, bluish quartz eyes are apparent in the altered mineral ized zones. The gold may not all occur as free gold, as some may be tied up in the associated sulphides. The No. 20 zone and the Beaverl ridge showing are characteristic of this second type of occurel ce. The No. 20 zone is a continuation of the Chester No. 2 gold-c pper zone contained within the adjacent claim block held by Kidd Re sources.

The most important and heavily investigated gold-bearing struct res discovered to date on the property include the No. 3 and No. 1 vein-shear systems.

The No. 3 vein-shear has been traced over a strike length of 2,8( )' by means of underground investigations, surface diamond drillir and trenching. The system comprises a series of 2-3 parallel veins r ather than a single vein. Relatively high grade diamond drill interse tions have been obtained over a strike length of about 400 feet ir the central portion of the No. 3 vein-shear system. An

intersection of 4.08 oz Au/ton over 1.2 feet was obtained at a vertical depth of 210 feet. The structure was additionally intersected at a depth of 350 feet in the same general locale but yielded low gold values. The results of the 1982 drilling on this section of the vein were the most consistent of any drilling undertaken on the property, and thus this zone is considered as promising with regard to the possible development of a viable gold deposit.

The western portion of the No. 3 vein-shear system is indicated over a strike length of 800 feet. The Watts trenches were sampled during the past program, indicating a strike length of 290 feet averaging 0.49 oz Au/ton across an average sampling width of 3.1 feet. A number of diamond drill holes were drilled by predecessor companies in the vicinity of the trenches, specifically by Chesgo (1947), by Kingbridge (1970) and by Olympia (1975). Older plans and drill logs indicate that significant intersections were obtained during these periods of drilling in a number of holes with the deepest intersection assaying0.94 oz Au/ton over a 2 foot width at a depth of 210 feet (Chesgo, DDH 13, 1947). Unfortunately the locations of the older diamond drill holes are not accurately known and can at best be approximated. Thus, based on the encouraging results obtained from the recent chip-channel sampling of the Watts trenches and the

intersection of 4.08 oz Au/ton over 1.2 feet was obtained at a vertical depth of 210 feet. The structure was additionally intersected at a depth of 350 feet in the same general locale but yielded low gold values. The results of the 1982 drilling on this section of the vein were the most consistent of any drilling undertaken on the property, and thus this zone is considered as promising with regard to the possible development of a viable gold deposit.

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Located along strike to the west of the No. 3 system is the No. 8 vein, situated to the immediate south of Mill Pond. Of significance is the very close alignment of this structure with the Gosselin

showing to the west and the No. 3 system to the east. It is probable that the No. 8 vein and the No. 3 vein are all part of the same system, which in effect would increase the total strike length of the structure to approximately 4,700 feet. Sulphide mineralization is of moderate abundance in the structure and some significant gold values were obtained during recent sampling.

The No. 1 vein-shear system has been traced over a strike length of approximately 2,600 feet by means of trenching, underground investigations and some limited diamond drilling. This system, asis the case for the No. 3 system can be divided into 3 sections.

In the central section Gomak Mines developed an 85 foot deep inclined shaft with 215 feet of drifting at the 65 foot level in 1935-36. It is reported that Gomak produced 98 ounces of gold from 500 tons of ore at that time. In 1939, Jones reportedly sampled the 200 foot long trench located to the west of the shaft and obtained an average value of 2.04 oz Au/ton over an average width of 1.4 feet. Murgold resampled the trench in 1980 and reported an average of 0.47 oz Au/ton over an average sampling width of 2.8 feet. Olympia International Resources drilled 2 holes in the locale of the Gomak shaft in 1975. The holes were intended to intersect the down-dip extension of the structure at shallow depths ( 45 feet). Shallow intersections of 2.93 oz Au/ton and 0.42 oz Au/ton were intersected over core lengths of 1.5 and 1.0 feet respectively at this locale.

Two large trenches have been developed on the shear at the east end of the structure. Drill hole M18 was drilled at this locale in 198? and produced a 6 foot length of core assaying 0.146 oz Au/ton. Significant gold values were obtained from both of these

trench s during recent sampling which are consistent with earlier sampli g by Murgold.

The western portion of the No. 1 system has been investigated by han and bulldozer trenching, in addition to very limited diamond drilli g. A number of hand trenches returned significant gold values and a ingle drill hole which was drilled 650 feet to the west of the shaft long strike returned values of 0.45, 2.0, 1.0 and 0.10 oz Au/ton respec ively. The hole was reportedly drilled in 1939 by Gomak Mines Ltd. he widths of the intersections are not known, however it is report d that the mineralized sections of core were intersected at depths 56 - 61 feet vertically.

Other vein-shear zones that have been investigated include the No . 2,4,5,11,15,16,17 and 20 systems in addition to the Highway shear hich is located on Highway 144, on the east side of Southcamp Bay. o date a limited amount of work has been undertaken on them, largel being restricted to trenching and sampling. Significant gold values nave been obtained from the sampling, however their vertical and la eral continuity has yet to be established, and further work is war anted on these zones.

Hand and backhoe trenching was carried out at a number of locale on the property. The following summarizes these operations and th results obtained.

No. 3 ein-Shear (Watts Portion)

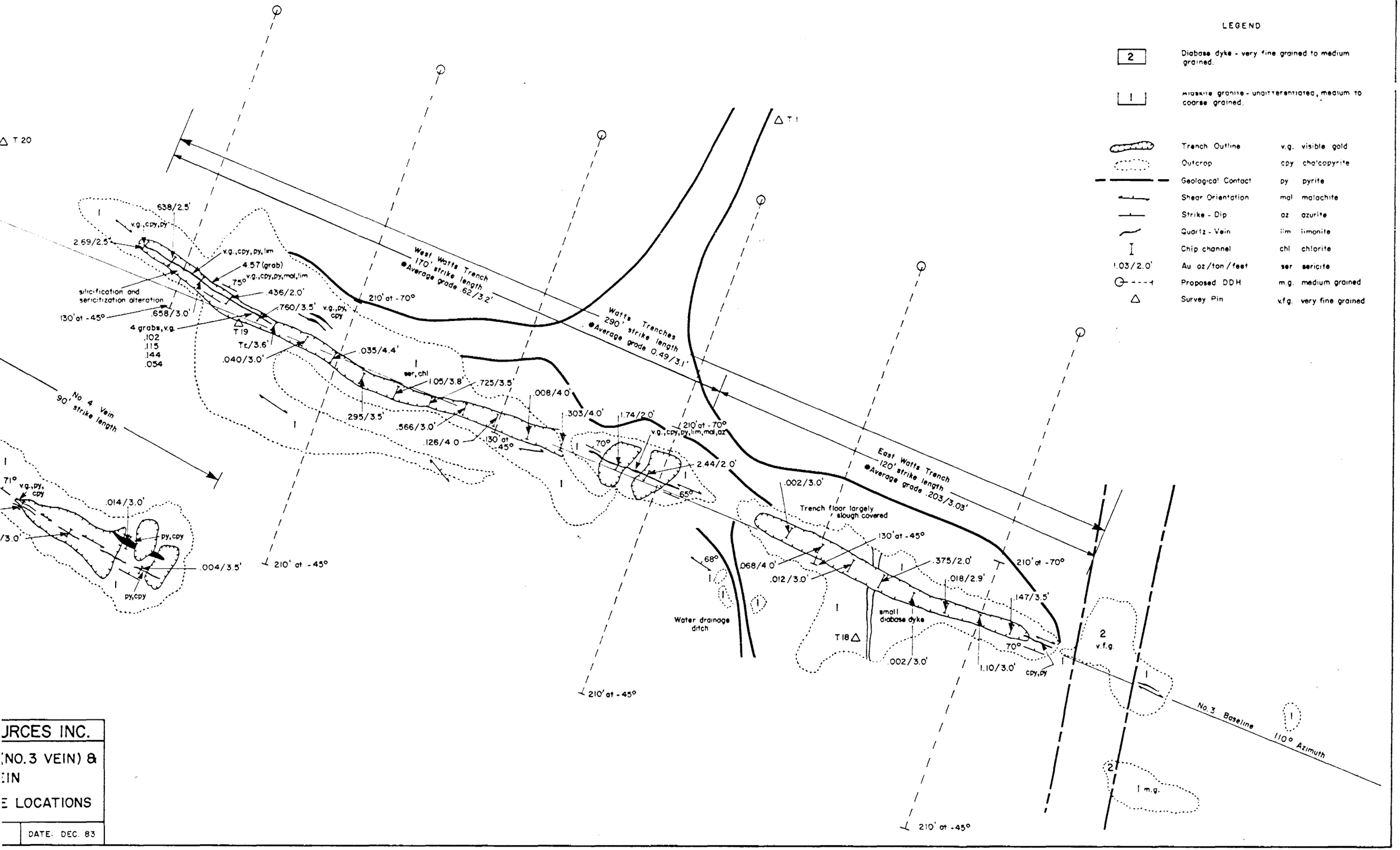
Blasting and subsequent mucking of the west Watts trench reveal d a thin quartz vein (4-6" in width), hosted in relatively unalte ed alaskite. The vein carries abundant chalcopyrite, pyrite, malach te and azurite and appreciable visible gold locally (Figure 4).

Chip-channel sampling results of the west trench indicate a zone 170 feet in length averaging 0.62 oz Au/ton over an average sampli g width of 3.2 feet. The east trench assays 0.203 oz Au/ton across an average width of 3.03 feet along a strike length of 120 feet. This indicates a total strike length of 290 feet averaging 0.49 o /ton Au over a sampling width of 3.1 feet. Grab samples collec ed from the west trench returned values ranging from .054 to 4.57 o /ton Au. Visible gold is readily discernable at this locale.

The results of the above sampling confirm values which were previo sly obtained by Murgold personnel and are in accord with the result of two bulk samples collected by Olympian International Resour es in 1974. The two samples were comprised of 46.74 and 48.92 tons a d returned values of 0.172 and 0.30 oz Au/ton from estimated widths of 6 to 10 feet respectively.

No. 1 ein-Shear (East End)

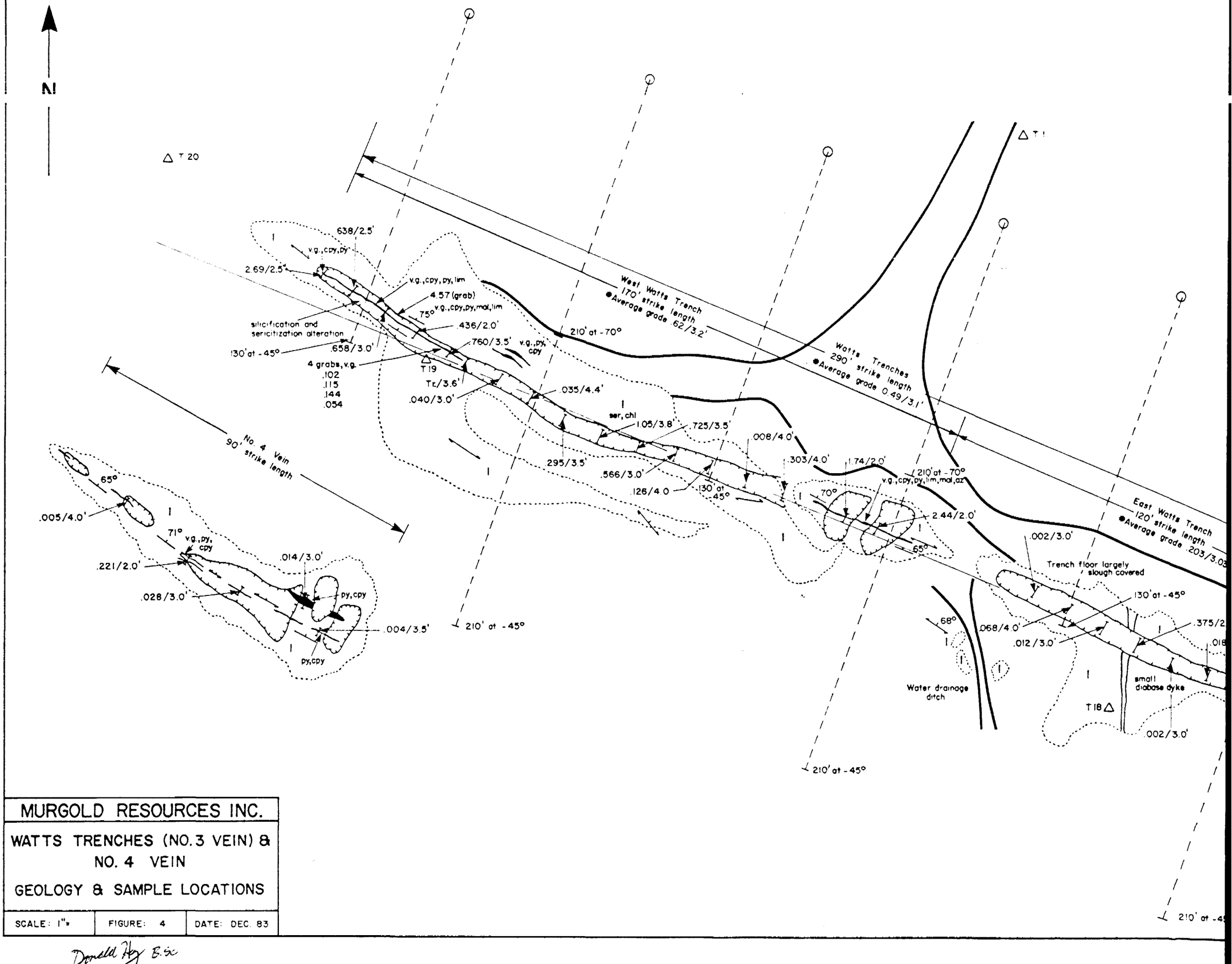
Three pits were blasted and re-opened along the eastern extens on of the No. 1 vein shear along a strike length of about 375




URCES INC.

(NO. 3 VEIN) &
EIN
E LOCATIONS

DATE: DEC. 83




| MURGOLD RESOURCES INC. | | |
|---|---|---|
| WATTS TRENCHES (NO. 3 VEIN) & NO. 4 VEIN<br>GEOLOGY & SAMPLE LOCATIONS | | |
| SCALE: 1"= | FIGURE: 4 | DATE: DEC. 83 |

Donald Hoy B.Sc

Drilled by Murgold - 1978)

N

18540 — 1.42/.8'
18541 — .002/4.0'
v.g., q.v., py, cpy
55°
1
2

Assays
/6.0'
/6.0'
(grab)
(grab)

Sheared Quartz Diorite
2
80°
py,cpy
18452 — .211/2.0'
70°
Chlorite Schist
18573 — .262

Thick Overburden

Two Backhoe Excavations
did not reach bedrock

Strike of No. 1 Vein Shear

No. 1 Baseline
15+00E
16+00E

LEGEND

1 — contains disseminated py, cpy

2 — Altered Diorite - Quartz Diorite - prominent shearing, pervasive propylitic alteration, appreciable disseminated sulphides

| | | | |
|---|---|---|---|
| | Trench Outline | diss | disseminated |
| | Outcrop | py | pyrite |
| 18573 | Sample Number | cpy | chalcopyrite |
| .246/6.0' | Au oz/ton/feet | qtz | quartz |
| .116 | Au (grab sample) | v.g. | visible gold |
| | Shear Orientation | | |
| | Quartz Vein | | |

2
2
75°
18577 — .006
47°
qtz, py, cpy
18575 — .066/2.0'
50°
q.v. py, cpy, po
2
1
2
1
18576 — .547/5.0'
18574 — .018
q.v., py, cpy

MURGOLD RESOURCES INC.

NO.1 VEIN (EAST END)

GEOLOGY & SAMPLE LOCATIONS

| SCALE: 1" = 20' | FIGURE: 5 | DATE: DEC. 83 |
|---|---|---|

Donald Hay B.Sc.

N

M18 (Drilled by Murgold - 1978)

To No. 1 Shaft (Gomak)
700'

.146/6.0'

Vertical Projection to Surface

18540 — 1.42/.8'

18541 — .002/4.0'

65°

55°

v.g., q.v., py, cpy

diss. py, cpy

1

2

18539 — .074/2.0'

To Murgold Camp

Previous Murgold Assays

.27 oz Au / ton / 6.0'
1.08 oz Au / ton / 6.0'
4.11 oz Au / ton (grab)
.92 oz Au / ton (grab)

Sheared Quartz Diorite

2

80°

py, cpy

70°

18452 — .211/2.0'

Chlorite Schist

18573 — .262

Thick Overburden

Two Backhoe Excavations
did not reach bedrock

Strike of No. 1 Vein Shear

Bush Road

Baseline Azimuth 100°

14+00E

No. 1 Baseline

15+00E

16+00E

To No. 3 Vein and Bates Shaft

feet ( 'igure 5). The shearing observed in these trenches is of modera e to strong intensity with widths ranging from 5 to 20 feet. The qu rtz associated with the shearing is lenticular and discontinuous in nat re. The shear and associated quartz contain pyrite, chalcopyrite, malach te and minor visible gold. Sampling of the trenches yielded the fo lowing results.

| Assay (oz/ton Au) | Sampling Width (feet) | |
|---|---|---|
| 0.074 | 2.0 ) | |
| 1.42 | .8 ) | .431/6.8' |
| 0.002 | 4.0 ) | |
| .211 | 2.0 | |
| .262 | grab | |
| .066 | 1.5 | |
| .018 | grab | |
| .547 | 5.0 | |

Previo s assays that were obtained by Murgold in these trenches were .27/6. ' and 1.03/6.0'. In addition drill-hole M18 was drilled in this l cale in 1982 and encountered a 6 foot section assaying 0.146 oz/ton Au.

No. 1 ein-Shear (West End)

A number of samples of interest have been obtained from a series of trenches located to the west of the Gomak shaft. In a trench crosscutting the vein-shear 900 feet west of the shaft the follow ng assays were returned (Drawing 1).

| Assay (oz/ton Au) | Sampling Width (feet) |
|---|---|
| 0.119 | 8.0' |
| 0.204 | grab |

A furt er 100 feet to the west, the shear was trenched and sampled at wha has been referred to as the No. 17 showing. The following assays were obtained from sampling.

| Assay (oz/ton Au) | Sampling Width (feet) |
|---|---|
| 0.134 | grab |
| 0.294 | grab |
| 0.052 | 3.0 |
| 0.010 | 3.0 |
| 0.020 | grab |

At this locale the shear appears to decrease in intensity and thick overburden becomes prevalent to the west.

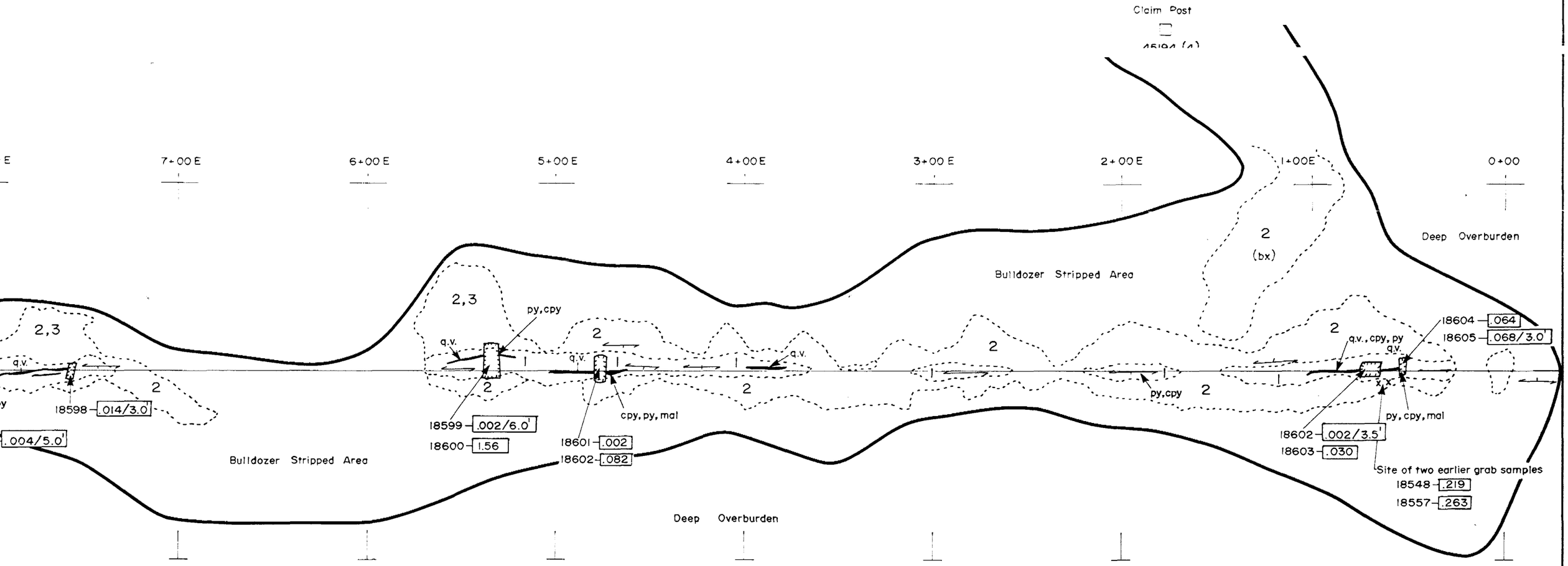
No. 8 Vein-Shear

The No. 8 vein-shear was previously stripped by bulldozer during 1981 exploration by Murgold. The structure is stripped along a strike length of approximately 1,000 feet (Figure 6). The shear lies to the west and on strike with the No. 3 vein-shear. The discontinuous shearing and associated quartz veining is of moderate intensity and characteristically pinches and swells along strike. A number of hand trenches were blasted along the strike of the structure revealing rusty sections containing minor to appreciable pyrite and chalcopyrite. Chip-channel sampling and a few grab samples were collected from the hand trenches and returned values ranging from .002 to 1.56 oz Au/ton. Two samples collected from the small exploration pit located at the west end of the structure returned assays of .219 and .263 oz Au/ton respectively. The sampling indicates that there is significant gold contained within the structure and reflects the erratic distribution of gold in these vein-shear systems.

No. 20 Vein-Shear Zone

The following results were obtained from sampling the mineralized structures comprising the No. 20 zone (Figure 7).

| Sample # | Au oz/ton | Sample Width (feet) |
|---|---|---|
| 18561 | .050 | 10.0 ) |
| 18562 | 1.06 | 10.0 ) 0.38/30.0' |
| 18563 | .084 | 10.0 ) |
| 18564 | .002 | 3.0 |
| 18565 | .004 | 3.0 |
| 18566 | .084 | 5.0 |
| 18567 | .002 | 2.5 |
| 18568 | .004 | 2.5 |
| 18569 | .082 | grab |
| 18570 | .198 | grab from Chester #2 zone |




LEGEND

| | |
|---|---|
| 1 | Sheared Diorite, intense, pervasive propylitic alteration schistose and foliated |
| 2 | Diorite, relatively unaltered, locally brecciated |
| 3 | Alaskite, unaltered, fine to medium grained |

KEY

| | |
|---|---|
| | Bulldozer stripped area |
| | Outcrop |
| | Shearing and foliation |
| □ | Claim post |
| | Rock trench |
| | Quartz veining |
| 18596 | Sample location |
| .002/6.0' | Au oz/ton/feet (channel) |
| .004 | Au oz/ton (grab) |

| | |
|---|---|
| cpy | chalcopyrite |
| py | pyrite |
| mal | malachite |
| bx | brecciated |

MURGOLD RESOURCES INC.

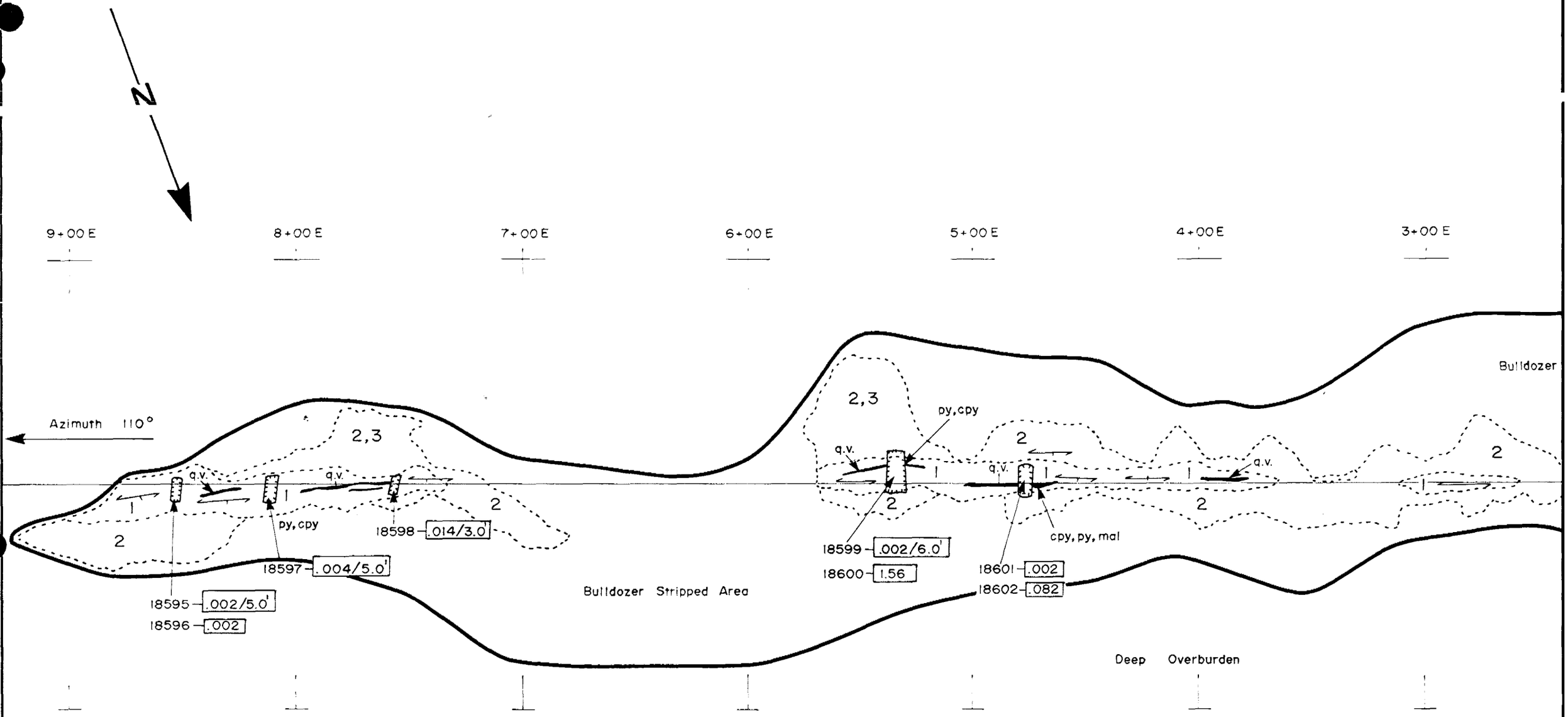
NO. 8 VEIN-SHEAR STRUCTURE

GEOLOGY & SAMPLE LOCATIONS

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

| SCALE: 1" = 50' | FIGURE: 6 | DATE: DEC. 83 |
|---|---|---|

Donald Hy B Sc




LEGEND

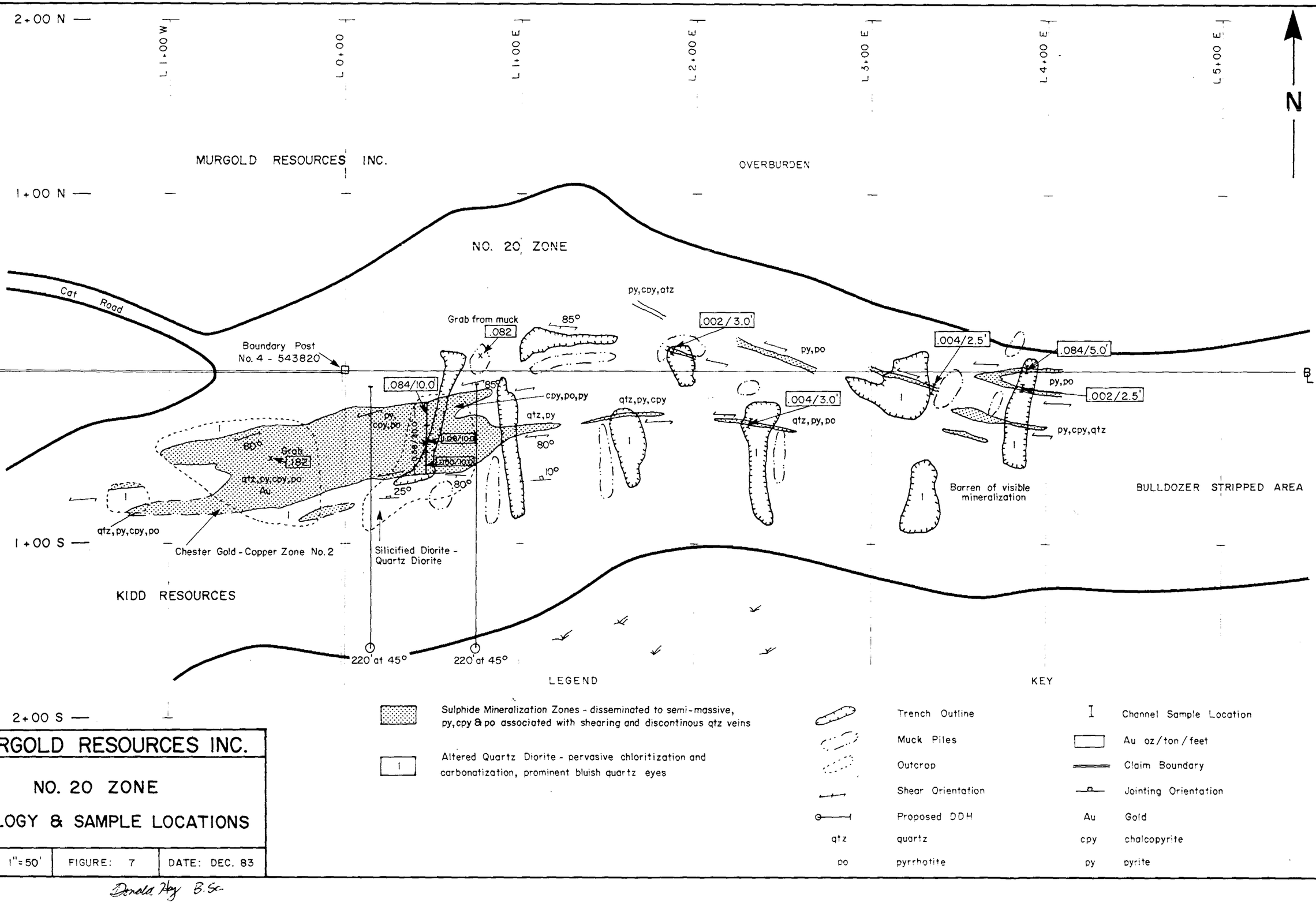
| | |
|---|---|
| 1 | Sheared Diorite, intense, pervasive propylitic alteration schistose and foliated |
| 2 | Diorite, relatively unaltered, locally brecciated |
| 3 | Alaskite, unaltered, fine to medium grained |

KEY

| | | | |
|---|---|---|---|
| | Bulldozer stripped area | cpy | chc |
| | Outcrop | py | pyr |
| | Shearing and foliation | mal | ma |
| | Claim post | bx | bre |
| | Rock trench | | |
| | Quartz veining | | |
| 18596 | Sample location | | |
| .002/6.0' | Au oz/ton/feet (channel) | | |
| .004 | Au oz/ton (grab) | | |

The most significant values were obtained over the widest sectio of the zone with three continuous channel samples of ten feet length assaying .050, 1.06 and .084 oz Au/ton respectively. As a compos te the width of this portion of the zone assays 0.38 oz Au/ton across 30 feet. The other shears were sampled and returned values rangin from 0.002 to 0.084 oz Au/ton across width ranges of 2.5 to 5.0 fe t. A grab sample taken by Murgold from the adjacent Chester #2 gol -copper zone assayed 0.198 oz/ton Au. Norminex reported assays from well-mineralized grab samples containing in excess of 2 oz/t n Au. from the No. 20 zone.

Kidd Resources reports channel sampling values of up to 0.87 o /ton Au across 38.0 feet from the adjacent Chester #2 zone. They ha e additionally intersected significant gold values in drill holes o a vertical depth of 150 feet.




LEGEND

Sulphide Mineralization Zones - disseminated to semi-massive, py, cpy & po associated with shearing and discontinous qtz veins

1 Altered Quartz Diorite - pervasive chloritization and carbonatization, prominent bluish quartz eyes

KEY

| | | | |
|---|---|---|---|
| | Trench Outline | I | Channel Sample Location |
| | Muck Piles | | Au oz/ton/feet |
| | Outcrop | | Claim Boundary |
| | Shear Orientation | | Jointing Orientation |
| | Proposed DDH | Au | Gold |
| qtz | quartz | cpy | chalcopyrite |
| po | pyrrhotite | py | pyrite |

# MURGOLD RESOURCES INC.

## NO. 20 ZONE

## GEOLOGY & SAMPLE LOCATIONS

| SCALE: 1"=50' | FIGURE: 7 | DATE: DEC. 83 |
|---|---|---|

Donald Hoy B.Sc.

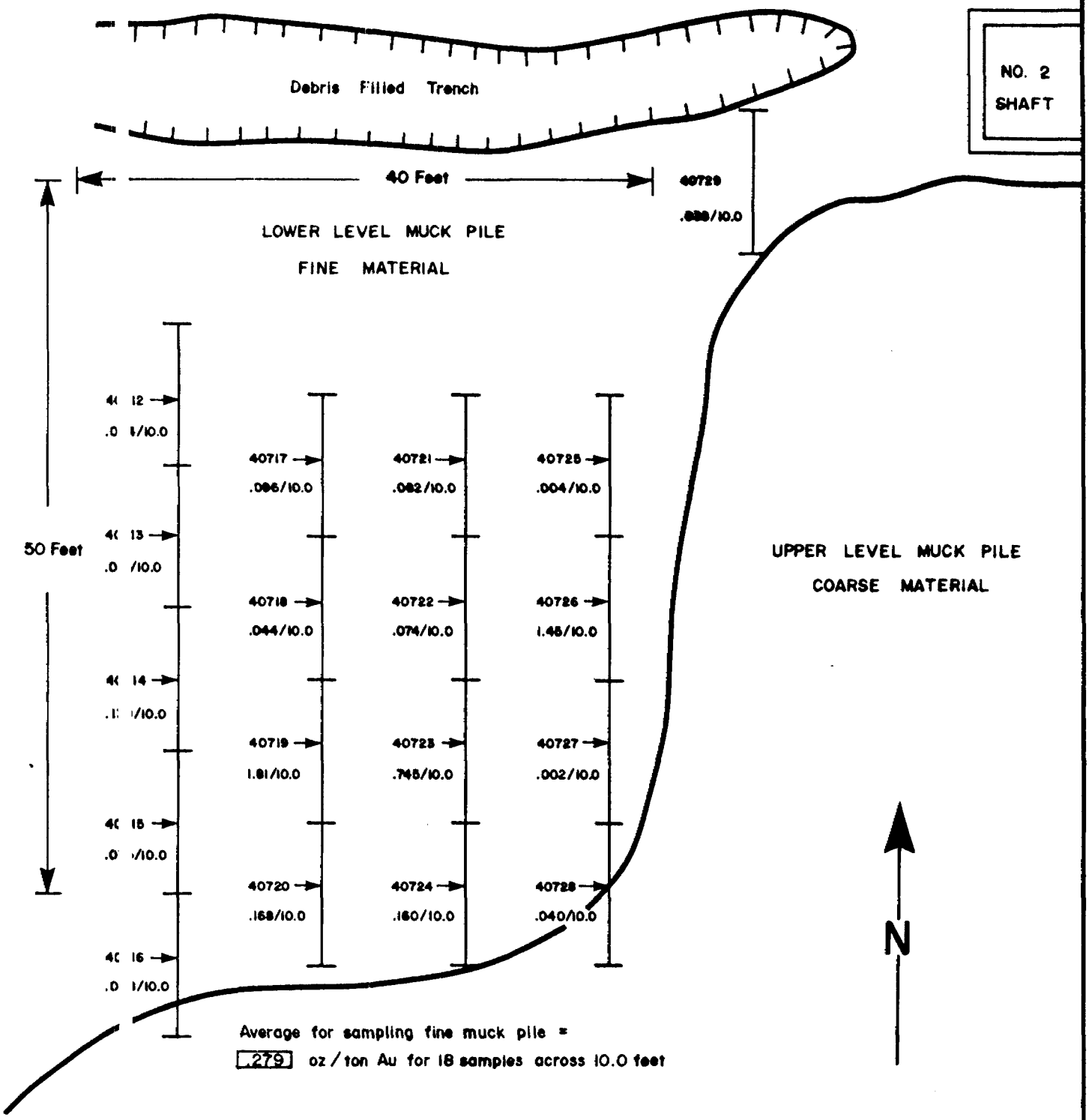
No. 2 haft Dump

Relatively fine material comprises the lower level "dump" at the site of the No. 2 shaft. Observation of this fine material indica ed the presence of fine grained disseminated sulphides. Sampli g of the dump was conducted in 10 foot lengths in channels. Values ranged from .002 to 1.81 oz Au/ton and averaged .279 oz/ton Au over 1 foot sampling widths (Figure 8 ). The results of the sampling indica es that the lower level of the No. 2 shaft dump comprises ore grade aterial. Based on dimensions of a 50 foot length, a 40 foot width nd a 4 foot thickness, it is estimated that there is approximately 500 to s of this material present at the site.

The coarser material comprising the upper level was additionally s mpled. Channel samples returned values of .018 and .004 oz/ton Au ove channel sample lengths of 6.5 and 6.0 feet.

No. 4 ein-Shear

This vein-shear was blasted and sampled over a strike length of app oximately 40 feet. The structure is located approximately 85 feet t the south of the Watts trenches trending at an azimuth of approx mately 115° (Figure 4 ). Trenching indicated a shear of moderate intens ty hosting discontinuous and lensy quartz. The quartz veining varied in width from a few inches to about 2 feet. Appreciable patchy and di seminated pyrite and chalcopyrite were hosted in the quartz and within the shear itself. Small amounts of visible gold were noted at one of the sampling sites. Gold values ranged from .004 oz/ton Au to a high of .221 oz/ton Au across sampling widths of 3 to 4 feet. Unfort nately the presence of thick overburden at both ends of the struct re prevented further trenching from taking place.




MURGOLD RESOURCES INC.

PLAN OF NO. 2 SHAFT DUMP

SAMPLE LOCATIONS - LOWER LEVEL

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

Donald Hogg B.Sc.

| SCALE: 1"=10' | FIGURE: 8 | DATE: DEC. 83 |
|---|---|---|

Other Veins Sampled

Trenching and sampling was carried out at a number of other locales during the program. This sampling was conducted on the No. 2 vein-shear, the No. 11 showing and from the remainder of the ore stockpile obtained from the No. 2 shaft.

The No. 2 shear is located approximately 300 feet north of the No. 2 zone. The structure has been exposed by a number of small hand trenches over a strike length of about 400 feet. Grab samples were collected from these trenches and returned values of .468, .014, .155, .005, .78 and .12 oz/ton Au. Appreciable patchy sulphides are present in the quartz vein which attains a maximum width of about 2 feet at a few locales.

The No. 11 showing is located on Grid C to the north of the No. 1 vein system (Drawing No. 8 ). The zone is stripped along a strike length of about 600 feet. The showing was discovered in 1981 in response to a strong gold in soils anomaly reported by Norminex. The mineralization is comprised of patchy and disseminated pyrite and chalcopyrite, hosted in interfingered units of diorite and alaskite. Three grab samples were collected from the showing and returned values of .006, .020 and .016 oz/ton Au.

A few large grab samples (20-25 lbs) were collected from the remainder of the ore stockpile in the No. 2 shaft locale. The samples were representative grabs of the ore and returned values of 2.21 and .464 oz Au/ton. The results confirm our feelings with regard to the grade of the ore extracted from the stope in the west drift.

VLF-EM and magnetometer surveys were carried out over grids A, B, and C covering portions of the Nos. 1, 3, 20 and highway vein-shears. A Geonics VLF-EM 16 was employed for the electromagnetic survey, using Cutler, Mains as the transmitter station. A McPhar M 500A magnetometer was used for the magnetic survey. The results of the surveys are summarized below.

A number of conductors were indicated on the EM survey carried out on grid A (Drawing 3). The presence of 2 powerlines created problems of interference on sections of the grid, and readings are only valid between crosslines 10+00W and 10+00E. The conductors defined by the Fraser filtered contours are apparently not associated with the quartz vein-shear which is bisected by Highway 144. The major conductor located between crosslines 2+00E and 10+00E is coincident with an area of the grid underlain by swamp as are a number of the other conductors. It is probable that the EM responses obtained are a result of the presence of conductive overburden rather than due to bedrock conductors.

Three major conductors were defined by the EM survey on grid B Drawing 6). The Fraser filtered contours and the in-phase profiles indicate 2 very strong conductors located between crosslines 4+00W and 10+00W. The in-phase readings were extremely high over these zones and when filtered using the moving average, the resulting data were high. It is apparent that these anomalies are generated by the extremely swampy conditions in these areas, and are probably due to conductive overburden. There is, however, one anomaly which is considered valid, in view of the absence of swampy terrain in the locale,

and its proximity to the No. 2 shaft and No. 3 vein system. This anomaly is located between lines 4+00W and 18+00E, trending at an azimuth of approximately 080°. Of significance is the apparent intersection of the conductor with the projected strike of the No. 3 vein to the east of the shaft. It is probable that this anomaly represents a bedrock conductor and follow-up work is warranted in this case.

On grid C, there is one very prominent anomaly indicated by the filtered contours, that spans the entire grid in an east-west direction (Drawing 8). The portion of the conductor located between crosslines 16+00E and 24+00E is interesting in view of its close spatial relationship with the No. 11 showing. The showing consists of disseminated and patchy pyrite and chalcopyrite hosted in fractures and shears in interfingered units of alaskite and diorite. The showing was discovered by follow-up trenching, investigating a strong gold in soils anomaly in 1981. With the exception of one 10-contour anomaly located between lines 12+00E and 16+00E, the conductors delineated in the survey are not associated with the No. 1 vein-shear system.

VLF-EM 16 and magnetometer surveys were carried out on a small grid covering the No. 20 zone. A strong conductor was indicated by the EM survey, which correlates very strongly with the mineralization associated with the Chester #2 gold-copper zone and the No. 20 zone. In addition the magnetometer survey indicates a prominent magnetic high superimposed on the sulphide zones. Of significance is the continuation of the EM conductor to the east beyond the extent of the presently exposed sulphide zones, indicating potential for additional mineralization.

Generally, the conductors delineated by the EM surveys are not associated with the relatively narrow vein-shear systems tested, which included the Nos. 1 and 3 systems and the shear on Highway 144. It is apparent that the veins are too narrow and lack sufficient sulphides to elicit an EM response. The exception of course, is the No. 20 zone, which is of considerable more width than the veins and contains significantly more sulphide material.

By and large, the magnetic surveys are more useful in providing geologic control than for detecting the shear zones. The magnetic data are able to detect the trend and location of diabase dykes and the gabbroic-diorite intrusive phases in areas underlain by overburden. In a few isolated cases, weak magnetic lows are situated over the strongest vein-shears, but this relationship is not always consistent.

In the order of 1,000 soil samples were collected on grids A, B, and C (Drawings 4, 7 and 9) to supplement the geologic mapping, the VLF EM-16 and magnetometer surveys. Samples were collected from the B soil horizon at all stations on the grid that were not underlain by swampy ground. The samples were analyzed at Bell-White Analytical Laboratories in Haileybury.

In general, the response obtained from the geochemical sampling was poor. Geochemical sampling that was carried out over the EM conductors yielded negative results. The results of the sampling are somewhat surprising given the fact that even soils that were sampled in close proximity to known gold bearing veins yielded negative results.

The poor results can be in part explained by the relatively thick veneer of overburden underlying major portions of the property. Soil geochemistry works best in thin horizons of residual soils which have been left undisturbed. The overburden covering large areas of the grids sampled consist of glaciofluvial material such as sands and gravels. This suggests that the responses obtained in the soils do not reflect the "signature" of underlying bedrock mineralization.

Some consideration should be given to further geochemical testing of organic material utilizing the neutron activation method. This could initially be carried out as a test survey with future surveys contingent upon the earlier results. The advantages of this method are that the neutron activation system is much more sensitive in terms of a lower detection limit (to 0.1 ppb), the method is a multi-element technique in that many elements can be readily analyzed simultaneously.

The 1983 exploration program has been a success from a geological point of view. The results of the program have substantiated and added to the potential of the property with regard to the development of viable gold deposits. The most important conclusions as yielded by the program are:

1. The No. 3 vein system has been explored by surface sampling, trenching and diamond drilling, over a strike length of 2,800 feet. The investigations have delineated 2 zones of interest for further exploration. The central portion of the system contains relatively high grades of gold over narrow widths, along a strike length of 400 feet at shallow depths. The western portion of the system, at the Watts trenches locale, was sampled in some detail during the program, and indicates a zone 290 feet in length assaying 0.49 oz/ton Au, across an average width of 3.1 feet.

2. The No. 1 vein system has been traced over a strike length of approximately 2,600 feet through trenching, sampling and limited diamond drilling. Sampling of the eastern and western portions of the vein-shear system has yielded significant gold values across relatively narrow widths. The structure is still open at both ends along strike.

3. The No. 20 zone represents a significant zone of mineralization. The showing displays a style of mineralization which differs from the relatively narrow veins. Sampling of the zone indicates gold values of 0.38 oz/ton Au, over a sampling width of 30 feet. The zone has never been

drilled and present indications are that mineralization extends at depth.

4. There are numerous gold bearing structures present on the property. Very limited investigations have been carried out on these to date, however most of them contain siginificant gold as indicated by preliminary sampling.

5. VLF-EM 16 surveys failed to respond to the relatively narrow vein-shear zones. A number of conductors were delineated in the surveys, with most of them responding to the presence of conductive overburden rather than bedrock conductors. The exception is the No. 20 zone where a significant EM and magnetic response was obtained, very closely spatially associated with the mineralized zones. Magnetic surveys were similarly unsuccessful in outlining the narrow vein-shears.

6. Geochemical soil sampling was unsuccessful in outlining gold in soil anomalies. The presence of a relatively thick veneer of overburden, glacio-fluvial in origin, is suggested to be the cause of the negative response.

It is herein recommended that a program of diamond drilling, trenching, geological, geophysical and geochemical surveys be undertaken on the property, as the next stage in exploration. The elements of the program are as follows:

1. A diamond drilling program be undertaken comprising 10,000 feet of drilling, primarily concentrating on the Nos. 1 and 3 vein-shear systems. The drilling is suggested to be broken down into the following:

| Vein System | Portion | Proposed Footage | No. of Holes |
|---|---|---|---|
| No. 3 vein | central | 2,800' | 9 |
| No. 3 vein | western (Watts trenches locale) | 1,600' | 9 |
| No. 3 vein | eastern | 400' | 2 |
| No. 1 vein | central & eastern | 3,000' | 20 |
| No. 1 vein | western | 500' | 3 |
| No. 20 zone | -- | 800' | 4 |
| | Sub total | 9,000' | |
| Allowance for fill-ins on earlier results | contingent | 1,000' | |
| | Total | 10,000' | |

The proposed drilling is designed to fill in, extend and test the structures at depth. It is recommended that 2 drill rigs be used to carry out the drilling, with one drill operating on each vein system.

2. It is recommended that the Weeduck Lake area, the No. 20 zone area and the adjacent claims to the north of the property held by Kidd Resources be investigated by a program of geological mapping, EM, I.P., magnetometer and geochemical surveys. The prominent EM anomalies delineated by Norminex

in 1981 in these areas, and the excellent potential for discovering additional zones of mineralization similar in nature to the Chester Nos. 1 and 2 zones and the No. 20 zone, warrant a program of this nature.

i. Given the obvious association of the vein-shears on the property with fracture, shear and fault systems, an air photo structural study is recommended. An air photo study can be useful in areas of heavy overburden outlining lineament and regional fracture systems. This would be useful on the Murgold property in view of the abundance of overburden covering large areas of the claims block.

i. It is recommended that a test geochemical survey utilizing humus sampling, with subsequent analysis by the neutron activation method be carried out. This method is much more sensitive with regard to detection limits for gold and provides better data than does soil sampling of the B horizon. Apparently the technique has been used with some success in the Hemlo area.

## COST ESTIMATE

For a program of approximate 3 month duration.

| | |
|---|---|
| Diamond Drilling, 10,000 ft @ $20/ft | $200,000 |
| Assays, 500 @ $10.00 each | 5,000 |
| I.P. Survey, @ $1,000/line kilometre, say 40 km | 40,000 |
| Linecutting, @ $150/line kilometre, 40 km | 6,000 |
| Geochemical Sampling & Analysis | 10,000 |
| Air Photo Structural Interpretation | 1,500 |
| Report, Map & Section Preparation | 5,000 |
| Personal and Administration Costs | 40,000 |
| Sub total | 307,500 |
| plus contingencies @ 10% | 30,750 |
| Total | $338,250 |

Don Hoy

Don Hoy, B.Sc.
January, 1984

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# REPORT

# ON

# THE 1983 EXPLORATION PROGRAM

# MURGOLD RESOURCES INC. PROPERTY

# CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

# PORCUPINE MINING DIVISION

# ONTARIO

BY

D. Hoy, B.Sc.

JANUARY 1984

VOLUME II - DIAMOND DRILL LOGS

# DIAMOND D. LL RECORD

**PROPERTY** Chester, Benoueville & St. Louis Townships **HOLE No.** M 1

**SHEET NUMBER** 1 of 3 **SECTION FROM** 0+100 WNW **TO** **STARTED** Feb '82

**LATITUDE** .8903 **DATUM** No. 3 Vein (Local Grid N/S) **COMPLETED** February 1982

**DEPARTURE** 170953 **BEARING** 200° (S 20° W) **ULTIMATE DEPTH** 250'

**ELEVATION** 2982.37 **DIP** -45° at collar **PROPOSED DEPTH**

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 7.0 | Casing | | | | |
| 7.0 - 8.0 | Boulders | | | | |
| 8.0 - 10.0 | Biotite chlorite - quartz rich rock; foliated, prominent quartz eyes, perhaps a tuffaceous rock inclusion. biotite foliation @ 50° to core axis. | | | | |
| 10.0 - 38.0 | Diorite; quartz diorite; coarse medium grained, medium to dark grey, finer grained equivalents are present locally. towards the bottom of the unit, interlayering of grey diorite with underlying granodiorite is evident | | | | |
| | 33.0 - 38.0: zone contains numerous calcite veinlets. | | | | |
| 38.0 - 110.0 | Granodiorite; variably medium to coarse grained, light to dark grey, occasional bluish quartz eyes are present locally. | | | | |
| | 38.0-110.0: fine grained chlorite appears to be an assimilation zone with above mentioned granodiorite & a fine grained mafic rich, quartz eyes dominant, finely disseminated pyrite & pyrrhotite | | | | |
| | @76.5': quartz vein (5") sharp contacts @ 75°, no visible mineralization | | | | |
| | 70-82.0: upgraded alteration of rock; chlorite @ 30° to core | | | | |
| | 90: fractures show signs of a brittle fault movement | | | | |
| | 97.6': irregular quartz vein with brecciated chlorite & accessory chlorite, no visible mineralization | | | | |

Relogged 24/7/83 Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 110.0 - 115.0' | Island Dacite: dark grey, moderate to strong alteration, medium grained, | | | | |
| | prominent quartz eyes, numerous 1mm - cutting calcite veinlets | | | | |
| | within the unit, trace to minor disseminated pyrite * | 1-114-116 | 114.0-116.0 | 2.0' | |
| 115.0 - 125.0 | Monzodiorite; medium to coarse grained, large bluish quartz * | 1-116-118 | 116.6-118.0 | 2.0 | |
| | eyes, carbonatized, becomes sheared at 122.0' with increase in * | 1-118-120 | 118.0-120.0 | 2.0' | |
| | pyrrhotite to 1%, schistosity @ 45° to core axes * | 1-120-122 | 120.0-122.0 | 2.0' | |
| | @ 121.0': quartz vein (22cm), barren, does contains carbonate * | 1-122-124 | 122.0-124.0 | 2.0' | |
| | (shaft vein?), lower contact occupied by 15cm qtz-carbonate * | 1-124-125 | 124.0-125.0 | 1.0' | |
| | vein containing 2% po & py * | 1-125-126 | 125.0-126.0 | 1.0' | |
| 125.0 - 126.0 | Schist: chloritized, may be derived from tuff because of | | | | |
| | weak crosscutting occurrence, possibly an alteration product associated with quartz veining & shearing | | | | |
| 126.0 - 147.0 | Dacite - quartz feldspar porphyry: medium to coarse grained phenocrysts in matrix; | | | | |
| | relatively unaltered, although displays schistosity locally, also locally chloritized | | | | |
| | 126.0-134.0: fine to medium grained, dacite phase | | | | |
| | 134.0-141.0: buff coarse grained, prominent large bluish quartz eyes | | | | |
| | 141.5-143: fine grained & chloritic, minor disseminated pyrite | | | | |
| 147.0 - 150.0 | Lamprophyre; fine to medium grained, prominent biotite flakes, | | | | |
| | upper contact sharp at about 80°, lower contact not discernible | | | | |
| 150.0 - 171.0 | Dacite quartz feldspar porphyry; largely medium to coarse grained, | | | | |
| | relatively unaltered, minor disseminated pyrite. | | | | |
| | 164.0-164.5': fine grained, felsitic phase | | | | |

+ obtained from 1982 DDH data * Results & core not available

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 190.0 - 198.0 | Altered Diorite; fine to medium grained, intense alteration noted. Chlorite, silicified, pervasive hairy bleached quartz eyes, pervasive carbonatization, trace to minor disseminated pyrite. Foliation is moderately developed at 70-80° to core axes. numerous calcite veinlets. | | | | |
| 198.0 - 202.0 | Mafic dyke (?); resembles a lamprophyre, largely fine grained, intensely carbonatized, contains finely disseminated pyrite, relatively sharp upper contact @ 80° to core axis, lower contact 70-80° to core axis. | | | | |
| 202.0 - 250.0 | Diorite; largely medium grained although fine & coarser grained phases are present locally, abundant calcite veinlets. 214.0 - 216.5; zone of oppressive foliation, carbonatized, light alteration is restricted to development of epidote as alteration product of plagioclase, chlorite is abundant locally. 229.0 - 235.0; fine grained, intensely altered, chloritic, fractured, hairy quartz eyes, numerous calcite veinlets. 245.0; small quartz vein (1.5") sharp contacts @ 80° to core axis. Visible mineralization | | | | |
| | END OF HOLE @ 250.0' | | | | |

# DIAMOND DRILL RECORD

**PROPERTY** Astor, Semenicio and St. Louis Townships **HOLE No.** M5

**SHEET NUMBER** 1 of 2 **SECTION FROM** 0+250 ESE **TO** **STARTED**

**LATITUDE** 28718 **DATUM** No. 3 Mine system **COMPLETED**

**DEPARTURE** 171237 **BEARING** **ULTIMATE DEPTH** 300.0'

**ELEVATION** 0000.16 **DIP** **PROPOSED DEPTH**

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 15.0 | casing | | | | |
| 15.0 - 80.0' | Basalt: dark green aphanitic rock or alternatively a shallow siliceous, largely fine to medium grained, medium to dark grey, isotropic characterless epidote bearing of plagioclase laths, relatively unaltered, minor alteration of plagioclase to epidote moderate to heavy fracturing locally, occasional small patches of epidote, also strongly resorbed xln. of diopside volcanic - dolled bonus margin. Lower contact highly fractured | | | | |
| 80.0 - 120.0 | Diorite; fine to coarse grained phases, massive, pink to light grey, isotropic throughout locally largely silicification<br>80.0 - 86.0; large bluish quartz eyes. trace chalcopyrite.<br>@ 83.0': patchy quartz veining two small patches of chalcopyrite and pyrite.<br>@ 108.0': Small patchy quartz veining. trace of chalcopyrite.<br>92.0 - 95.0': medium grained pink granite rock, intrusive<br>minor xenolithic inclusions<br>109.0 - 120.0; coarse grained granite, abundant large bluish quartz eyes.<br>@ 113.0': 5" irregular shaped white pegmatite.<br>@ 117.5': 3" quartz vein. no visible mineralization @ 55-60° to C.A.<br>118.0 - 120.0; ± sharp contact with underlying unit. | | | | |

Logged 2/1/83 Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 120.0 - 171.0 | Altered Diorite; largely medium grained, salt & pepper fine and coarse grained phases are present locally, medium to dark grey, pervasive schistosity quartz eyes throughout and very abundant locally, finely disseminated pyrite + trace chalcopyrite. | | | | | | |
| | 120.0 - 122.5; Coarse grained, prominent large bluish quartz eyes minor to moderate finely disseminated pyrite + pyrrhotite (1-2%) | | | | | | |
| | 132.0 - 140.0; fine grained phase, chlorite + occasional quartz eyes. Shearing @ 139.0'; 60-65° to C.A. | | | | | | |
| | 157.0 - 159.0; abundant large bluish quartz eyes with associated disseminated pyrite | | | | | | |
| | 168.5 - 170.0; CORE MISSING PREVIOUSLY SAMPLED FOR ASSAY | | | | | | |
| | 170.0 - 171.0; very fine grained and foliated, chlorite foliation @ 20-25° to C.A. | | | | | | |
| 171.0 - 200.0 | Granodiorite - granite; very coarse grained, very prominent large blue quartz eyes, rock is redish grey in colour | | | | | | |
| | @ 176.0'; 3" irregular shaped calcite vein with patchy chlorite | | | | | | |
| | @ 187.0 - 188.0; fine grained basic (dike?) with country rock inclusion & hypersthene xtls, sharp lower contact at 80-85° to C.A | | | | | | |
| | END OF HOLE @ 2000' | | | | | | |

# DIAMOND DRILL RECORD

**PROPERTY** Chester, Bonnevies and St Louis Townships **HOLE No.** M6

**SHEET NUMBER** 1 of 3 **SECTION FROM** 0+039 WNW **TO**

**LATITUDE** 8911 **DATUM** No. 3 mine system

**DEPARTURE** 71001 **BEARING** 200°

**ELEVATION** 2285.18 **DIP** -45° @ collar

**STARTED** March 1982

**COMPLETED** March 1982

**ULTIMATE DEPTH** 289.0'

**PROPOSED DEPTH**

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 7.0' | Casing | | | | |
| 7.0 - 270. | Granodiorite; medium to dark grey, fine to medium grained, fresh, massive with local foliated intervals. Pyrite in places. @ 90'; biotite rich and foliated at 65-70° to core axis | | | | |
| 270 - 50.0 | Granitic intrusive; medium to coarse grained, massive pink to light grey in colour, fresh with little alteration | | | | |
| 50.0 - 51.2' | Quartz vein; milky white, abundant associated chlorite, no visible mineralization, upper contact sharp @ 10°, lower @ 50-55° | | | | |
| 51.2 - 74.5 | Granite - granodiorite; as per 270-500. towards the bottom of the interval, granodiorite displays alteration | | | | |
| 74.5 - 106.0 | Intrusive alteration zone; zone is characterized by intrusion of granitic granodiorite dykes into biotite-quartz schist, abundance of milky to pink, contacts are sharp to gradational abundant fine cutting calcite veinlets, light brecciation is evident locally, occasional blush quartz eyes | | | | |
| 106.0 - 117.5 | Granodiorite; coarse grained to very coarse grained, pink to medium grey in colour, massive, occasional large blush quartz eyes | | | | |
| W 117.5 - 153 | Altered granodiorite dyke; roughly coarse grained, has undergone silicification as large blush quartz eyes are observable. | | | | |

Relogged 22/7/83

Don Hoy

# DIAMOND D.LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 120.5 - 173.0'; medium grained, foliated interval, prominent chlorite, strongly developed foliation at 60-70° to C.A. @ 127.5'; calcite Veins @ 65° to C.A. | | | | |
| | 173.0 - 133.0; coarse to very coarse grained large black quartz eyes, numerous buff colored Fe carbonate stringers @ 50-60° | | | | |
| | 132.0 - 133.0; lower most foot is strongly foliated with abundant carbonate, foliation / calcite stringers found @ 60-70° to C.A. abundant chlorite | | | | |
| 133.0 - 289.0' | Allard Dacite; largely fine to medium grained, chlorite, specs of recrystallized siliceous material, containing large black quartz eyes, moderate to strong carbonatization alteration, numerous narrow calcite stringers, traces of finely disseminated pyrite, coarse grained phases are banded into fine allard dacite | | | | |
| | 175.0 - 177.0'; foliated, biotite chlorite rich rock, foliation @ 50° to core axes, strongly carbonatized, sharp upper contact @ 55° | | | | |
| | 178.0'; quartz vein (1"), at 60° to core, contains finely disseminated chalcopyrite & pyrite | 15151 | 177.5 - 178.7 | 1.2' | Trace |
| | 178.7 - 190.0; strongly foliated @ 40-50° to core axes, disseminated chalcopyrite & pyrite | | | | |
| | after 180. carbonatization is more intense | | | | |
| | @ 140.6 - 191.5; quartz stringers with fine pyrite & chalcopyrite. | 15152 | 190.5 - 191.5 | 1.0 | Trace. |

* obtained from 1982 drilling data.

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | 204.5 - 206.0' ; fine grained diorite with streaks of fine dolcopyrite and pyrite | 16153 | 204.5-206.0 | 1.5 | Trace |
| | @ 213.0 - 280 ; coarser grained phase, diorites not quite as intense, | | | | |
| | 245' ; foliation and fracturing at 60° to core axis, | | | | |
| | from 254.0' - 278.0' ; mostly coarser grained diorite, biotite present, type more prominent, abundant diorite, displays local foliation | | | | |
| | @ 276.5 ; quartz vein, (1") at 45° to core axis containing dolcopyrite + pyrite | 15154 | 276.5-278 | 0.3 | 0.575 |
| | END OF HOLE @ 289.0' | | | | |

# DIAMOND D.LL RECORD

**PROPERTY** Chester, Bonnevies & St. Louis Townships **HOLE No.** M-7

**SHEET NUMBER** 1 of 3 **SECTION FROM** ____ **TO** ____ **STARTED** March 1982

**LATITUDE** 28909 **DATUM** No 3 Vein system **COMPLETED** March 1982

**DEPARTURE** 170999 **BEARING** 200° **ULTIMATE DEPTH** 310.0'

**ELEVATION** 9984.58 **DIP** -60° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 0 - 6.5' | Casing | | | | | | |
| 6.5 - 33.0 | Diorite: largely medium grained, massive, unaltered, medium to dark grey, locally chloritic. | | | | | | |
| | 32.5 - 33.0': sheared, foliated, biotite rich interval, foliation @ 50° to core axis. | | | | | | |
| 33.0 - 65.0 | Granodiorite; coarse grained massive, fresh with little alteration, pink to light grey in colour, relatively sharp upper contact at 50° to core axis. | | | | | | |
| | 46.5 - 64.0: granitic phase, very coarse grained, smaller pinkish inclusions. | | | | | | |
| | 64.0 - 65.0: grey diorite phase, large biotite quartz eyes. | | | | | | |
| 65.0 - 68.0 | Shear zone; incompetent zone characterized by shearing, foliation & brecciation, original pebbly quartz & irregular quartz veins, abundant recrystallized biotite & chlorite, no visible mineralization, foliation & shearing: 65.6': 50°, 67.0': 50-55° to core axis, upper contact of type B (5°), lower at 35-40°. | | | | | | |
| 68.0 - 83.0 | Granodiorite, light grey coarse grained massive, medium to dark grey, moderate to weak alteration which is mainly saussuritic, very few large biotite quartz eyes, trace disseminated sulphides. | | | | | | |
| 83.0 - 127.0 | Intrusive breccia zone; type A characterized by assimilated | | | | | | |

Relogged 26/7/83 Don Hay

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | and small granodiorite of similar units and rare felsic granite - granodiorite. The dominant is these similar locally including subfeldspar irregular shape / transitional contacts, moderate to intense carbonatization chloritic rich intervals, numerous calcite veinlets, very little mineralization associated with this zone. | | | | |
| | At 133.0 - ; more intense brecciation, pink granite fragments in an altered siliceous matrix, prominent bluish quartz eyes, highly altered dominant, are broken rock. | | | | |
| | 112.0 - 114.0; very coarse grained, abundant bluish quartz eyes with disseminated pyrite (1-2 %). | | | | |
| 22.0 - 151.5 | Diorite; medium to coarse grained, massive relatively unaltered although occasional blue grey eyes are discernible, fine grained equivalents are present within the interval with varying chloritization & chloritization. Transitional lower contact. | | | | |
| 151.5 - 189.0 | Altered granodiorite; porphyritic appearance, very prominent large subhedral blue eyes of quartz, matrix is very siliceous, locally intensely altered to contain disseminated pyrite, locally sheared and foliated; 161.5'; 60-65° to C.A. @ 167.0'; zone of patchy quartz veining visible mineralization 182.0 - 189.0; granodiorite zone more dominant in this interval (10-15 %) | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 189.0 - 310.0' | Altered Diorite; fine to coarse grained, moderate to strong alteration, extremely chloritic, granular to schistose in nature, | pervasive | carbonatization. | | |
| | 189.0 - 198.0: includes occasional bluish quartz eyes & biotite rich sections, carbonaceous | | | | |
| | 198.0 - 213.0: fine grained and moderately schistose, foliation, numerous calcite veinlets & stringers, very chloritic | | | | |
| | foliation: 206.0': 65°, 208.0': 55°-60°, 209': 65-70° | | | | |
| * | 206.8 - 208.0: small quartz stringers containing finely disseminated chalcopyrite & pyrite, zone characterized by shearing @ 45-60° to C.A. | 15155 | 206.8 - 208.0 | 1.2' | Trace |
| | 213.0 - 243.0': coarse grained granular, alteration not quite as intense as above, contains fine grained zones | | | | |
| | fracturing & shearing: 218.0-220.': 60-75° to core axis | | | | |
| | 243.0 - 258.0: fine grained, chlorite silicified, resembles a volcanic in places finely disseminated pyrite, | | | | |
| | 258.0: coarse grained as per 213.0-243.0, fine grained equigranular broad locally, shearing at 291.0': @ 50-70° | | | | |
| | END OF HOLE @ 310' | | | | |

* obtained from 1982 drilling data.

## DIAMOND D[illegible]LL RECORD

Plotted on section
1 + 438 W

**PROPERTY** Chester, Bennevis and St. Louis Townships **HOLE No.** M-7

| | | | | | |
|---|---|---|---|---|---|
| **SHEET NUMBER** | 1 of 6 | **SECTION FROM** | **TO** | **STARTED** | March 1982 |
| **LATITUDE** | 29468 | **DATUM** | No. 3 vein system | **COMPLETED** | March 1982 |
| **DEPARTURE** | 169704 | **BEARING** | 200° (S 20° W) | **ULTIMATE DEPTH** | 518.0' |
| **ELEVATION** | 9994.71 | **DIP** | -60° at collar. | **PROPOSED DEPTH** | |

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE GOLD $ |
|---|---|---|---|---|---|
| 0 - 4.0 | Casing | | | | |
| 4.0 - 33.0 | Dacite: fine grained to very fine grained, dark green to black, | | | | |
| | [illegible] [illegible]. [illegible] at lower contact @ 20-50° to core. | | | | |
| 33.0 - 80.5 | [illegible] [illegible] [illegible] [illegible] medium grained [illegible] | | | | |
| | [illegible] [illegible] alteration [illegible] by numerous small | | | | |
| | [illegible] which have [illegible] in the [illegible] resulting | | | | |
| | in [illegible] [illegible] [illegible] [illegible] of which | | | | |
| | [illegible] significant mineralization. [illegible] [illegible] locally | | | | |
| | @37.5' small [illegible] [illegible] [illegible] @ 35-40° to core. | | | | |
| | @ 43.0' [illegible] [illegible] at 40-45° to core, [illegible] [illegible] $CuFeS_2$ | | | | |
| | 49.0 - [illegible] [illegible] [illegible] [illegible] @ 80° gradational | | | | |
| | [illegible] | | | | |
| | [illegible] [illegible] [illegible] [illegible] [illegible] | | | | |
| | [illegible] [illegible] [illegible] [illegible] pyrite. | | | | |
| | [illegible] [illegible] [illegible] $FeS_2$ | | | | |
| 80.5 - 52.0 | Dacite: [illegible] grained to [illegible] grained. [illegible] [illegible] | | | | |
| | [illegible] [illegible] [illegible] contact @ 35-40° | | | | |
| | [illegible] [illegible] @ 10° | | | | |
| [illegible] | [illegible] [illegible] [illegible] | | | | |
| | [illegible] [illegible] @ 30-40° | | | | |
| | [illegible] [illegible] no significant mineralization | | | | |

Released 7/7/83 Don Hoy

# DIAMOND D. LL RECORD

**PROPERTY** _____ **HOLE No.** _____

**SHEET NUMBER** 2 of 6 **SECTION FROM** _____ **TO** _____ **STARTED** _____

**LATITUDE** _____ **DATUM** _____ **COMPLETED** _____

**DEPARTURE** _____ **BEARING** _____ **ULTIMATE DEPTH** _____

**ELEVATION** _____ **DIP** _____ **PROPOSED DEPTH** _____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| | | @ 165' ± all coarse-grained Aplite @ 30-40° to ca. no visible mineralization | | | | |
| 139.0 - 203.0 | | Diorite, strongly fine to medium grained & porphyritic in texture, locally abundant calcite grains and veinlets, and less common chloritization, carbonatization, pervasive introduced quartz veining. Trace amounts of $FeS_2$, $FeS_2$ & $Fe_{1-x}S$ associated with calcite veinlets as fracture coatings and in fracture planes. Foliation & shearing; usually ill-defined @ ca. 40-50° | | | | |
| | * | @ 191.5-192.0' Fg. Aplite & calcite stringers with Fg. in $FeS_2$ & $FeS_2$ | #15179 | 191.5-192.0 | 0.5' | .002 |
| | * | @ 196.5-197.5; Coarse quartz stringers | #15180 | 196.5-197.5 | 1.0' | .026 |
| | | @ 200.0-203.0' 1-2% sphalerite to be most abundant trace sulphides | 19592 | 199.0-201.5 | 2.5' | Trace |
| | | | 19593 | 197.0-199.5 | 4.5' | trace |
| | | | 19594 | 197.5-200.0 | 2.5 | .002 |
| | | | 19595 | 200.0-203.0 | 3.0 | trace |
| 203.0 - 254.0 | | Diorite; [illegible] fine-grained, relatively equigranular apart locally [illegible] fg. anhedral quartz grains. Also [illegible] fracture coating type. Trace disseminated sulphide, [illegible] increasing [illegible] bottom of the unit. | 19596 | 251.0-254.0 | 3.0 | trace |
| 254.0 - 259.0 | | Diorite [illegible] wide [illegible] fg. white, pervasive [illegible] & calcite [illegible] & veinlets [illegible] relatively large irregular [illegible] | 19597 | 254.5-256.0 | 1.5 | trace |
| | | | | | | |

* data obtained from 1982 drilling

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 255.0 - 257.5' | Altered Diorite; medium grained, intense alteration as evidenced by presence of biotite flakes as alteration product of amphibole, subordinately carbonate, no visible mineralization | 19598 | 255.0-257.5 | 2.5 | trace |
| 257.5 - 258.0 | Quartz vein; massive, milky white, no visible mineralization, sharp angular contacts | 19599 | 257.5-258.0 | 0.5' | .02 |
| 258.0 - 261.0 | Altered Diorite; medium to coarse grained, composite dark grey type, altered, dominantly patchy silicate, moderately altered from 259' to 260', gradational into underlying unit. | 19600 | 258.0-261.0 | 3.0 | .02 |
| 261.0 - 273.5 | Diorite; dk grey medium grained massive unaltered, light fracturing | | | | |
| 273.5 - 285.5' | Diabase; fine grained to very fine grained, black massive sharp angular upper contact, sharp tilted lower contact @ 40-45° | | | | |
| 285.5 - 314.0 | Altered Diorite; dk grey medium to coarse grained, slight alteration resulting from intrusion & assimilation of coarse white plagioclase laths, [illegible] moderate veinlets @ 290.0 - 302.5; coarse grained plagioclase type dominant, black groundmass, gradational upper contact, lower contact fairly sharp @ 15-20° | | | | |
| 312.0 - 315.5 | Altered Diorite; dk grey medium grained, slightly altered, dominant white grains & veinlets, minor $FeS_2$ is associated with white; numerous blue quartz eyes & patches | 19601 | 312.0-315.5 | 1.5 | .02 |

# DIAMOND D. LL RECORD

**PROPERTY** _____ **HOLE No.** _____

**SHEET NUMBER** 4 of 6 **SECTION FROM** _____ **TO** _____ **STARTED** _____

**LATITUDE** _____ **DATUM** _____ **COMPLETED** _____

**DEPARTURE** _____ **BEARING** _____ **ULTIMATE DEPTH** _____

**ELEVATION** _____ **DIP** _____ **PROPOSED DEPTH** _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 315.5 - 324.0' | Diabase; very fine grained to fine grained, chilled upper & lower margins, upper contact dips @ 30-35°, lower dips @ 55° @ 315.5' - 317.0; sheared fractured zone. | | | | |
| 324.0 - 337.0 | Altered Dacite; fine to medium grained, foliation developed. Alteration includes carbonatization and chloritization. Pyrite is developed locally. Several stages of quartz-carbonate veining, dominant carbonate veinlets network foliation @ 50-70° @ 324.0', @ 327.0': 60-75°, @ 328.0': 70-80° Disseminated $CuFeS_2$ grains observed in veinlets, disseminated sulphides aligned with the foliation | 19602<br>19603<br>19604<br>19605 | 324.0-327.0<br>327.0-330.0<br>330.0-333.0<br>333.0-337.0 | 3.0<br>3.0<br>3.0<br>4.0 | .002<br>.018<br>trace<br>.002 |
| 337.0 - 365.0 | Dacite; light grey, medium grained, very slight chloritic, contains trace disseminated sulphides, intruded by narrow granite dykes. | | | | |
| 365.0 - 390.0 | Intrusive alteration zone; the zone is characterized by granite dykes & bodies intruding and assimilating wallrock altered dacite (qtz diorite) zone contains numerous small quartz veins & carbonate veinlets and is sheared and fractured in places. Much pyrite type introduced into dacite with disseminated $CuFeS_2$ & $FeS_2$ associated with quartz & carbonate veinlets, heavy fracturing locally, @ 371.0 small qtz vein & 45° to c.a. @ 387.6' qtz vein & 45° to c.a. and shearing @ 40-45° to c.a. | | | | |
| 390.0 - 396.5' | Altered Dacite; strongly altered dacite? unit, schistose, abundant chlorite & fracture surfaces, heavily fractured and sheared. | 19606<br>19607 | 390.0-393.0<br>393.0-396.5 | 3.0<br>3.5 | .002<br>.002 |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | appreciable stringer $Fe_{1-3}$ (2-5%) matrix disseminated $CuFeS_2$ + $FeS_2$ (<1%) | | | | |
| | foliation + bearing relatively constant @ ~ 20-30° to core axis | | | | |
| 396.5 - 398.0 | Granite Gneiss; coarse grained, pink + massive, sharp upper contact @ 30°, gradational lower contact into underlying unit. | | | | |
| 398.0 - 420.0 | Diorite; medium to coarse grained, relatively unaltered + massive locally small dykes + granitic granodiorite composition intrude the diorite. | | | | |
| 420.0 - 474.0 | Granodiorite; very coarse grained, badly fractured, attitude of the contacts is not discernible. | | | | |
| 474.0 - 434.0 | Diorite; medium to coarse grained, similar as a result of granodiorite intrusion, foliation quite rare. locally strong, one assimilated with granodiorite unit. Core is very [illegible] with strong pervasive quartz veinlets. | | | | |
| 434.0 - 454.0 | Granodiorite; coarse grained to very coarse grained, massive; equigranular [illegible] with quartz veinlets, sharp upper contact @ 45°, moderate to heavy fracturing, | 19608 | 436.0-438.0 | 7.0 | .010 |
| | @ 437.0; small shear @ 35° to core, stringer $CuFeS_2$ | 19609 | 440.0-441.0 | 1.0 | .010 |
| | @ 441.0; [illegible] @ 30-40°, disseminated $CuFeS_2$ | | | | |
| | sharp lower contact @ 30° | | | | |
| 454.0 - 465.0 | Diorite; medium to coarse grained, locally altered | 19610 | 462.0-465.0 | 3.0 | .002 |
| | @ 462.0-463'; foliated, biotite rich zone, thickness @ 80°, pyrite cubes. | | | | |

# DIAMOND D.LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 6 of

SECTION FROM _____ TO _____

STARTED _____

LATITUDE _____

DATUM _____

COMPLETED _____

DEPARTURE _____

BEARING _____

ULTIMATE DEPTH _____

ELEVATION _____

DIP _____

PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 464.0-465.0' biotite development pegmatite, alkaline zone for underlying rock, schistose and trace sulphide | | | | |
| 464.0-489.0 | Granite granodiorite, very coarse grained, massive amalbite rich decomposable and strongly $FeS_2$ to $FeS_2$ | | | | |
| | @ 474.0-476.0' foliated schistose and, biotite rich, altered texture, trace sulphide. | | | | |
| 489.0-518.0 | Intrusive alteration zone of fragmented & assimilated granodiorite & trachyte-quartz diorite, contacts between units are sharp to gradational, quartz diorite an alkaline product & dacites, cream & bluish quartz type, possibly introduced by felsic intrusives, locally rich in $FeS_2$ (2-5%), dacitic units are altered & carbonatized | | | | |
| | END OF HOLE @ 518.0' | | | | |

# DIAMOND D[illegible]LL RECORD

**PROPERTY** Foster, Bannerman and St Louis Townships **HOLE No.** 410 plotted on section 14 310 NW

**SHEET NUMBER** 1 of 5 **SECTION FROM** ____ **TO** ____ **STARTED** April 1982

**LATITUDE** 2206 **DATUM** NAD 83 Main system **COMPLETED** April 1982

**DEPARTURE** 69740 **BEARING** 020° ( N 20°E) **ULTIMATE DEPTH** 322.0'

**ELEVATION** 958.88. **DIP** -45° at collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0-7.0 | Casing | | | | |
| 7.0-18.8 | Diabase dyke; very fine grained to fine grained, dark green to black, chilled fine margin with underlying diorite, very heavily fractured, very sharp fine fracture @ 70-80°. | | | | |
| 18.8-23.0 | Diorite; fine grained, massive & relatively unaltered, slight alteration & chloritization to dyke, some foliation developed at 40° to core. Trace to 1% disseminated pyrrhotite & pyrite | 19515 | 20.0-23.0 | 3.0 | trace |
| * 23.0-25.9 | [illegible] with underlying diorite. | * 15181 | 23.0-23.9 | 3.9 | .639 |
| 23.9-56.0 | Diorite; to chilled dyke contact grained, massive, unaltered | 19516 | 23.9-27.0 | 3.1 | .004 |
| | 23.9-25.6' dyke & altered & sheared and heavily fractured | | | | |
| | Trace to minor disseminated pyrite & pyrrhotite (<1%) | | | | |
| | @ 38.0' fine fract @ 35° to core, minor alteration associated with fracture | | | | |
| | @ 54.0-56.0' [illegible] with underlying dyke. | 19517 | 54.0-57.0 | 3.0 | trace |
| 56.0-58.5 | Diorite to gabbro dyke, fine grained to coarse grained, massive and unaltered, very sharp contact @ 75° to core minor stringer sulphides (<1%) | 19518 | 57.0-60 | 3.0' | trace |
| | @ 56.0' 3" [illegible] associated with the contact zone. | | | | |
| | fr 60.0-64.0' fine grained dark green diorite. | | | | |
| | [illegible] | | | | |
| 58.5-74.0 | Diorite; ranging to coarse grained, massive and unbroken, weakly foliated, very light fracturing, coarse grained [illegible] underlying dyke. | 19519 | 72.0-74.0 | 2.0' | trace |

* data obtained from 1982 drilling

Don Hoy Completed 28/6/82

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 94.0 - 96.6 | Diorite porphyrite dyke; very coarse grained, massive, sharp upper and lower contacts @ 75° & 80° respectively, rare disseminated pyrite and pyrrhotite associated with black specs. | 19520 | 94.0 - 96.6 | 2.6 | .004 |
| | | 19521 | 96.6 - 98.0 | 1.4' | trace |
| 96.6 - 98.0 | Diorite; as described above, but more coarse grained, relatively unaltered. | | | | |
| | @ 130° - 80° sharp alteration contact, very coarse grained, brecciated, quartz type, minor sulphides & calcite alteration, remnant strong pyrrhotite | | | | |
| 118.0 - 120.0' | Diabase dyke; dyke is fine at contact, very fine grained to very fine grained, sharp upper contact @ 30° to core @ 119.0', 2" white, soft & brittle fine pyrite & quartz | * 15182 | 119.0 - 120.0 | 1.0' | .005 |
| 120.0 - 128.0' | 120' - Diorite dyke; medium grained, soft grey in colour, may be fine textured, strongly chloritized, fairly disseminated pyrite throughout, strong chlorite alteration @ 120° - 122°, very fractured & sheared, broken. | 19522 | 120.0 - 123.0 | 3.0' | .002 |
| | | 19523 | 123.0 - 126.0 | 3.0' | .002 |
| | | 19524 | 126.0 - 128.0 | 2.0' | .010 |
| 128.0 - 140.0' | Diorite; fairly uniform fine to coarse grained, massive and competent, with very small 1/2 to 1 wide veins, occasional fine pyrite & pyrrhotite @ 130° - 132°, 1" - 1.5" black pyrite stringers, with minor quartz veinlets. | 19525 | 128.0 - 131.0 | 3.0' | .002 |
| 140.0 - 143.0 | Diabase dyke; very fine grained, black, very sharp upper & lower | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | at 50° & 40° respectively | | | | |
| 143.0 - 167.5 | Intrusive zone: Diorite medium grained & varies in amount | 19526 | 143.0 - 146.0 | 5.0 | .002 |
| | of dominant coarse grained granite dykes, which are gradational | 19527 | 146.0 - 149.0 | 3.0 | trace |
| | to relatively sharp, dominant bluish quartz eyes in the diorite, giving | 19528 | 149.0 - 152.0 | 3.0 | trace |
| | intrusive by granite dykes. Rock is foliated in places. | 19529 | 152.0 - 155.0 | 3.0 | .010 |
| | Disseminated sulphides present in both rock & granite bodies. | 19530 | 155.0 - 158.0 | 3.0 | trace |
| | @ 143.0 - 147.0; coarse grained granite dyke shows intrusive contact at | 19531 | 158.0 - 161.0 | 3.0 | .002 |
| | 70° | 19532 | 140 - 164.0 | 3.0 | trace |
| | @ 147.0 - 148.0; diorite to coarse grained basic foliated @ 55°, contains | 19533 | 164.0 - 167.5 | 3.5 | .002 |
| | 1 - 2% appreciable fine chalcopyrite, pyrite and po, numerous | | | | |
| | calcite veinlets & small granite dykes. @ 154.0: chalcopyrite stringer | | | | |
| | @ 156.0 - 158.5: coarse grained granite dyke upper contact @ 50°, | | | | |
| | lower @ 80° | | | | |
| | @ 158.5 - 171.0; diorite to coarse grained basic and quartz veins, quartz | | | | |
| | veins to 6 inches wide and out of core in places, granite | | | | |
| | dykes, dominant bluish quartz eyes, some of both and blends | | | | |
| | into original basalt, some 1% disseminated stringers & pyrrhotite | | | | |
| | veins and blebs and chalcopyrite | | | | |
| 167.5 - 171 | * Quartz vein 6" wide with chalcopyrite & sphalerite | *15183 | 167.5 - 171 | 9.4 | .506 |
| 167.1 - 171.0 | Sheared basaltic rock altered zone as above vein, gradational | 19534 | 171 - 171.0 | 31 | .002 |
| | contact with underlying unit. | 19535 | 171.0 - 174.0 | 3.0 | .002 |

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 176.0 - 241.5' | Diorite; medium to coarse grained, locally weathered, Minor small shear zones are present, faint foliation is discernible @ 45°, minor disseminated strongly pyritized | | | | |
| | @ 176.0 - 176.0, very coarse grained & siliceous, approaches fine pegmatite in composition, minimal shear parallel veins. | 19536 | 174.0-177.0 | 3.0' | trace |
| | @ 193.5' - 195.0'; small dykes of very fine grained with inclusions of biotite schist. Sharp upper contact @ 45° to core axis @ 30° | | | | |
| | @ 207.0 - 208.0'; small dyke and accompanying alkaline phase @ | | | | |
| | @ 230.5 - 231.0' small granite type, sharp contacts at 80° to core axis. | | | | |
| | Dyke is gradational into underlying diorite unit. | | | | |
| 241.5 - 247.0 | Altered Diorite; medium to coarse grained, dark green, locally | 19537 | 241.5-244.5 | 3.0 | .002 |
| | highly sheared & schistose. Locally sheared abundant carbonate | 19538 | 244.5-247.0 | 2.5 | .004 |
| | veinlets & pods with associated disseminated sulphides, locally | | | | |
| | silicified with patchy pyrite. | | | | |
| | @ 246.5' shear zone dipping @ 30°, strongly chloritic schist | | | | |
| | to diorite. | | | | |
| ± 247.0 - 248.2 | @ Diorite to schist; very well mineralized with disseminated pyrite | ± 5'34 | 247.0-248.2 | 1.2 | .284 |
| 248.2 - 254.0 | Altered Diorite to schist, locally very fine grained, | 19539 | 248.2-251.0 | 2.8 | .104 |
| | @ 248.2-249.3' shear zone, foliation dipping @ 35°, schistose, well | 19540 | 251.0-254.0 | 3.0 | .002 |
| | developed foliation, marked with shearing, patchy calcite & associated sulphides. | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 253.0-254.0' Dk grey fol'd ? Shearing ~ parallel at 25-30°, calcitic and very chloritic, disseminated minor pyrite. | | | | |
| 254.0-278.0 | Dacite; largely medium grained, lightly altered, some epidotization of plagioclase, weak foliation evident @ 52°, numerous very thin carbonate veinlets + veinlet network. Trace to minor py. | | | | |
| | @ 278.0-280.0' Intrusive (granodiorite) coarse grained, white siliceous, rare py & pyrite dissem. pyrite, @ 280.3 appreciable Cu-Fe-S2 | 19541 | 2780-280.0 | 3.0 | .002 |
| | | 19542 | 280.0-284.0 | 3.0 | .002 |
| | | 19543 | 284.0-286.0 | 2.0 | trace |
| 286.0-315.0 | Dacite; locally medium grained slight chloritic, mainly epidotization of plagioclase, locally, prominent foliation @ 288-50° 293-55° Intrusive Quartz porphyry @ 304.0' mainly fractured zone | | | | |
| 315.0-317.5 | Intrusive felsic porphyry dacite; light grey coarse grained, fractured zone and lower contact @ 0° to core. | | | | |
| 317.5-321.0 | Altered Dacite; fine to coarse grained, chloritic & siliceous, weakly foliated @ 318.5° 80° to core Zone of fracturing foliation @ 319-80° | 9544 | 317.5-321. | 2.5' | .002 |
| 321.0-372.0 | Dacite as above, irregular upper contact | | | | |
| | END OF HOLE @ 372.0' | | | | |

# DIAMOND D. LL RECORD

**PROPERTY** Chester, Bennewies & St. Louis Townships **HOLE No.** M11

**SHEET NUMBER** 1 of 5 **SECTION FROM** ____ **TO** ____ **STARTED** collar in solid 4.3 to WNW

**LATITUDE** 29204 **DATUM** No. 3 vein system **COMPLETED** April 1982

**DEPARTURE** 69739 **BEARING** 020° (N 20°E) **ULTIMATE DEPTH** 388.0'

**ELEVATION** 2959.67 **DIP** -65° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0-10.0' | casing | | | | |
| 10.0-23.0 | Lamprophyre dike? Very badly fractured, fine grained, totally altered, contains quartz basalt, vein, which is sharp @ 50° | | | | |
| 23.0-74.0 | Diorite, medium to coarse grained, mostly massive, very slightly | | | | |
| | foliated, which includes inclusions of pegmatite, chlorite & | 19545 | 18.0-21.0 | 3.0 | trace |
| | chlorite locally from 60 to 70% hydrothermally altered to | 19546 | 21.0-24.0 | 3.0 | .008 |
| * 24.0-24.5 | Quartz vein, [illegible] with chalcopyrite, [illegible] @ 30° to core | * 5185 | 24.0-24.5' | 0.5 | 2.06 |
| | | 19547 | 24.5-28 | 3.5 | .002 |
| 24.5-29.2 | Diorite, [illegible] | * 15203 | 28.0-29.2 | .2 | .006 |
| * 29.2-30.5 | Quartz Vein; massive with fine grained chalcopyrite & some | * 15186 | 29.2-30.5 | 1.3 | .112 |
| | pyrite, [illegible] @ 30° to core | | | | |
| 30.5-32.0 | [illegible] | 19548 | 30.5-33.0 | 2.5 | .002 |
| * 32.0-72.0 | [illegible] | * 15204 | 32.0-72.0 | .3 | Tr. |
| 72.0-75.0 | [illegible] | | | | |
| | [illegible] | 19549 | 72.0-75.0 | 3.0 | trace |
| 75.0-81.0 | [illegible] | 19550 | 75.0-78.0 | 3.0 | trace |
| | [illegible] | 9351 | [illegible] | 2.5 | .010 |
| | [illegible] | * [illegible] | 78.5-81.0 | 2.5 | .025 |
| | [illegible] | | | | |
| 81.0-81.5 | Quartz vein; massive with fine chalcopyrite | * 15187 | 81.0-81.5 | 0.5 | .116 |

* data obtained from 1982 drilling

Dan Hoy Calculated 2/4/83

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| * 81.5 - 96.0' | Diorite, minor granitic, unaltered | *15206 | 81.5 - 86.5 | 5.0 | Tr. |
| | | *15207 | 86.5 - 91.5 | 5.0 | Tr. |
| | | *15208 | 91.5 - 96.0 | 4.5' | .012 |
| * 96.0 - 97.5' | Quartz Vein, 1/4" quartz in a 2" pale grey quartz stringer | *15188 | 96.0 - 97.5 | 1.5 | 44 |
| | showing $Fe_2S_3$ & $FeS_2$ in chlorite, visible gold | | | | |
| * 97.5 - 99.0 | Diorite, [illegible] | * 15209 | 97.5 - 100.5 | 3.0 | .002 |
| * 99.0 - 105.0 | Granite-aplite dyke, lower contact sharp @ 35° | * 15210 | 100.5 - 105.5 | 5.0 | Tr. |
| 105.0 - 129.0' | Diorite; dark grey to dark, medium to coarse grained, massive | 19552 | 105.5 - 108.0 | 2.5 | trace |
| | and unaltered, minor chlorite & sericite & 1% blebs of pyrrhotite | | | | |
| | to pyrite. Set foliation @ 30-60° locally, trace | | | | |
| | small shear & foliation veining from 1 to mine $FeS_2$ [illegible] $FeS_2$ to $Fe_2S_3$ | | | | |
| 129.0 - 137.0' | Silicified [illegible] 1/2 to 1% medium grained, [illegible] to aggregates | | | | |
| | light to dark grey & [illegible], minor black [illegible] | | | | |
| | & veins with trace to mine sulphides, [illegible] | | | | |
| | [illegible] Stringy & blebby @ 30° | *15211 | 136.0 - 137.0' | 1 | .012 |
| | @ 136.0', 1/4" grey vein | | | | |
| 137.0 - 172.0 | [illegible] | 19553 | 137.0 - 140.0 | 3.0 | trace |
| | granitic aplite dyke & grain to very strongly [illegible] Diorite | 19554 | 140.0 - 143.0 | 3.0 | trace |
| | [illegible] shear, [illegible] | 19555 | 143.0 - 146.0 | 3.0 | .016 |
| | stringers & blebs of [illegible] units are sharp to gradational | 19556 | 146.0 - 149.0 | 3.0 | .002 |
| | veins to approximate sulphides are associated with the [illegible] | 19557 | 149.0 - 152.0 | 3.0 | trace |

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | 137.0 - 153.5; Mod dk grey; medium to coarse grained, moderately to extensively altered, contains large blocky pinkish feldspar eyes. Contact slightly | 19558 | 132.0 - 135.0 | 3.0 | .004 |
| | [illegible] | 19559 | 135.0 - 138.0 | 3.0 | trace |
| | [illegible] @ 147.0 - 148.0' | 19560 | 138.0 - 141.0 | 3.0 | trace |
| | 153.5 - 158.0'; medium to coarse grained, granite - granodiorite, strongly | 19561 | 141.0 - 144.0 | 3.0 | trace |
| | [illegible] upper contact @ 80°, gradational lower contact. | 19562 | 144.0 - 147.0 | 3.0 | trace |
| | 158.0 - 165.5'; medium to coarse grained dk grey [illegible] rock from | 19563 | 167 - 172.0 | 5.0 | trace |
| | diagenetic | | | | |
| | 165.5 - 165.5; coarse grained, granite - granodiorite, weakly altered, strongly | | | | |
| | [illegible] upper contact @ 65° / gradational lower contact | | | | |
| | 165.5 - 169.0', medium to coarse grained dk grey diorite; moderate alteration | | | | |
| | [illegible] gradual [illegible] | | | | |
| | 169.0 - 172.5'; coarse grained granodiorite, strongly [illegible] upper contact @ 70°, | | | | |
| | [illegible] lower contact. | | | | |
| 172.5 - 221.6 | [illegible] medium to coarse grained [illegible] rock [illegible] | | | | |
| | [illegible] [illegible] [illegible] to [illegible], characterized by [illegible] | | | | |
| | [illegible] [illegible] [illegible] [illegible] contact [illegible] | 19564 | 195.0 - 198.0 | 3.0 | trace |
| | [illegible] @ 30° to [illegible]. | | | | |
| | 207.5 - [illegible] coarse [illegible] rock strongly [illegible] | | | | |
| | @ 25°, [illegible] contact | | | | |
| | 211.8 - 213.0' [illegible] rock [illegible] upper contact | | | | |
| | @ 45°, lower @ 70°. | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | 181.0-185.0; coarse grained gneissic diorite dyke; | | | | |
| 221.6- 227.0 | Diorite; medium to coarse grained, mineralized | 19564 | 221.6-224.0 | 2.4 | trace |
| | banded thin carbonate veinlets, opposite the strongly | 19565 | 224.0-227.0 | 3.0 | trace |
| | sheared zone | | | | |
| 227.0 - 231.0 | Biotite granodiorite; coarse grained massive, brecciated | 19566 | 227.0-230.0 | 3.0 | trace |
| | upper contact, sharp lower contact with underlying dyke | | | | |
| 231.0 236.0 | Diorite dyke; black, very fine grained, chilled margin, | | | | |
| | upper contact very sharp at 40° lower contact sharp at | | | | |
| | 35° | | | | |
| 236.0 - 379.6 | Diorite gneissic biotite, medium to coarse grained, cataclasty | | | | |
| | moderate, sheared locally, weak foliation developed 40-50° | | | | |
| | @ 236.6 - 238.0' siliceous zone, minor disseminated chalcopyrite, | 19567 | 236.5-239.0 | .5 | trace |
| | *@ 238.0 - 238.7 gneissic mineralized with chalcopyrite & pyrite | *19568 | 238.5-238.7 | 1.7 | .010 |
| | @ 246.5 - small shear zone @ 40° to ca | *19569 | 270.0-272.0 | 0.2 | .005 |
| | @ 274 < 1" chalcopyrite quartz sylvlable stringer in shear @ 25° to ca | 19568 | 272.5-275.0 | 2.5 | .010 |
| | | *19570 | 318.0-318.3 | 0.3 | .005 |
| | @ 328.0 - 1cm thick foliation developed @ 45° | | | | |
| 329.6 - 331.0 | Diorite dyke, very fine grained dark, moderately sheared | | | | |
| | lower contact sharp, upper @ 35° lower @ 35° | | | | |
| 331.0 - 357.0 | Diorite, medium to coarse grained, moderate foliation @ 45-55° | *19571 | 335.-335.8 | .8 | .005 |
| | local disruption by pegmatitic bodies. | | | | |

# DIAMOND D.[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 325.0-327.0; mainly as brecciated veins in aplite-granite unit | 14569 | 325.8-327.0 | 1.12 | trace |
| 327.0-388.0 | Diabase aplite; very fine grained to fine grained, dark, massive aplite below, chilled margin at upper contact, sharp irregular upper contact @ 40° to core axis. (~30.26°) | | | | |
| | END OF HOLE @ 388.0 | | | | |

# DIAMOND D[illegible]LL RECORD

**PROPERTY** Victor, Bonanza and St. Louis Fractions **HOLE No.** M 12

**SHEET NUMBER** 1 of 4 **SECTION FROM** 1+310 WNW **STARTED** probably started at 1+310 WNW

**LATITUDE** 2° 195 **DATUM** No. 3 mine system **COMPLETED** April 1982

**DEPARTURE** 16 2740 **BEARING** 200° (S 20°W) **ULTIMATE DEPTH** 449'

**ELEVATION** [illegible] 957.59 **DIP** -42° at collar **PROPOSED DEPTH**

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 10.0' | Casing | | | | |
| 10.0 - 30.0 | Diabase dike, fine grained to very fine grained, massive dark gray to black, blocky fracturing. Chilled lower margin, very sharp lower contact @ 30-35° | | | | |
| 30.0 - 36.0' | Sandstone; coarse grained to very coarse grained, massive light gray to pink, argillized lower 6' and with underlying unit | | | | |
| 36.0 - 40.2 | Siltstone Breccia; coarse grained cream & black grains w/ alteration product of the host rock, some epidote | | | | |
| | * @ 370-392' grades to fine sand porphyry | * 5124 | 37.0-39.2 | 2.2 | Trace |
| 40.2 - 43.0 | Altered Diabase; coarse grained, sheared, altered, mainly epidote & chlorite altered | | | | |
| * 43.0 - 44.0 | Chert, red to dark maroon below the ore and to the shear | * 15175 | 430-44.0 | 1.0 | Trace |
| 44.0 - 54.0 | Altered Diabase; largely medium to coarse grained, replaced by heavy Mn oxides, calcite, chlorite, sheared in part, some to mainly altered, associated with calcite veining | | | | |
| | @ 520-540' [illegible] | * 15176 | 520-54.0 | 2.0' | Trace |
| | [illegible] | | | | |
| 54.0 - 194.5' | Diabase, medium to coarse grained, displays relatively weak [illegible] kept locally, some veining and chloritized [illegible] upper contact sharp @ 300 | | | | |

[illegible] 1982 drill hole
Logged 27/1/83

Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | [illegible] | | | | |
| | 700-72.0'; [illegible] | 19578 | 700-72.0' | 2.0' | trace |
| | [illegible] | | | | |
| | 88.5-91.5'; [illegible] | 19579 | 88.0-90 c | 2.0' | trace |
| | [illegible] | | | | |
| | @ 103.0'; 2" [illegible] | 15147 | 103.0-106 c | 3.0' | Trace |
| | @ 108.0', [illegible] | 15148 | 106.0-109.0 | 3.0' | .006 |
| | @ 119.0'; [illegible] | 15149 | 118.0-118.5' | 0.5' | .0056 |
| | @ [illegible] | 15200 | 125.5-126.5 | 1.0' | .002 |
| | @ 158.0-163.0'; [illegible] | 15201 | 158.0-163.0 | 5.0' | [illegible] |
| | @ 163.0-168.0' [illegible] | 15202 | 163.0-168.0 | 5.0' | .002 |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| 1944-2910 | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | 11580 | [illegible] | 2.0 | .010 |
| | [illegible] | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 268.5 - 270.0' [illegible] | 19581 | 268.5-270.0 | .15 | trace |
| | [illegible] @ 75° [illegible] | | | | |
| | [illegible] | | | | |
| | 270.0 - [illegible] | 19582 | 270.0-273.0 | 3.0 | trace |
| | [illegible] | 19583 | 273.0-276.0 | 3.0 | trace |
| | 276.0 - 279.0' [illegible] | 19584 | 276.0-279.0 | 3.0 | trace |
| | [illegible] | 19585 | 279.0-291.0 | 12.0 | trace |
| | [illegible] | | | | |
| 291.0 - 298.0 | [illegible] | 19586 | 298.0-301.0 | 3.0 | trace |
| | [illegible] | 19587 | 301.0-304.0 | 3.0 | trace |
| | [illegible] | 19588 | 304.0-307.0 | 3.0 | trace |
| | [illegible] | 19589 | 307.0-310.0 | 3.0 | .002 |
| | [illegible] | 19590 | 310.0-313.0 | <.1 | .002 |
| | [illegible] | 19591 | 313.0-316.0 | <.1 | .004 |
| | [illegible] | | | | |
| | @ 320.0-323.0 [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | @ [illegible] [illegible] stringers + pyrite spots | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 4 | SECTION FROM _____ TO _____ | STARTED _____

LATITUDE _____ | DATUM _____ | COMPLETED _____

DEPARTURE _____ | BEARING _____ | ULTIMATE DEPTH _____

ELEVATION _____ | DIP _____ | PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 3190 - 3660' | [illegible] granodiorite with gabbro; chilled very fine grained margin @ 55° to core; transitional into medium grained blocky gabbro. Locally blocky and heavily fractured, broken to rubble before @ 343.0'; 2" clay gouge, fault zone @ 45° to core. | | | | |
| 366.0 - 478.0' | Gabbro; medium to coarse grained, light to dark grey, massive, numerous [illegible] yellow carbonate veinlets from upper [illegible] @ 20° to core, [illegible] light brick red, 1/4" [illegible] Weakly [illegible] @ 30-45° to core. @ 378.0' [illegible] gouge, [illegible] @ 30° to core. | | | | |
| | END OF HOLE @ 478.0' | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY Victor, Dumont & St Louis Township HOLE No. M 13 [illegible] NW

SHEET NUMBER 1 of 5 SECTION FROM ____ TO ____ STARTED April 1 1982

LATITUDE 9078 DATUM No. 3 mine system COMPLETED April 6/82

DEPARTURE 69954 BEARING 020° ULTIMATE DEPTH 408.0'

ELEVATION 955.07 DIP -47° PROPOSED DEPTH ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 290 | Casing | | | | |
| 290 33.5 | Altered Diorite; medium grained, dark grey, slight foliation @ 115° to core, slight chloritic & hematite alteration of feldspars & biotite, disseminated po and minor py. | | | | |
| * 33.5 - 38.5 | Sight mineralization of fine sulphide in an altered calcareous [illegible] siliceous matrix | * 15212 | 33.5-38.5 | T.C | TR. |
| 38.5 - 77.0 | Diorite; highly variable to coarse grained, minor shears, displaying slight alteration, mineral veinlets consist mostly of calcite, quartz, chlorite and carbonate as veinlets, disseminated fine grained sulphides are also associated with the alteration zones. foliation @ 110° - 45° | | | | |
| | [illegible] zone from 3 meter quartz vein, relating to the mineralization | 40845 | 3.0 | 2.5 | trace |
| | [illegible] predominately altered diorite, various veinlets consisting [illegible] of the above mineralized zone, quartz veinlets carrying 5% [illegible] slight foliation, alteration has been altered to epidote [illegible] heavily | 40846 | 47.0-49.0 | TR | trace |
| | | 40847 | 49.0-50.0 | 5.0 | .002 |
| | | 40848 | 75.0-78.0 | 3.0 | .002 |
| * 78.0 - 82.0 | [illegible] siliceous fine grained, slightly [illegible] quartz | * 7213 | 78.0-82.0 | TR | TR |
| | core @ 82.0' | * 15214 | 82.0-87.0 | 5.0 | .032 |
| | [illegible] mostly Diorite | | | | |

Released 27/6/83 Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| * 87.0- 89.0 | Quartz Vein; at slight angle to core, possibly hitting with vein | *15215 | 87.0-89.0 | 20' | 2.55 |
| | lots of fine grained pyrite & chalcopyrite & sphalerite | | | | |
| * 89.0- 92.0 | Diorite; fine grained at ch. contains very fine grained mineral- | *15216 | 89.0-92.0' | 3.0' | .092 |
| | ization. | | | | |
| * 92.0- 97.0' | 20 degree [illegible] | *15217 | 92.0-97.0 | 5.0' | .202 |
| 97.0- 123.0 | altered Diorite gouge, medium to coarse grained, light to | 40849 | 97.0-100.0 | 3.0 | .002 |
| | moderate [illegible] chalcopyrite, stringers of calcite veinlets & fractures, | 40850 | 100.0-103.0 | 3.0 | .002 |
| | minor disseminated pyrite, mostly fractures, very occasional | 19501 | 103.0-106.0 | 3.0 | trace |
| | sulphides, [illegible] [illegible] | 19502 | 106.0-109.0 | 3.0 | trace |
| | @ [illegible] small stringer chalcopyrite and disseminated pyrite | 19503 | 109.0-112.0 | 3.0 | .002 |
| | associated with calcite veinlets | 19504 | 112.0-115.0 | 3.0 | trace |
| | | 19505 | 115.0-118.0 | 3.0 | .002 |
| | | 19506 | 118.0-121.0 | 3.0 | .002 |
| 123.0 - 158.0 | Diorite, [illegible] to coarse grained, [illegible] on [illegible] | | | | |
| | [illegible] of small [illegible] zones of pyrite associated with small calcite | | | | |
| | & fracture [illegible] Core broken up by numerous [illegible] calcite veinlets | | | | |
| | [illegible] @ 135° to core | | | | |
| | @ 130' [illegible] parallel @ 35° to core, [illegible] | | | | |
| | [illegible] [illegible] calcite [illegible] & [illegible] | | | | |
| 158.0- 193 | [illegible] Diorite gouge, fine grained, [illegible] | 19507 | 156.0-158.0 | 2.0 | trace |
| | [illegible] moderate to heavy [illegible], chalcopyrite, | 19508 | 158.0-161.0 | 3.0 | .002 |

# DIAMOND D.LL RECORD

**PROPERTY** _____ **HOLE No.** _____

**SHEET NUMBER** 3 of 5 **SECTION FROM** _____ **TO** _____ **STARTED** _____

**LATITUDE** _____ **DATUM** _____ **COMPLETED** _____

**DEPARTURE** _____ **BEARING** _____ **ULTIMATE DEPTH** _____

**ELEVATION** _____ **DIP** _____ **PROPOSED DEPTH** _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 1561-1580'; augite porphyry, stringers of albite and biotite, minor sphalerite, arsenopyrite & chalcopyrite | 19509 | 1610-1640 | 3.0 | trace |
| | | 19510 | 164.0-166.0 | 5.0 | trace |
| | foliation: @ 1580' - 30-35°, @ 1630' - 40°, | | | | |
| | relatively steep veins, start @ 25', zone lower contact | | | | |
| 166.0-275 | Diorite; largely coarse grained & massive, relatively unaltered, | | | | |
| | only light chloritization, trace disseminated sulphides | | | | |
| | (pyrite, pyrrhotite) & scarce quartz-albite veins | | | | |
| | @ 2045-2065' the diorite is more altered, minor albitization | 19511 | 2045-2065 | 1.0 | trace |
| | and 1-2% sericite by vug | 5218 | 250.0-255.0 | 1.0 | .006 |
| | @ 2740' 3" of brown quartz | 5219 | 2740-2750 | 1.0 | Tr |
| 275.0-295 | Minor Diorite dyke; aphanitic fine grained light brown, | | | | |
| | light chlorite alteration, trace of magnetite porphyry, | | | | |
| | quartz veins, 1% pyrite | | | | |
| 295.5-297.5 | [illegible] gray & dark [illegible], | | | | |
| | [illegible] with the veins forming 1/2 [illegible] of the interval | | | | |
| 285.0-290.0 | [illegible] 1% [illegible] & trace of quartz vein material, | | | | |
| | [illegible] zone [illegible] veins @ 60° to [illegible] | | | | |
| | [illegible] | | | | |
| 293.0-315 | [illegible] quartz veins; rare to trace pyrite, weakly | | | | |
| | [illegible] veins @ 295-297', | | | | |
| | @ 2920-2945' fine grained phase, [illegible], chilled looking | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 299.5 - 311.5; weathered, altered, coarse grained, quartz diorite, patchy quartz, no visible sulphides. Sharp lower contact with underlying unit @ 65° | | | | |
| 311.5 - 326 | Diorite, pinkish; fine to medium grained, more mafic than overlying unit, patchy abundance of ferromagnesian minerals, slight alteration to chlorite | | | | |
| | @ 318.0 - 326.0; weathered diorite, equigranular and massive, bleached with underlying unit | | | | |
| 326.0 - 336 | Mineralized zone, patchy altered diorite, intensive, silicified, stringers of quartz, abundant biotite + chlorite locally, carbonatized + chloritized, pyrite, pyrite patches + pockets, minor sulphides associated with fractures + with veinlets, biotite rich seams, foliation @ 327° - 45°, @ 328° - 50° parallel with the underlying unit. | | | | |
| 336.0 - 343.0 | Quartz ± pyrrhotite ± pyrite vein, massive, weathered, light grey with ~~minor~~ minor chlorite, pyrrhotite, quartz veinlets, vein is composed of 3 veins with altered quartz wall rock | 19512<br>19513<br>19514 | 326.0 - 329.0<br>329.0 - 332.0<br>332.0 - 336.0 | 8.0'<br>2.0'<br>4.0' | .002<br>trace<br>trace |
| 343.0 - 353.0 | Diorite, pinkish, fine to medium grained, massive, minor to fine grained, local porphyritic texture, sharp upper contact, chloritic, biotite veinlets @ 70° to CA | | | | |
| 353.0 - 356.0 | Quartz vein, brecciated, as above, gradational transition, lower contact | | | | |

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 356.0 - 385.0 | Diorite; medium to coarse grained, light to moderate alteration, slight brecciation, small shears are intruded by small thin discontinuous granodiorite dykes, weak foliation @ ~15° to core @ 378.0 - 376.6 small shear zone @ 40° to core, Sericite chlorite and biotite associated with shear | | | | | | |
| * 385.0 - 391.0' | Brecciated blue opal material with a fine grained shear very fine disseminated mineralization | * 15220 | 385.0-391.0 | 6.0' | Trace | | |
| 391.0 - 394.0 | Granodiorite; very coarse grained & massive, quartz eyes. gradational into underlying diorite unit. occasionally narrow calcite healed with minor sulphide mineralization | | | | | | |
| 394.0 - 408.0 | Diorite; medium to coarse grained, weathered massive to massive occasional pyrrhotite and pyrite | | | | | | |
| | END OF HOLE @ 408' | | | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY MURGOLD RESOURCES INC. HOLE No. MIW Plotted from 1+ [illegible] -20° WNW

SHEET NUMBER 1 of 4 SECTION FROM 1+ 054 WNW TO STARTED April 6/82

LATITUDE 29285 DATUM No. 3 vein system COMPLETED April 7/82

DEPARTURE 170068 BEARING 200° ULTIMATE DEPTH 598'

ELEVATION 9966.26 DIP -66° @ collar, -67° (acid test) PROPOSED DEPTH

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 11.0' | casing | | | | |
| 11.0 - | Diorite; medium to coarse grained, dark green to grey, | | | | |
| | pink potash feldspar locally, quartz rare blebs also present locally, | | | | |
| | relatively unaltered, slight to moderate fracturing, minor disseminated | | | | |
| | pyrite (1-2%), minor to trace chalcopyrite <1%, chrysocolla (1-2%) | | | | |
| | @ 34.5 - 38.2' fine grained white quartz veinlet @ ~45° to core | | | | |
| | @ 42.8 - 43.3' fine grained white quartz veinlet @ ~45° to core | | | | |
| | @ 45.7 - 45.9' medium to coarse grained quartz veinlet, minor fracturing to diorite | | | | |
| | @ 48.6 - 57.3' medium grained pink potash feldspar veinlets (1-2%) | | | | |
| | moderate fracturing @ 60° to core, foliation & slight shearing | | | | |
| | 35° to core @ 52.5' & 54.0', minor chalcopyrite stringers @ 40° | 40751 | 52.5-54.0 | .5' | |
| | to core, pyrite | | | | |
| | @ 57.3 - 57.3' fine to coarse grained quartz vein, minor sericite | | | | |
| | fracturing @ 20° to core | | | | |
| | @ 64.0 - 80' fine grained pink potash feldspar veinlets, minor quartz veinlets | 40752 | 64.0 - 67.0 | 3.0' | |
| | moderate fracturing parallel to foliation, slight foliation @ ~40° | 40753 | 67.0 - 70.0 | 3.0' | |
| | 45° to core, minor stringers of pyrite, 2% | 40754 | 70.0 - 73.0 | 3.0' | |
| | @ 73.0 - 95.0' fine grained pink potash feldspar veinlets, relatively unaltered, minor quartz | 40755 | 73.0 - 76.0 | 3.0' | |
| | veinlets, minor fracturing, minor pyrite, trace chalcopyrite | 40756 | 76.0 - 78.0 | 2.0' | |
| | @ 97.5' fine grained white quartz vein @ 35° to core, trace | 40757 | 78.0 - 81.0 | 3.0' | |
| | to minor 2% py | | | | |

Released 23/4/83 Don Hong

# DIAMOND D. LL RECORD

**PROPERTY** _____ **HOLE No.** _____

**SHEET NUMBER** 2 of 4 **SECTION FROM** _____ **TO** _____ **STARTED** _____

**LATITUDE** _____ **DATUM** _____ **COMPLETED** _____

**DEPARTURE** _____ **BEARING** _____ **ULTIMATE DEPTH** _____

**ELEVATION** _____ **DIP** _____ **PROPOSED DEPTH** _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | 93.0-98.0' fine grained biotite clast porphyritic rhyolite to dacite. | 40758 | 93.0-96.0 | 3.0' | .002 |
| | minor narrow fine grained siliceous pebble, irregular upper contact, | 40759 | 96.0-98.0 | 2.0' | .002 |
| | base contact @ 50° to ca, @ 96.5-98.0' irregular quartz vein | | | | |
| | containing py, cpy, & white massive slightly foliated @ 60° to ca | | | | |
| | 98.0-116.6 : coarse grained biotite quartz biotite dacite quartz eyes | | | | |
| | grained locally minor recrystallized angular 1-5 cm (½"-2") lithic | | | | |
| | lithic clasts commonly flattened, very slight foliation @ ~60° to ca. | | | | |
| | 116.6-119.0' : fine grained equigranular dioxplagic zone similar to | 40760 | 116.6-119.0 | 2.4' | .002 |
| | host rock : some bedding, numerous small chlorite & calcite | 40762 | 119.0-122.0 | 3.0' | .002 |
| | veinlets @ 40° to ca, minor disseminations of po & py. & cpy. | 40763 | 122.0-125.0 | 3.0 | trace |
| | 122.0-140.0' : medium to coarse grained quartz biotite, relatively | 40764 | 125.0-128.0 | 3.0' | .002 |
| | unaltered, some preferred orientation of biotite flakes. | | | | |
| 140.0-145.5' | Intrusive : moderately medium grained, light grey, bleached quartz | | | | |
| | & K-spar : ~ 5% biotite & hornblende ~ 10%. Sharp upper & lower contact at | | | | |
| | 35° to ca, zone of alteration & biotite towards bottom of the intrusive | | | | |
| | zone to more disseminated sulphides. | | | | |
| 145.5-214.5 | Quartz Biotite Porphyry: medium to coarse grained quartz eye | | | | |
| | porphyritic dacite, quartz eyes commonly fractured, some partially recrystallized | | | | |
| | @ 160' : zone of py & cpy @ 70° to ca | 40765 | 156.5-159.0 | 5.0' | .004 |
| | @ 200' : zone of py & cpy @ 70° to ca | 40766 | 159.5-162.0 | 5.0' | .004 |
| | @ 210' : zone of py & cpy @ 70° to ca, sharp contacts @ 5° | | | | |
| | to core axis, fine grained equigranular locally | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 11 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 1520 - 1680': fine grained tuffaceous rock, trace disseminated sulphides, numerous calcite veinlets & grains on approximately perpendicular to core. | | | | |
| 214.5 - 225.5 | Diorite; fine to medium grained, basaltic in nature, dark green to grey, locally sheared with accompanying alteration to chlorite, abundant calcite grains & veinlets, lightly brecciated, trace to minor pyrite, py (< 1%), veinlets in fractures & shear surfaces. | 40761 | 214.5-217 | 2.5' | .002 |
| | | 40767 | 217.0-220.0 | 3.0' | [illegible] |
| | | 40768 | 220.0-223.0 | 3.0' | [illegible] |
| | | 40769 | 223.0-225.5 | 2.5' | [illegible] |
| 225.5 - 313.0 | Diorite - Quartz Diorite; medium to coarse grained, relatively unaltered, minor fine grained phases, locally, small stringers of quartz, calcite & epidote, trace to minor py, po (~1%) | 15721 | 240.5-243.1 | 0.6' | * [illegible] |
| | @ 236.0-239.0': fine grained shears @ 20° | 40770 | 268.0-270.0 | 2.0' | [illegible] |
| | @ 270.0 - 271.2': fine grained light rock, finely disseminated py & cpy, | 40771 | 270.9-271.2 | 1.2' | .002 |
| | stringers of calcite @ 55-60°, [illegible] @ 310' small shears @ 15° | 40772 | 271.2-273.0 | 2.9' | [illegible] |
| | @ 313.0-313.5': see T.D. Brown, re 32-11 to disseminated | | | | |
| * 313.0 - 316.0' | Diorite; fine grained, [illegible] silica, alteration, calcite veinlets & light [illegible] mineralization | 15551 | 313.5-316.0 | 3.0' | *.002 |
| * 316.0 - 319.0' | [illegible] contact is fairly gradational with fine grained diorite & [illegible] mineralization, [illegible] veinlets, [illegible] disseminated pyrite & [illegible] | 15552 | 316.0-319.0 | 3.0' | *.002 |

* Data obtained from 1982 drillholes

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 3195 | Diorite; medium to coarse grained, relatively unaltered, contains quartz eyes with bluish tinge, light fracturing, minor sulphides (< 1%), minor biotite film on fracture surfaces | | | | |
| | @ 3440': fine grained pale pink dyke contacts @ 45° | 40773 | 344.0-345.0 | 1.0' | .002 |
| | @ 362.0-367.0': very coarse grained granitic dyke & patchy quartz veins, chalcopyrite (1-2%), pyrite, copper & iron oxide stains | 40774 | 363.0-364.0 | 5.0' | .002 |
| | @ ~30° | 40775 | 366.0-367.0' | 1.0 | .002 |
| | | 40776 | 367-370.0 | 3.0 | .002 |
| | from 367.0 →: diorite is somewhat more altered, slight foliation, quartz veins 1% wide, contacts @ ~35° to core. | | | | |
| | END OF HOLE @ 378.0' | | | | |

# DIAMOND DRILL RECORD

**PROPERTY** Wynyard Resources Inc. **HOLE No.** M 15

**SHEET NUMBER** 1 of 4 **SECTION FROM** ____ **TO** ____ **STARTED** April 21/1982

**LATITUDE** L2214 **DATUM** No. 3 Vein system **COMPLETED** April 23/1982

**DEPARTURE** 7018O **BEARING** 200° (S 20° W) **ULTIMATE DEPTH** 298'

**ELEVATION** 1958.17 **DIP** -45° **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 17.0' | Casing | | | | |
| 17.0 - 32.5 | Diorite: medium to light grey, fine grained, massive, moderately to strongly chloritized, weakly to moderately sericitized, minor pyrite, trace chalcopyrite, trace magnetite, weakly to moderately fractured, fractures filled with chlorite, quartz, pyrite, calcite, fractures at 20° to core axis, 45° to core axis, 90° to core axis | 40777 | 17.0 - 20.0' | 3.0' | trace |
| | | 40778 | 20.0 - 23.0 | 3.0' | trace |
| | | 40779 | 23.0 - 26.0' | 3.0' | trace |
| | | 40780 | 26.0 - 29.0 | 3.0' | trace |
| | | 40781 | 29.0 - 32.5 | 3.5' | .002 |
| 32.5 - 35.9 | Diorite: medium to coarse grained, massive, moderately fractured, moderately chloritized, weakly sericitized, trace pyrite | | | | |
| | @ 34.0 - 34.6': small vfg. light green stringers @ 15° to core. | | | | |
| 35.9 - 61.0' | Diabase dyke: fine grained, dark green to black, slight silicification towards the contacts, chilled & fractured contacts, irregular upper contact, lower contact @ ~45° to core, light to moderate pervasive chloritization, 37.0 - 38.0: interval of coarse grained diorite | | | | |
| 61.0 - 64.0 | Diorite: medium to coarse grained, development of minor chloritization, moderately fractured, fractures filled with chlorite, quartz, pyrite, calcite | 40782 | 61.0 - 64.0 | 3.0' | .002 |
| * 64.0 - 86.0 | Diorite: [illegible] | * 15223 | 64.0 - 69.0 | 5.0 | Tr. |
| | Sheared Diorite: moderately to strongly chloritized, sericitized, pervasively fractured, fractures filled with chlorite, calcite, pyrite, minor chalcopyrite, moderately to strongly pervasive pyrite & trace cpy. | * 15224 | 69.0 - 74.0 | 5.0 | Tr. |
| | | * 15225 | 74.0 - 79.0 | 5.0 | .002 |
| | | * 15226 | 79.0 - 84.0 | 5.0 | .006 |
| | | * 15227 | 84.0 - 86.0 | 2.0 | Tr. |

* Data from 1982 drill logs Relogged 24/6/83 Don Hoy

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 86.0 - 91.0 | Lamprophyre dyke; somewhat silicified, contains finely | 45783 | 86.0 - 91.0 | 5.0' | .002 |
| | disseminated $FeS_2$ & $nFeS_2$ | * 15228 | 86.0 - 91.0 | 5.0' | .008 |
| | | | second assay (was still in dry) | | |
| 91.0 - 101.0 | Diorite - Quartz Diorite; predominantly coarse grained, light to | | | | |
| | dark grey [illegible] altered, traces to minor sulphides (< 1%) | | | | |
| | @ 270'; small [illegible] @ 70° to core, blebby, rusty, trace sphalerite | | | | |
| | @ 95.0 - 97.5' [illegible] dyke, coarse grained, [illegible] | | | | |
| * 101.0 - 106.0' | Silicified Diorite; mineralized with $nFeS_2$ & $FeS_2$ | * 15229 | 101.0 - 106.0 | 5.0' | Tr |
| | | | | | |
| * 106.0 - 110.0' | core [illegible] drill [illegible] | * 15230 | 106.0 - 110.0 | 4.0 | Tr |
| * 110.0 - 113.0' | " " " " | * 15231 | 110.0 - 113.0 | 3.0 | Tr. |
| 113.0 - 136.0 | Quartz Diorite; [illegible] grey coarse grained quartz diorite, some | | | | |
| | [illegible] with dark [illegible] altered [illegible], [illegible] sulphides | | | | |
| | [illegible] [illegible] to biotite & [illegible] sericite, [illegible] with small | | | | |
| | [illegible], veinlets of [illegible] type [illegible] locally [illegible] sulphides, | 40794 | 125.0 - 126 | [illegible] | .002 |
| | @ [illegible] [illegible] [illegible] veinlets parallel, trace [illegible] possible, | | | | |
| | @ [illegible] [illegible] [illegible] [illegible] 20° [illegible] sphalerite [illegible] | | | | |
| | to [illegible] [illegible] [illegible] @ 70° | | | | |
| * [illegible] | [illegible] | | | | |
| | Drilling [illegible] core material [illegible] fine $nFeS_2$ + $FeS_2$ | * 15232 | 136.0 - 143.0 | 7.0' | Tr |
| | @ 60° to core | | | | |

* Data from 1982 drill logs

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | | | | | |
| 148.0 150.0 | Diorite; coarse grained, relatively unaltered, except adjacent to small shears where chloritization & some potassic alteration is present, weak foliation @ 30° to core, trace to minor pyrite, prominent calcite veins & veinlets towards bottom of interval | | | | |
| 150.0 - 163.0 | Altered Diorite; fine grained, moderate to strong alteration, strong chloritization, biotite is dominant locally, schistose in places, abundant calcite filled veinlets & fractures, sheared foliation @ 152.0° 60°, 155.0°; 55-60° to core axis | 40785 | 150.0-153.0 | 3.0 | trace |
| | | 40786 | 153.0-156.0 | 3.0 | trace |
| | | 40787 | 156.0-158 | 2.0 | trace |
| | | 40788 | 158.0-161.0 | 3.0 | trace |
| | quartz veins dominant locally, upper & lower contacts are brecciated & silicified to less intense towards the bottom of the interval | 40789 | 161.0-163.0 | 2.0 | trace |
| 163.0-175.5 | Gabbro-Diorite; medium to coarse grained, relatively unaltered fractured, fine to minor pyrite, well developed V-vein stockworks @ 168.0-170.0; small chlorite veins, minor pyrite throughout the entire interval grading into a quartz diorite phase. | | | | |
| 175.5-177.0 | Aplite dyke; relatively fine grained sugary texture, core axis @ 25-30° to core. | | | | |
| 177.0-178.0 | Highly broken, fractured soft black material zone, chlorite & biotite, patchy quartz, approximate p.o (2-5%) | 40790 | 177.0-179.0 | 2.0 | trace |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 4 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 178.0 - 232. | Quartz Diorite Granodiorite; coarse grained light grey to pinkish, relatively unaltered, light to moderate fracturing minor pretty quartz, biotite rich intervals, trace sulphide. | | | | |
| | @ 205.8; Small 2" quartz vein, contacts 0 ~ 60° core | 40791 | 205.8-217.0 | .12 | .002 |
| | @ 208.2 - 210.1; fine grained granodiorite phase | | | | |
| 232.0 - 233.7 | Lamprophyre dyke; dark grey to black, very fine grained contains disseminated pyrite, foliation @ 80° to core, sharp upper & lower contact @ 80-85° to core | | | | |
| 233.7 - 238.0' | Granodiorite - Quartz Diorite as above. | | | | |
| | END OF HOLE @ 238.0' | | | | |

# DIAMOND D[illegible]LL RECORD

**PROPERTY** Aste, Bourgeois and St. Louis Township **HOLE No.** M16 plotted on 14310 WNW

**SHEET NUMBER** [illegible] **SECTION FROM** 14310 WNW **TO** [illegible] **STARTED** May 1/1982

**LATITUDE** 12352 **DATUM** No. 3 vein system **COMPLETED** May 3/82

**DEPARTURE** 59809 **BEARING** 320° (S 20°W) **ULTIMATE DEPTH** 378.0'

**ELEVATION** 991.17 **DIP** -65° **PROPOSED DEPTH** [illegible]

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 2.0' | Casing | | | | |
| 2.0 - 22.0 | Diorite; medium grained, massive, relatively unaltered to moderately fractured, trace to minor po*py, abundant small calcite veinlets | | | | |
| | @ 90°; small shear @ 35° to core, stringer pyrrhotite | | | | |
| 22.0 - 28.5 | Mafic Dike; fine to medium grained, dioritic in part, weakly to moderately chloritized, disseminated to stringer pyrrhotite, @ 45° | 40792 | 22.0-24.0 | 2.0 | trace |
| | | 40793 | 24.0-27.0' | 3.0 | trace |
| | @ 26.0-28.5'; fine grained, chloritic, more intense, approx. 5% disseminated pyrrhotite as fine grains & disseminations | 40794 | 27.0-28.5 | 1.5 | trace |
| # 28.5 - 30.5 | Quartz vein material, milky white, with minor pyrrhotite & chalcopyrite | #15233 | 28.5-30.5 | 2.0' | .178 |
| 30.5 - 62.5 | Diorite; medium to coarse grained as above, massive, weakly altered, small shear zones locally with accompanying chloritic alteration, disseminated pyrrhotite & calcite veins to minor py*po | 40795 | 30.5-33.0 | 2.5 | trace |
| | | 40796 | 33.0-36.0 | 3.0 | trace |
| | 52.0-57.0; very coarse grained | | | | |
| 62.5 - [illegible] | Mafic Dike; [illegible] medium grained, [illegible] | 40797 | 62.5-65.0 | 2.5 | .172 |
| | [illegible] @ 65° | | | | |
| | [illegible] @ 45° to core, highly chloritic | | | | |
| # [illegible] | [illegible] | | | | |
| [illegible] | [illegible] | 15793 | 73.5-76.0 | 2.5' | [illegible] |
| | chloritic, weakly altered, pyrrhotite fracturing at 75° to core. | | | | |
| | very coarse grained, [illegible] | | | | |

# data obtained from 1982 drilling.

Reported 25/6/82 Don Hoy

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 96.0-98.0': lightly fractured | | | | |
| | @ 110.0-170': fairly dense core. Biotite dist. dominant locally minor accompanying pyrite, relatively sharp upper contact @ 30° to core | | | | |
| | (core 170.0-) increasingly altered fine to medium feldspar @ 45° to core. Occasional disseminated pyrite (1-2%) | | | | |
| 121.0 - 128.0 | Silicified Diorite: fine to coarse grained moderate to intense silicification, locally quartz, minor black quartz | 40799 | 121.0-124.0 | 3.0 | trace |
| | eyes. minor (1%) disseminated pyrite and chl (1-2%) | 40800 | 124.0-127.0 | 3.0 | trace |
| | @ 124.0-128.0': coarse grained granodiorite dyke, relatively sharp upper & lower contact 15-20° to core, minor pyrite & chl | 40801 | 127.0-128.0 | 1.0 | trace |
| * 128.0-132.0' | Silicified Diorite: fine grained [illegible] pyrite | #15235 | 128.0-132.0 | [illegible] | [illegible] |
| 132.0-134.0 | [illegible] | 40802 | 132.0-134.0 | 2.0 | trace |
| | [illegible] | | | | |
| 134.0-136.5 | [illegible] | 40803 | 134.0-136.5 | [illegible] | [illegible] |
| | [illegible] | | | | |
| 136.5-139.0 | Diorite: fairly dark grey; fine to medium grained | 40804 | 136.5-139.0 | 3.5 | trace |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | [illegible] | 40805 | 140.0 - 143.0 | 3.0 | trace |
| | [illegible] | 40806 | 143.0 - 146.0 | 3.0 | trace |
| | [illegible] | 40807 | 146.0 - 148.0 | 3.0 | .002 |
| | [illegible] | | | | |
| [illegible] | [illegible] | 40808 | 148.0 - 151.0 | 3.0 | trace |
| | [illegible] | 40809 | 151.0 - 153.0 | 2.0 | trace |
| | [illegible] | | | | |
| | [illegible] | | | | |
| 153.0 - [illegible] | [illegible] | 40810 | 153.0 - 153.3 | 0.3 | trace |
| | [illegible] | | | | |
| 153.3 - [illegible] | [illegible] | 40811 | 153.3 - 156.0 | 2.7 | trace |
| | [illegible] | 40812 | 156.0 - 159.0 | 3.0 | trace |
| | [illegible] | | | | |
| | [illegible] | | | | |
| 159.0 - [illegible] | [illegible] | 40813 | [illegible] - 162.0 | 3.0 | .002 |
| | [illegible] | 40814 | 162.0 - 165.0 | 3.0 | .002 |
| | [illegible] | 40815 | 165.1 - [illegible] | 3.0 | trace |
| | [illegible] | | | | |
| [illegible] - [illegible] | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 172.0 - 174.0' | Diabase type; m-c fine grained, dark grey to black, strong fracture cleavage, very sharp upper & lower contacts @ ~35° to core. | | | | |
| 174.0 - 183.0 | Diorite; medium to coarse grained, has largely undergone light alteration, development of chlorite, although not as intense alteration as elsewhere locally. Small qtz veinlets to massive throughout the interval, not fracture controlled @ 35-40°. @ 181.5 - 182.0, very coarse grained, pegmatitic texture | | | | |
| 182.0 - 185.5 | Dacite; fine grained light siliceous phase, light to medium grey, mottled appearance, upper contact sharp @ 7° to core axis, lower contact transitional to diorite | 40816 | 1830-1855 | 2.5' | trace |
| 185.5 - 233.8 | Diorite; medium to coarse grained, slight alteration & amphibole to chlorite, relatively massive with a very weak foliation, locally sheared with small white qtz veins along fracture, occasional pyrite @ 213.0-214.0, small coarse grained granitic type intrusive, contacts @ 50-60° | | | | |
| | @ 222.0'; small 2" grey diorite type sharp contact @ 45°, associated minor pyrite & po. | | | | |
| | @ 227.5 - 228.5; small alteration zone with patchy quartz & pyrite, minor po, associated with chlorite alteration | * 15236<br>40817 | 2275-2285 | 1.0' | .02 |
| * 233.8 - 234.8 | Diorite; fine grained slightly recrystallized, contains alteration zone | * 15237 | 233.8-234.8 | 1.0 | .02 |
| * 234.8 - 236.0 | Quartz vein; well mineralized, chalcopyrite, pyrite & visible gold | * 15238 | 234.8-236 | 1.2 | 4.08 |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| * 236.0 - 239.0 | | Altered Diorite; fine grained with fairly moderate (5%) $FeS_2$ + $FeS_2$ | * 15239 | 236.0 - 239.0 | 3.0' | .008 |
| * 239.0 - 258.0' | | Highly altered, fine grained, slightly sheared with stringers of quartz, moderate | * 15240 | 239.0 - 244.0 | 5.0' | .010 |
| | | | * 15241 | 244.0 - 248 | 4.0 | .006 |
| | | | * 15242 | 248.0 - 253.0 | 5.0 | .008 |
| | | | * 15243 | 253.0 - 258.0 | 5.0 | .006 |
| 258.0 - 260.' | | Altered Diorite; medium grained, dark green to black moderate degree of alteration prominent chlorite, minor biotite, weak foliation. Alteration more intense towards bottom of the interval, cubic pyrite present (1-2%) trace cpy. | 40818 | 258.0 - 260.0 | 2.0' | .002 |
| 260.0 - 273.0' | | Aplite dyke; fine to medium grained, massive light grey to pink, sharp contacts upper @ 40-45°, lower @ 40° | | | | |
| 273.0 - 318.0 | | Diorite; coarse grained, massive, relatively unaltered locally rich in pyrrhotite + pyrite (3-5%), light fracturing @ 274.0 - 276.0; altered contact, approximately 50% cpy, minor cpy | 40819 | 274.0 - 276.0 | 2.0' | .002 |
| | * | @ 301.0 - 303. Ball white quartz in microcrystalline | * 15244 | 301.0 - 303.0 | 2.0' | Tr. |
| | | @ 316.5 - 317.0 white quartz, sharp contacts @ 45° | 40820 | 316.5 - 317.0 | 0.5' | .002 |
| 318.0 - 319.0 | * | White to grey quartz vein, no mineralization visible | * 15245 | 318.0 - 319.0 | 1.0' | .002 |
| 319.0 - 341.0 | | Diorite; as above, relatively unaltered, medium to coarse grained, minor disseminated pyrite and pyrrhotite @ 329.0; fragments of chlorite alteration, massive weak foliation, calcite veinlets throughout @ 45° | | | | |
| * 340.0 - 343.0 | | fine altered diorite with fine pyrite | * 15246 | 340.0 - 345.0 | 5.0 | .008 |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 6 of 6 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 362.0 - 368.0 | Altered Diorite; fine to medium grained, moderately to | 15247 | 346.0 - 350.0 | 5.0 | Tr. |
| | heavily altered, dark grn to black, schistose in places | 40821 | 355.0 - 358.0 | 3.0 | trace |
| | foliation @ 45° to cor, numerous narrow calcite veinlets @ | 40822 | 358.0 - 361.0 | 3.0 | trace |
| | 45° to cor (carbonatization) minor disseminated py/apy & cpy | 40823 | 361.0 - 364.0 | 3.0 | .002 |
| | alteration of hornblende to biotite locally. | | | | |
| 368.0 - 378.0 | Diorite; medium to coarse grained, relatively unaltered & | | | | |
| | massive intruded by coarse grained granodiorite & granite | | | | |
| | bodies (dykes?), irregular contacts | | | | |
| | @ 366.5 - 367.5: V. coarse grained granodiorite dyke: irregular upper | | | | |
| | contact, sharp lower contact @ 45° | | | | |
| | @ 369.5 - 371.0: irregular V. C. grained granodiorite intrusive dyke. | | | | |
| | @ 377.0: 1ft or 2° granodiorite dyke, sharp lower contact | | | | |
| | @ 20° to cor | | | | |
| | | | | | |
| | END OF HOLE @ 378.0' | | | | |

# DIAMOND D. LL RECORD

**PROPERTY** Vista, Bravissa, and 2e Four Tonne ; **HOLE No.** M 17 Yalbed r[illegible]on (1+31" WNW)

**SHEET NUMBER** 1 of 5 **SECTION FROM** 1+310 WNW **TO** **STARTED** May 1982

**LATITUDE** 29353 **DATUM** NO. 3 Mine system **COMPLETED** [illegible]

**DEPARTURE** 69809 **BEARING** 200° (S 70°W) **ULTIMATE DEPTH** 389.'

**ELEVATION** 9991.03 **DIP** -80° **PROPOSED DEPTH**

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0-5.0' | casing | | | | |
| 5.0-65.0 | Diorite; medium to coarse grained, relatively massive & unaltered, small alteration zones associated with shears, which contain K feldspar & chlorite, small calcite veinlets shearing @ 23.5' ; 35-45° @ 30.0-31.0'; small alteration zone, low-moderate K feldspar and epidote, minor associated py and cpy. Faint foliation developed at 40-45° to core. Transitional into the underlying unit, microgranophyre & alteration | | | | |
| 65.0-70.0 | Altered Diorite; light grey medium grained slightly massive to schistose, stronger calcite stringers & zones, minor chlorite & @ 68.5-70.0'; silicified, altered & broken, schistose in nature, foliation developed at 45° to 60°, prominent calcite stringers and veinlets containing minor associated py & cpy. biotite dominant in addition to K feldspar. | 45924 | 68.5-70.0' | 1.5 | .002 |
| * 70.0-72.5' | Quartz vein; at slight angle to core, well mineralized with cpy and py; [illegible] lower contact @ 5-20° to core | * 15248 | 70.0-72.5' | 2.5' | .002 |
| 72.5-93.5' | Diorite; medium to coarse grained, largely massive, relatively unaltered, light banding, chloritic and. | 15275 | 72.5-75.0 | 2.5' | .002 |
| 93.5-99.0' | Granitic granodiorite dyke; coarse grained massive little alteration & contacts relatively sharp upper/lower contacts @ 45° & 47° respectively | | | | |

* Data obtained from 1982 drill logs.

Relogged 24/6/83 Don Hay

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | ...trace fine disseminated sulphides - opalescent quartz eyes | | | | |
| 99.0 - 113.0 | Diorite; medium to coarse grained, massive, contorted, | | | | |
| | intrusive ? opalescent quartz eyes appear secondary, finely disseminated | | | | |
| | sulphides are pervasive throughout the interval, foliation @ 35° | | | | |
| | @ 103.0', 5" zone chalcopyrite associated with small calcite veinlets | 45826 | 102.5 - 103.5 | 1.0' | .002 |
| * 113.0 - 130.0' | Fine grained diorite containing a large % of quartz with | | | | |
| | slight mineralization mainly of chalcopyrite and pyrite | | | | |
| | 113.0 - 116.0': mineralized fine grained diorite | * 15249 | 113.0 - 116.0 | 3.0 | Tr |
| | 116.0 - 118.0': white quartz vein | * 15250 | 116.0 - 118.0 | 2.0 | .002 |
| | 118.0 - 123.0': fine grained diorite, containing slight mineralization | * 6501 | 118.0 - 123.0 | 5.0' | Tr. |
| | 123.0 - 130': as above | * 6502 | 123.0 - 127.0' | 7.0' | .010 |
| 130.0 - 134.0' | Medium grained, locally fine grained, very coarse grained granodiorite | | | | |
| | containing white, white very intensely altered, siliceous inclusions | [illegible] | 130.0 - 132.0 | [illegible] | trace |
| | chalcopyrite in the siliceous recrystallized quartz eyes, veinlets, blebs | [illegible] | 132.0 - 135.5 | [illegible] | trace |
| | pyrite (~2%) | | | | |
| 134.0 - 135.5 | Diorite dike: very coarse grained and massive, disseminated | | | | |
| | grains & eyes of white to pinkish grey, recrystallized quartz veins, 1" to 2" at 25° | | | | |
| 135.5 - 136.5 | Quartz vein; massive milky white, no visible mineralization, | [illegible] | 135.5 - 136.5 | 1.0 | .002 |
| | sharp upper contact @ 50-55° irregular lower contact | | | | |
| 136.5 - 141.0' | Diorite as above, very coarse grained | [illegible] | 136.5 - 138.2 | [illegible] | .002 |
| | @ 139.7': 3" quartz vein, milky, massive, no visible mineralization | [illegible] | 138.2 - 138.7 | 0.5' | .002 |
| | sharp upper contact @ 55°, irregular lower contact | | | | |

* Data obtained from 1982 drill logs.

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 3 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 141.0 - 142.0 | Diorite, medium to coarse grained, massive + unaltered | | | | |
| 142.0 - 146.2 | hornblende-biotite diorite; fine to medium grained, dark grey to black, foliated @ ~45°, upper + lower contacts sharp @ 70-80° | | | | |
| 146.2 - 164.5 | Diorite as above | | | | |
| | @ 162.0-163.0; small fine grained dikes or veins, similar to diorite | | | | |
| 164.5 - 173.0 | hornblende-biotite diorite; very coarse grained, massive, contains appreciable chalcopyrite + bornite, irregular upper + lower contacts | U3832 | 165-165 | 2.0' | .002 |
| | @ 165.5; appreciable pyrite + chalcopyrite associated with patchy quartz | | | | |
| 170.0 - 173.0 | Diorite as above, medium to coarse grained, massive (mineralized) | | | | |
| 173.0 - 195.0 | Altered Diorite; very coarse grained, intensely altered, appreciable, irregular, patchy + coalescent quartz veining + veinlets, abundant pyrite + chalcopyrite, abundant veinlets of calcite, occasional patchy, dark green chlorite | U3833 | 173.0-176.0 | 3.0 | trace |
| | | U3834 | 86.0-189.0 | 3.0 | .002 |
| | | U3835 | 189.0-192.0 | 3.0 | .002 |
| | | U3836 | 192.0-195.0 | 3.0 | trace |
| 195.0 - 196.5 | Diorite dike; very coarse grained, [illegible] | U3837 | 1950-1965 | 1.5 | .002 |
| | [illegible] | | | | |
| | [illegible] fracture controlled [illegible] @ 140°. | | | | |

# DIAMOND D[illegible]LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 4 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 196.5 - 209.0 | Schistose Diorite; strongly coarse grained, prominent | 40838 | 196.5-199.0 | 2.5 | .002 |
| | black quartz eyes, locally high chlorite, trace to mini- | 40839 | 199.0-202.0 | 3.0 | trace |
| | sulphide mineralization, locally crushed in bands | 40840 | 202.0-206.0 | 4.0 | .002 |
| 209.0 - 214.0 | Albite Dyke; medium grained, foliated @ 30° to | 40841 | 206 - 209.0 | 3.0 | trace |
| | core, slightly schistose, intercalated, sporadic chlorite. | 40842 | 209.0-210.5 | 1.5 | .002 |
| | [illegible] | | | | |
| | @ 210.6-211.5; fine grained white dyke, light grey, contacts @ | | | | |
| | 30° to c/a | | | | |
| | @ [illegible]; fine grained aplite dyke as above, sporadic | | | | |
| | pyrite and [illegible] veinlets contacts @ 45° to core. | | | | |
| 214.0 - 295.0 | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | 19570 | 264.0-267.0 | 3.0 | .002 |
| | [illegible] | 19571 | 267.0-269.0 | 2.0 | .004 |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| 295.0 - 313.5 | Altered Diorite; fine to medium grained, weak foliation | 19572 | 295.0-298.0 | 3.0 | trace |
| | marked at 45° to c/a, abundant small recrystallized calcite | 19573 | 298.0-301.0 | 3.0 | trace |
| | veinlets, disseminated chlorite locally schistose in nature | 6503 | 299.0-299.5 | 0.5 | .022 |
| | @ 299.0-299.3'; white quartz vein with chalcopyrite and pyrite | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 5 of 5 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 343.0': strong foliation developed @ 45° to core | 19574 | 301.0-304.0 | 3.0 | trace |
| | stringer & disseminated chalcopyrite, py + po associated with | 19575 | 304.0-307.0 | 3.0 | .002 |
| | white veinlets and small shears, minor quartz eyes. | 19576 | 307.0-310.0 | 3.0 | trace |
| | | 19577 | 310.0-313.5 | 3.5 | trace |
| 313.5 - 351.0 | Diorite, medium to coarse grained dark grey to black, | | | | |
| | massive, unaltered, thin silicated zones associated with | | | | |
| | fractures / small shears, small granodiorite dykes intrude | | | | |
| | the unit. disseminated sulphides throughout | | | | |
| | @ 321.5 - 333.5; coarse grained granodiorite dyke containing | 40843 | 331.5-333.5 | 2.0 | .002 |
| | associated pyrite, chalcopyrite & sphalerite, upper contact | | | | |
| | @ 60°, irregular lower contact | | | | |
| | @ 337.5; small 1" quartz vein, pyrite & chalcopyrite | 40844 | 337.5-339.5 | 1.0 | trace |
| | 338.0 - 338.5; coarse grained granodiorite dyke as above | | | | |
| | veinlets disseminated py, cpy & po, relatively sharp upper | | | | |
| | & lower contacts @ 50° to core. | | | | |
| 351.0 - 353.0 | Diorite dykes; black, very fine grained sharp upper contact | | | | |
| | @ 50° to core, sharp lower contact @ 35° | | | | |
| 353.0 - 356.3 | Diorite; similar to coarse grained massive, minor silicification | | | | |
| | & fracturing, minor unaltered, minor disseminated sulphides | | | | |
| 356.3 - 358.0 | Dioritic dykes; dark - dark green, very fine grained, very | | | | |
| | sharp upper contact @ 60°, becomes coarser grained away from contacts | | | | |

END OF HOLE @ 358.0'

# DIAMOND D. LL RECORD

**PROPERTY** Vista, Bennevis & St. Louis Townships **HOLE No.** M 18

**SHEET NUMBER** 1 of 1 **SECTION FROM** ____ **TO** ____ **STARTED** May 1982

**LATITUDE** ____ **DATUM** East end of No 3 view system **COMPLETED** May 1982

**DEPARTURE** Not Surveyed **BEARING** 200° **ULTIMATE DEPTH** 68'

**ELEVATION** ____ **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 15.0' | Casing | | | | |
| 15.0 - 22.0 | Diorite; variably fractured, chlorite and lightly silicified | | | | |
| | unless small quartz veinlets with minor chalcopyrite. | | | | |
| | Diorite is medium grained and contains minor disseminated | | | | |
| | pyrite. Lower contact is sharp @ 45-50° to core axis | | | | |
| 22.0 - 41.0 | Albite Diorite; medium to coarse grained, equigranular to | 19623 | 22.0 - 25.0 | 3.0 | trace |
| | slightly schistose. Buff to dark grey in colour, consistent | 19624 | 25.0 - 28.0 | 3.0 | .002 |
| | carbonate + chlorite alteration. Moderate veining + | 19625 | 28.0 - 31.0 | 3.0 | .002 |
| | fracturing. Contains trace + 5 mega pyrite (3-5%) | 19626 | 31.0 - 34.0 | 3.0 | .002 |
| | @ 27.5'; 1mega pyrite @ 50° to core. | 19627 | 34.0 - 37.0 | 3.0 | .002 |
| | Minor to moderate carbonate fracture system throughout unit | 19628 | 37.0 - 41.0 | 4.0 | .002 |
| 41.0 - 47.0' | * Highly silicified, siliceous with chlorite stringers + fine mineralization | * 3553 | 41.0 - 47.0 | 6.0' | .016 |
| 47.0 - 53.0' | * As above, but strongly fractured and a 6" wide | * 3554 | 47.0 - 53.0 | 6.0 | .146 |
| | quartz-pyrite-carbonate vein at 50° to core axis | 19629 | 53.0 - 56.0 | 3.0 | trace |
| 53.0 - 68.0 | Albite Diorite fine grained, chlorite veinlets and carbonate | 19630 | 56.0 - 59.5 | 3.0 | trace |
| | fracturing, fine grained pyrite mineralization + trace chalco- | 19631 | 59.5 - 62.0 | 3.0 | trace |
| | pyrite at 64° to core axis. Moderate chlorite alteration | 19632 | 62.0 - 65.0 | 3.0 | .002 |
| | throughout, + coarse pyrite | 19633 | 65.0 - 68.0 | 3.0 | .002 |
| | END OF HOLE @ 68.0' | | | | |

* Obtained from 1982 drilling data.

Relogged 11/1/83

OM83-[illegible]-C-279

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES): D.D.H # M19 to M26 & M39 to M42
→ see chester tp. report #30 & 29
- Murgold Resources

# DIAMOND DRILL RECORD

**PROPERTY** Hester, Berrisford and St. Louis Townships **HOLE No.** M 27

**SHEET NUMBER** _____ **SECTION FROM** _____ **TO** _____ **STARTED** June/82

**LATITUDE** _____ **DATUM** Winduck Lake Area **COMPLETED** June/82

**DEPARTURE** N/A Surveyed **BEARING** 020° **ULTIMATE DEPTH** 331

**ELEVATION** _____ **DIP** -50° @ collar **PROPOSED DEPTH** _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 5.0 | Casing | | | | |
| 5.0 - 58.0 | Biotite - quartz diorite; coarse grained, light to dark grey, massive, moderate pink staining locally, trace to minor disseminated pyrite, light chloritic alteration, reduced to chlorite/pyrite @ 45.0'; Small ½" quartz vein @ 50° to core axis. | | | | |
| | @ 57.0-58.0; Mafic dyke, fine grained with quartz stringers, biotite, upper contact @ 30° to core axis, lower contact @ 50° to core axis, light brecciation | | | | |
| | @ 58.0-58.5 | 15282 | 58.0-58.5 | .05 | Trace |
| 58.0 - 125.0 | Biotite granodiorite; coarse grained, moderately and silicified, light brecciation, patches of biotite, occasional large quartz eyes, minor disseminated pyrite / trace chalcopyrite | | | | |
| 125.0 - 150.0 | [illegible] quartz [illegible] grey [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | (~3%), quartz [illegible] | | | | |
| 150.0 - 160.0 | Felsite; [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| 160.0 - [illegible] | [illegible] | | | | |

Relogged 14/7/83 Don Hay

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| | [illegible] white quartz type [illegible] banding with [illegible] feldspar with dark rich flow [illegible] with the underlying unit | | | | | | |
| 71.0 - 274.0 | Diorite [illegible] fine to medium grained dark [illegible] show moderate [illegible] the upper part is well [illegible] show @ 70' consisting of fine - medium grained [illegible] rock [illegible] mainly quartz locally [illegible] appears to be [illegible] light olive [illegible] Rock [illegible] Many stringers of clear [illegible] [illegible] @ 70' | | | | | | |
| 274.0 - 276.0 | Mod grained [illegible] quartz [illegible] up to 2% pyrite. Alteration [illegible] moderate to [illegible] with light [illegible] | | | | | | |
| 276.0 - 330.0 | [illegible] fine grained [illegible] to [illegible] [illegible] with [illegible] & [illegible] [illegible] [illegible] pyrite fracture [illegible] [illegible] [illegible] quartz [illegible] with [illegible] [illegible] | | | | | | |
| | END OF [illegible] | | | | | | |

# DIAMOND DRILL RECORD

PROPERTY Nobs, Bonanza & St Louis Townsites HOLE No. "A 28"

SHEET NUMBER 1 of 3 SECTION FROM ____ TO ____ STARTED [illegible] 1982

LATITUDE ____ DATUM Universal Tube Co COMPLETED June 1982

DEPARTURE Not Surveyed. BEARING 360° ULTIMATE DEPTH [illegible]

ELEVATION ____ DIP -50° at collar PROPOSED DEPTH ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| [illegible] | Casing | | | | |
| 33 - 74.0 | Granite; medium grained equigranular, light to medium grey & pink, [illegible] phases & more mafic rock [illegible] weathered, [illegible] fractures where the rock is more mafic and in the dominant black quartz veins & veinlets [illegible] gradual transition between the granite & the diorite. Minor pegmatite & aplite dykes [illegible] @ 260° 51.5'. Minor pyrite and trace of sphalerite [illegible] quartz veins, minor disseminated pyrite @ [illegible] 64.0 - 74.0' [illegible] @ 64.5' | | | | |
| 74.0 - 120 | [illegible] granite; [illegible] & more granitic, dark grey to black [illegible] composed of [illegible] | | | | |
| [illegible] | [illegible] | | | | |
| [illegible] (134 - 140) | [illegible] | 3287 | 134 - 140 | 0' | Trace |

Relogged 14/1/83 Don Hoy

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | @ 260-266'; ultra fracturing [illegible] the lower colored zone is heavily fractured | | | | |
| 3200 - 3240 | [illegible] | | | | |
| | [illegible] | | | | |
| [illegible] | [illegible] | | | | |
| -48.0 - -104.0 | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] | | | | |
| | [illegible] @ 342.5'; [illegible] | 19634 | [illegible] | [illegible] | 1/4 oz |
| | [illegible] | 19635 | [illegible] | [illegible] | .022 |
| | END OF HOLE @ 400' | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | | |
|---|---|---|---|---|---|---|---|---|
| 20.0 - 120.0 | Mafic schist; fine to medium grained, grey to light brown, 10% mafic minerals, occasional large quartz grains, moderately oxidized, last 20 feet are fractured and somewhat chloritic zones. | | | | | | | |
| 120 - 175 | Mica schist; granoblastic; medium to coarse grained, moderately to heavily chloritized, locally rich in biotite as a metamorphic result of alteration | | | | | | | |
| 175 - 270 | Granodiorite; medium to coarse grained, locally weathered pink to medium grey, dominant large biotite grains, locally chloritized, rarely biotite schist, trace pyrite @ 180': 2" quartz calcite vein, 45° to core axis @ 215': 2" quartz calcite vein, 45° to core axis | | | | | | | |
| 270 - 320.0 | Dominantly fine grained to fine grained schist, locally chloritized, quartz veining, dominantly fractured, locally sheared & fractured @ 275 - 280': Quartz vein, 45° to core axis @ 305': 1" quartz vein, 45° to core axis | | | | | | | |

# DIAMOND DRILL RECORD

**PROPERTY** Chester, Benneviss and St. Louis Townships **HOLE No.** M29

**SHEET NUMBER** 1 of 3 **SECTION FROM** ____ **TO** ____ **STARTED** July 1/82

**LATITUDE** ____ **DATUM** Universal Tube Mine **COMPLETED** July 3/82

**DEPARTURE** Not Surveyed **BEARING** 180° **ULTIMATE DEPTH** 318.0'

**ELEVATION** ____ **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 15.0 | Casing | | | | |
| 15.0 - 42.0 | Granodiorite; medium grained, massive, medium to dark grey, only little alteration, except for local fracturing 15.0 - 33.0', moderate to heavy fracturing @ 27.0 - 28.5 foliated, biotite chlorite rich rock, sandy rock inclusions, stringers, fracture @ 70° to core axis, patchy sulphide @ 33.0' 35.0 - 36.0' foliated biotite, chlorite rich rock, sharp upper contact @ 45°, lower @ 60°. | | | | |
| 42.0 - 43.0 | * Quartz Vein; with pyrite and pyrrhotite, trace chalcopyrite | 15287 | 42.0 - 43.0 | 1.0 | Trace |
| 43.0 - 134.0 | Granodiorite; medium grained as per 15.0 - 42.0', inclusions of disseminated pyrite & trace chalcopyrite, (1-3%) contained 560-580; stringers of quartz-calcite @ 40° to core axis light oxidation in the form of fractures. 71.0; inclusion patchy quartz & associate Fe carbonate 98.0 - 110.0; inclusion quartz-chlorite contact (S) to V.S.° to core axis | | | | |
| 134.0 - 137.0' | Biotite chlorite rich rock; the rock is sandy rock inclusions sharp upper and lower contacts at 70° to core axis. foliation @ 80° to core axis. | | | | |
| 137.0 | Granodiorite medium to coarse grained, massive, light to medium grey, including inclusions, except for local zones | | | | |

* obtained from 1982 data
Relogged 20/7/83

Don Hoy

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 215.0 - 218.0 | Altered granodiorite; fine to medium grained, dark grey in colour, siliceous, minor pyrite (~1%) | | | | |
| 218.0 - 227.5 | Fine grained, basic metavolcanic?; very fine grained, dark grey to black, carbonatized, foliated locally at 60-70° relatively sharp contacts at ~80° may be representative of a lamprophyre | | | | |
| 227.5 - 306.5 | Altered granodiorite; quartz eye granodiorite, medium to coarse grained, pronounced bluish quartz eyes, medium to dark grey, massive, often patchy and disseminated pyrite (2-5%), Monzonite dyke present locally | | | | |
| | 263.0 - 269.0; gen. as characterized by abundant patchy and blebby pyrite, minor chalcopyrite | 19671 | 263.0-266.0 | 3.0 | trace |
| | | 19672 | 266.0-269.0 | 3.0 | .002 |
| | 289.0'; quartz vein (3"), @ 40° to core, no visible mineralization. | | | | |
| | 297.5; Small (½") quartz vein @ 35° to core, associated pyrite and chalcopyrite | | | | |
| 306.5 - 308.0 | Fine grained basic rock; lamprophyre, carbonatized, highly oxidized, highly developed foliation, sharp upper and lower contacts at ~80° to core | | | | |
| 308.0 - | Altered granodiorite; as per 227.5 - 306.5', grey, massive, dark quartz eyes, minor patchy pyrite, pervasive disseminated pyrite (~1-2%) | | | | |

END OF HOLE @ 318.0

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | in which diorite is prominent as Fe staining | | | | |
| | @ 161.5'; small (½") vein of ragged chalcopyrite & pyrite at | | | | |
| | 80° to core. | | | | |
| | 163.6'; stringers of chalcopyrite and pyrite, associated diorite | 19659 | 170.0-173.0 | 3.0 | .003 |
| | @ 172.0-174.0'; veins of Fe carbonates and quartz, associated | 19660 | 173.0-176.0 | 3.0 | trace |
| | patchy pyrite mineralization | 19661 | 176.0-179.0 | 3.0 | .002 |
| | From 170.0' to granodiorite substantially more altered, bluish | 19662 | 179.0-182.0 | 3.0 | .002 |
| | quartz eyes, associated to moderate pyrite & chalcopyrite | 19663 | 182.0-185.0 | 3.0 | .006 |
| 170.0 - 194.0 | Altered granodiorite; coarse grained, more siliceous than | 19664 | 185.0-188.0 | 3.0 | .002 |
| | above, prominent bluish quartz eyes, associated to moderate | 19665 | 188.0-191.0 | 3.0 | .002 |
| | patchy pyrite. (5%) | 19666 | 191.0-194.0 | 3.0 | trace |
| 194.0-196.0 | Quartz vein; contains fine pyrite and pyrrhotite | 15288 | 194.0-196.0 | 2.0 | .002 |
| 196.0 - 213.0 | Altered granodiorite as per 170.0-194.0, prominent | 19667 | 196.0-199.0 | 3.0 | trace |
| | bluish quartz eyes, moderate to heavy pyrite mineralization | 19668 | 199.0-202.0 | 3.0 | .002 |
| | as veinlets and stringers. | 19669 | 208.0-211.0 | 3.0 | trace |
| | @ 208.0-213.0'; zone of heavy patchy pyrite mineralization | 19670 | 211.0-213.0 | 2.0 | .004 |
| | & moderate to dark grey and siliceous, patchy light | | | | |
| | fine grained diorite | | | | |
| 213.0 - 215.0 | Diorite; fine grained to very fine grained, black, | | | | |
| | sharp upper contact @ 50° to core, lower contact | | | | |
| | at 55° | | | | |

# DIAMOND D. LL RECORD

**PROPERTY** Foster, Bannerman and St Louis Townships **HOLE No.** M30

**SHEET NUMBER** 1 of 3 **SECTION FROM** ____ **TO** ____ **STARTED** July 1/82

**LATITUDE** ____ **DATUM** Wuduck Lake Area **COMPLETED** July 3/82

**DEPARTURE** Not surveyed. **BEARING** 340° **ULTIMATE DEPTH** 501'

**ELEVATION** ____ **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| 0 - 10.0' | | Casing | | | | |
| 10.0 - 40.0 | | Ultra Diorite; medium to coarse grained heavily altered, white weathering to pervasive, no to trace, the alteration includes carbonatization, fairly pervasive and fine white pyrite is retained locally, foliation developed locally 290-310°; strong blocky developed at 10-15° to SE axis which has resulted in a secondary cleavage. | | | | |
| 40.0 - 41.0' | * | Felsite; blue type of quartz with iron pyrite, some chlorite | 15289 | 40.0-41.0 | .10 | .002 |
| 41.0 - 43.0 | | Altered granodiorite-diorite; largely medium grained, pervasive light grey, moderate to strong alteration, pervasive bleached altered & leaching minerals, trace rock outcrops, fine to medium pyrite and chalcopyrite alteration zones were noted towards the bottom of the interval. | | | | |
| 43.0 - 152.0' | | Altered granodiorite, largely altered, fine grained, pyrite to 2% in altered zones, fine to coarse grained, moderately altered, largely fractured and fractured, rock type is fairly altered, altered zones largely bleached white, moderate alteration, moderate white clay stringers, trace to trace moderate pyrite. Faulting and fracturing: 12.0' @ 25°, 45° @ 10-15°, 146'; @ 20-30° to core | | | | |
| | * | 108.5-109.0, quartz with pyrite and pyrrhotite | 15285 | 108.5-109.0 | .5 | Trace |

Relogged 24/7/82 Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 157.0 - 237.0 | Altered biotite granodiorite; fairly medium grained, equigranular to strongly altered, porphyritic textures. Feldspar is altered, biotite is altered to chlorite, pseudomorphs of biotite porphyritic textures in matrix. Small pyrite veins 205.0-221.0: fine grained, chloritic interval, veinlets less than 1% at least shallow intervals from 220.0 to end of unit; increasing degree of alteration showing foliation @ 221.0' - 20-30°, 236.0': 10-15° | | | | | | |
| 237.0 - 255.0 | Chloritic gouge, extremely altered zone, schistose, abundant biotite and biotite, foliation at very shallow angle to core, 5-10° to 15° axis, abundant carbonate veinlets fine to med grained 243.0 - 244.5' small interval of coarse grained unaltered granodiorite. 245.0': contact of fairly granodiorite with associated pyrite grading | | | | | | |
| 255.0 - 303.0 | Granodiorite, becoming coarse grained and unaltered, relatively low veining @ 30-35° to axis, minor stringers and pockets of pyrite & pyrrhotite (2-3%), foliation absent, fairly steep angle of intrusion @ 20° to axis. | | | | | | |
| 303.0 - 402.5 | Altered biotite granodiorite fine grained, moderately altered, chloritic, porphyritic carbonate, altered granodiorite dikes? | | | | | | |

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| | 303.0 - 304.0': chlorite altered, rubbly quartz @ 15° to ca axis | | | | | | |
| | veinlets too small or quartz, no visible mineralization | | | | | | |
| | rock may represent a country rock inclusion - may possibly | | | | | | |
| | be dyke rock | | | | | | |
| 475 - 501.0 | Rhyolite: largely medium grained, medium to light grey, <10% | | | | | | |
| | mafic minerals, relatively strong upper contact @ 30° to ca. | | | | | | |
| | locally reconstructed rhyolitic breccia disseminated | | | | | | |
| | pyrite (<2%), occasional rounded, bluish quartz eyes | | | | | | |
| | 480 - 486.0: heavily fractured, chlorite coating fracture surfaces | | | | | | |
| | from 470 - 471' rock is predominantly fine to medium grained, | | | | | | |
| | strongly recrystallized rhyolite/rhyodacite breccia with | | | | | | |
| | occasional quartz eyes. | | | | | | |
| | 456': small (2') quartz-chlorite vein @ 80° to ca. no | | | | | | |
| | visible mineralization | | | | | | |
| | from 471.0 - 501.0: medium to coarse grained, chloritic/quartz rich | | | | | | |
| | medium grey, speckled appearance | | | | | | |
| | 497.0 - 498.0 fractured interval @ 45° to core axis | | | | | | |
| | recrystallized minerals: chlorite, trace sulphides | | | | | | |
| | | | | | | | |
| | END OF HOLE @ 501.0' | | | | | | |
| | | | | | | | |

# DIAMOND D. LL RECORD

**PROPERTY** Chiasta, Benvenuto & St Louis Townships **HOLE No.** M 32?

**SHEET NUMBER** 1/1 **SECTION FROM** ____ **TO** ____ **STARTED** July 10/82

**LATITUDE** 3140 **DATUM** NO 3 min system **COMPLETED** July 12/82

**DEPARTURE** 69808 **BEARING** 030° (N30°E) **ULTIMATE DEPTH** 183.01

**ELEVATION** 9552.40 **DIP** -60° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 0 - 21.0' | Casing | | | | | | |
| 21.0 - 43.5 | Wood Dacite; medium to coarse grained, moderate to intense alteration, schistose to granular, intensely chloritized, occasional bluish quartz eyes; minor disseminated pyrite, numerous thin calcite veinlets | | | | | | |
| | 31.0'; fracture developed at 55-40° to core axis | | | | | | |
| 43.5 - 138.1 | Dacite; medium to coarse grained, intruded by numerous narrow granite dykes, some of which have associated with the dacite, resulting in local alteration zones, otherwise dacite is relatively unaltered, trace to minor chalcopyrite, light carbonatization | | | | | | |
| | @ 60.0'; 1 narrow (1.5") quartz vein w/ visible remobilization, stringlets at 50° to core axis | | | | | | |
| | 78.0-81.0'; intrusive alteration zone, core dacite and patchy carbonatized granite cut with dacite | | | | | | |
| | 130-136.0'; Wood dacite, moderate chloritic quartz eyes, chlorite veins & disseminated pyrite (2-3%), trace chalcopyrite | | | | | | |
| 136.0 - 142.0 | Wood Dacite; moderate to intense alteration, chloritization, light green in color, pervasive bluish quartz eyes, groundmass patchy quartz & buff calcite veins | | | | | | |
| | @ 140.0'; patchy quartz & appreciable disseminated chalcopyrite | | | | | | |
| | @ 145.0'; patchy quartz with appreciable patchy cpy & po. * | 15291 | 142.0-144.5 | 2.5 | 2.83 | V/slide | 10/11 |
| 142.0 - 144.5' | * dacite with chalcocite and pyrite | | | | | | |

Relogged 26/7/83 [signature]

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 18.0' - 155.0 | Diorite; coarse grained, relatively unaltered except for local gouge zone, slight foliation @ ~ 50° to the core axis numerous calcite stringers, transitional into the underlying unit. | | | | |
| 155.0 - 183.0 | Altered Diorite; intensely altered interval, medium to coarse grained, moderate gouge zone, intensely carbonatized chlorite, contains minor disseminated pyrite & trace chalcopyrite, numerous buff coloured calcite stockes & veinlets. | | | | |
| | END OF HOLE @ 183.0' (?) | | | | |

# DIAMOND DRILL RECORD

**PROPERTY** Hixton, Bonnemies and St. Louis Townships **HOLE No.** 1134

**SHEET NUMBER** 1 of 2 **SECTION FROM** ____ **TO** ____ **STARTED** July 14, 1983

**LATITUDE** 29486 **DATUM** #3 vein system **COMPLETED** July 16, 1983

**DEPARTURE** 69506 **BEARING** 200° **ULTIMATE DEPTH** 266.0'

**ELEVATION** 990.66 **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 7.0 | Casing | | | | |
| 7.0 - 12.0 | Altered diorite; fine grained and schistose, dark green, intense alteration, carbonatization & chloritization prevalent, numerous calcite stringers & slashes, traces of quartz & pyrite, foliation @ ~50° to core axis. | | 7.0 - 12.0 | 3.0 | |
| 12.0 - 13.5 | Quartz vein (6") at 12.5 - 13.0'; heavily mineralized with $FeS_2$, alteration of wallrock 6" each side of the vein, blue glassy eyes. | 15296 | 12.0 - 13.5 | 1.5 | .068 |
| 13.5 - 14.5 | Altered Diorite; larger, fine grained, with weak medium grained inclusions, prevalent chloritization & carbonatization, locally strongly foliated @ 35° to core axis, abundant carbonate stringers @ 14.0'; minor hematization and stringers of pyrite. | | 13.5 - 16.0 | 2.5 | |
| 14.5 - 15.0' | Diorite; medium to coarse grained, unaltered. | | | | |
| | @ 220 - 230': [illegible] | | | | |
| | sharp contacts. | | | | |
| | [illegible] | | | | |
| | @ 253.0': 2.5" [illegible] | | | | |
| | [illegible] | | | | |
| * | 270 - 273' [illegible] | 15297 | 270 - 273 | .8 | .030 |
| * | 141.0 - 142.6' [illegible] | 15298 | 141.0 - 142.6 | 1.5 | .022 |
| | $FeS_2$ & $Fe_{1-x}S$ pyrite | | | | |
| | 143 - 143.5 ; well mineralized with pyrrhotite disseminations ($Fe_{1-x}S$) | | | | |

Relogged 5/4/83 Don Hoy

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ | | |
|---|---|---|---|---|---|---|---|
| 151.0 - 153.0 | Diorite Dyke; medium grained, dark in colour, chloritic, copper @ 45°, lower @ 50-60°, strong magnetic, Sharp pyrite is associated with the contact zone small pyrite veinlets subparallel to dyke, minor pyrite & chalcopyrite | | | | | | |
| 153.0 - 230.0 | Diorite; medium grained, moderately altered, chloritic locally, fractures, relatively unaltered, gabbroic phases are present locally. 180-185.0; more dioritic in texture, carbonate filled, narrow calcite stringers and small cavities, mineralization is disseminated pyrite & chalcopyrite, predominant copper & lower contacts @ 50°; 1" quartz vein is visible mineralization @ 30-35° to core axis 210.0-210.6; broad interval of heavily disseminated chalcopyrite | | 210.0-213.5 | 0.5 | | | |
| | 214.0-218.0; fracturing and calcite veining @ 60-80° to core axis | | | | | | |
| 230.0 - 266.0 | Albite Diorite; medium to coarse grained, moderate to intense alteration, silicified (massive calcite veinlets) and silicified with disseminated pyrite, groundmass altered albitization of feldspars, pervasive very finely disseminated pyrite. | | | | | | |
| | @ 247.0-247.3'; quartz with chalcopyrite & pyrrhotite | 15294 | 247.0-247.3 | 0.3 | 0.02 | | |
| | @ 258.0' & 263.0'; shearing & foliation @ 45° to core axis. | | | | | | |
| | END OF HOLE @ 266.0' | | | | | | |

# DIAMOND D[illegible]LL RECORD

**PROPERTY** Chester, Bennevides & St. Louis Townships **HOLE No.** 1135

| | | | | | |
|---|---|---|---|---|---|
| **SHEET NUMBER** | 1 of | **SECTION FROM** | **TO** | **STARTED** | July 16/82 |
| **LATITUDE** | 20030 | **DATUM** | Vo. 3 Vein Spun | **COMPLETED** | July 17/82 |
| **DEPARTURE** | 10054 | **BEARING** | 20° (N 20°E) | **ULTIMATE DEPTH** | 150.0' |
| **ELEVATION** | 2955.61 | **DIP** | -50° @ collar | **PROPOSED DEPTH** | |

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 13.0 | Casing | | | | |
| 13.0 - 24.0 | Fine grained biotite rich rocks, light grey to black abundant biotites, possibly lamprophyre, numerous quartz - calcite veins within the interval, veins found @ 40-50° to core axis no significant visible mineralization other than disseminated pyrite. | | | | |
| 24.0 - 32.0 | Granodiorite; medium to coarse grained, slight schistosity developed, sharp contact with the above unit @ 45° to core axis, Intermittent brecciated contact | | | | |
| * | 27.0 - 27.8', quartz vein with chalcopyrite, contacts @ 45° to core | 15300 | 27.0 - 27.8' | 0.8 | .006 |
| 32.0 - 150.0' | Diorite - Quartz Diorite; largely medium grained and unaltered except for intervals which are rich in epidote, some preferred orientation of plagioclase laths seen locally. | | | | |
| | 32.0 - 33.0' foliation @ 45° to core, epidote stringers consistent with foliation. | | | | |
| | 88.0 - 58.4' white glassy vein, no visible mineralization | 1135-001 | 58.0 - 83.0' | 0.4 | Tr |
| | 90.0 - 111.0; very coarse grained quartz - biotite phase, some 1" large brown quartz eyes. | | | | |
| | 93.0 - 98.0; breccia with limonite | | | | |
| | END OF HOLE @ 150.0' | | | | |

Relogged 29/7/83 Don Hay

# DIAMOND DRILL RECORD

**PROPERTY** Chester, Bannerois and St. Louis Townships **HOLE No.** M 36

**SHEET NUMBER** 1 of 1 **SECTION FROM** ____ **TO** ____ **STARTED** July 19, 1982

**LATITUDE** 8974 **DATUM** No. 8 Vein system **COMPLETED** July 21, 1982

**DEPARTURE** 70187 **BEARING** ____ **ULTIMATE DEPTH** 153.0'

**ELEVATION** 9950.19 **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 7.0 | Casing | | | | |
| 7.0 - 133.0 | Quartz Eye Granodiorite; coarse grained, very light albeitic pink to medium grey, large bluish irregularly shaped quartz eyes, pinkish granite phases are present locally minor pyrite + $FeS_2$ locally. | | | | |
| | @ 20.0': ½" qtz vein at 45° to core, no visible mineralization | | | | |
| | @ 22.5': ½" qtz vein at 35-40° to core, no visible mineralization | | | | |
| | @ 25.0': ¾" qtz vein at 75° to core, barren of mineralization | | | | |
| | 43.0 - 43.3': 10% colored phase & ¾" seam of chalcopyrite @ 45° | M35-002 | 43.0 - 43.3 | 0.3' | Trace. |
| | @ 67.0': finely disseminated pyrite. | | | | |
| | 79.5 - 83.0': fine grained grey aplitic phase. | | | | |
| | @ 93.0': slight foliation @ 45° to core axes | | | | |
| | @ 117.0': small ¾" quartz vein at 70° to core axis | 19677 | 117.0 - 117.6 | 0.5 | .002 |
| | 117.5': brecciated patchy pyrite + minor chalcopyrite associated with a small quartz vein. | | | | |
| | from 121.0 to end of hole: quartz diorite - plastic phase. | | | | |
| 133.0 - 133.3 | Quartz vein: milky white, massive, no visible visible mineralization contacts @ 75° to core axes | M35-003 | 133.0 - 133.3 | 0.3 | Trace |
| 133.3 - | Granodiorite: rare ± 1" felsic phase ranges 10-15%, moderately [illegible] quartz veinlets, trace to rare disseminated sulphides | | | | |
| | END OF HOLE @ 1530' | | | | |

Relogged 28/7/83 Don Hoy

# DIAMOND D.LL RECORD

**PROPERTY** Chester, Bonnacio and St. Louis Townships **HOLE No.** M37

**SHEET NUMBER** 1 of **SECTION FROM** ____ **TO** ____ **STARTED** July 22 1983

**LATITUDE** 29092 **DATUM** NO 3 Vim system **COMPLETED** July 29 1983

**DEPARTURE** 10366 **BEARING** 180° **ULTIMATE DEPTH** 240.0'

**ELEVATION** C 1250.06 **DIP** -45° @ collar **PROPOSED DEPTH** ____

| DEPTH FEET | FORMATION | SAMPLE No | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 0 - 9.0 | Casing. | | | | |
| 9.0 - 14.0 | Granite - granodiorite; medium grained, massive, pink to medium grey, small bluish quartz eyes are evident. Transitional contact with the underlying unit. | | | | |
| 14.0 - 21.0 | Diorite - gabbro; medium grained, porphyritic appearance, primarily plagioclase phenocrysts in a dark groundmass, alteration of plagioclase to epidote seen locally, transitional contact is seen with the underlying unit. | | | | |
| 21.0 - 33.1 | Quartz bearing diorite; medium to coarse grained, pink to dark grey, some assimilation of granodiorite with diorite unit. | | | | |
| | 27.0 - 33.1'; pinkish granite dyke, coarse grained | | | | |
| | @ 33.0'; 1" quartz vein @ 45° to core. | | | | |
| | 32.1 - 33.1'; minor blue quartz eyes, 5% of chalcopyrite & pyrite mineralization | 40501 | 32.1 - 33.1 | 1.0 | Trace. |
| 33.1 - 35.0 | Gabbro; medium grained to porphyritic, similar to the interval 14.0 - 21.0', sharp upper & lower contacts at 45-50° and irregular lower respectively, light to moderate chloritization | | | | |
| 35.0 - 51.0 | Granite - quartz eye granodiorite; medium to coarse grained | | | | |
| | 35.0 - 38.0; pink, medium grained granite intrusive phase. | | | | |

Relogged 5/14/83 Don Hay

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| | | gradational into underlying granodiorite phase. | | | | |
| | | 38.0'; medium grained quartz-eye granodiorite | | | | |
| 51.0 - 54.0 | * | fine grained, containing finely disseminated chalcopyrite, pyrite and pyrrhotite, grained alone in spots, few quartz eyes. | * 40502 | 51.0 - 54.0 | 3.0 | Trace |
| 54.0 - 69.0 | | altered Diorite - Quartz Diorite; medium to coarse grained, dark grey to black, moderate to strong carbonatization, patchy epidote resulting from alteration of plagioclase | | | | |
| | * | 65.0 - 65.5'; quartz vein (1") with minor chalcopyrite and heavy pyrite mineralization | * 40503 | 65.0-65.5 | 0.5 | .024 |
| | | 65.0 - 69.0; coarser grained, more siliceous, quartz eyes, fracture filling pyrrhotite. | | | | |
| 69.0 - 86.0 | | Diabase - Lamprophyre; dyke rock, very fine grained to fine grained, chilled upper margin with sharp contact at 45-50°, very badly fractured at all angles, dark grey to black | | | | |
| 86.0 - 86.5 | * | Quartz Vein; contains heavy chalcopyrite disseminations upper contact sharp @ 50-55° to C.A. | * 40504 | 86.0-86.5 | 0.5 | 1.58 |
| 86.5 - 88.0 | * | Diorite; few quartz eyes & chalcopyrite and pyrite dissemination @ 87.5'; quartz vein (2") | * 40505 | 86.5 - 88.0 | 1.5 | .002 |
| 88.0 - 441.0 | | Altered Diorite; fine grained, slightly schistose, very siliceous, dark shades, disseminated pyrite & pyrrhotite (<1%) | | | | |

# DIAMOND D.LL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER _____ SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| | | fracture @ ~ 70-75° to core axes. | | | | |
| | | 93.5-94.0'; finely disseminated, chalcopyrite and pyrite | 40506 | 93.5-94.0 | 0.5 | trace |
| 94.0 - 107.0' | | Granodiorite - diorite; assimilation zone of pink-grey-quartz eye granodiorite and dark grey to black diorite, transitional & sharp contacts seen in both units. | | | | |
| | | 107.0-108.0; small diabase dyke, extremely fine grained sharp upper contact at 45° to core axes, sharp lower contact at 20° to C.A. | | | | |
| | | 116.0-125.0; medium-coarse grained granite phase, transitional contacts | * 40507 | 116.3-116.6 | 0.3 | .002 |
| | | 125.0 coarse grained siliceous diorite phase, quartz eye. | | | | |
| | * | 135.0-136.0'; becomes more siliceous with heavier dissemination of pyrite. | 40508 | 1350-136.0 | 1.0 | Trace |
| | * | 145.5-146.0'; ½" blue quartz with very fine chalcopyrite in quartz | 40509 | 145.5-146.0 | 0.6 | .002 |
| | | 146.0-240.0; fine siliceous diorite quartz eye | | | | |
| | | 146.0-148.0; 2" fracture @ 35° to core axes | | | | |
| 240.0 | | 148.0-240.0; medium grained, pink grey to black, relatively unaltered | | | | |
| | | 198.0-200.0 [illegible] | | | | |
| | | 200.0-240.0 [illegible] | | | | |
| | | END OF HOLE @ 240.0 | | | | |

# DIAMOND D. LL RECORD

**PROPERTY** Lester, Bernavicz & St Louis Townships **HOLE No.** M 38

**SHEET NUMBER** 1 of 3 **SECTION FROM** ____ **TO** ____ **STARTED** July 29/83

**LATITUDE** 29588 **DATUM** No. 3 Vein system **COMPLETED** July 31/83

**DEPARTURE** 9399 **BEARING** 200° (S 20°W) **ULTIMATE DEPTH** 321.0'

**ELEVATION** 9999.87 **DIP** -45° at collar **PROPOSED DEPTH** ____

| DEPTH FEET | | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|---|
| 0 - 15.0 | | Casing | | | | |
| 15.0 - 18.0 | | Boulders, granite and slate | | | | |
| 18.0 - 51.0 | | Diorite - Gabbro; largely coarse grained, massive, dark grey to black, relatively unaltered except for local oxidation parallel to fractures, minor disseminated pyrite. | | | | |
| | | 18.0-33.0; intensely fractured at various angles to core. | | | | |
| | | @ 35.5 - 36.0; oxidized and fractured interval | | | | |
| 51.0 - 68.0 | * | Fine grained altered diorite; chloritic, various quartz stringers throughout | | | | |
| | | 52.0 - 55.0; disseminated chalcopyrite and pyrite, weakly mineralized | * 40510 | 52.0-55.0 | 3.0 | Trace |
| | | 55.0 - 56.5; as above | * 40511 | 55.0-56.5 | 1.5 | Trace |
| | | 56.5 - 58.0'; 3" quartz vein at 57.3' containing heavily mineralized pyrite, sphalerite & chalcopyrite | * 40512 | 56.5-58.0 | 1.5 | .010 |
| | | 58.0 - 59.0'; disseminated $2FeS_2$ & $FeS_2$ | * 40513 | 58.0-59.0 | 1.0 | .018 |
| | | 59.0 - 60.0'; 12" qtz vein with $2FeS_2$, $FeS_2$ & $Fe_{1-x}S$ | * 40514 | 59.0-60.0 | 1.0 | .016 |
| | | 60.0 - 63.0'; mineralized $2FeS_2$ & $FeS_2$ | * 40515 | 60.0-63.0 | 3.0 | .002 |
| | | 63.0 - 66.0'; as above | * 40516 | 63.0-66.0 | 3.0 | .002 |
| 68.0 - 148.0 | | Gabbro; medium to coarse grained, very slight alteration, minor albitization of plagioclase to sericite, slight to moderate | | | | |
| | * | 88.0 - 88.3'; Vein quartz stringers with fine $2FeS_2$ & $FeS_2$ | * 40517 | 88.0-88.3 | 0.3 | Trace |
| | * | 92.0 - 93.0'; fine grained phase, heavily mineralized with $2FeS_2$ pervasive very finely disseminated pyrite & trace chalcopyrite | * 40518 | 92.0-93.0 | 1.0 | .026 |

Relogged 28/7/83 Don Hay

# DIAMOND DRILL RECORD

PROPERTY _____ HOLE No. _____

SHEET NUMBER 2 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| | 126.0 - 126.4'; disseminated Cu $FeS_2$ & $FeS_2$ | 40519 | 126.0 - 126.4 | 0.4' | .002 |
| | 147.0 - 148.0'; siliceous interval, mineralized with Cu $FeS_2$ & $FeS_2$ | 40520 | 147.0 - 148.0 | 1.0 | .008 |
| 148.0 - 149.0 | Quartz Vein; heavily mineralized for 3" on each side of the vein with $FeS_2$ & Cu $FeS_2$ | 40521 | 148.0 - 149.0 | 1.0 | .006 |
| 149.0 - 256.5 | Gabbro - Diorite; similar to 68.0 - 148.0', veined to coarse grained, relatively unaltered. | 40522 | 149.0 - 149.5 | 0.5 | .002 |
| | 158.0 - 161.0; quartz vein (1") running subparallel to the core axis, contains very minor $FeS_2$, Cu $FeS_2$ & $Fe_{1-x}S$ | | | | |
| | 210.5 - 211' fine grained chlorite interval, fractured @ 50 - 55° to CA. | | | | |
| | | 19678 | 222.0 - 225.0 | 3.0 | .302 |
| | 225.0 - 227.0'; fine grained some blue quartz eyes, disseminated pyrite & chalcopyrite | 40523 | 225.0 - 227.0 | 2.0 | .247 |
| | | 19679 | 227.0 - 228.4 | 1.4 | Trace |
| | 228.4 - 228.9; some grained with disseminated pyrite and minor chalcopyrite | 40524 | 228.4 - 228.9 | 0.5 | .038 |
| | | 19680 | 228.9 - 232.0 | 3.1 | Trace |
| | 244.0 - 244.5'; fine grained, some shearing and mineralized with $FeS_2$ & Cu $FeS_2$ | 40525 | 244.0 - 244.5 | 0.5 | .002 |
| | from 244.0 - 266.5; groundmass is fine grained and more siliceous, possible finely disseminated pyrite & minor Cu $FeS_2$ | 19681 | 244.5 - 247.0 | 2.5 | .002 |
| | | 19682 | 247.0 - 250.0 | 3.0 | .002 |
| | | 19683 | 250.0 - 253.0 | 3.0 | Trace |
| | | 19684 | 253.0 - 256.5 | 3.5 | Trace |
| 256.5 - 257.0 | Quartz Vein; heavily mineralized with Cu $FeS_2$, contacts @ 70° to C.A. | 40526 | 256.5 - 257.0 | 0.5 | .229 |

# DIAMOND D. LL RECORD

PROPERTY _____ HOLE No. _____

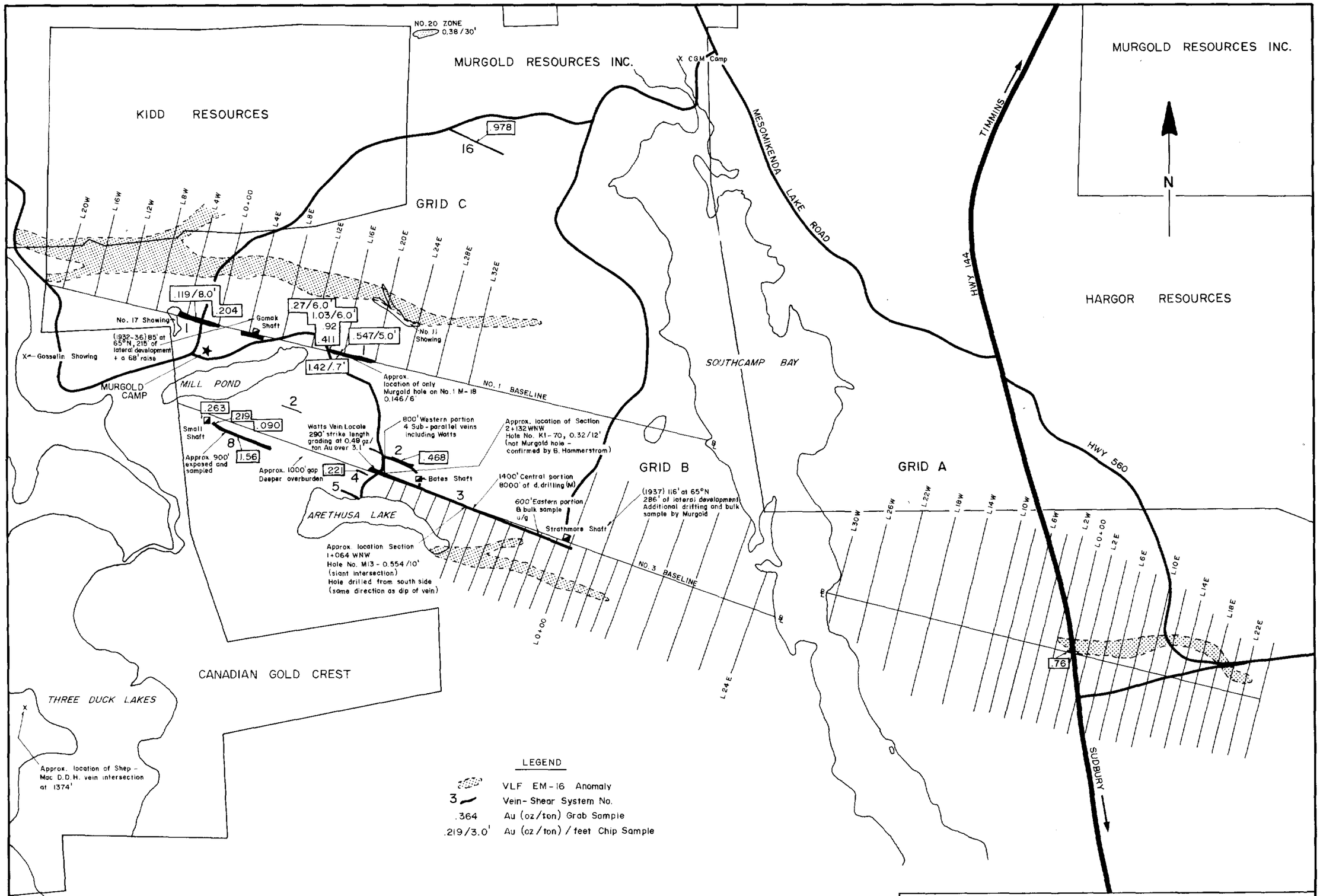
SHEET NUMBER 3 of 3 SECTION FROM _____ TO _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

| DEPTH FEET | FORMATION | SAMPLE No. | WIDTH OF SAMPLE | GOLD $ | SLUDGE / GOLD $ |
|---|---|---|---|---|---|
| 257.0 - 277.0 | Gabbro - Diorite; similar to above quartz vein @ 149.0 - 256.5' | 16685 | 257.0-260.0 | 3.0' | T.nil |
| 277.0 - 290.0' | Altered Diorite; medium grained, slightly more siliceous than above, moderately carbonatized, weak foliation developed at 75-80° to core axis, trace disseminated pyrite, chlorite, numerous calcite stringers and slips. Locally contains small patches of pyrrhotite. | | | | |
| 290.0 - 321.0 | Gabbro - Diorite; medium to coarse grained, unaltered medium to dark grey | | | | |
| | END OF HOLE @ 321.0' | | | | |




LEGEND

| | |
|---|---|
| | VLF EM-16 Anomaly |
| 3 | Vein-Shear System No. |
| .364 | Au (oz/ton) Grab Sample |
| .219/3.0' | Au (oz/ton) / feet Chip Sample |

NOTES

1. Murgold drilled 42 holes - 12,776'
2. W.G.M. Report, p.39 "It has been established that the No.3 vein is not a single vein but a system of narrow veins located within a N110° structural trend (shear.) at least 2,800' long and some 200' wide"
3. Bill Hammerstrom recently indicated that he feels the No. 1 vein system is a priority target

# MURGOLD RESOURCES INC.

## COMPOSITE MAP

## NO. 1, 2, 3, 4, 5, 8 VEINS

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

| SCALE: 1" = 1000' | DRAWING NO.: 1 | DATE: DEC. 1983 |
|---|---|---|





63.4370

Donald Hogg B.Sc.

GRAVEL PIT

SOUTHCAMP BAY

BERNICE LAKE

POWER LINE

T.L. 10+00 N

T.L. 8+00 N

T.L. 5+00 N

T.L. 5+00 S

T.L. 6+00 S

T.L. 8+00 S

Guardrails

TO TIMMINS

CONTOUR INTERVAL = 10 ppb Au

L 30+00 W
L 26+00 W
L 22+00 W
L 18+00 W
L 14+00 W
L 10+00 W
L 8+00 W
L 6+00 W
L 4+00 W
L 2+00 W
L 0+00
L 2+00 E
L 4+00 E
L 6+00 E
L 8+00 E
L 10+00 E
L 12+00 E
L 14+00 E
L 16+00 E
L 18+00 E
L 20+00 E
L 22+00 E
L 24+00 E

10+00 N
8+00 N
6+00 N
4+00 N
2+00 N
0+00
2+00 S
4+00 S
6+00 S
8+00 S

# MURGOLD RESOURCES INCORPORATED

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

## PLAN OF GRID A
## SOIL GEOCHEMISTRY
## Au ppb

| | |
|---|---|
| N.T.S.: 41-P/12 | SCALE: 1" = 200' |
| MAPPED BY: D.H. | DRAWING NO.: 4 |
| DRAWN BY: M.B. | DATE: DECEMBER 1983 |

63,4370

Donald Hoy B.Sc.

GRAVEL PIT

POWER LINE

BERNICE LAKE

SOUTHCAMP BAY

T.L. 10+00N

T.L. 8+00N

T.L. 5+00N

T.L. 5+00S

T.L. 8+00S

T.L. 6+00S

L 30+00W

L 26+00W

L 22+00W

L 18+00W

L 14+00W

L 10+00W

L 8+00W

L 6+00W

L 4+00W

L 2+00W

L 0+00

L 2+00E

L 4+00E

L 6+00E

L 8+00E

L 10+00E

L 12+00E

L 14+00E

L 16+00E

L 18+00E

L 20+00E

L 22+00E

L 24+00E

10+00 N

8+00 N

6+00 N

4+00 N

2+00 N

0+00

2+00 S

4+00 S

6+00 S

8+00 S

Guerdreis

TO QUIRKE

IN-PHASE PROFILE - OPERATOR FACING NORTH

+50% -50%

CONTOUR INTERVAL = 20 UNITS

SURVEY WITH GEONICS EM-16 BY BULLOCK

TRANSMITTER NAA, CUTLER, MAINE, 17.8 kHz

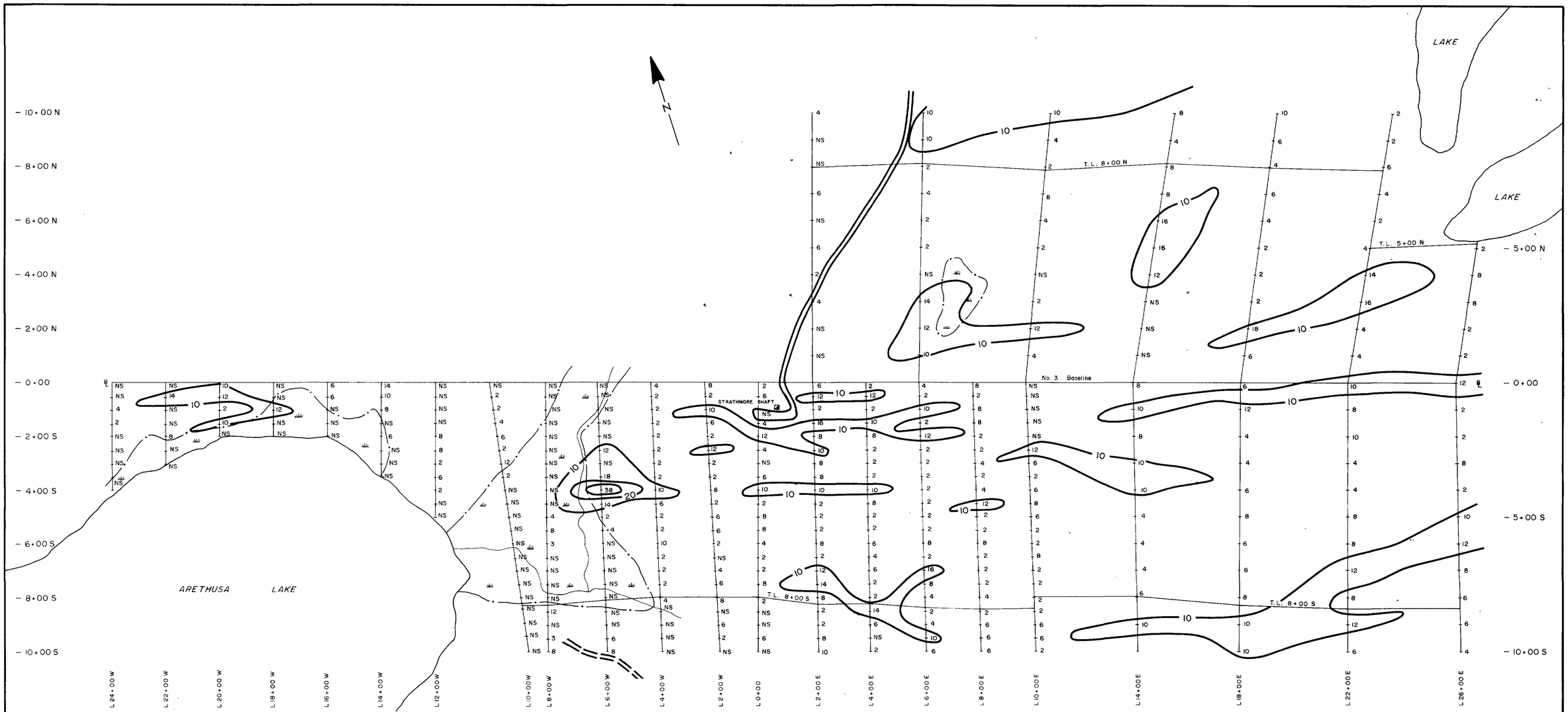
# MURGOLD RESOURCES INCORPORATED

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

## PLAN OF GRID A
## VLF-EM SURVEY

FRASER FILTERED CONTOURS & IN-PHASE PROFILES

| | |
|---|---|
| N.T.S.: 41-P/12 | SCALE: 1" = 200' |
| MAPPED BY: D.H. | DRAWING NO.: 3 |
| DRAWN BY: M.B. | DATE: DECEMBER 1983 |




CONTOUR INTERVAL = 10 ppb Au

**MURGOLD RESOURCES INCORPORATED**

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

# PLAN OF GRID B
# SOIL GEOCHEMISTRY
## Au ppb

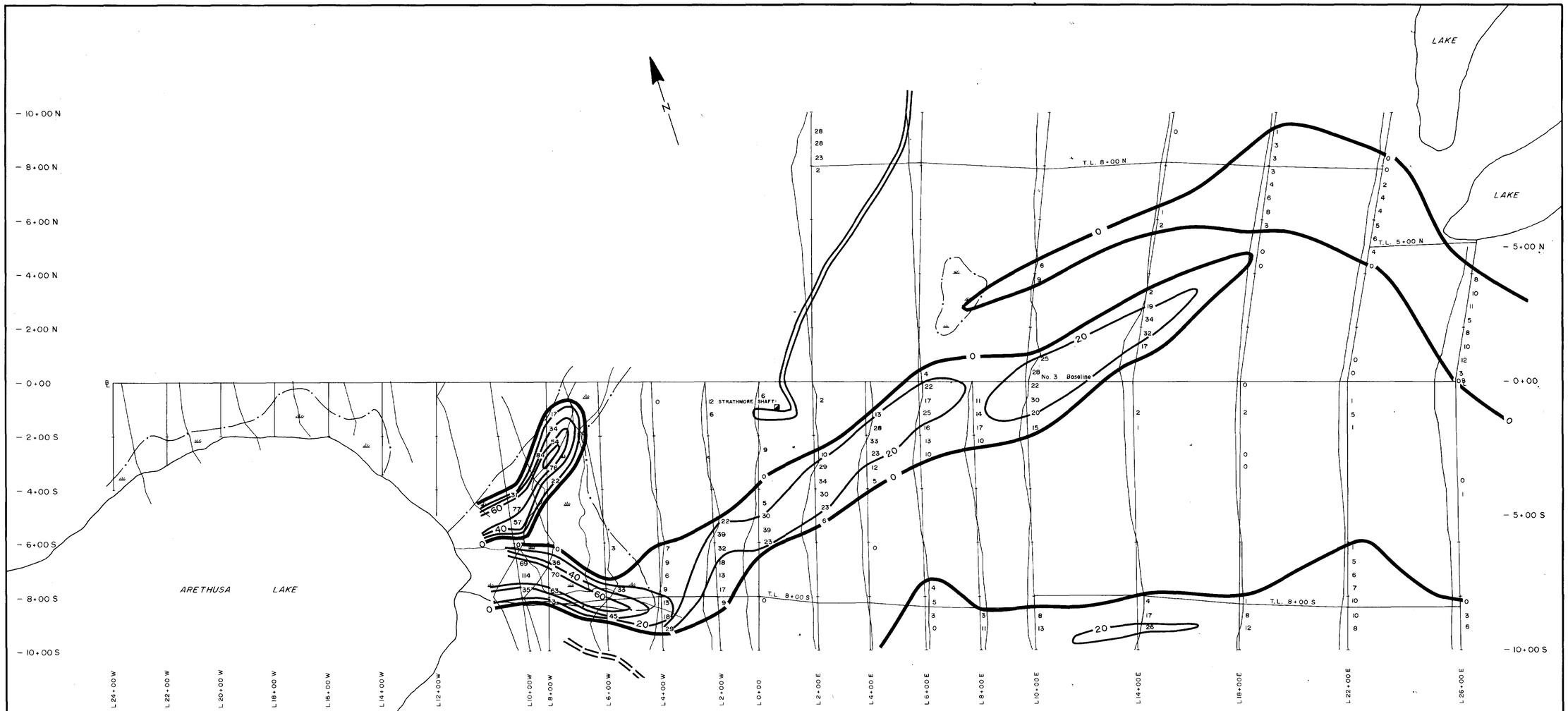
| | |
|---|---|
| N.T.S.: 41- P/12 | SCALE: 1" = 200' |
| MAPPED BY: D. H. | DRAWING NO.: 7 |
| DRAWN BY: M. B. | DATE: DECEMBER 1983 |



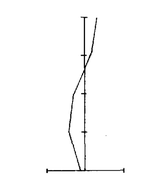
230

63,4378

Donald Hy B.Sc.




IN-PHASE PROFILE - OPERATOR FACING NORTH




CONTOUR INTERVAL = 20 UNITS

SURVEY WITH GEONICS EM-16 BY BULLOCK

TRANSMITTER NAA, CUTLER, MAINE, 17.8 kHz

# MURGOLD RESOURCES INCORPORATED

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS

PORCUPINE MINING DIVISION, ONTARIO

## PLAN OF GRID B
## VLF-EM SURVEY

FRASER FILTERED CONTOURS & IN-PHASE PROFILES

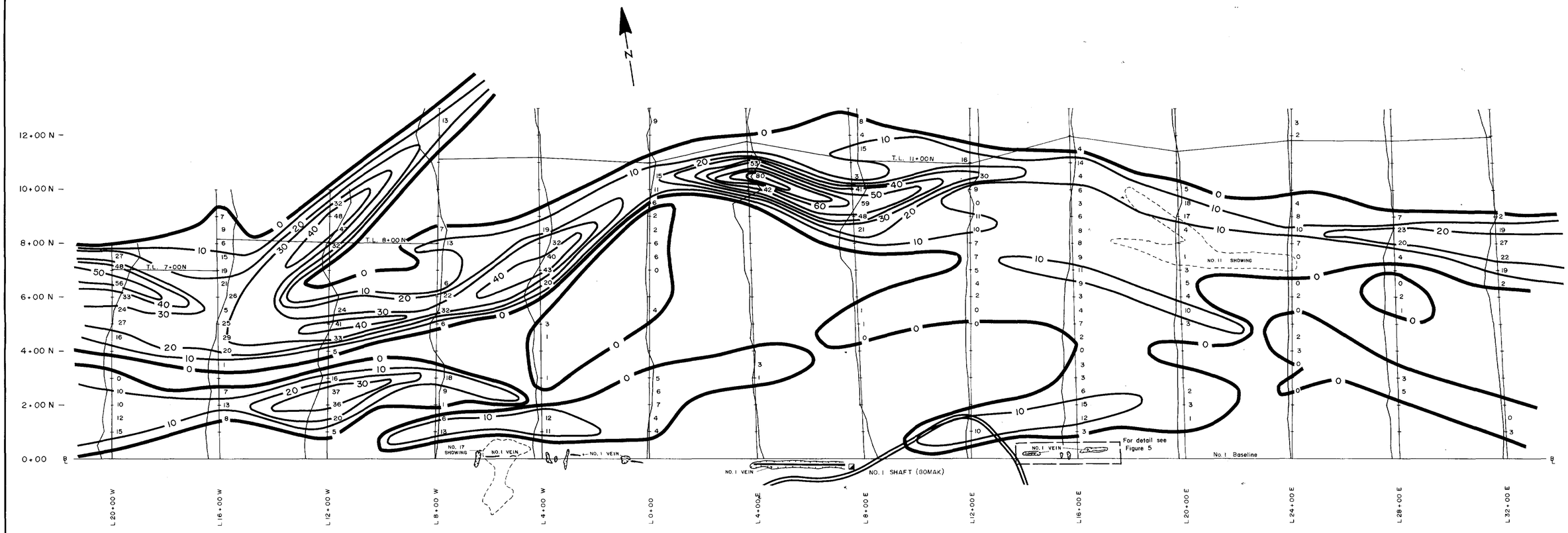
| | |
|---|---|
| N.T.S.: 41-P/12 | SCALE: 1" = 200' |
| MAPPED BY: D.H. | DRAWING NO.: 6 |
| DRAWN BY: M.B. | DATE: DECEMBER 1983 |



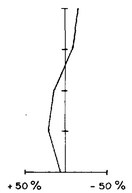


63.4370

Donald Ply B.Sc.




IN-PHASE PROFILE - OPERATOR FACING NORTH




CONTOUR INTERVAL = 10 UNITS

SURVEY WITH GEONICS EM-16 BY BULLOCK

TRANSMITTER NAA, CUTLER, MAINE, 17.8 kHz

VEIN EXPOSURE

BULLDOZED AREA

TRENCH LOCATIONS

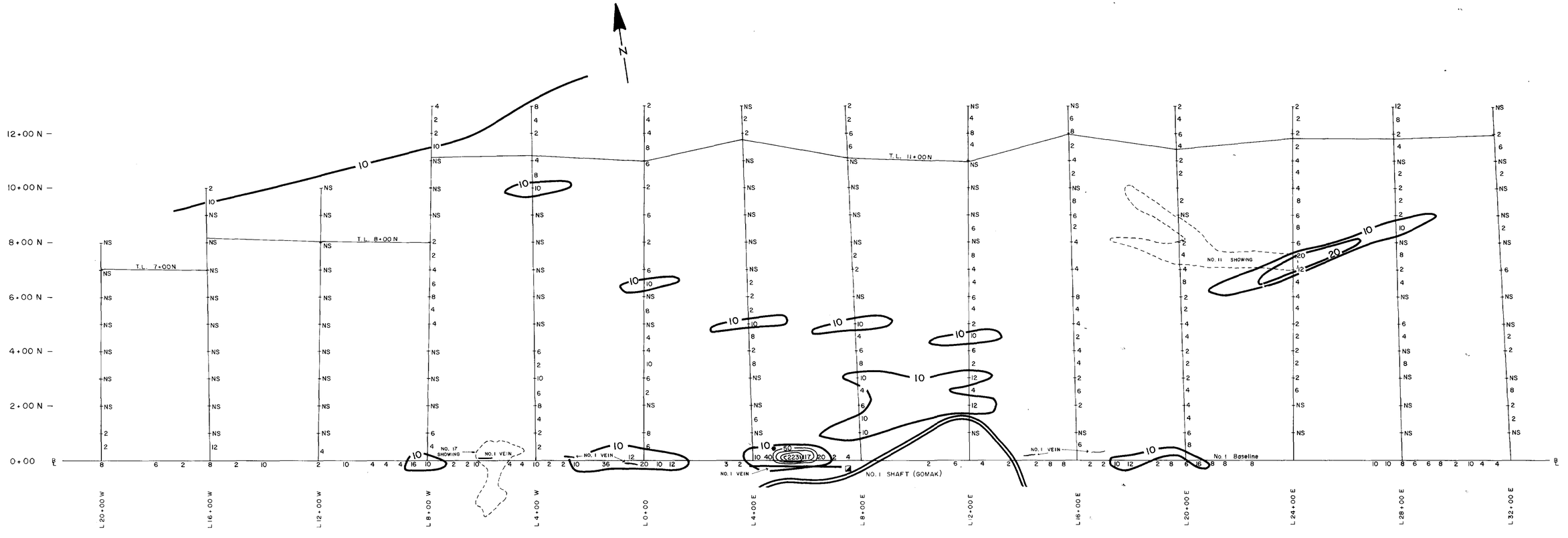
**MURGOLD RESOURCES INCORPORATED**

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

# PLAN OF GRID C
# VLF-EM SURVEY

FRASER FILTERED CONTOURS & IN-PHASE PROFILES

| | |
|---|---|
| N.T.S.: 41-P/12 | SCALE: 1" = 200' |
| MAPPED BY: D. H. | DRAWING NO.: 8 |
| DRAWN BY: M. B. | DATE: DECEMBER 1983 |




CONTOUR INTERVAL = 10 ppb
* Contours increase in increments of 50ppb

# MURGOLD RESOURCES INCORPORATED

CHESTER, BENNEWEIS & ST. LOUIS TOWNSHIPS
PORCUPINE MINING DIVISION, ONTARIO

## PLAN OF GRID C
## SOIL GEOCHEMISTRY
## Au ppb

| | |
|---|---|
| N.T.S.: 41-P/12 | SCALE: 1" = 200' |
| MAPPED BY: D.H. | DRAWING NO.: 9 |
| DRAWN BY: M.B. | DATE: DECEMBER 1983 |





63.4370

Donald Hy