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A REPORT ON THE DIAMOND
DRILLING AND GEOPHYSICAL SURVEY
WORK CONDUCTED ON THE
ST. ANTHONY GOLD MINE PROPERTY
OF AUBET RESOURCES INC.
BETWEEN JANUARY 19 AND MARCH 3, 1983

bу

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OM82-2-C-156

April 19, 1983



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#### SUMMARY

A diamond drilling and geophysical survey exploration program was carried out on the St. Anthony Gold Mine Property of Aubet Resources Inc., located near the north end of Sturgeon Lake, Ontario, during the period. January 19 - March 3, 1983. The purpose of this program was to explore for the extension of the No. 1 Vein System outside the previously mined areas, to evaluate the ore making potential of the No. 2 Vein System and to identify new exploration targets on the property.

The work program consisted of 5 drill holes for a total of 4,487 feet, 12 line miles of proton magnetic surveying and 10.5 line miles of V.L.F. electromagnetic surveying.

The drill program confirmed the extension of the No. 1 Vein System below the old mine workings and numerous anomalous gold values were obtained within this System. No ore grade mineralization over mineable widths was encountered, the best assays being 0.43 oz. Au/ton over 1.7 feet and 0.37 oz. Au/ton over 2.0 feet. The confirmation of the continuation of the mineralized structure below the 750 foot level is considered significant and one additional drill hole totalling 1,000 feet is recommended to further evaluate the No. 1 Vein System at depth. Additional drilling should be deferred until completion of an I.P. survey to the north of the old mine workings.

The No. 2 Vein System was intersected in all 3 holes which tested it. One of the 3 holes intersected 5.3 feet grading 0.50 oz. Au/ton. Gold values of 0.16 oz. Au/ton over 1.3 feet and 0.056 oz. Au/ton over 3.1 feet were encountered in the other 2 holes. The No. 2 Vein System has now been shown to have a strike length in excess of 600 feet and a depth extent of over 3 50 feet. Drilling conducted in 1983 was done down lithologic dip in order to cross cut the mineralized zones. Since it is believed that ore grade mineralization may be spatially related to the granite-volcanic contact where it is cut by a shear zone, two drill holes to be drilled across the lithologic dip are recommended to further evaluate the No. 2 Vein System and to determine the

geological picture at depth.

Geophysical surveys have identified 7 magnetic and 8 electromagnetic anomalies which warrant further investigation. Coincident magnetic and VLF-EM anomalies, believed to represent the extension of the shear zone which hosts the No. 1 Vein System to the south of it are recommended for drill testing by 2 holes for a total of 800 feet. A 3 mile I.P. survey is recommended to locate and evaluate what is believed to be the extension of the No. 1 Vein System shear zone to the north of the old mine workings. Six magnetic and seven electromagnetic anomalies identified by the geophysical surveys warrant field examinations to determine their cause.

The St. Anthony Gold property has an excellent chance of hosting an economic gold deposit and on budget of \$122,000 should be provided to carry out the recommended work program.

### Conclusions:

On the basis of the work completed to date, the following conclusions have been drawn:

- 1. The No. 1 Vein System, extends below the old mine workings and is characterized by a series of en-echelon veins with zones of quartz lacing in between.
- 2. The absence of ore grade mineralization over mineable widths in the recent drill testing of the No. 1 Vein does not rule out the existence of an economic gold deposit below the old mine workings since 3 drill holes over a strike length in excess of 400 feet cannot be expected to accomplish more than confirm the presence or absence of the mineralized structure.
- 3. The gold ore shoots of the No. 1 Vein System appear to be spatially, if not genetically, related to the granite-volcanic contact where it is intersected by the major shear zone which hosts the No. 1 Vein System.
- 4. Further drill testing of the No. 1 Vein System is warranted to evaluate its ore making potential. Specific efforts should be made to locate the volcanic-granite contact where it is cut by the major shear zone at depth.
- 5. The No. 2 Vein System occurs over a drill indicated strike length in excess of 600 feet and to a depth of at least 350 feet. The identification of ore grade gold mineralization over mineable widths in 1 out of 3 drill holes which tested this zone in 1983 and gold intersections of economic interest in 2 out of 7 holes drilled in 1965 indicate that the No. 2 Vein System has the potential to host an economic gold deposit.
- 6. The location of economic grade gold mineralization in the No. 2 Vein System spatially associated with the granite-volcanic

contact where it is cut by the No. 2 Vein System shear zone indicates that the location of this contact at depth must be determined.

- 7. Geophysical surveys have indentified the probable extension of the No. 1 Vein System both to the north and to the south of the old mine workings. These anomalous zones warrant systematic evaluation.
- 8. Geophysical surveys have identified 6 magnetic and 7 electromagnetic anomalies which warrant field examinations to determine their cause.
- 9. The St. Anthony Gold property has an excellent chance of hosting an economic gold deposit and a substantial exploration effort is warranted to evaluate this potential.

### Recommendations:

On the basis of the work completed to date, the following recommendations are made:

- 1. Conduct a geological field investigation of magnetic anomalies D, E, F, G, H, I and VLF-EM anomalies A, E, F, G, I, J, M (Plate 1) to determine their cause where possible. This work will involve mapping, sampling and assaying.
- 2. Conduct a 3 mile I.P. Survey to evaluate magnetic anomaly F and VLF-EM anomaly J. The purpose of this work is to identify and locate the extension of the shear zone which hosts the No. 1 Vein System from L8N to L44N and to identify drill targets within this zone. This work must be done following freeze-up next winter since approximately 1/3 of the survey area lies under the lake.
- 3. Drill two holes (SA83-9, SA83-10; Plate 1; Table 6) totalling 800 feet to test geophysical anomalies "C" (Plate 1) for gold mineralization. This drilling should follow a geological examination to determine the dip of the lithology and structures.
- 4. Drill two holes (SA83-6, SA83-7; Plate 1; Table 6) totalling 1,700 feet to test the No. 2 Vein System 50 100 feet above and below the No. 2 Vein intersection of drill hole SA83-4. These holes should be drilled from East to West in order to drill across the lithologic dip so that a geological picture of the relationship of mineralization to lithology can be determined.
- 5. Drill one hole (SA83-8; Plate 1; Table 6) totalling 1,000 feet to further evaluate the No. 1 Vein System to the north of drill hole SA83-3 and at the same level.

- 6. Defer further evaluation of the No. 1 Vein System to the north of and below drill holes SA83-1 and SA83-2 until the geophysical surveys recommended in 2. above have been completed and evaluated.
- 7. Conduct this program in conjunction with the tailings program scheduled for May, 1983.
- 8. Conduct additional sampling and assaying of core from 1983 winter drill program as listed in Table 5 of this report.
- 9. Provide \$122,000.00 to conduct this program. Table 7 presents an estimated breakdown of the costs to be incurred for these purposes.

J. B. Hinzer

J. W. Gill

### Introduction

On September 22, 1981 an engineering report on the St. Anthony Gold Mine property of Aubet Resources Inc. was completed by G.M. Hogg & Associates Ltd.. This report reviewed all the previous production history and exploration work and made recommendations for a 2 stage evaluation program designed to confirm the ore extension of the No. 1 Vein System outside previously stoped areas, to test the No. 2 Vein System over a 400 foot strike length, to identify new exploration drill targets and, contingent upon encouragement from this work, to dewater the shaft, sample and carry out limited development work within the existing mine workings.

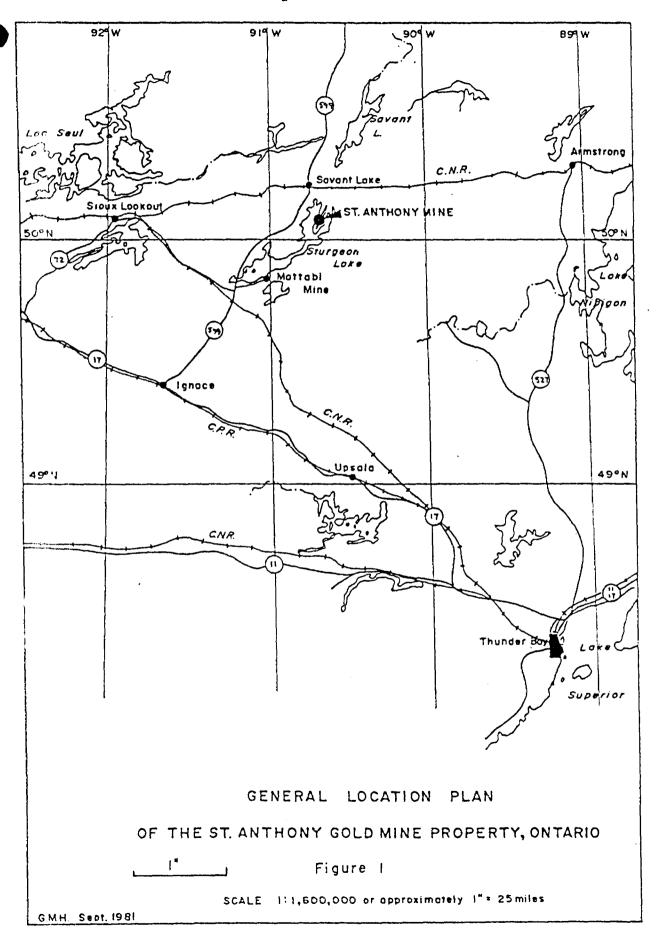
On November 29, 1982, Aubet Resources Inc. contracted Halo Centrex Inc. to manage and conduct the Stage 1 evaluation program as recommended by G.M. Hogg & Associates Ltd. The drilling and geophysical survey portion of this evaluation program was carried out between January 19, 1983 and March 3, 1983.

Drilling completed to date indicates that the No. 1 Vein System extends below the existing mine workings and further work is warranted to evaluate its gold potential in these areas. Further drilling and the tailings sampling program are scheduled to be conducted beginning in mid May 1983.

#### Property Location and Access

The St. Anthony Gold Mine property lies near the north end of Sturgeon Lake, approximately 130 miles northwest of the city of Thunder Bay, Ontario, and 13 miles south of the community of Savant Lake (Figure 1).

Acress to the property is by paved Highway 599 north from Ignace or south from Savant Lake to within 1 mile of the northwest side of Sturgeon Lake. Numerous gravel roads provide access to Sturgeon Lake from Highway 599 and the property is then reached by boat. The Horizontal Bay road off Highway 599, 12 miles south of Savant Lake, leads to the Marie's Bay Lodge landing on Sturgeon Lake which provides



for the most direct access to the property by boat. Boat rental is available at this Lodge. The property can also be reached by float or ski equipped aircraft from Ignace or Savant Lake.

An old winter road leading south from Savant Lake to the property is at present not useable, however, rehabilitation is possible if required.

Lodging can be arranged at Marie's Bay Lodge located approximately 1 mile southeast of the property and from which the property is accessible by foot along a bush road. The 1983 winter drilling program was operated out of this camp.

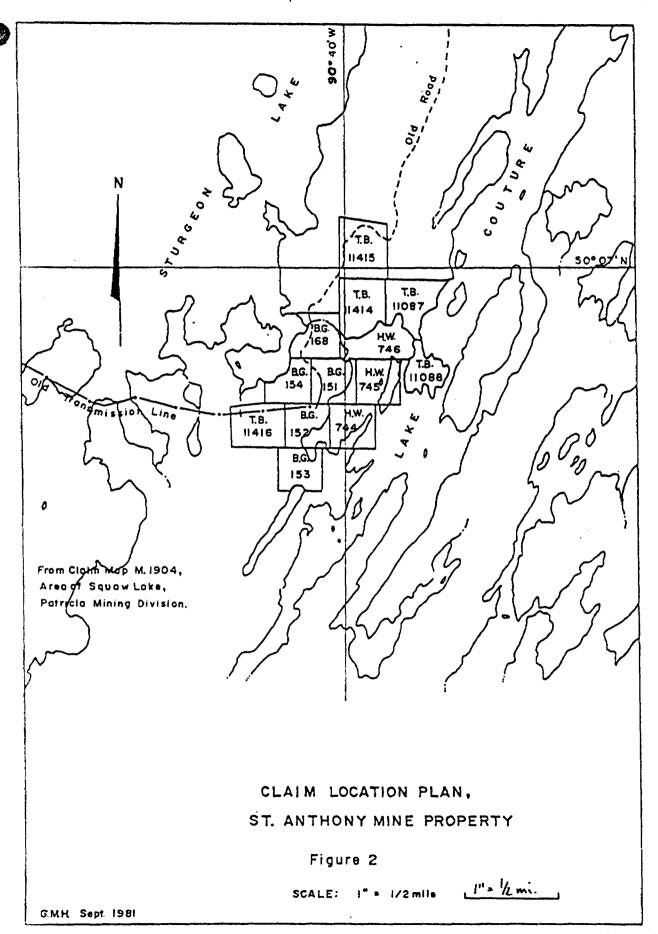
### Land Position

The property consists of 13, contiguous, patented mining claims located in the Patricia Mining Division of the Thunder Bay Mining District of Ontario (Figure 2). The claims are registered in the name of Aubet Resources Inc. in the Land Titles Registry Office in Thunder Bay, Ontario, and are shown on Claim Map M1904 - Area of Squaw Lake. A list of the claims is presented in Appendix A to this report.

### **Geology**

The St. Anthony Gold Mine property lies within the Superior Structural Province of the Precambrian Shield of Canada and all rocks in the area are of Precambrian age. Geologically the area is characterized by a northeasterly trending belt of mafic to intermediate volcanic rocks which wrap around the eastern margin of a large granitic-granodioritic batholith to the west. Major faulting has resulted in a well developed NNE-SSW trending pattern of lake development and roughly E-W faulting has offset stratigraphy at various locations.

On the St. Anthony Gold Mine property the batholith-volcanic contact zone is apparent. A mixture of basaltic and mafic volcanic rocks, granite, diorite and granitized volcanics are observed as well as numerous shear zones and faults. Silicification, sericitization and chloritization is abundant within this mixed, contact-zone rock package



and quartz veins and stringers are abundant within the shear zones. Late quartz porphyry dykes and mafic dykes cut the other rock units in the area.

A more detailed geological summary, as well as surface geological maps, of the property is given in the report of G.M. Hogg & Associates Ltd. presented in Appendix B to this report.

### Previous Work

A review of all previous work on the property was prepared by G.M. Hogg & Associates. This report is presented in Appendix B and the reader is referred to it for details.

The St. Anthony Gold Mine produced a total of 63,310 ounces of gold and 16,341 ounces of silver from 332,720 tons of ore mined during the period 1905-1941. All production was from the No. 1 Vein System, above the 750 foot level over a strike length of approximately 1,000 feet. This production was from a vein system characterized by extensive quartz veining in the form of veins and stringers within both granitic and volcanic host rocks where a major shear zone intersected the granite-volcanic contact. Disseminations of pyrite, sphalerite, galena and chalcopyrite were associated with the quartz. Gold was apparently associated with pyrite in the lower levels of the mine while free gold was reported in the upper levels. No work has been conducted on the No. 1 Vein System since 1941.

The No. 2 Vein System was drill tested by 7 holes over a 250 foot strike length to a maximum depth of 100 feet in 1965. Quartz veining up to 6 feet in width containing local pyrite was intersected in all holes, however, only 2 narrow ore grade intersections were obtained and no further work was carried out.

Systematic exploration of other known shear zones on the property has not been carried out to date.

### 1983 Work Program

During the period January 19, 1983 to March 3, 1983 a 5 hole 4,487 foot diamond drilling program and both magnetic and V.L.F. electromagnetic surveys were completed on the St. Anthony Gold Mine property.

### a. Geophysical Surveys

A total of 12 miles of grid lines were cut on the property at a spacing of 400 feet and the lines were picketed at 100 foot intervals. A 12 mile proton magnetic survey and a 10.5 mile V.L.F.- EM survey were carried out with readings taken at 50 foot stations along the lines. The In-Phase V.L.F.- EM data was filtered by the Fraser Filter Method.

A summary of the results of these surveys is presented in Tables 1 and 2 and Plate 1. Detailed survey maps are presented in Plates 7, 8 and 9. The geophysical surveys were conducted by Northwest Geophysics Ltd. and their report is attached as Appendix C to this report.

### 1) Magnetic Survey Results (Plate 9)

The background magnetic intensity is approximately 1,100 gammas on the Aubet property and the magnetic trend closely parallels both the strike of the lithologic units and the dominant N20-30°E shear direction.

Eight significant magnetic anomalies (A,C,D,E,F,G,H,I) have been identified on the property.

Anomaly A occupies a zone which corresponds with the existing mill and other buildings on the property and is interpreted as a cultural anomaly.

Anomaly C is a strong (3,609 gammas), N30°E striking anomaly located in an area underlain by mafic volcanic rocks. Anomaly C may represent the extension to the south of the No. 1 Vein System.

Anomaly D is a strong (3,214 gammas), NE striking anomaly, hosted in mafic volcanic rocks. The cause of the anomaly is unknown.

Table 1:

### Magnetic Survey Anomaly Data

Anomaly	Peak Magnitude (४)	Width (ft)	Length (ft)	Location	Comments
A	8660	200	200	L0-1E	mine site
В	5800	100	?		possible dyke - not on Aubet property
С	3609	100	1200	20S-5E	possible No. 1 Vein system extension
D	3215	100	600	8N-7E	possible shear zone
Ε	2061	100	600	16N-8W	cause unknown
F	1723	200-500	3200	48N I	major shear
F-1	1807	100-200	1300	-(0-4E)	major shear
F-2	1354	100-200	1500+	↓ 24S	major shear
G	1675	100-300	2000	32N-25E	possible sulphide zone
н	1854	200-300	1400+	(12-20S)-4W	possible mineralized shear zone
I	1436	50-100	1600-1800	36N-8E	possible extension of D

Table 2:

## VLF-EM Fraser Filter Anomaly Data

Anomaly	Peak Magnitude	Width (ft)	Length (ft)	Location	Comments
A	413	100	one line	8S-10E	possible contact shear zone
В	190	200	one line	8S-6E	overburden effect - fault zone
С	147	100	800+	(16-24S)-6E	possible No.1 Vein system extension
D	119	100	one line	24N-9W	overburden effect
E	108	250	800+	(12-20S)-(3-5W)	possible shear zone
F	103	200	1200+	32N-26E	possible bedrock conductor flanking magnetic anomaly
G	99	200	800+	36N-18E	possible shear zone
Н	98	100	one line	0-2E	mine site - cultural
I	90	100-200	1600+	(8-20S)-(1E-1W)	possible mineralized shear zone
J	87	50-200	4000+	(8-48N)-(0-4E)	shear-fault zone
K	85	150	800+	32N-22E	overburden effect
Ł	80	150	800+	8N-10W	overburden effect
М	78	100	800+	0-3W	shear zone
N	75	100	800+	(20-32N)-32E	overburden effect

Anomaly E occurs only on L16N within granitic rocks just west of the granite-greenstone contact. The cause of this anomaly is unknown.

Anomaly F is a long, N30°E striking, weak magnetic anomaly which parallels the shear zone which hosts the No. 1 Vein System and which may represent its extension to the north and south on the property.

Anomaly G occurs parallel to and just west of a carbonate-rich rhyolite shear zone. The cause of this anomaly is unknown.

Anomaly H is located in mafic volcanic rocks to the west of the No. 2 Vein System. The cause of this anomaly is unknown.

Anomaly I strikes N30°E in mafic volcanic rocks located in the NE portion of the property. No cause for this anomaly is known. This anomaly appears to be on strike with Anomaly D and they both may represent a mineralized shear zone parallel to the east of the No. 1 Vein System shear zone.

### 2) VLF-EM Survey Results (Plates 7, 8 and 9)

Fourteen VLF conductors have been identified by the survey and these conductors are shown on the Fraser Filter contour map (Plate 8). The anomalies trend N20-30°E subparallel to the regional lithologic strike and the primary shear direction.

Anomaly A is a very strong, 1 line conductor which lies at the volcanic-granite contact. This is most likely caused by local shearing at the contact and a field examination is warranted.

Anomaly B is a strong 1 line conductor, lying under water south of the No. 1 Vein System. This conductor lies within a fault zone and, although it possibly represents the southward extension of the No. 1 Vein System, it is believed to be due to overburden effect in the bay.

Anomaly C is a strong conductor, with a coincident magnetic anomaly. This conductor may represent the southern extension of the No. 1 Vein System and as such it should be examined in the field prior to drilling. The VLF data indicates a dip to the west for this conductor.

Anomaly D is a 1 line conductor located in the river and has no magnetic correlation. Although most likely due to overburden, it should be examined in the field since it may lie within an E-W fault zone defined by the river.

Anomaly E is a moderate strength conductor with good magnetic correlation. A field examination is warranted as this conductor may represent a shear zone west of the No. 2 Vein System.

Anomaly F lies immediately west of a rhyolite shear zone identified by geologic mapping. A field examination is warranted to evaluate this rhyolite shear zone.

<u>Anomaly G</u> is a weak conductor which may reflect a shear zone in this area. A field examination is warranted.

Anomaly H is located in the area of the mine site and is interpreted to be caused by cultural material.

Anomaly I is a weak conductor which may coincide with the diorite zone to the north. The strongest part of this conductor lies in a swamp which defines an E-W trending fault zone. A field examination is warranted.

Anomaly J is a weak, long conductor which extends northward along strike from the No. 1 Vein System. This conductor may represent the northward extension of the shear zone which hosts the No. 1 Vein System and an I.P. survey is warranted to evaluate its gold potential.

Anomaly K is overlain by water and is interpreted to be caused by overburden.

<u>Anomaly L</u> lies in a swamp underlain by granite and is believed to be caused by overburden.

Anomaly M occupies a shear zone observed on surface. A field examination of this anomaly is warranted. This shear zone may extend southward toward Anomaly E.

Anomaly N lies along a narrow channel between 2 land masses and is interpreted to be due to overburden within a fault zone.

On the basis of the results of the geophysical surveys, follow-up work is warranted on magnetic anomalies C. D. E. F. G. H and I and on VLF-EM anomalies A, C, E, F, G, I, J and M. Magnetic and VLF-EM anomalies "C" are of immediate priority since it is probable that the extension of the shear zone which hosts the No. 1 Vein System to the south of the old mine workings. Two drill holes are recommended to test this zone at shallow depth following surface examination to confirm the dip of the lithology in this area. Magnetic anomaly F and VLF-EM anomaly J warrant an I.P. geophysical investigation to identify drill targets for future testing. One of these anomalies is believed to represent the extension of the shear zone which hosts the No. 1 Vein System to the north of the existing mine workings. The completion of a 3 mile I.P. survey to cover these anomalies and extending from L8N to L44N will allow the determination of which anomaly represents the No. 1 Vein System shear zone and whether or not new drill targets exist along this shear. The remaining anomalies should be evaluated by a geological field investigation to consist of mapping and sampling prior to any additional geophysical work or drilling.

### b. <u>Drilling Program</u>

Five drill holes, for a total of 4,487 feet, were drilled to test for additional ore reserves in the unstoped areas of the St. Anthony Gold deposit and to evaluate the No. 2 Vein System located approximately 400 feet to the west of the past producing No. 1 Vein System.

The drill hole collar locations, bearings, dips and depths are shown in Table 3. The holes are shown projected to surface in Plate 1, in cross section in Plates 2 - 6, and their pierce points on a longitudinal section are shown on Figure 3. Diamond Drill Logs are presented in Appendix D and rock unit descriptions are presented in Appendix E.

#### 1) Drill Holes SA83-1 and SA83-2

Drill holes SA83-1 and SA83-2 were drilled to evaluate an unstoped area between the 150 and 500 foot level below the 101 and 151 stopes north of the No. 1 shaft (Figure 3).

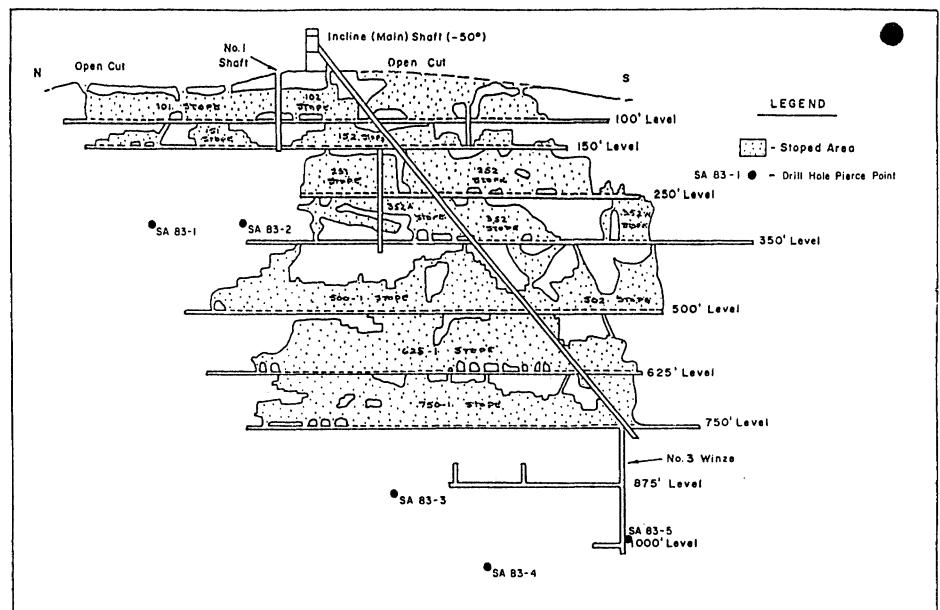
Hole SA83-1 was drilled in granite over its length of 416 feet, with the exception of a 39.1 foot section of highly sheared quartz porphyry intersected between 161.2 and 193.1 feet. Intense shearing (Shear Breccia), quartz lacing, and prominant yellow-green alteration characterize the granite adjacent to the quartz porphyry and in narrow zones from 270.9 - 277.0 feet, 348.0 - 353.0 feet and 385.0 - 390.0 feet. The alteration is characterized by sericite, minor chlorite and up to 50% narrow, irregular quartz stringers (quartz lacing). All the sheared and altered zones contain 1-3% disseminated pyrite as well as traces of sphalerite and galena. Anomalous gold values from 0.008 to 0.011 oz. Au/ton are associated with these zones. Within the sheared-altered zone from 385.0 - 390.0 feet, an 18 inch quartz vein contains several 1/8 inch massive pyrite-pyrrhotite seams. Within this zone the section from 387.2 - 388.9 feet assayed 0.43 oz. Au/ton. The zone from 385.0 - 390.0 feet is believed to represent the No. 1 Vein System.

Hole SA83-2 was drilled in granite over its length of 407 feet with the exception of a 37.3 foot section of sheared quartz porphyry intersected

Table 3: Drill Hole Data - SA83-1 to SA83-5

Hole No.	Collar Location	Bearing	Dip at Collar	Dip at Bottom	Total Length (feet)
SA83-1	2+92N, 0+06W	110°	-50°	-53°	416
SA83-2	0+93N, 0+27E	110°	-50°	-54°	407
SA83-3	3+30S, 3+57W	102*	-65 <b>*</b>	-62°	1,108
SA83-4	5+52S, 3+70W	102*	-65°	-61 <b>•</b>	1,248
SA83-5	6+49S, 3+46W	102°	-60°	-57 °	1,307





LONGITUDINAL SECTION OF THE WORKINGS OF THE ST. ANTHONY MINE TO DECEMBER, 1941

Adapted from G.M. Hogg & Associates Ltd., 1981 Report

SCALE: 1" = 20011. 1" = 200"

Figure 3

between 254.7 and 292.0 feet. Intense shearing and alteration, similar to that encountered in SA83-1, characterizes the granite adjacent to the quartz porphyry and was encountered in several other 10 foot sections. No distinct quartz veins were intersected, however, two zones characterized by up to 50% narrow irregular quartz stringers (quartz lacing) with up to 3% disseminated pyrite, occur from 355 - 365 feet and 380 - 390 feet. The No. 1 Vein System is believed to correspond with the section from 380 - 390 feet where assays of 0.035 oz. Au/ton over 3.3 feet from 383.2 - 386.5 feet were obtained. Anomalous gold values ranging from 0.010 to 0.013 oz. Au/ton were obtained from most other shear zones containing minor pyrite.

### 2) Drill Holes SA83-3, SA83-4 and SA83-5

Drill holes SA83-3, SA83-4 and SA83-5 were drilled to test for the down dip extension of the No. 1 Vein System below the 750 foot level and to test the No. 2 Vein System at a depth between 250 and 400 feet below surface. (Plate 1, Figure 3).

Hole SA83-3 was drilled in granite, greenstone, diorite and quartz porphyry to a depth of 1,108 feet. From 69.0 to 171.8 feet greenstone was cored consisting of mafic volcanics, minor granitic material and 2 narrow mafic dykes. A sheared quartz porphyry, identical to that in holes SA83-1 and SA83-2, was intersected from 283.5 to 295.3 feet. Mafic dykes were encountered from 297.5 - 301.8 and 347.5 - 357.0 feet and coarse-grained diorite was intersected between 357 and 715 feet. All other sections of hole SA83-3 were drilled in granite. Significant alteration zones with shear brecciation and abundant quartz lacing occur from 345 - 350 feet, 770 - 780 feet, 845 - 855 feet and 915 - 920 feet. These zones all contain 1 - 3% pyrite and pyrrhotite, traces of sphalerite and galena, as well as anomalous gold values ranging from 0.008 to 0.080 oz. Au/ton. The higher gold values are associated with those sections containing sphalerite and/or galena. Two major quartz vein zones were encountered from 924.5 - 969.4 feet and 1,005.0 - 1,017.8 feet and are believed to represent the No. 1 Vein System which extends from 918 to 1,020 feet. Gold assays of 0.37 oz. Au/ton over 2.0 feet from 951.8 - 953.8 and 0.14 oz. Au/ton over 2.1 feet from 1,012.5 to

1,014.6 were obtained from massive quartz veins containing large 3 - 10 cm pyrite cubes within the No. 1 Vein System. The No. 2 Vein System is believed to have been intersected between 460 and 540 feet. This zone is characterized by major shearing. No gold values of economic interest were encountered in this zone.

Hole SA83-4 was drilled in altered granite over almost its entire length of 1,248 feet. Mafic dykes were encountered from 19 - 21 and 23.0 - 25.7 feet and a narrow section of highly sheared (gneissic) mafic volcanic was cored from 376.3 - 383.5 feet. A quartz porphyry was intersected from 376.3 - 383.5 feet. The altered granite is buff to pink above 760 feet and becomes a darker green-gray below this depth. Major alteration and shear zones are present from 380 - 400, 510 - 530, 600 - 670, 750 - 775, 925 - 965 and 1,110 - 1,180 feet. Within the zone from 1,110 - 1,180 a zone of massive quartz veins occurs from 1,130 -1,150 feet. Within the sheared and altered zones are patches of pink potassium feldspar alteration, locally heavy chlorite and pyrite on slip surfaces between 750 and 1,200 feet. Gold values ranging from 0.010 -0.079 oz. Au/ton were encountered throughout the hole. These gold values are associated with quartz lacing, minor pyrite and pyrrhotite as well as traces of sphalerite and galena. The higher gold values coincide with higher pyrite content, the presence of sphalerite, and/or pink potassium feldspar alteration. Gold assays of 0.035 oz. Au/ton over 1.6 feet from 1,143.7 - 1,145.3 in a 9 inch quartz vein and 0.049 oz. Au/ton over 4.5 feet from 1,170.9 - 1,175.4 feet in a quartz laced zone with 3% pyrite and pyrrhotite are within what is believed to be the No. 1 Vein System extending from 1,116 to 1,176 feet. Gold assays of 0.16 oz. Au/ton over 1.3 feet from 512.8 - 514.1 feet and 0.50 oz. Au/ton over 5.3 feet from 612.1 - 617.4 feet were obtained from sheared and altered zones containing quartz veins and pink potassium feldspar alteration. The section from 612.1 - 617.4 feet is believed to be contained within the No. 2 Vein System.

Hole SA83-5 was drilled in mafic volcanics and altered granite for most of its length of 1,307 feet. From bedrock to 515.1 feet, the hole cored mafic volcanics with the exception of from 138 - 142 feet where a mafic dyke was intersected and from 414 - 417 feet where a quartz porphyry was

cored. Granite was encountered from 515.1 feet to the bottom of the hole. The top 200 feet of the granite is a buff to grey colour which grades into a darker green-grey granite below. Blue-green chloritic mud is abundant on shear slips in the lower portion of the hole. Major shear and alteration zones occur from 370 - 380, 480 - 520, 610 - 675, 770 - 810, 965 - 975, 1,070 - 1,200 feet. No economically significant gold values were encountered, however, anomalous values ranging from 0.010 to 0.088 oz. Au/ton are present throughout the hole. A chloritized shear breccia zone from 965 - 975 feet contains gold values of 0.088 oz. Au/ton over 3.8 feet from 968.5 - 972.3 and may represent the zone called the "Diorite Zone" at surface. The No. 1 Vein is believed to be represented from 1,076 to 1,200 feet, however, no gold values of economic interest were encountered in this zone. The No. 2 Vein System was intersected from 610 - 675 feet and gold values of 0.056 oz. Au/ton over 3.1 feet from 665.1 to 668.2 feet associated with sulphides in quartz veins is of significance.

### c. Mineralization

No visible gold was observed in any of the drill holes completed in this program. The principal sulphides observed were pyrite and pyrrhotite. Trace amounts of sphalerite, galena and chalcopyrite were identified.

Pyrite occurs in two modes; as disseminated, euhedral cubes throughout the core and concentrated up to 5% where alteration and shearing are strong, and as seams and blotches associated with pyrrhotite in bull quartz veins and in areas of heavy quartz lacing.

Pyrrhotite occurs as seams and blotches associated with pyrite in bull quartz veins and in areas of heavy quartz lacing. Pyrrhotite does not appear in holes SA83-1 and SA83-2 and no mention of pyrrhotite was made in previous reports on the property. The pyrrhotite appears to be restricted to the lower portions of the No. 1 Vein System.

Sphalerite, galena and chalcopyrite occur in insignificant quantities as relates to the zinc, lead and copper potential of the property.

Sphalerite occurs locally as crystal aggregates associated with bull quartz veins. Both galena and chalcopyrite were rarely seen and no significance can be attached to their associations with blotches of pyrite and pyrrhotite.

Gold was the only element assayed for in this program. In view of the low silver concentrations reported from past mining operations and the sparcity of galena and sphalerite, it was decided to assay the pulps from any interesting gold values for their silver content.

The gold values of interest from this drill program are presented in Table 4 and assay results from the 484 samples are presented in Appendix F. Based on the assay results and their relationship to lithology, additional sampling as outlined in Table 5 should be carried out to insure that no gold mineralization of interest has been overlooked. All significant gold values are associated with seams and blotches of pyrite and pyrrhotite in bull quartz veins and areas of heavy quartz lacing. No gold values of economic interest were obtained from altered and sheared zones containing disseminated pyrite.

### d. Discussion of Results

The 1983 diamond drilling program was conducted with the objective of testing for the continuation of the No. 1 Vein System below those areas stoped during previous mining operations and to evaluate the ore making potential of the No. 2 Vein System.

All 5 drill holes intersected the No. 1 Vein System and confirm the presence of this system both to the north of and below the old mine workings. Drill holes SA83-1 and SA83-2 evaluated the No. 1 Vein System at a depth of approximately 350 feet and directly below shallow, wide stopes reported to have contained substantial free gold. No wide zones of quartz vein material were intersected in this drilling, however, zones of heavy quartz lacing were encountered. Drill hole SA83-1 did intersect a 1.5 foot quartz vein within the No. 1 Vein System and, as this hole was drilled across the area where there is an apparent en echelon vein pattern at surface (see Plate 1 and Map No. 2 in Hogg's report), this may indicate a new zone of heavy quartz veining

Table 4:

# Mineralized Zones of Interest in the No. 1 and No. 2 Vein Systems

Drill Hole	No. 1 Vein System			No. 2 Vein System		
	Au (oz/ton)	Length (ft)	Footage	Au (oz/ton)	Length (ft)	Footage
SA83-1	0.430	1.7	387.2-388.9			
SA83-2	0.035	3.3	383.2-386.5			
SA83-3	0.370	2.0	951.8-953.8			
	0.140	2.1	1012.5-1014.6			
SA83-4	0.035	1.6	1143.7-1145.3	0.160	1.3	512.8-514.1
	0.049	4.5	1170.9-1175.4	0.500	5.3	612.1-617.4
SA83-5	0.088	3.8	968.5-972.3	0.056	3.1	665.1-668.2
	0.032	5.0	1192.8-1198.0			

Table 5:

### Additional Core Sampling and Assaying

Drill Hole	Sample Interval (feet)	Assay For
SA-83-2	88.9 - 101.5 102.7 - 108.5	Au Au
SA-83-3	830.3 - 846.8 910.6 - 915.6 919.0 - 924.1	Au Au Au
SA-83-4	184.9 - 188.0 190.0 - 198.5 214.7 - 216.5 222.0 - 225.9 384.4 - 388.0 394.5 - 400.0 501.3 - 512.8 514.1 - 524.8 526.8 - 535.0 617.4 - 625.7 628.4 - 645.5 672.0 - 677.5 680.3 - 687.0 750.0 - 755.2 764.6 - 768.8 894.5 - 898.0 926.0 - 928.0 929.0 - 939.5 1107.6 - 1113.5 116.6 - 1122.7 1166.0 - 1170.9	Au Au Au Au Au Au Au Au Au Au Au
SA-83-5	368.0 - 373.6 377.0 - 382.0 730.3 - 747.0 775.4 - 780.1 789.3 - 793.0 800.7 - 815.1 1078.4 - 1081.3 1105.3 - 1110.0 1131.0 - 1136.2 1139.5 - 1147.0 1151.0 - 1157.8 1163.8 - 1169.6 1189.1 - 1192.8 1198.0 - 1202.8	Au Au Au Au Au Au Au Au Au

coming in to the north of hole SA83-1. Drilling to evaluate this possibility is warranted. Drill hole SA83-2 was disappointing in that sulphide bearing major quartz veins were not intersected as expected. This is likely due to the pinching out of the No. 1 Vein System in this area, however, it remains possible that a narrow gap in the No. 1 Vein System was intersected.

Drill holes SA83-3, SA83-4 and SA83-5 intersected the No. 1 Vein System below the 700 foot level. Major quartz veining, as described in reports of previous mining, was encountered only in hole SA83-3. The presence of narrow ore grade gold values associated with sulphides in quartz veins confirms the presence of the No. 1 Vein System at depth. The presence of strong alteration and quartz lacing in holes SA83-4 and SA83-5 indicates that the No. 1 Vein System is more diffuse in this area and suggests that this Vein System may be characterized by pinching and swelling quartz veins which locally become zones of quartz lacing. The presence of strong quartz veining in holes SA83-3 suggests that a zone of increased veining may be coming in to the north of hole SA83-3 and a further drill test of the No. 1 Vein System in this area is warranted.

Of critical importance to the understanding of the No. 1 Vein System is the knowledge of the relationship of the ore grade material to the lithology. Unfortunately the No. 1 Vein System dios to the west and the lithologic dips are to the east. Necessarily, all drilling to date has been down the lithological dip to properly evaluate the mineralization. It appears, however, that the ore grade mineralization is spatially related to the volcanic-granite contact and it is our view that the location of this contact is critical. If this spatial relationship is valid, then, once the volcanic-granite contact is located, exploration for new ore shoots where the major shear zone (which hosts the No. 1 Vein System) intersects the contact can be conducted. Drilling from east to west across the lithologic dip and down the vein dip must be done to acquire an understanding of the lithologic relationships.

The No. 2 Vein System was intersected in drill holes SA83-3, SA83-4 and SA83-5. This vein system correlated well from hole to hole and a

subvertical dip is indicated. Although only the 5.3 foot intersection grading 0.50 oz. Au/ton in hole SA83-4 is of clear economic significance, the presence of the No. 2 Vein System over a strike length of in excess of 600 feet, containing altered, sulphide -rich, quartz veined material with anomalous gold values indicates that further drilling is warranted. In addition narrow, ore grade gold values have been reported from 2 of 7 holes drilled in 1965 to test the No. 2 Vein System. The exact location of each hole is unknown, however, they are known to have been drilled in the area of drill holes SA83-4 and SA83-5. The volcanic-granite contact occurs at surface in this area and the location of this contact at depth is critical. Drill testing of the No. 2 Vein System and for lithologic information is warranted.

The geophysical surveys completed this winter have identified numerous anomalies which warrant field investigation. Magnetic anomaly C and VLF-EM anomaly C are coincident and believed to represent the extension of the No. 1 Vein System to the south of the old mine workings. Drilling should be carried out to evaluate the ore making potential of this zone. Magnetic anomaly F and VLF-EM anomaly J are long anomalies extending northward from the No. 1 Vein System. At this time, it is not known which of these anomalies represents the No. 1 Vein System and further geophysical surveys should be carried out to define drill targets. All the remaining anomalies of possible economic significance should be examined in the field prior to conducting any further geophysical surveys or diamond drill programs.

The 1983 work program results indicate that the No. 1 Vein System extends below the old mine workings. No ore grade gold assays over mineable widths were encountered, however, the odds of hitting the high grade zones, which made the St. Anthony Mine economically viable, in just 5 widely spaced holes are long, and the failure to have done so should not be viewed as highly discouraging. The intersection of ore grade material over mineable widths in one of these holes which tested the No. 2 Vein System is very encouraging, especially in view of previous results reported by Holbrooke in 1965. The geophysical survey

results have enhanced the property by defining many new targets for exploration in previously untested areas of the property. The potential for outlining a gold ore deposit on this property, remains high and a systematic exploration effort should be continued.

#### Conclusions:

On the basis of the work completed to date, the following conclusions have been drawn:

- 1. The No. 1 Vein System, extends below the old mine workings and is characterized by a series of en-echelon veins with zones of quartz lacing in between.
- 2. The absence of ore grade mineralization over mineable widths in the recent drill testing of the No. 1 Vein does not rule out the existence of an economic gold deposit below the old mine workings since 3 drill holes over a strike length in excess of 400 feet cannot be expected to accomplish more than confirm the presence or absence of the mineralized structure.
- 3. The gold ore shoots of the No. 1 Vein System appear to be spatially, if not genetically, related to the granite-volcanic contact where it is intersected by the major shear zone which hosts the No. 1 Vein System.
- 4. Further drill testing of the No. 1 Vein System is warranted to evaluate its ore making potential. Specific efforts should be made to locate the volcanic-granite contact where it is cut by the major shear zone at depth.
- 5. The No. 2 Vein System occurs over a drill indicated strike length in excess of 600 feet and to a depth of at least 350 feet. The identification of ore grade gold mineralization over mineable widths in 1 out of 3 drill holes which tested this zone in 1983 and gold intersections of economic interest in 2 out of 7 holes drilled in 1965 indicate that the No. 2 Vein System has the potential to host an economic gold deposit.
- 6. The location of economic grade gold mineralization in the No. 2 Vein System spatially associated with the grunite-volcanic

contact where it is cut by the No. 2 Vein System shear zone indicates that the location of this contact at depth must be determined.

- 7. Geophysical surveys have identified the probable extension of the No. 1 Vein System both to the north and to the south of the old mine workings. These anomalous zones warrant systematic evaluation.
- 8. Geophysical surveys have identified 6 magnetic and 7 electromagnetic anomalies which warrant field examinations to determine their cause.
- 9. The St. Anthony Gold property has an excellent chance of hosting an economic gold deposit and a substantial exploration effort is warranted to evaluate this potential.

### Recommendations:

On the boaris of the work completed to date, the following recommendations are made:

- 1. Conduct a geological field investigation of magnetic anomalies D, E, F, G, H, I and VLF-EM anomalies A, E, F, G, I, J, M (Plate 1) to determine their cause where possible. This work will involve mapping, sampling and asserting.
- 2. Conduct a 3 mile I.P. Survey to evaluate magnetic anomaly F and VC.-EM anomaly J. The purpose of this work is to identify and locate the extension of the shear zone which hosts the No. 1 Vein System from L8N to L44N and to identify drill targets within this zone. This work must be done following freeze-up next winter since approximately 1/3 of the survey area lies under the lake.
- 3. Drill two holes (SA83-9, SA83-10; Plate 1; Table 6) totalling 800 feet to test geophysical anomalies "C" (Plate 1) for gold mineralization. This drilling should follow a geological examination to determine the dip of the lithology and structures.
- 4. Drill two holes (SA83-6, SA83-7; Plate 1; Table 6) totalling 1,700 feet to test the No. 2 Vein System 50 - 100 feet above and below the No. 2 Vein intersection of drill hole SA83-4. These holes should be drilled from East to West in order to drill across the lithologic dip so that a geological picture of the relationship of mineralization to lithology can be determined.
- 5. Drill one hole (SA83-8; Plate 1; Table 6) totalling 1,000 feet to further evaluate the No. 1 Vein System to the north of drill hole SA83-3 and at the same level.

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# Proposed Diamond Drill Holes

Hole #	Location	Dip	Bearing	Depth (ft)	Target
SA-83-6	3+65S-2+85E	-60°	282 <b>°</b>	900	No. 2 Vein
SA-83-7	3+655 -2+85E	-45°	282°	800	No. 2 Vein
SA-83-8	2+00S-3+50W	-65°	102°	1000	No. 1 and No. 2 Vein
SA-83-9	20+00S-3+50E	-45*	120°	400	VLF "C"
SA-83-10	24+00S-3+00E	-45°	120°	400	VLF "C"
				3,500	

Table 7: Cost Estimate for the Recommended Exploration Program

1.	Drilling 3,500 feet @ \$25		\$97,500
2.	Geophysics 3 miles I.P. @ \$1,200		\$ 3,600
3.	Geology		\$ 5,000
4.	Assays 500 samples @ \$10		\$ 5,000
5.	Travel and Expenses		\$ 5,000
6.	Reports		\$ 4,000
7.	Contingency (10%)		\$11,010
		Total	\$121,110
		Say	\$122,000

- 6. Defer further evaluation of the No. 1 Vein System to the north of and below drill holes SA83-1 and SA83-2 until the geophysical surveys recommended in 2. above have been completed and evaluated.
- 7. Conduct this program in conjunction with the tailings program scheduled for May, 1983.
- 8. Conduct additional sampling and assaying of core from 1983 winter drill program as listed in Table 5 of this report.
- 9. Provide \$122,000.00 to conduct this program. Table 7 presents an estimated breakdown of the costs to be incurred for these purposes.

J. B. Winzer

J. W. Gill

**APPENDICIES** 

APPENDIX A

St. Anthony Gold Mine Property

Claim Listing

Appendix A:

# St. Anthony Gold Mine Property Claim Listing

Patented Claim Number	Parcel Number	Registered Owner
B.G. 151	2307	Aubet Resources Inc.
B.G. 152	2307	Aubet Resources Inc.
B.G. 153	2307	Aubet Resources Inc.
B.G. 154	2307	Aubet Resources Inc.
B.G. 168	692	Aubet Resources Inc.
H.W. 744	7316	Aubet Resources Inc.
H.W. 745	7316	Aubet Resources Inc.
H.W. 746	7316	Aubet Resources Inc.
T.B. 11087	3414	Aubet Resources Inc.
T.B. 11088	3413	Aubet Resources Inc.
T.B. 11414	3417	Aubet Resources Inc.
T.B. 11415	3418	Aubet Resources Inc.
T.B. 11416	3419	Aubet Resources Inc.

## APPENDIX B

A Report on the St. Anthony Mine Property
of Aubet Resources Inc., Sturgeon Lake
Area, Ontario

G.M. Hogg & Associates Ltd.
September 22, 1981

A REPORT ON THE ST. ANTHONY MINE PROPERTY OF AUBET RESOURCES INC., STURGEON LAKE AREA, ONTARIO.

September 22, 1981

G.M. Hogg & Associates Ltd.
28 Thompson Avenue,
Toronto, Ontario M8Z 3T3

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## APPENDICES

- Appendix I Listing of Sources of Information Available on the St. Anthony Mine Property.
- Appendix II Extract From Ont. Bur. Mines Annual Report, Vol. 20, Pt.1, 1911. The Sturgeon Lake Gold Field. E.S. Moore.
- Appendix III Extract From Ont. Dept. of Mines Annual Report, Vol. 50, Pt.1, 1941. Mines of Ontario in 1940, W.O. Tower.
- Appendix IV Report on the St. Anthony Gold Mine, Sturgeon Lake, Ontario. W.W. Beaton, 1980.

#### SUMMARY

The St. Anthony property consists of 13 contiguous, patented mining claims situated in the northern part of the Sturgeon Lake area of Northwestern Ontario. The lands are held by Aubet Resources Inc. This report on the property has been prepared by G.M. Hogg, P.Eng., at the request of this Corporation.

The St. Anthony gold deposit, located in the southwestern part of the claim area, has been mined intermittently over the period 1905 to 1941. The total recorded production is 332,720 tons of ore, from which 63,310 ounces of gold and 16,341 ounces of silver have been recovered.

All production has come from the structure known as the No. 1 Vein system, which has been mined over a length of approximately 1000 feet to a depth of 750 feet. This vein system contains extensive quartz veining with associated disseminations of pyrite, chalcopyrite, sphalerite and galena. Substantial amounts of gold and silver are present, in the ratio of 4 Au : 1 Ag. Widths of 6 to 25 feet have been mined, consisting of quartz veins and/or a series of quartz stringers in greenstone or granite. The vein system assumes a general strike of N 20° E, and a dip of -73° W.

To 1930 all mining took place above the 150' Level, and the ore was processed in a stamp-amalgam mill. About 37,832 tons of ore were produced and treated over the 1905-1930 period, at an estimated mine grade of 0.42 oz.Au/ton. Mill recovery during this period was from 50 to 60 percent of the contained gold.

In 1934 a cyanide-leach mill facility was constructed, and it operated continuously until mine closure in late 1941. From 1934 to 1941 mine production totalled 294,888 tons at an estimated grade of 0.20 oz.Au/ton. Recovery in the cyanide-leach plant was approximately 95 percent of the contained gold. Mining was carried out from the 750' Level to surface during this operating period. During the late 1930's a winze was sunk to the 1000' Level, but no production was reported from below the 750' Level.

It is believed that mine closure at the end of 1941 was primarily because of difficulties in obtaining manpower, supplies and equipment during the war years. As far as can be ascertained, there appears to be no significant decrease in tonnage and grade characteristics within the zone below the 750' Level. If conditions encountered above the 750' Level persist to depth, and there is no technical data available to support or negate this premise, it is possible that about 250,000 tons of ore grading in the 0.20+ oz.Au/ton range will exist in the mine to the 1000' Level. There is, in addition, no apparent reason that the ore system should not extend below a depth of 1000 feet.

Additional possibilities exist for significant gold occurrence within the property, notably within the No. 2 Vein system which lies about 400 feet west of the No. 1 system, and parallel to it.

A staged evaluation program is proposed for the St. Anthony property. The first stage should consist of exploratory and confirmatory work, estimated to cost in the order of \$ 282,000. This will provide for geophysical coverage of the mine area, and confirmatory drilling on the No. 1 Vein system. Also, a test program to locate the original stamp mill tailings area will be completed as part of this phase of the program. The stamp mill residue, if in existence, will constitute 35,000 to 40,000 tons of readily available material grading in the 0.18 oz.Au/ton range.

If encouragement is obtained from the confirmatory drilling on the No. 1 Vein system, a second stage of evaluation is recommended. This will entail the opening and rehabilitation of the No. 1 Vein workings, and the underground evaluation of the zone as to production potential. This phase of the program is estimated to cost in the order of \$ 750,000.

## INTRODUCTION

This report on the St. Anthony Mine property has been prepared by G.M. Hogg, P. Eng., for Aubet Resources Inc. at the request of Dr. J.M. Gill. The St. Anthony property, situated in the north Sturgeon Lake area of Northwestern Ontario, produced approximately 332,000 tons of ore yielding 63,310 ounces of gold during the 1905-1941 period. Mining operations ceased in late 1941, during the war years, and no production has been recorded since that time.

The purpose of this report is to provide an independent assessment of the economic potential of the St. Anthony property, based on a review of all available data. Also, if appropriate, a program of exploration and evaluation will be recommended with a view to early production.

The writer is familiar with the area, having performed and supervised exploratory work in the region in the past. The property itself was visited relevant to this study on August 13, 1981.

Information on the St. Anthony property used in this study include that available in the files of the Ministry of Natural Resources of Ontario, some miscellaneous data on the St. Anthony operation dating from its production period, and a number of post-production period reports dealing mainly with exploratory activities and considerations on the property. These latter reports include those of G.L. Holbrooke (1964), I.C. Christopher (1973), and W.W. Beaton (1975, 1980).

Unfortunately the information available on the mine itself is not extensive, but is believed adequate for the purposes of this study. The various sources of information are listed in Appendix I to this report.

## PROPERTY LOCATION, ACCESS

The St. Anthony Mine property of Aubet Resources lies near the north end of Sturgeon Lake in the District of Thunder Bay, Ontario (see Figure 1). It is located approximately 12 miles south of the village of Savant Lake which is situated on the main transcontinental line of the Canadian National Railway, and lies within the administrative area of the Patricia Mining Division.

The property is situated on a rather narrow land area lying between Sturgeon and Couture Lakes, and includes a portion of the west bay of Couture Lake. It is accessible from Savant Lake via a gravel road to the head of Sturgeon Lake, and boat to the property. Also, an old winter road extends south from Savant Lake to the property, a distance of about 15 miles. Both Sturgeon Lake and Couture Lake are suitable for floator ski-equipped aircraft operation, and such aircraft may be chartered from Sioux Lookout or Ignace.

The property is well-wooded, and of moderate to low local relief. There is ample water available for any mining or milling requirements. During the latter operating years electric power was partially supplied to the property via a power line extending east from a hydro-electric installation on the Sturgeon River, a distance of 12 miles to the west. New power transmission facilities would be required for any future operation, however.

Several old buildings, including the headframes for the No. 1 and Incline shafts, are still standing on the property. These are in various states of disrepair, and new facilities would be required for mine operation. Interestingly, most of the old equipment remains on the property, having been left on site in entireity when operations were terminated in 1941.

#### LAND TENURE, OWNERSHIP

The property consists of thirteen contiguous, patented mining claims comprising an area of 520 acres, more or less (see Figure 2). The claims are registered in the Land Titles Registry Office, Thunder Bay, Ontario, and the records were examined by the writer on August 14, 1981. As of that date the status of title was as follows:

Claim No.	Parcel No.	Registered Owner		
B.G. 151	2307	Can Con Enterprises and Explorations		
B.G. 152	2307	" Ltd.		
B.G. 153	2307	•		
B.G. 154	2307	и		
B.G. 168	692	•		
H.W. 744	7316	n		
H.W. 745	7316	· u		
H.W. 746	7316	, n		
T.B. 11087	3414	и		
T.B. 11088	3413	n		
T.B. 11414	3417	n		
T.B. 11415	3418	n		
T.B. 11416	3419	n		

Note: All the above lands were shown subject to Caution 163677, registered by Leonard E.Wilson, October 7, 1980, where-by no dealings on the lands is to be made until notice has been served upon him.

Since the date of examination we have received notice that (1) the registered ownership has been changed from Can Con Enterprises and Explorations Ltd. to Aubet Resources Inc., and (2) that the noted Caution has been terminated. Accordingly, we are satisfied that property ownership is now held by Aubet Resources Inc. free of encumbrances, and that title is secure and as represented.

## HISTORY OF PROPERTY

Gold was first discovered in the property area and the original claims staked in 1900. At this time the property was known as the Jack Lake or Anthony Reef prospect. The Jack Lake Gold Mining Company Ltd. was incorporated in 1901, assuming ownership of the claims. It was succeeded in 1904 by the St. Anthony Gold Mining Company Ltd., and the first production of significance was attained in 1905 under this corporation (see Table I).

During 1907 the property was optioned to Mr. J. Steele, and in 1910 to Mr. G. Glendinning. There was no notable production during this time, and it appears to have been essentially a period of reorganization. Ownership was assumed by Sturgeon Lake Development Company in early 1911, and later that same year by Northern Gold Reef Ltd. During the 1911-13 period approximately 18,500 tons of ore were mined and milled by the Northern Gold Reef group.

During the 1915-16 period, coinciding with the early first world war years, St.Anthony Development Company Ltd. (Kerr Lake Mining and Wettlaufer Lorrain-controlled) held an option on the property from Northern Gold Reef Ltd. In 1916 the Thunder Mining Company Ltd. assumed ownership, and attained modest production during 1917 and 1918. Through 1920 and 1921 the property was leased to Messrs. C.L. Campbell, C.P. Charlesbois and W.H. Fairburn, and in this period small additional production is reported. Later in 1921 St. Anthony Gold Mines Ltd. acquired the property, but no further production was recorded until 1929. Through 1929 and 1930 a total of 686 tons of ore were produced by this company, the last to be treated by the existing stamp mill facility.

It will be noted that through this early phase of operations a total of 37,832 tons of ore were treated, yielding 9,029 ounces of gold. All this production came from above the 150' Level, and was milled by stamp-amalgamation process or hand-cobbed. This tonnage equates roughly to that estimated to exist in the stamp mill tailings area by St. Anthony

Table I

PRODUCTION FROM THE ST. ANTHONY MINE, 1905-41.

(From the Ontario Department of Mines Mineral Deposit File)

Year	Gold Produced ozs.	Silver Produced ozs.	Ore Milled	Recoverable Grade oz. Au/ton	Operator
1905	1,787	-	5,500 *	0.33	St. Anthony Gold Mining Co. Ltd.
1906	1,220	-	5,800 *	0.21	"
1907	524	==	1,800 *	0.29	Optioned to Mr. J. Steele
1911	207	61	540 *	0.38	Sturgeon Lake Development Co.
1912	1,950	577	11,500 *	0.17	Northern Gold Reef Ltd.
1913	987	-	6,432 *	0.15	н
1917	94	26	627 *	est. 0.15 est.	Thunder Mining Co. Ltd.
1918	1,460	<b>26</b> 3	3,603 *	0.41	n
1920	420	82	1,024 *	est. 0.41 est.	Leased to C. Campbell, C. Charlesbois, and W. Fairburn
1921	243	59	320 *	0.76	п
1929	115	23	678 *	0.17	St. Anthony Gold Mines Ltd.
1930	22	7	8 *	2.75	n
1934	3,571	991	21,618	0.17	10
1935	8,584	1,958	44,550	0.19	n
1936	4,564	1,217	28,408	0.16	II .
1937	4,442	1,766	17,896	0.25	II
1938	6,226	1,815	28,945	0.22	H .
1939	8,052	2,120	23,792	0.34	ti .
1940	10,972	3,082	59,039	0.19	п
1941	7,870	2,294	70,640	0.11	н
Total	63,310	16,341	332,720	0.19	

<sup>\*</sup> Hand Cobbed and/or Stamp Mill Production

Gold Mines Ltd. (circa 1930), at a grade of 0.18 oz.Au/ton. In reference to Table I the average recovered grade of ore milled to that time was 0.24 oz.Au/ton. Accordingly a recovery level of about 57 percent is indicated for the stamp-amalgamation milling process, and the actual grade of ore produced must have approximated 0.42 oz.Au/ton.

During the 1930 to 1934 period St. Anthony Gold Mines Ltd. developed the mine to the 750' Level through a new inclined shaft, and constructed a cyanide-leach mill with a rated capacity of 225 tons per day. Production was maintained through the 1934 to 1941 period at an estimated 95 percent recovery of gold on 294,888 tons of ore milled. This equates to an actual mine grade of 0.20 oz.Au/ton for the entire production period, or 0.22 oz.Au/ton if the 1941 production of 70,640 tons at a recovered grade of 0.11 oz.Au/ton is not included.

In the latter part of this period the No. 3 Winze was sunk from the 750' Level to a depth of 1000 feet. Some development was completed from this winze, but no mining appears to have been done. At the end of 1941 operations were terminated at the mine reportedly because of lack of manpower, supplies and equipment during the war years.

In the closing year of operation, 1941, the radically increased tonnage and lover grade of ore produced suggest a pre-closure salvage operation was being carried out. It may also indicate, of course, that the higher grade ores had simply been depleted. However, it would seem more reasonable to expect that manpower limitations forced decreased mining selectivity, pillar removal, etcetera, and certainly precluded any additional development. The fact that all operating equipment was left on site would also support the premise that additional reserves existed, and that the operators intended to resume production when conditions improved.

In 1944 the company name was changed from St. Anthony Gold Mines Ltd. to St. Anthony Mines Ltd., and in 1964 Con-Key Mines Ltd. acquired the property. A shallow drilling program was completed in 1965 under the direction of G.L. Holbrooke, P.Eng., for Con-Key Mines, centered on the No. 2 Vein

system and the "Diorite Zone". These areas were thought not previously mined, but the "Diorite Zone", constituting a south extension of the known ore system, probably had been to some extent. In any case, this program failed to provide sufficient encouragement to justify further work at this time.

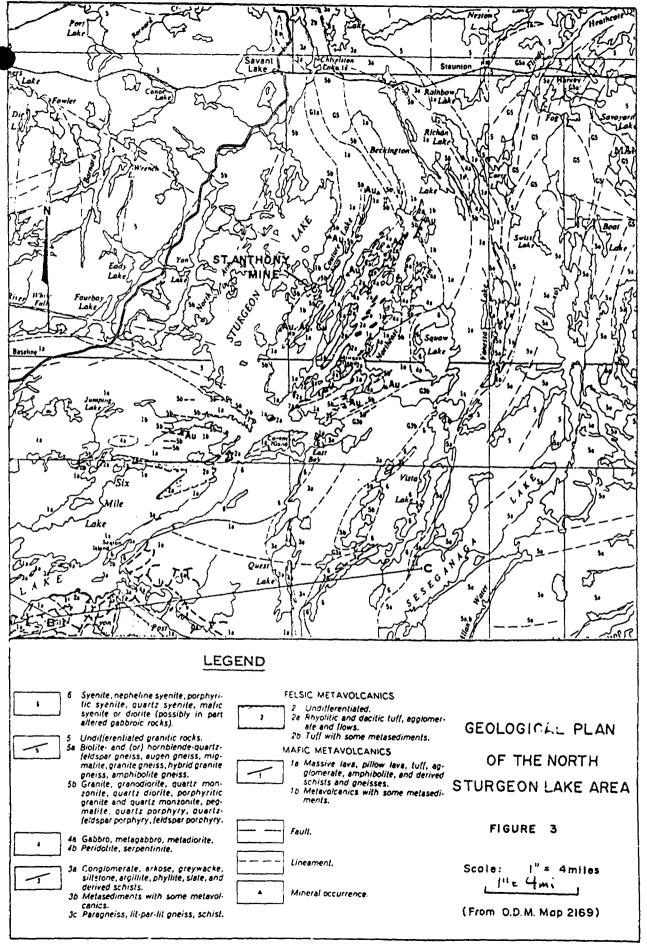
By 1973 the property had been acquired by Can Con Enterprises and Explorations Ltd., and I.C. Christopher, P.Eng., prepared a report recommending further drilling on the property in that year. This program was not implemented, and the property has remained dormant to the present.

With renewed interest in gold, Can Con Enterprises and Explorations Ltd. commissioned a review of the property in 1980 by W.W. Beaton, P.Eng. Within the last few weeks Aubet Resources Inc. has acquired the property, and it is at their request that this evaluation has been undertaken.

#### GENERAL GEOLOGY

As shown in Figure 3, the St. Anthony property is situated within a belt of northerly-trending basic to intermediate volcanics, close to their contact with a batholithic granite mass to the west. Several gold prospects are known within this greenstone belt, extending in an arcuate configuration from the King Bay area to the southwest to the northermend of Northeast Arm of Sturgeon Lake. All rocks in the area are of Precambrian age.

At the St. Anthony Mine location an elliptical mass, or stock, of granitic material extends east of the main granite-greenstone contact into the volcanics themselves. This stock is mainly composed of pink to gray medium-grained granite, but includes some quartz porphyry. The granite is often found laced with quartz veins and stringers, and normally becomes sericitic and greenish in color in such areas. The contact with the enclosing greenstones is irregular in detail, and "granitized" greenstone is present in the contact area.



)

The greenstone area of the St. Anthony property is composed of schistose basaltic to andesitic flows, some pyroclastics, dioritic sills, and interflow units of tuffaceous metasediments. The latter are siliceous in character, carbonated, and normally exhibit a well-developed schistosity. The greenstone assemblage is thus typical of the Keewatin-type basic volcanic terrain.

In reference to Map No. 1 (in pocket), as mapped by G.L. Holbrooke, P.Eng. the granitic stock underlies parts of claims B.G. 151, B.G. 152 and B.G. 154. It is approximately 2400 feet in length and 1200 feet in width, with quartz porphyry occurring along the east contact. The surrounding greenstone sequence exhibits a general N 20°E schistosity, and steep dips, normally to the east. Tuffaceous metasediments within the predominantly volcanic series have not been differentiated by Holbrooke, but are probably present over limited thicknesses in areas noted as "schistose" or "cheared" within the greenstone complex.

Two strong quartz vein systems are shown in Map No. 1, extending on a N 20° E strike from the greenstone area into the granite stock. These are designated the No. 1 and No. 2 Vein systems, and it is the No. 1 zone on which all mining has been done to date. Map No. 2 (in pocket), also originally prepared by G.L. Holbrooke, illustrates the geology of the central property area in greater detail. It will be noted that although a predominantly east dip is indicated for schistosity within the greenstone area, the No. 1 Vein system itself dips 70° to 75° west.

Major faulting has not been recognized in the property area, though shearing and fracturing on the N 20° E bearing is well-developed. A pervasive east-trending fracture system is also present. N.F. Trowell of the Ministry of Natural Resources of Ontario, who mapped in the area during 1972 and 1973 (O.G.S. Map 2420), suggests a north-trending fault exists along the No. 2 Vein system. It is also possible that an easterly-trending fault structure exists near the south end of claim B.G. 152, and that it offsets the No. 1 Vein system.

## ECONOMIC GEOLOGY

#### GENERAL CONSIDERATIONS:

All mining operations on the St. Anthony property have been carried out on the No. 1 Vein system. Accordingly, most observations on the character and distribution of ore derive from this zone. Other substantial mineralized zones include the No. 2 Vein system, and the "Diorite Zone", the latter probably forming the south extension of the No. 1 Vein system. A number of smaller showings also exist in the surrounding greenstone area.

Gold in the St. Anthony Mine occurs in white quartz veining within both granite and greenstone. It is accompanied by silver in the approximate ratio of 4 Au : 1 Ag. Normally minor carbonate and disseminations of pyrite, chalcopyrite, sphalerite and/or galena exist where significant gold values occur. Native gold, often in spectacular concentrations, was reportedly a frequent occurrence in the upper levels of the mine (E.S. Moore, 1911, Appendix II). This was likely a near-surface, fracture-controlled phenomenon, and it appears that with depth the gold became increasingly closely associated with pyrite. Thus, to effect satifactory treatment of deeper ores, it became necessary for St. Anthony Gold Mines Ltd. to install the cyanide leach milling facility in the early 1930's.

Within the No. 1 Vein system the quartz veining in the greenstone area is multiple, exhibits sharp contacts, and appears locallized in schistose, siliceous metasedimentary units intercalated with basaltic flow material. Within the granite the veining becomes less discrete, forming a stringer zone diminishing in frequency outward from a strong central vein. The granite is commonly sericitized and pyritic in the veined area, assuming a greenish color and often a schistose, greasy texture.

Mining widths of from six to twenty-five feet in both the greenstone and granite are reported, consisting of a single vein, a stringer zone,

or both. The wall rocks in both granite and greenstone areas are of reasonably good competence, causing no unusual difficulties in mining operations.

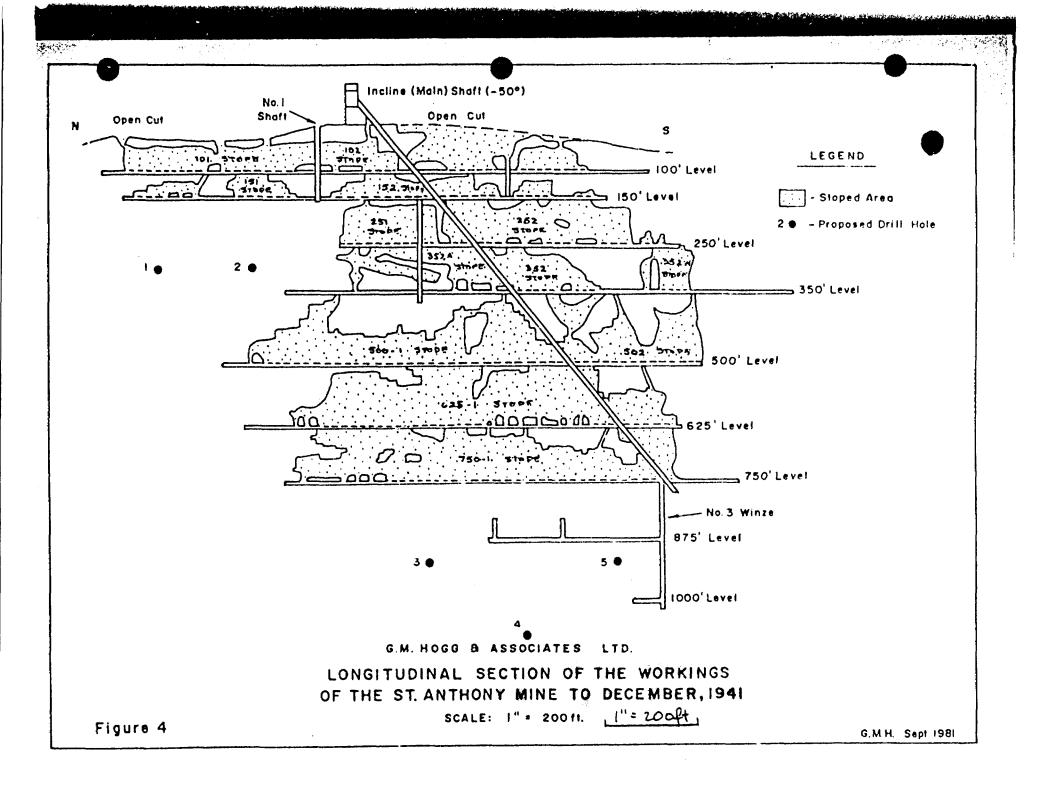
#### THE NO. 1 VEIN SYSTEM:

The No. 1 Vein system is shown in surface plan on Map No. 2 (in pocket), and in isometric projection on Map No. 3 (in pocket). Figure 4 illustrates the mined areas along the vein system in longitudinal section. Although limited information exists as to drift and stope locations, unfortunately no geological or assay data is available in the form of mine plans.

The No. 1 Vein system is approximately 1000 feet in length at surface, and was mined over a length of 800 feet at the 750' Level. The structure strikes approximately N 20° E, and dips 73°W. As shown on Map No. 2, the veining at surface commences in the greenstone area, extending northward about 400 feet to the granite contact area. It then follows the contact zone for about 200 feet, and extends into the granite for an additional 400 feet.

In the southern, or greenstone portion of the vein system the multiplicity of veining is indicated by the drift configuration shown in Map No. 3. Within the granite some irregularity also exists, as shown by the displacement of mining areas in the northern portion, and by the easterly orientation of the north open cut area. As previously noted, the veining carried ore grade gold values over widths of six to twenty-five feet, averaging in the order of twelve feet.

As described, the No. 1 Vein system carried considerable native gold in the upper levels, with a 57 percent recovery of gold in the stamp-amalgam milling process. Drift assays reported in an article in the Canadian Mining Journal of June 15, 1911, indicate a grade of 0.65 oz.Au/ton over a drift length of 200 feet on the 100' Level, in the vicinity of the No. 1 Shaft. Production records suggest a mine grade in the order of



0.40+ oz.Au/ton was maintained in the upper levels.

Below the 150' Level the mine grade appears to be in the 0.20+ oz.Au/ton range, reflecting a lower native gold content as well as much less selectivity in mining. There is no indication of any radical decrease in grade or extent of mineralization with depth in the lower levels.

It is probable that the granite-greenstone contact locus plunges south, more or less at the angle of the inclined shaft (-50°). The reason for the termination of stoping areas in a vertical plane at the south end of the vein system (see Figure 4) is unclear. It is possible that an easterly trending fault, as shown in Map No. 1, offsets the system in this area. There is little geological evidence to support this premise, however.

#### THE NO. 2 VEIN SYSTEM:

The No.2 Vein system lies approximately 400 feet west of the No. 1 structure, and is parallel to it. The No. 2 system extends over an observed length of 700 feet, all within granite (see Map No. 2, in pocket), but is known to extend into the greenstone area to the south.

This system consists of quartz veins and stringers strongly developed over widths of at least 30 feet. Some shearing along the vein system is evident within the granite, but it is essentially similar in character to the northern portion of the No. 1 zone. The No. 2 Vein system strikes N 20°E, and dips vertically to steeply west where observed. Weak pyrite mineralization is associated with the veining.

As noted, N.F. Trowell of the Ministry of Natural Resources of Ontario mapped the area in 1972-73 (O.G.S. Map 2420), and interpreted a south-trending fault to occur along the No. 2 zone extending into the greenstone area. Movement along this postulated fault, if it exists, appears to be of a very low order of magnitude.

During 1965 Con Key Mines Ltd. carried out a limited drill test program on the No. 2 Vein system under the direction of G.L. Holbrooke. This drilling was centered approximately 500 feet southwest of the Incline Shaft, in the area of intersection of the vein system with the granite-greenstone contact. Seven holes were drilled, testing a 250 foot strike length to a maximum depth of 100 feet.

Quartz veining up to six feet in width with irregular, low pyrite mineralization was intersected in all holes, but only two assay values in the higher range were reported. These are recorded as 1.18 oz.Au/ton over 1.7 ft. in hole No. 2, and 0.38 oz.Au/ton over 1.2 ft. in hole No. 20 (25 feet below hole No. 2). No further drilling was done at this time, and there is no record of subsequent testing.

A random chip sample across the zone exposed in granite to the north of the drill test area was taken by the writer. "Average material" across a 30 foot width yielded an assay value of 0.006 oz.Au/ton, and 0.01 oz.Ag/ton.

#### OTHER PROSPECTS:

The "Diorite Zone", identified by G.L. Holbrooke in 1965, is located close to the west bay of Couture Lake, approximately 500 feet south of the Incline Shaft (see Map No. 2, in pocket). It lies 150 feet west of the south end of the No. 1 Vein structure, on the west side of a diorite sill. In all probability it forms part of the No. 1 Vein system. As shown in Map No. 3 (in pocket), the earlier operators drifted west from the south end of the 100' Level, and undoubtedly intersected the zone. It is uncertain if any ore was extracted from this location.

In 1965 Con Key Mines Ltd. drilled six shallow holes in this vicinity, testing a strike length of 350 feet. Silicified and pyritized basic volcanics were intersected, yielding values of up to 0.58 oz.Au/ton over a

core length of 2.0 feet. Only minor quartz veining was reported, and continuity of higher gold values was not established. As observed at surface the zone dips 65° E, and strikes N 30° E. A sample taken in the pit location by the writer, consisting of quartz and pyritic, carbonated schist, returned values of 0.27 oz.Au/ton, and 0.06 oz.Ag/ton.

Other areas of shearing and minor quartz veining are known within the property area, and some of these are indicated in Map No. 1 (in pocket). No record of any sampling results from these occurrences is available, and it is doubtful if any have been drill-tested.

## MINING OPERATIONS, 1905-41

As has been previously noted, pre-1930 mining operations were carried out exclusively on the No. 1 Vein system to a maximum depth of 150 feet. Underground access was through the 150 foot No. 1 Shaft, and the north and south open cuts were established during this period. While mined tonnage was small during this early phase of operations (37,832 tons), the grade was excellent, being estimated at 0.42 oz.Au/ton mine average.

The Incline Shaft was sunk to the 750' Level at a -50° S angle during the early 1930's. From levels established at 250', 350', 500', 625' and 750' depths, mining of the deposit continued to late 1941. As shown in Table I, 294,888 tons of ore at a mine grade of 0.20 oz.Au/ton were produced during this second operating phase.

In the Ontario Department of Mines Annual Report for 1941 (Vol.51, Pt.I, pg.190), it is stated that at the time of closure a reserve of 35,000 tons of ore remained. It is also noted that because of the low grade of the ore produced in 1941, operations could no longer be carried on at a profit.

In respect to grade, however, it appears that severe operating difficulties of the period forced the removal of all easily available mineralized material from developed workings above the 750' Level to provide mill feed.

Much of this "ore", probably including many pillar areas, was undoubtedly

of very low grade. The milled production for this final operating year was a record 70,640 tons at an uncharacteristically low mine grade of 0.12 oz.Au/ton. This production, incidentally, included 45,338 tons at an unspecified grade from the old mining area above the 150' Level.

Concerning reserves, it will be noted in Figure 4 that mining on the No.1 Vein system was essentially continuous from the 750' Level to surface. It is unreasonable to expect such continuity to virtually disappear at the 750' Level, where a stoping length of 800 feet is indicated. Accordingly, it is suggested that the quoted closing reserve figure of 35,000 tons refers only to developed ore, and should not be interpreted as a statement of potential reserves below the 750' Level.

During the latter part of the operating period the No. 3 Winze was sunk from the 750' Level to the 1000' Level, and some exploratory drifting was done on the 875' Level. We have little information on the character of the material encountered here, but there is no indication that it was not equivalent in extent and grade to that mined at the 750' Level. There is, in any case, no record of mining having been carried out in this area.

#### MILLING OPERATIONS, 1905-41

#### GENERAL OBSERVATIONS:

The original milling facility on the St. Anthony property was a stamp mill with amalgamation tables. The actual date of installation is not known, but it was probably operational in 1905, the first year of substantial recorded production. In 1911 the facility was expanded to a ten stamp unit, reflected in the processing of 11,500 tons of ore in 1912. Stamp mill operation was continued sporadically until 1930, treating a total of 37,832 tons of ore for a recovery of 9029 ounces of gold. A 50 to 60 percent recovery of the contained gold in the ore processed is estimated.

In 1934 a 225 ton per day cyanide-leach plant was completed, and commenced operation. This unit remained in service until 1941, the year of closure.

A total of 294,888 tons of ore were processed in this unit for a recovery of 54,281 ounces of gold, and 15,243 ounces of silver. It is estimated that 95 percent of the contained gold was recovered from the ore processed during this period.

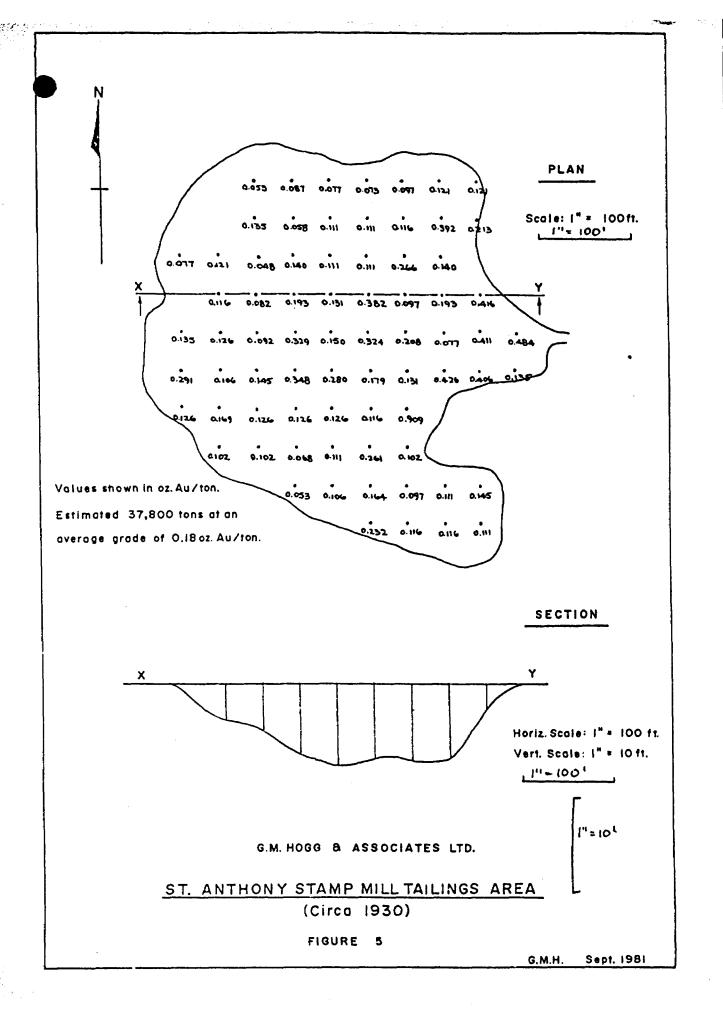
With mine closure the cyanide-leach mill was left on site, and some of the equipment remains in place to the present. The location of this mill, and the tailings disposal area, are shown on Maps No. 1 and No. 2 (in pocket). No trace remains of the earlier stamp mill, but photographs of the plant in the 1910-11 period show it to have been located at, or just to the south of, the site of the cyanide-leach mill.

#### TAILINGS AREA:

The cyanide-leach plant tailings appear to have been discharged to the north of the mill building, and allowed to pond over a large depression to the north and west. Again from photographs, the stamp mill tailings seem to have been deposited immediately west of the plant, in a location now forming part of the larger tailings disposal area.

It has been noted that the relatively coarse stamp mill residue must have approximated 37,800 tons of material grading in the 0.1° oz.Au/ton range. St. Anthony Gold Mines was aware of this remanent, and carried out a test program on the stamp mill tailings around 1930. The results of this program are shown in Figure 5, and it is on this data that the quoted grade of the tailings is established. W.W. Beaton also mentions these tailings in his report of 1980 (Appendix IV), having first carried out a study on them in 1926. It is possible that St. Anthony Gold Mines reclaimed and processed these tailings, but, if intact, this tailings deposit would contain approximately 6800 ounces of gold, and would be readily available for treatment.

The tailings area was examined by the writer, with special attention being paid to the small embayment area lying immediately west of the



existing mill building. All exposed tailings were found to consist of a fine, sericitic sand, buff in color, and locally rusty. A surface sample taken in the embayment area returned values of 0.004 oz.Au/ton, and 0.01 oz.Ag/ton, which would be consistent with the values one would expect in the cyanide-leach tailings. No coarsely ground material which could be classified as possible stamp mill residue was noted in the area.

Accordingly, it is apparent that the stamp mill tailings are either covered with the finer cyanide-leach tailings, or have been already reclaimed and processed by St. Anthony Gold Mines. Considering the potential value of the stamp mill residue, however, a program designed to locate and evaluate it is certainly warranted.

#### INTERPRETIVE CONSIDERATIONS

Little information is available on the mine geology and gold distribution within the No. 1 Vein system. However, descriptions by earlier writers such as E.S. Moore (Appendix II), and personal observations strongly suggest that the deposit is of detrital origin, the gold and sulphides having been originally concentrated in channel or basinal configuration on an Archean paleosurface. Siliceous metasediments, often strongly tuffaceous and carbonate-rich, and intercalated with basic flow material, probably formed the primal host material. Later deformation and metamorphism within this basinal accumulation produced variable recrystallization and remobilization resulting in the form and configuration of the vein system we see today.

The role of the granite intrusive in the evolution of the St. Anthony deposit is interesting. It appears that a portion of the basinal deposit was absorbed into the granite as part of an intense but essentially non-disruptive recrystallization process. This gave rise to the diffuse quartz veining and pervasive sericitization within the granite, marking the northern part of the No. 1 Vein system.

The implications of this genetic theory are three-fold. First, that good continuity in the general sense may be expected within the No. 1 Vein system. The original basinal accumulation in this case being a relatively large and rich one. Second, stratigraphic duplication of a depositional locus is a common feature in such deposits, and the No. 2 Vein system may well be of similar origin. On the basis of minimal evaluation it appears less auriferous than the No. 1 system, but this condition may change along strike or with depth. Thirdly, the active paleosurface itself may be quite extensive. In this area, for example, it may extend in more or less continuous fashion into the King Bay area to the southwest.

Reference has been made to the decreasing frequency of native gold with depth in the No. 1 Vein system, and the possible adverse effect on deeper grade levels. This is based on the comments of earlier observers (E.S. Moore, 1911, Appendix II), and also on production records. While it is likely that near-surface enrichment of gold may be a factor of some significance, it will be noted that ore extraction from above the 150' Level is estimated at approximately 250 tons per vertical foot, and at about 490 tons per vertical foot below this level. The later operators were thus mining considerably greater tonnages of lower grade material at depth, reflecting the increased efficiency of the cyanide-leach mill. The apparent grade decrease with depth is therefore more an operational feature than a physical characteristic of the deposit.

In regard to the more immediate prospects for ore development on the St. Anthony property, the possibilities for extension of the No. 1 Vein system below the 750' Level, and to the north below the 150' Level, are considered excellent (see Figure 4, Map No. 3). Simple projection from stoped areas suggests that as much as 250,000 tons of material grading in the 0.20+ oz.Au/ton range may exist in these areas to a depth of 1000 feet. Also, there is no apparent reason why the ore structure should not extend well below the 1000' Level. However, considering only the semi-developed areas of the mine, and including the stamp mill tailings as previously discussed, 50,000 to 60,000 ounces of gold may well

be available at relatively low cost to a new operator.

As to identified exploration prospects (1) the extension of the No. 1
Vein system below the 1000' Level, (2) the virtually unexplored No. 2
Vein system, and (3) the possibility of an offset extension of the
No. 1 Vein structure to the south of the present workings must be rated
as particularly attractive. In addition, the remaining greenstone areas
of the property have not been thoroughly explored, and warrant attention.

#### EVALUATION REQUIREMENTS

## GENERAL COMMENTS:

As noted in the preceding section the St. Anthony property is considered to offer excellent possibilities for the definition of gold ores both within the presently existing workings, and elsewhere. Early production is, of course, desireable, and any evaluation program should thus be largely oriented to the appraisal of those situations offering the maximum potential in this regard.

It has also been observed that there is an unfortunate lack of specific data on the mine area in particular, and we are uncertain as to the character and extent of the postulated ore remanents and extensions. Aubet Resources Inc. should therefore proceed with caution, performing confirmatory work prior to any costly commitment such as mine rehabilitation, etcetera.

A staged evaluation process is therefore proposed, with the initial phase consisting of geophysical work, confirmatory drilling, and a test of the tailings area. The second stage, predicated on encouraging results from the first, will involve dewatering, sampling and limited development work within the mine workings.

It will be noted that this program will be eligible in great part for

assistance under the Ontario Mineral Exploration Program, administered by the Ministry of Natural Resources of Ontario. Up to 25 percent of eligible exploration expenses will be paid by the Province of Ontario on an approved program.

#### THE EVALUATION PROGRAM:

Stage I of the program provides for the layout of a grid over the mine area, and geophysical coverage by VLF-EM and magnetic surveying. As shown on Map No. 1 (in pocket), approximately 20,000 feet of line will be required initially, with stations at 100 foot spacing. Closer coverage may be required in anomalous areas. The VLF-EM data, particularly when processed by the Fraser Filter Method, will prove helpful in structural analysis, and is capable of definition of weakly pyritic zones of the type associated with gold ore in this environment.

Five confirmatory BQ drill holes are recommended, as shown in Figure 4 and on Map No. 2 (in pocket). These holes are designed to confirm ore extension at relatively shallow depths below the North Open Cut of the No. 1 Vein system, and below the 750' Level. The three deeper holes have the additional advantage of testing the No. 2 Vein system at depths of 300 to 400 feet along a 400 foot strike length. The suggested hole locations are as follows:

Hole No.	Coordinates From No. l Shaft Collar	Bearing	Dip	Approx. Depth (ft.)
1	350' N20°E; 260' N70°W	s 70° E	-500	400
2	150' N20°E; 260' N70°W	s 70° E	<b>-</b> 500	400
3	200' S20°W; 700' N70°W	S 70° E	-650	1100
4	400' 520°W; 700' N70°W	S 70° E	-750	1400
5	600' S20°W; 700' N70°W	S 70° E	-650	1100
			-	
		Total		4400 ft.

A provision for 2000 feet of contingency drilling is also included in

the program, to be used as required for additional confirmatory drilling or anomaly evaluation.

The tailing test area, as shown on Map No. 2 (in pocket), should be auger tested to depths estimated at 10 to 15 feet. As the original stamp mill tailings area (see Figure 5) is estimated to cover an area about 300 feet by 300 feet, a search grid at 100 foot centers can be completed initially. On location of the stamp mill tailings, sampling on 20 to 25 foot centers will be required. Allowance for 100 test holes has been made. Since the coarser stamp mill tailings are covered by finer tailings from the cyanide-leach plant, it is suggested that provision for selective sampling in the auger holes be made.

An allowance for the fencing of the No. 1 Shaft area has been included in the Stage I program. Caving is taking place at the collar of this shaft, and safety precautions should be taken at an early date.

Stage II of the evaluation program makes provision for dewatering and rehabilitation of the underground workings on the No. 1 Vein system. Allowance is made for bulk sampling, some development work, 3500 feet of diamond drilling, and metallurgical test work. Note that prior to dewatering a thorough test of the mine water will be required, and a permit for discharge obtained.

It is estimated that the time required for completion of Stage I of the program will be approximately 6 months. A similar period will be required for Stage II.

#### COST ESTIMATES:

## Stage I:

Confirmatory drilling (4400 ft. BQ @ \$30.00/ft.)....\$ 132,000

Contingency drilling (2000 ft. BQ @ \$30.00/ft.)..... 60,000

		Drilling, mobilization & demob	7,000
		Tailings Test Program (100 holes)	10,000
		Line Cutting, Chaining (approx. 5 mi.)	1,500
		Geophysical Surveying (VLF-EM, Mag.)	3,500
		No. 1 Shaft Fencing	2,500
		Supervision, Compilation	15,000
		Assaying, Core Storage	7,500
		Consulting	5,000
		Travel, Accomodation	12,500
		Subtotal \$	256,500
		Contingencies (10%)	25,650
		Total Estimated Cost \$	282,150 *
Stage II:			
•	A.	Environmental:	
		Mine water testing, Report\$	7,500
	В.	Dewatering:	
		(Estimated 33 million gallons. Pumping @ 500,000 gal./day possible, requiring 66 day period)	
		Contract Cost (\$3000/day for 66 days)	198,000
	c.	Rehabilitation:	
		Shaft (1250 ft. @ \$125/ft. contract)	156,250
		Drifts, Crosscuts	30,000
	D.	Standby & Development:	
		Contract Cost; Pumping, Compressor, Hoist @ \$600/day for 90 day period	. 54,000
	E.	Contract Cost; X-Cuts, Drill Stations, Bulk Sample Cuts	40,000
	F.	Underground Exploration, Sampling:	
		Labour (Geologist, 2 helpers,3 mo.) Diamond Drilling (3500' @ \$20/ft.) Sample Treatment Facilities Assaying Metallurgical Testing	25,000 70,000 5,000 10,000 12,500

#### F. Continued

Travel, Accomodation	25.000 22,500	
Subtotal Contingencies (@ 15%)	\$	655,750 98,360
Total Estimated Cost	\$	754,110 *

## Summary:

Estimated Cost, Stage I\$ Estimated Cost, Stage II	•
-	
Overall Total Evaluation Cost\$	1,036,260 *

\* Most of the indicated costs will be subject to a 25 percent rebate under the Ontario Mineral Exploration Program, if desired.

#### CONCLUSIONS

- 1. The St. Anthony Mine operated during the period 1905 to 1941, producing 63,310 ounces of gold and 16,341 ounces of silver from 332,720 tons of milled ore. Mining operations ceased at the end of 1941 due to a lack of manpower and shortages of equipment and supplies during the war years. The closure does not appear to have been the result of lack of prospective reserves or real decrease in ore grade.
- 2. All production came from the No. 1 Vein system, a lenticular zone of quartz veining within greenstones and granite which strikes N 20° E and dips steeply west. It was mined over a length of 800 to 1000 feet to a depth of 750 feet, with an average mining width of 12 feet reported. No mining was carried out below the 750' Level, though

some development was completed to the 1000' Level.

}

- 3. Within the No. 1 Vein system there may be as much as 250,000 tons of ore grade material remaining in place to the 1000' Level. This does not include ore remanents within stoped areas, which would be doubtfully accessible. There is no apparent reason that the ore system should not extend below the 1000' Level.
- 4. Milling of the St. Anthony ores was by stamp-amalgam process to 1930, and by cyanide-leach methods thereafter. The stamp mill operation was inefficient, extracting only 50 to 60 percent of the contained gold. Accordingly, it is possible that 35,000 to 40,000 tons of stamp mill residue may exist within the present tailings area. This material should grade in the 0.18 oz.Au/ton range, and would be easily available for reclamation.
- 5. Other possibilities for ore occurrence exist within the property area, notably along the No. 2 Vein system to the west of the No. 1 zone. In that the gold of the area is probably of paleo-placer origin, concentrated in tuffaceous sediments within the greenstone sequence, exploration within the greenstones away from the granite should be pursued. The most favourable areas would be expected to lie more or less on strike with known zones of veining and mineralization.
- 6. A staged program of exploration and evaluation on the St. Anthony property has been developed herein. The initial phase of the program provides for geophysical surveying, a test of the tailings area, and confirmatory drilling. The cost of this work is estimated at \$ 282,150. The second phase of the program involves the opening and thorough sampling of the unmined areas of the No. 1 Vein system at an estimated cost of \$ 754,110.
- 7. Aubet Resources Inc. has acquired the St. Anthony property, consisting at this time of 13 patented mining claims comprising approximately

520 acres. Title to these lands is secure, and as represented.

### RECOMMENDATIONS

The St. Anthony property affords excellent potential for the development of good grade gold ores both within the No. 1 Vein system, and elsewhere within the claim area. As such, it warrants thorough evaluation at this time, essentially as proposed herein.

The suggested program is staged, with the first phase being of an exploratory and confirmatory nature. The second phase is designed to evaluate the No. 1 Vein system in detail, and should be undertaken only if the confirmatory drilling of the first stage proves encouraging.

The condition of the workings of the No. 1 Vein system is unknown, but access should be possible for evaluation purposes. For deeper ores the existing access is through the No. 3 Winze, which will prove an awkward arrangement for mining purposes. If the second phase of evaluation is undertaken, efforts should be made to assess the depth potential of the deposit insofar as possible. A new shaft would be desireable for more efficient operation at depth, but will be justifiable only if substantial amounts of ore are in prospect.

The cost of the entire evaluation program is estimated at \$ 1,036,260. The Ontario Mineral Exploration Program will likely fund up to 25 percent of this cost, or approximately \$ 250,000. It is recommended that this assistance opportunity be utilized.

Respectfully Submitted,

G.M. Hogg.

ErG. M. HOGG

OLINCE OF ONTARIO

### CERTIFICATE OF QUALIFICATION

I, Glen M. Hogg, of the City of Toronto, County of York, in the Province of Ontario, Canada, do hereby certify that:

- I am a Consulting Engineer, principal of the firm of G.M. Hogg & Associates Ltd., with an office located at 28 Thompson Avenue, Toronto, Ontario.
- 2. I am a member of the Association of Professional Engineers of Ontario, a registered Consulting Engineer with that organization, and designated as a Specialist in the Field of Geological Engineering, Classes of Exploration and Development, as per Regulation 59/73 of the Professional Engineers Act, RSO 1970.
- 3. I am a graduate of Queen's University of Kingston, Ontario, having received the degree of Master of Science in Geological Sciences from the Faculty of Applied Science in 1952. I have since practised professionally in the field of mineral exploration and development.
- 4. I have knowledge of, and experience in the area in which the St. Anthony Mine property is located.
- 5. In addition to my personal knowledge of the area, I have made use of the records of the Ministry of Natural Resources of Ontario, and Aubet Resources Inc. in the preparation of this report. I examined the property relevant to this study on August 13, 1981.
- 6. I have no interest, direct or indirect, in the property on which this report is written, nor do I expect to receive any.

Dated this 22 day of September, 1981.

G.M. Hogg,

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APPENDIX I

G.M. HOOG & ASSOCIATES LTD

# ON THE ST. ANTHONY MINE

Coleman, A.P. (1902)-	OBM Annual Report, Vol.11, pgs. 148-49, 242.  Jack Lake Co. Mine in Iron Ranges of NW Ont.
Miller, W.G. (1903)-	OBM Annual Report, Vol.12, pgs.82-4. St. Anthony Reef Mine.
Carter, W.E.H. (1904)-	OBM Annual Report, Vol.13, pg.70. St. Anthony Reef Mine.
Carter, W.E.H. (1905)-	OBM Annual Report, Vol.14, Pgs.54-6. St. Anthony Reef Mine.
Corkill, E.T. (1907)-	OBM Annual Report, Vol.16, Pt.1, pg.60. Sturgeon Lake Area.
Corkill, E.T. (1908)-	OBM Annual Report, Vol.17, Pt.1, pg.79. St. Anthony Gold Mine.
Houston, J.C. (1911)-	Canadian Mining Journal, June 15, 1911, pgs.387-92. The St. Anthony Gold Mine.
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Moore, E.S. (1911)-	OBM Annual Report, Vol.20, Pt.1, pgs. 145-46. The St. Anthony Mine.
Corkill, E.T. (1912)-	OBM Annual Report, Vol.21, Pt.1, pg. 100
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Sutherland, T.F.(1916) - et al	OBM Annual Report, Vol.25, Pt.1, pg.68. St. Anthony Mine.
Sutherland, T.F.(1917)- et al	OBM Annual Report, Vol 26, Pt.1, pg. 75. St. Anthony Mine.
Sutherland, T.F.(1918)- et al	OBM Annual Report, Vol. 27, Pt.1, pg.87 St. Anthony Mine.
Sutherland, T.F.(1919)- et al	OBM Annual Report, Vol. 28, Pt.1, pg.104. St. Anthony Mine.
Sutherland, T.F.(1921)- et al	ODM Annual Report, Vol.30, Pt.1, pg.65. St. Anthony.

Hopkins, P.E. (1921)-ODM Annual Report, Vol.30, Pt.2, pg. 41. St. Anthony. Sinclair, D.G.(1929)-ODM Annual Report, Vol.38, Pt.1, pg. 143-44. et al St. Anthony Gold Mines Ltd., Mines of Ontario in 1928. Graham, A.R. (1930)-ODM Annual Report, Vol.39, Pt.2, pgs. 45-48. St. Anthony Mine in Sturgeon Lake Gold Area. Sinclair, D.G. (1934)-ODM Annual Report, Vol. 43, Pt.1, pgs.97-98. et al St. Anthony Gold Mines Ltd. Sinclair, D.G.(1935)-ODM Annual Report, Vol.44, Pt.1, pgs. 138-39. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1934. Sinclair, D.G. (1936)-ODM Annual Report, Vol.45, Ptl, pg. 154. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1935. Sinclair, D.G.(1938)-ODM Annual Report, Vol.47, Pt.1, pg.201) et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1937. Sinclair, D.G.(1939)-ODM Annual Report, Vol.48, Pt.1, pgs.194-95. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1938. Tower, W.O. (1940)-ODM Annual Report, Vol.49, Pt.1, pgs.196-97. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1939. Tower, W.O. (1941)-ODM Annual Report, Vol.50, Pt.1, pgs.212-23. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1940. Echolls, H.V. (1941) -St. Anthony Gold Mines Ltd.; Composite Level Plan and Longitudinal Section of Mine Workings. Tower, W.O. (1942)-ODM Annual Report, Vol.51, Pt.1, pgs.188-191. et al St. Anthony Gold Mines Ltd. in Mines of Ontario in 1941. Holbrooke, G.L.(1964)-Report on the St. Anthony Property of Con Key Mines Ltd., Sturgeon Lake, Ontario. Sept.12,1964 Christopher, I.C. (1973) - Report for Can Con Enterprises and Exploration Ltd. on the Squaw Lake Area, Sturgeon Lake, Ontario. April 10, 1973.

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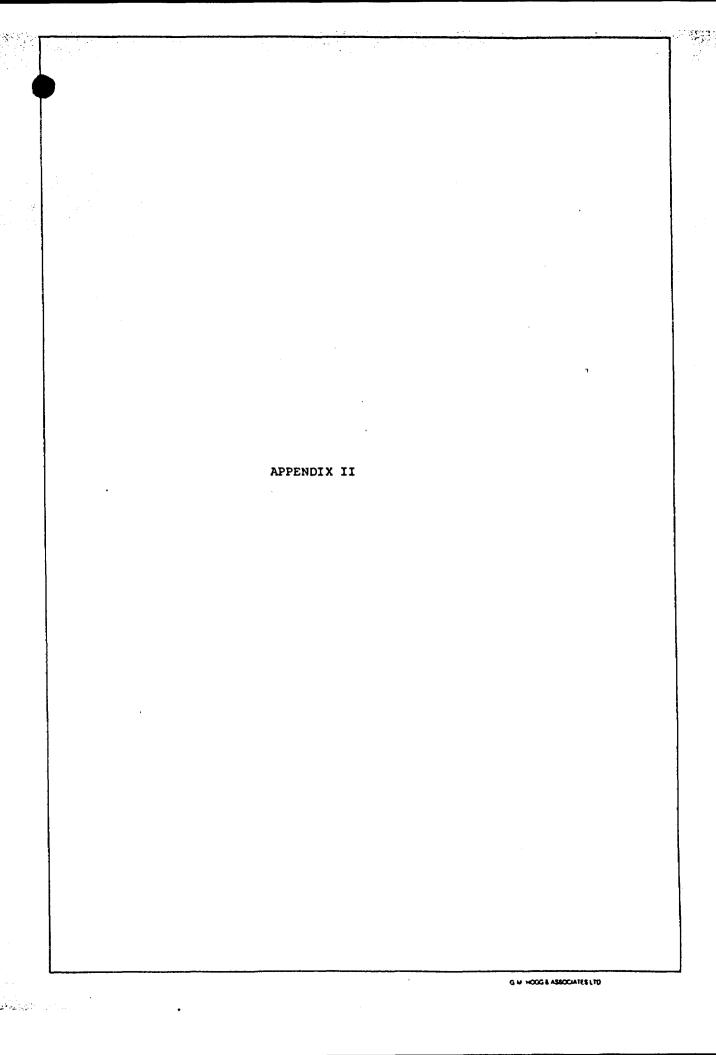
Trowell, N.F. (1977) - Ontario Geological Survey Map 2420.

Beaton, W.W. (1980) - Report on St. Anthony Gold Mines, Sturgeon Lake, Ontario. July 3, 1980.

Ontario Department of Mines- Mineral Deposits Files, St. Anthony Mine.

Department of Energy, Mines- Mineral Resources Branch, Files on Gold, and Resources, Ottawa St. Anthony Mine.

St. Anthony Gold Mines Ltd.- Miscellaneous data in posession of Aubet Resources Ltd. including Stamp Mill Tailings plan and assays (circa 1930).



Extract from A Report on the Sturgeon Lake Gold Field; E.S. Moore (1911), Ontario Bureau of Mines Annual Report, Vol. 20, Pt.I.

#### The St. Anthony Mine

The St. Anthony mine is situated on claims R.G. 151 and 152 on the west shore of Couture lake. The camps (Fig. 10) are located on R.G. 151 and 168 on St. Anthony bay, a small indentation in the shore of North bay of Sturgeon lake. The camps, as well as some of the buildings at the mine, have been renovated during the past summer, preparatory to the carrying out of further development work at the mine.

This property, which is by far the most important one in the district, was located about ten years ago, when it was known as the Jack Lake mine. It also goes by the name of the St. Anthony Reef, because of the idea held by some that its surroundings suggested a reef rising above the water of Conture lake. It has been controlled for some time by the St. Anthony Mining Company, and was worked from the year 1903 until 1908, when it was closed down. During 1907 and 1908 Mr. J. Steele worked the mine under option. The present manager of the company is dir. Arthur L. McEwan, to whom I am much indebted for his hospitality to us while working in the vicinity of the mine.

The digitary and shall lique currently and digitary benefit and anialgonation from yother course and shall lique currenter shappend digitary benefit atom. The supplied concentrates from the mill have been stored pending bother shipping facilities.

The general plan of the mine and the geology in its immediate vicinity is shown on the accompanying sketch map (page 147). This enteredirections continues the final properties of the properties of the properties of the first of the continues of the open continues the first of the feet and width of 25 feet. This cut is over 300 feet long and reaches a maximum depth of 40 feet and width of 25 feet. This cut is over 300 feet long and reaches a maximum depth of 40 feet and width of 25 feet. This cut is over 300 feet long and reaches a maximum depth of 40 feet and width of 25 feet. This cut is over 300 feet long and the open cut shaft No. 3 is found, and it extends 100 feet below the surface. About 220 feet north of this shaft No. 2 has been sunk and a drift connects the two shafts, most of it lying along the vein. At the bottom of No. 2 a cross-cut runs west 30 feet to pick up the vein, and then a drift south 67 feet and another cross-cut cast to the north and south drift between the shafts. A cross-cut is said to extend east 125 feet from the bottom of No. 2 shaft. The holsting is done from this shaft, which is timbered.

From the west end of the 20-foot cross-out from shaft Nn. 2 a drift runs north 180 feet to an upraise known as No. 1 shaft, and from the opening a drift is said to continue further north 160 feet. No mine maps were available at the time of my visit, and these figures are compiled from several sources.

Besides the open cut there are on the surface a number of pits as indicated on the sketch map, but none of these are very extensive. The rocks in the vicinity of the mine consist of Keewatin greenstone, schist and schistose graywacké, intruded by quartz-porphyry, and the whole intruded by the later Sturgeon Lake granite. The granite in this vicinity is porphyritic and highly aftered by hydrothermal action, where chemically active waters have acted on the rocks. The main vein runs in the granite close to the contact for some distance, and then leaves the granite and extends out into the schists. There seems to be good evidence that when the granite cooled and shrunk, the adjacent rocks were broken and shifted so that a fissure could be filled with quartz and calcite. From the appearance of the walls on the sides of the open cut it looks as if the rock on the east side of the fissure moved north and that on the west side south. At the time this large fissure was formed countless smaller ones were developed, so that there is a zone about one-quarter of a mile wide, more or less streaked with quartz veins, and in places the walls of the main fissure become indistinct in the granite (Fig. 22). In the walls of the veins the granite has been so aftered that most of the feldspar bas

disappeared, and the rock has turned into a greenish-yellow protogine, consisting almost entirely of quartz and muscovite.

The gangue in the granite and schist is largely quartz, but some calcite occurs in both rocks and in greater proportion in the latter. Some siderite is also present where the vein cuts the schist. In the open cut in the schist, the walls are distinct, although the quartz is often distributed in narrow veins along the planes of cleavage, and the whole mass from wall to wall contained more or less gold.

The minerals in the gangue are free gold, pyrite, chalcopyrite, sphalerite and galena. Deautiful specimens of free gold have been obtained from this mine. Thick the first specimens of tree gold have been obtained from this mine. Thick the first specimens and the first specimens and the grant specimens and the grant and the grant specimens.

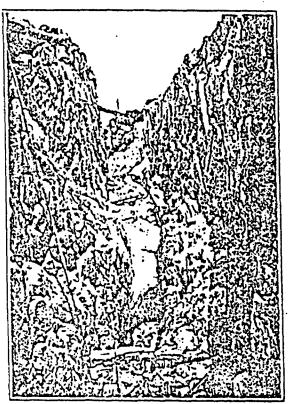


Fig. 12. Open out at St. Anthony mine.

this seems to be due to the greater ease with which oxidizing waters percolate the schists. The writer was informed while at the Athabasca mine, near Nelson, B.C., that similar conditions existed there where the ore occurs in porphyritic granite and schist.

No assays of the ore were made by the writer, but the manager states that much ore was mined which ran as high as \$55 per ton, and that there is still in the mine a good deal of ore which will average \$12 per ton. The introductive individual with elebting the manager with the content of the

During the past summer new interest was taken in this property, and considerable work was done in the way of putting up new buildings and making a start at development work by sinking in No. 3 shaft.

This property has been described by other writers, and references are given in this report in the section on the history of the field.

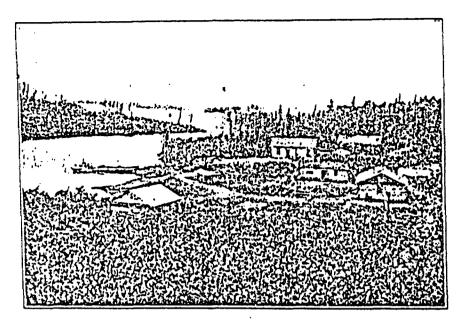


Fig. 40, 281, Authory mine range, Stuggeon lake,

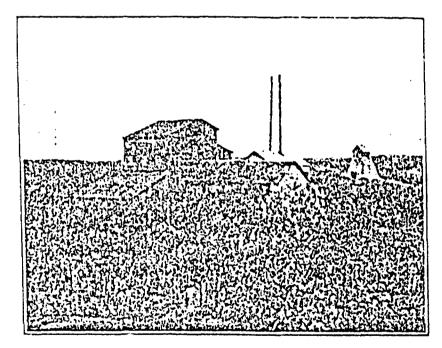
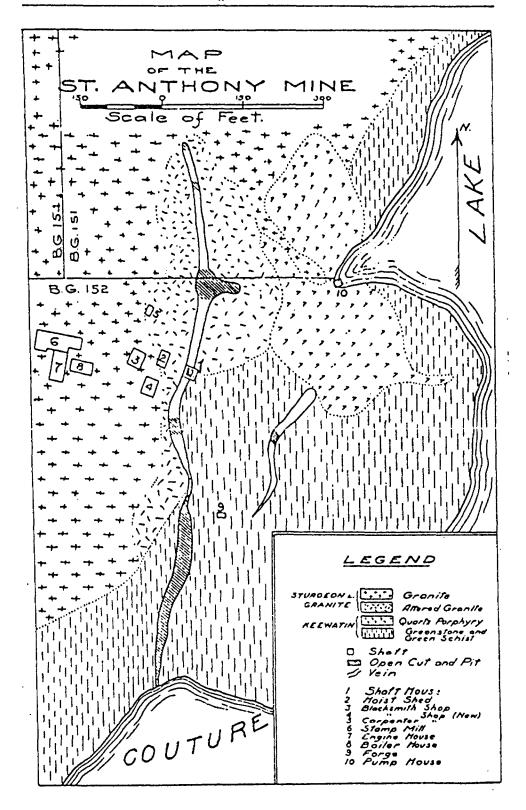
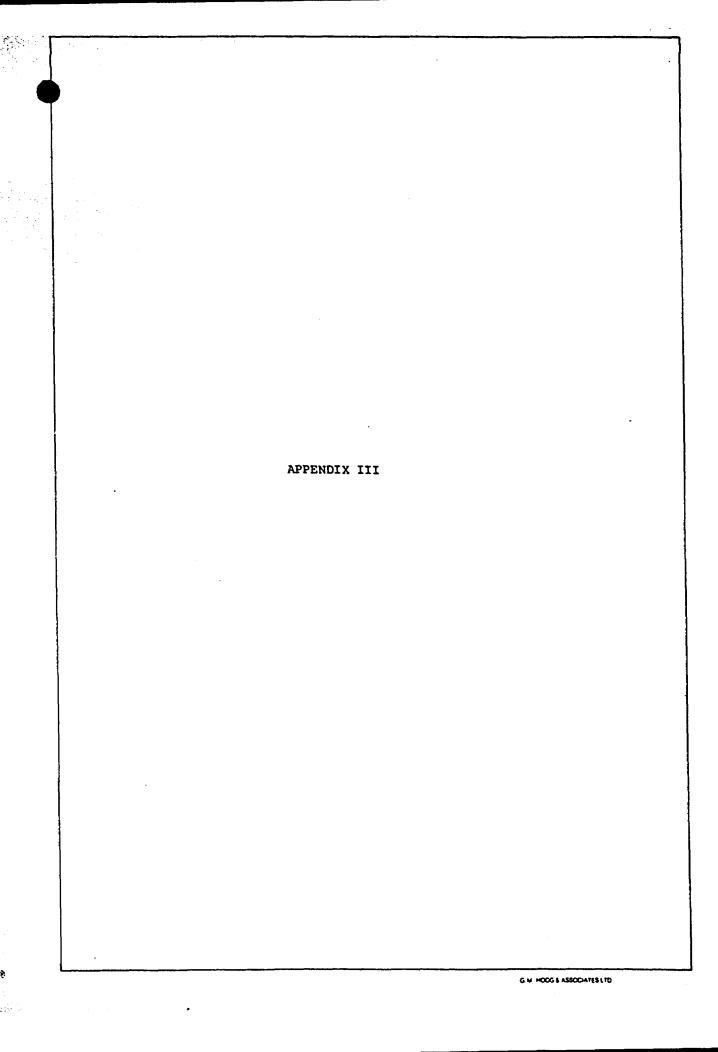


Fig. 11,-St. Anthony mine, Sturgeon lake, showing stamp mill, power hone and shaft hones,



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### St. Anthony Gold Mines, Limited

St. Anthony Gold Mines, Limited, was incorporated in September, 1921. The authorized capitalization is 5,000,000 shares of \$1 par value, of which 4,168,510 shares have been issued. The officers and directors are: H. P. Bellingham, president and general manager; R. H. Sankey, vice-president; D. M. Bellingham, secretary-treasurer; J. T. Horner and A. V. Silk, directors. The head office is at 159 Bay Street, Toronto. The mine address is St. Anthony Mine P.O.

The property consists of 16 claims, 698 acres, 12 miles south of Savant Lake station on the main line of the Canadian National Railways, in Thunder Bay district. The 3½-mile wagon road from Savant Lake station leads to the north end of the North arm of Sturgeon lake. From this point, transportation to the mine is by water. Scows and power boats are used to transport supplies over the water route. During 1940 two groups of claims, consisting of 17 claims in all, were staked on behalf of the company in the Savant Lake area, about 30 miles north of the main property.

The mine is served by two shafts and three winzes. The old 2-compartment, vertical No. 1 shaft is 150 feet deep. The inclined, 2-compartment No. 2 shaft has been sunk to a depth of 766 feet from surface. No. 1 winze, collared at the 150-foot level, is 213 feet deep. No. 2 winze, collared at the 350-foot level, is 150 feet deep. No. 3 winze, which is collared at the 750-foot level, was sunk to a depth of 262 feet in 1940, and two new levels were established at 875 and 1,000 feet from surface. The following table shows the development work done during 1939 and the total:—

71	Drifts		Crosscuts		Raises	
Level	1940	Total	1940	Total	1940	Total
	feet	feet	feet	feet	feet.	leet
100-foot	9G	1,316		453	1	182
150-loot	143	1,328	1	330		250
250-loot	: <i></i>	817	1	310	1	225
350-foot	129	1.687	83	433		490
500-foot	118	1.725	]	180	31	366
625-foot	<b></b>	964		380	65	230
750-foot			37	482		162
\$75-foot	326	326	114	114	23	23
000-foot	38	38	17	17	1	

The following diamond-drilling was done during the year: 15 holes, totalling 2,030 feet, from surface: 37 holes, totalling 6,708 feet from underground. Surface exploration consisted of 300 feet of trenching, 2 feet deep.

A second bunk-house was erected in 1940, an addition to the dry-house was built, and the coarse-cre bin was enlarged. Equipment purchased included the following: amalgam barrel for the mill; a 10,000-gallon fuel oil storage tank; a 2 h.p. Boyles X-ray diamond-drill outfit; a 625-cubic-foot Canadian Ingersoll-Rand Diesel compressor; a Dominion Crossley 150 h.p. Diesel engine, directly connected to a Canadian General Electric 125 k.v.a. generator. The installation of the new Diesel units provided ample power to carry on all operations independent of the hydro-electric plant. Owing to the shortage of water in Sturgeon lake it was necessary to close the hydro-electric plant during the winter season. It is the present intention to use Diesel power exclusively for six months of the year, building up the water storage so that the company's hydro power can be used during the other six months.

. The following is taken from the manager's report for the year ending December 31, 1940:—

#### Development

Development blocked out 102,310 tons of ore during the year, in addition to the known ore reserves of December 31, 1939.

Exploration on the upper levels has disclosed a parallel vein in the greenstone formation located about 25 feet east of the main vein. Intersections have been made on the 150-, 250-, and 350-foot levels. This vein is developed for 200 feet on the 150-foot level, and work is now in progress of further developing this occurrence as the south faces on all three levels are still in ore. Stoping widths have varied from 10 to 20 feet, and gold values have averaged in excess of \$13.00

#### Diamond-drilling

Diamond-drilling programme for the year consisted of a total of 8,738.5 feet of surface and

Diamond-drilling programme for the year consisted of a total of 8,738.5 feet of surface and underground drilling. A number of surface veins were drilled, and in several instances high gold values were obtained. These locations will receive further exploration during the coming summer.

The most promising underground diamond-drill intersections were obtained from drilling the west vrin about 160 feet west of the main ore zone. This vein was drilled over a length of 500 feet by holes on the 350-, 750-, and 875-foot levels. Gold values up to \$31.92 across 23 inches and \$50.16 across 12 inches were intersected in this vein. A crosscut has been driven to this vein on the 875-foot level. Assay returns from initial work were \$13.58 across 38 inches and \$9.00 across 36 inches. Several other ore intersections elsewhere obtained from diamond-drilling will be explored as machines are available. be explored as machines are available.

#### Ore Hoisted

During the year 75,773 tons of ore were drawn from the stopes on the different levels as follows:-

100-foot level	Tons
100-100t level	
150-foot level	7,735
350-foot level	750
500-foot level	27,283
625-foot level	15,414
750-foot level	18,028
Total.	75,773
Waste sorted on surface	15,493
Tons milled	60,280
Less moisture	
Net milled	59,039

### Milling

Milling operations continued throughout the year, and the daily tonnage treated was increased from the 1939 average of 80.7 tons per day to the current average in excess of 200 dry tons per 24 hours.

Tons of ore treated	59.039
Average tons milled per day	167
Per cent. waste sorted on surface	20
Per cent, operated of possible milling time	96.6
Per cent. of average recovery	94.7
Total fine gold recovered and shippedounces	
Total silver bullion recovered and shippedounces	3,082.440
Average value of mill heads	\$7.57
Total value of bullion recovered and shipped (basis Mint)	\$423,563.49

### Operating Cost

	,	Per ton milled	Per ton boisted
Mining costs Milling costs Development Diamond-drilling	80,682.5S 14,878.53	\$3.14 1.36 .26 .12	\$2.45 1.06 .20 .10
Total	\$288,343.45	\$4.88	\$3.81

#### **DEVELOPMENT UNIT COSTS**

Average cost of drifting and crosscuttingper foot	\$9.63
Average cost of raisingper foot	11.72
Average cost of slashingper cu. ft.	.13
Sinking No. 3 winzeper foot	38.70
Diamond-drillingper foot	.83

### Income

Bullion produced	\$423,563.49 727.83
Total income	\$424,291.32
diamond-drilling	288,342.45
Mine operating profit, exclusive of administrative expenses,	\$135 048 87

### Conclusion

Ore reserves indicate at least one year's ore, milling from 190 to 200 tons per day. In addition there are several years' probable ore indicated from diamond-drilling results on the west vein and other veins. Due to the erratic distribution of gold values and limited amount of work, it is impossible to arrive at an average grade of ore to be expected from these other probable ore sources.

H. V. Echolls was mine manager. An average of 124 men was employed, of whom 67 were in the mine, 15 in the mill, and 42 on general surface work.

APPENDIX IV G M HOGG & ASSOCIATES LTD

## REPORT ON

ST. ANTHONY GOLD MINES

STURGEON LAKE, ONTARIO

July 3rd, 1980

W.W. Beaton

## INDEX

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### Summary:

The property formerly known as the St. Anthony Gold mines, situated in the Sturgeon Lake area of North Western Ontario, in which area several large base metal deposits have recently been discovered and are now under rapid development. The Ontario Department of Mines records a production of gold worth \$2,165,292.00 between 1903 and 1942. The Ontario Bureau of Mines report of 1911 records that much ore was mined that ran as high as \$85.00 per ton (gold was then worth \$20.60 per cunce).

Although the shaft is 1000' deep the property was only developed and mined to the 750' level.

Lateral and vertical extentions past the mined area have not been explored.

There are two other gold bearing zones on the property that warrant evaluation.

Research work done by the writer in 1926 on the slimes from the mill of the St. Anthony showed a recovery of less than 50% of gold, the slimes from the original mill (a stamp mill using amalgamation) were still available when I last was on the property and a good gold recovery was possible using modern cyanidation.

It is now recommended that the tailings be evaluated for possible gold recovery and if found feasible they be milled to provide funds for further evaluation of the property and dewatering of the shaft.

## INTRODUCTION:

The purpose of this report is to recomment further detailed exploration of this property.

This report was requested by the present owners of the property.

This report was written from personal examination of the property both surface and underground in 1935 and from Mining records filed with the Ontario Bureau of Mines, by a report by George Holbrooke, P. Eng., dated July 8, 1965, a report of I. C. Christopher, P. Eng., Dated June 11, 1973.

## AREA LOCATION ACCESS:

The property consists of 13 patented mining claims numbered;

inclusive	11416	T.B.	to	11414	T.B.
	11088	T.B.	and	11087	T.B.
inclusive	746	H.W.	to	744	H.W.
inclusive	1:54	B.G.	to	151	B.G.
				168	Bls.

It contains approximately 520 acres.

## AREA LOCATION ACCESS: (cont'd)

The property is located near the north end of Sturgeon:

Lake on the east shore of the lake on a strip of land between

Sturgeon and Couture Lakes.

The highway, No. 599, from Ignace to Savant Lake is six miles east of the property.

Present access to the property is by boat from the gravel road from Savant Lake to the north end of Sturgeon Lake or by aircraft landing in either Sturgeon or Couture Lake.

### HISTORY:

This property known as the St. Anthony Mine, was staked in 1902 and operated intermittently until 1942. Production was started with an open cut. Later a shaft was sunk which ultimately reached a depth of 1,000.

The records show a total production of \$2,165,292 from a tonnage handled of 331,069 tons (Ontario Department of Mines Report for 1955, page 22).

### GEOLOGY:

The eastern part of the property is underlain by Keewatin Volcanics consisting for the most part of andesitic flows with a few minor rhyolitic phases. A quartz porphyry dike cuts the lavas across the property from northeast +o southwest.

The western part of the property is underlain by grano-diorite.

### GOLD OCCURRENCES:

The gold bearing veins occur in the granitic formation and consist mainly of fractured white quartz usually banded with pyrite galena and sphalerite. Visible gold occurs with the sulphide bands.

The main vein occurs on Claims BG. 152 and BG. 151. The vein strikes north 10° east and extends from Couture Lake on to Claim BG. 151, a distance of over 1000 feet.

The vein was originally opened up on surface by an open cut, starting at Couture Lake and extending north for 300 feet and was mined to a depth of 40 feet and an average width of 25 feet.

The zone was developed by underground mining and diamond drilling. The mine produced until January 1942 when war conditions made gold mining almost impossible. At that time the shaft and winze had reached a depth of 1,000 feet. Due to the mine closing, the lower levels were never explored.

Two other gold bearing zones occur on the property. The #2 zone which is located about 450 feet west of the main vein. It is a shear zone in granite which strikes northeasterly and has a steep dip. It carried lenses and stringers containing pyrite mineralization. It is exposed at surface in the granite near the south granite contact and continues southwesterly across the granite volcanic contact.

## Gold Occurrences (cont'd)

A diamond drilling program was undertaken during the summer of 1965 under the direction of George Holbrooke, P.Eng., The following excerpt is taken from Holbrook's report dated July 8th., 1965:

"Four holes, Nos. 2 to 5, were drilled across the No. 2 zone at 50 foot intervals. These holes covered a 250 length of the zone centered on the granite contact. The results showed the contact to be much more irregular than previously thought and to consist of a series of fingers of granite projecting southward from the main body into the adjacent basic lavas and tuffs.

Quartz veining with irregular pyrite mineralization across narrow widths up to 6 feet was encountered in all of the holes and is apparently best developed in sheared basic tuffs along the main granite contact. All sections of quartz and pyrite mineralization were sampled but with the exception of No. 2 hole at the north end of the drilling 5.5 feet of quartz and the last 1.7 feet of this vein assayed 1.18 ounces of gold per ton.

In order to check this occurrence three holes No. 19, 20 and 21 were drilled respectively 25 feet south under, and north of No. 2. Hole No. 19 to the south intersected the vein but returned only 0.01 ounces across 2.1 feet. No corresponding vein was cut in hole No. 21 to the north but hole No. 20, twenty-five feet vertically beneath No. 2 hole, returned 0.38 ounces gold per ton across 1.2 feet."

### DIORITE ZONE

The second zone is referred to as the diorite zone and it lies about 160 feet west of the southern exposure of the main vein. It is a strong shear zone which trends N25°E and dips steeply to the east. It has been traces for 260 feet from near the lakeshore to within 120 feet of the granite contact and cuts across an irregular sill of altered diorite at an acute angle. The shearing carried lenticular bodies of quartz up to 6 feet wide and a small shaft has been sunk on one of these lenses near the south end of the exposure.

A series of drill holes were put down on the zone by Holbrooke in the exploration program carried out during the summer of 1965.

The following excerpts discussing the results of this work are also taken from Holbrook's report dated July 8th, 1965:

"Six holes, Nos. 6 to 11, were drilled from west to east at 50 foot intervals across the zone and cover a length of 350 feet. Narrow zones of silicification and strong pyrite mineralization were found in the sheared basic volcanics and some of these carried interesting values. The mineralization was all on the west or footwall side of the diorite sill and the only quartz encountered was in a few very narrow stringers. The mineralization and the bedding in the volcanics was seen to be at an angle of about 200 to the core axis so that an east dip of about 650 is indicated and the intersections quoted below represent only very narrow streaks of sulphide mineralization.

## Dicrite Zone (cont'd)

For the most part the sulphide mineralization and the quartz stringers were found to be practically barren at intersections in three successive holes returned appreciable values in gold as follows:

Hole No.	Footage	Core Width	Ounces Gold per ton
7	17.5	1.0	0.55
8	25.5 11.0	2.0	0.58 0.10
9	75.8	3.0	0.40

It is reported that the following minerals were in the vein that was mined: free gold, pyrite chalcopyrite, sphalerite and galena. No report is available that would indicate whether these sulphides were an amount that would make them of interest with present day metal values.

## POSSIBLE RECOVERY FROM TAILINGS:

A report by the Ontario Bureau of Mines shows that 331,069 tons were milled at the mine.

From information I have been able to obtain it appears that over 50% of this tonnage was treated by a stamp mill and amalgamation tables.

Representative samples of these tailings were sent to me by the then mine manager in 1926. I found that less than 50% of the gold was recovered using the reported mill heads as a base.

I conducted a series of mill tests on these tailings and found cynidation using a high proportion the slimes from the amalgamation mill were segregated from the cynide tailings.

### CONCLUSIONS AND RECOMMENDATIONS:

With the present price of gold, this property has outstanding possibilities.

- 1. The lower levels that have not been developed but what drilling and sampling has been done indicate that the gold content is as high or higher than the upper levels and will extend as far.
- 2. The other gold bearing zones west of the mined vein offer great possibilities and warrant detailed exploration.
- 3. The so called "diorite zone" would in itself be a prospect worthy of full investigation.
- 4. The research work I did on the slimes from the stamp mill indicated that less than 50% of the gold had been recovered by amalgamation and I estimate that sufficient gold could be recovered from the slimes to more than cover the cost of the proposed program.
- 5. The Ontario Department of Mines records show 35,000 tons grading 1.15 ounces per (at present price of gold is over \$600.00 per ounce, this would be \$690.00 per tcn) developed and ready for mining.

The possibility of gold recovery from the amalgamation tailings adds a further potential to be considered.

1. That a qualified engineer examine the condition of the stamp mill tailings and carefully estimate the tonnage left.

- 2. If sufficient tonnage is available the tailings should be systematically sampled under experienced engineering supervision.
- 3. Should the results obtained by this examination be favourable a small protable mill be leased to treat the tailings. Mills suitable for this work are readily available.

I would also recommend a detailed drilling program to evaluate the gold bearing content of both the parallel vein structure and the Diorite zone, also the north and south extentions of the main vein should be investigated.

The shaft should be dewatered and the underground possibilities be evaluated.

I would estimate the cost of this work to be:

Dewatering shaft

\$50,000.00

Diamond drilling and supervision Total

\$85,000.00

This anticipated recovery from the tailings should provide the funds for the shaft and drilling programs.

Respectfully submitted,

WWB:jm

GANANOQUE, ONTARIO.

JULY 3rd, 1980

W.W. Beaton, P. Eng.



## APPENDIX C

Geophysical Surveys for Aubet Resources Inc.

by
Northwest Geophysics Ltd.
March 30, 1983

GEOPHYSICAL SURVEYS

for

AUBET RESOURCES INC.

ЪУ

NORTHWEST GEOPHYSICS LTD.

INTRODUCTION: Northwest Jeophysics Ltd. was contracted january 5, 1983 to carry out linecutting and conduct geophysical surveys for Aubet Resources Inc.

The area of investigation consisted of I2 patented mining claims numbered: TB IIO87, IIO88, II4I6, II4I4, HN 7/4, 7/45, 7/46, BJ ISI, ISB, ISB, ISB, and ISB.

These claims are in the Squaw Lake area, encompass the former St. Anthony Line and are located on the North Arm of Sturgeon Lake. They are accessible from highway 599 via Sturgeon Lake.

Linecutting began January 29, I983 and was completed February  $^{4}$ , I983. Lines were cut at  $^{4}$ 00° intervals along the baseline (N 30 degrees E) and stations were established every I00° along the section lines (N 60 degrees W).

GEOFHYSICAL JURVEYS: I. A VLF-EM survey was carried out February 4 to February 9, 1983. The receiving unit was a Geonics EM 16. Readings were taken every 50° along the section lines. All readings were taken facing north. The transmitting station was Cutler Maine, transmitting at a frequency of 17.8 khz. Both inphase and quadrature readings were taken.

The VLF data was plotted in profile form at a scale of I" equals 200' and 40 degrees. It was also filtered using the Fraser Filter method, plotted at I" equals 200' and contoured at a 20 degree contour interval.

2. A magnetometer survey was carried out February 4 to 9, 1983 using a GEOMETRICS 316 proton magnetometer.

A base station was established on 31 0 at 243. The baseline was surveyed and diurnal variations were corrected for by taking repeat readings at the intersection of the baseline and section lines during the survey. The section lines were read recording the total magnetic field at 50' intervals.

The results of the magnetometer survey were plotted at a scale of I" equals 200' and contoured at an interval of 200 gammas using a datum of 59000 gammas.

SUMMARY OF RESULTS: It must be noted that the direction of the transmitted VLF signal is very nearly coincident with the direction of the survey lines for the VLF survey. This is a common problem in the area because of the geological strike of the rocks in the area and is unavoidable because of the limited number of VLF transmitting stations available.

Throughout the survey area and in the mine-mill area, in particular, there are several garbage dumps, buildings, underground workings, and metal objects that may cause erroneous readings in both the magnetometer and VLF surveys. These areas have been noted on the maps, wherever observed in the field.

<u>CONCLUSIONS</u>: As per our contract a total of I2.0 miles of line were cut and surveyed for Aubet Resources Inc.

This report was written and the data submitted March 25, 1983, by A.J.Lambert, Geological Technician, Northwest Geophysics, Thunder Bay, Ontario.

A.J.LANDERT SECPHYSICS LTD.

## APPENDIX D

Diamond Drill Logs for Holes SA83-1, SA83-2, SA83-3, SA83-4, SA83-5

Drilled in January, February and March 1983.

# DIAMOND DRILL RECORD

NAME OF	PROPERTY	St. Anthony Gold (	(Aubel)		
		LENGTH	416.01		
LOCATION	202.01.11		( 01 11		
LATITUDE	292.0. N	DEPARTURE .	6*0. A		
ELEVATION	Sulface	HTUMISA	1100	DIP	<u>-50°</u>
STARTED	Jan. 23, 190	B3 TINIBUED .	Jan. 27, 19	<del>1</del> 85	

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZMUTH
100'	57°				
2001	560				
300' 400'	542				
400	530				

HOLE NO. \_\_\_\_\_ SHEET NO. \_\_\_\_

LOGGED BY J. Hinzer

F 0 0	TAGE	DESCRIPTION	1.		5 A M P	LE	Au ABBAYB			
FROM	10		HO.	SUPPL	FROM	FOOTAGE	TOTAL	•	Uz/Ton	OZ/TON
0.01	14.0'	CASING (overburden to 12.01)		100.5		,,,	10172			
12.0'	161.2*	Granite - medium grained.  Granite is medium gray, with some buff coloured sections.  Host of the rock is altered at least partially reflected by a greenish-yellow tint due to alteration mineralogies.  Buff felspar phenocryst (2-4 mm) are the dominant feature.  Rock is fairly massive and homogeneous. The granite texture is destroyed in some areas where strong shearing and silification reduce the rock to fine grained dark green material often containing many qualitatice veins and or quarts.	603 604 605	Тгру Тгру	48.2' 61.5' 85.5'	52.21 50.11 63.91 87.71			Nil Nil Nil 0.003	
		biebs (small).  Mineralization consists of up to 2% fine grained disseminated pyrite and up to 2% pyrite crystals up to 1 cm. occurring along quartz veins.	606 607 616 608	Тгру	95.0' 112.7' 131.9'	97.7' 115.0'	2.7' 2.3' 2.8'		Nil 0.002 Nil 0.005	
		12.0'-32.0' - granite is weathered due to pentrating fluids from the overlying tailings pond. Practures open to surface penetrate 30' or more and are strongly moned for up to six inches on either side. Granite is dark brown where weathered often marked by a red-brown halo (rim).  35.0'-39.0' dark green mottle or spotting up to 10% of granitic core due to alteration minerals crude mineral alignment (shearing) is present.	609 610 611 612 613		138.3' 141.3' 153.0' 155.6' 158.8'	141.3' 141.1 155.6' 158.8'	3.0' 1.8' 2.6' 3.2' 2.3'		Nil Nil Nil 0.002	

DIAMOND DRILL RECORD

NAME OF	PROPERTY _	St. Anthony Gold (Au)	bet)
LOCATION	<del></del>		
LATITUDE		DEPARTURE	***************************************
ELEVATION	·	AZIMUTH	DIP
STARTED .		FINISHED .	

FOOTAGE	DIP	HTUMISA	FOOTAGE	DIP	HTUMESA

HOLE NO. SA-03-1 SHEET NO. 2

LOGGED BY \_\_\_\_\_

F 0 0 1	AGE	D	BAMPLE						Au ASSAYS			
FROM	10	DESCRIPTION		3105	FROM	FOOTAGE	TOTAL	•	0z/Tor	OZ/TON		
12.0'-	161.21	continued						:				
		39.0'-130.0' massive granite with minor quars veining i - 2" qt. veins make up approximately 5% of the core. Minor shear zones end altered sections from 6" - 3", in length well dispersed throughout.										
		130-161.2 Strongly altered granite green to yellowish with finer grained texture. Very strong shear sone 133.8-134.3 - dark green fine grained, very soft. 130 - 150' - approximately 25-30% of core is quartz both massive and laced. 150 - 161.2' -approximately 35-40% of core is quartz.										
61.2*	-193.1	Quartz Porphyry (Sheared) medium to dark grey very strongly sheared, almost parallel to core axis (appears almost to be flow bended). Quarts phenocryst-dark gray occur as 1-2 mm, grains in the matrix and 5-10 mm large phenocryst (up to 50%) angular to sub-angular - often brocken (brecciated) - matrix flows around these coarse grains.	514 515 517		175.01	163.4' 177.0' 193.0'			0.001 Tr Nil			
		Other constituents are 1-3 mm yellowish sericite flakes and approximately 1/2% 1-2 mm py. cubes.										

## DIAMOND DRILL RECORD

NAME OF PROPERTY St. Anthony Gold (Aubot)	FOOTAGE	DIP	HTUMISA	FOOTAGE	DIP	HTUMISA	
HOLE NO. SA-83-1 LENGTH							REMARKS
LATITUDE DEPARTURE	<u> </u>						
ELEVATION AZIMUTH DIP							LOGGEO BY
STARTED FINISHED							

F O O T A		DESCRIPTION			5 A M F	LE		Au ASSA,YS				
FROM 1	10	o E S C R P P P O C C	NO.	1012	FROM	FOOTAGE TO	TOTAL	*	Uz/Ton	OZ/TOH		
.21-19	3.11	continued.										
		The lower 10-15 feet of core is more strongly sheared, rock is pale gray - almost lalcose, large quarts phenocrysts are less frequent and small ones are almost obliterated.										
	- 1	Quartz veining within the unit is restricted to one 3" vein.		1		·						
		Upper and lower contacts are irregular but fairly sharp. Contact zones were not discernable.										
3.11-37	10.01	Granite Medium Grained similar to 12.0' - 161.2' above.	618 619		220.31	196.0' 223.3'	3.01		Tr Nil 0,002			
		193.1-235.2 strongly altered & sheared granite green to yellowish green finer textured. Entire section averages 10-15% quarts both massive and laced. Sheer brecciation of	620 621 622 623		267.0	267.0	3.61		NII D.001 D.004			
		the granite occurs up to 204' w 222' alteration is greatly reduced. w 219' sphalerite bleb in bull quarts	624 625 626 627		274.61	274.6° 278.9° 290.2° 304.3°	4.51 3.21		N11 0.008 N11 0.001			
		235.2' - 270.9' medium grained granite with occasional shear zones and minor altered sections  260' small veinlet of sph	628 629	Trpy	310.81	313.6° 319.2°	2.8'		N11 N11			
		259' - 270.9' shear zone 1 - 5% py avg. 2%				1						
							ļ					
	]											

HAME OF PROPERTY St. Anthony Gold (Aubet	FOOTA
HOLE NO. SA-U3-1 LENGTH	
LOCATION	<del></del>
LATITUDE DEPARTURE	ļ
ELEVATION AZIMUTH DIP	ļ <del></del>
	L

		,				HOLE NO. 3A-03-1
FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	A2 MUTH	
						REMARKS
						LOGGED BY

HOLE NO. SA-US-1 SHEET NO
REMARKS

F 0 0 1	AGE		DESCRIPTION	1		5 A M F			l	Au Ass	3 A Y 5
FROM	τo		DESCRIFICA	NO.	SULPH	FROM	FOOTAGE		<b>K</b>	Oz/Ton	OZ/TON
		<del></del>		ł	IDES	FROM	10	TOTAL	<del> </del>	<del>                                     </del>	<del>-   -  </del>
93.14	370.01	continued			"		1				
		270.9 - 277.01	shear zone-quarts laced 60-70% quartz dark green	630	TIDY	319.21	320.31	1.1	1	Tr	
			fine textured 1-2% disseminated py tr. sph?	631	1 ''		322.41	2.1		Nit	
	1		galena? minor carbonate.	632	1		335.01	1.71	•	NIL	
1	i	277.0' -289.6'	altered granite. 10-15% qtz. laced	633	1		338.61	1.61		NII	1 1
		• • •		634	1	342.71	344.41	3.7'	İ	Nil	1 1
l		289.6' -370.0'	medium to coarses grained granite upper and	635	l		350.2			Nil	1 1
			lower sections are altered and sheared along ;	636	1		352.8		l	NSS NII	1 1
-			-5' sections, randomly, most noteably between	637	1		357.0		į	HII	1 1
			319' - 321.6' and 348 - 353.0' below 312' pale	638			360.81	3.8'		Nii	1 1
	l		gray - while green unsheared except small local shearing at 1-12" quartz veins - 1% diss.	639			371.2	2.1'		0.001	
			biotite.	640 641			375.61	2.4'		Ni i	1 1
							380.4	2.4	i .	Tr	
70.0'-	416.01	Granite Coarse	Grained			380.4		3.2'		0,001	
		Similar to	the above but coarse grained - lightly spotted	644	1		385.01	1.4'	1	NII	] !
İ		with darker al	teration patches, chlorite and biotite. Occasional	645	1	385.01	387.21	2.21		0.001	
			trong shearing and/or alteration accompanied by		Trpy		388.91	1.7'		0.430	1 1
			are also present. Up to 1% disseminated pyrite	647	1		392.01	3.1'		Tr	1 1
	1	(1-2 mm. grain	s) is also present.		Trpy		393.91	1.9'		NII	1
1		3851 - 390-01	Strongly altered sheared and silicified section,	649	L	393.91	397.01	3.11	ł	0.003	1 1
1		,,,	massive quart vein from \$88.1 - \$89.0' contains	650	Liba		399.81	2.8'		N11	
			several 1-2 mm sulfide seams up to 2-3% of qts.	651	1	399.81	101.5	1.7'	1	""	
i			zone is mineralized.	Ħ	1				1		1 1
				1	1					1	
				li		1	1				i i
				1	1	l				1 1	1 1
				H	1					1 1	1
j				l	1		1			1 1	<b>∤  </b>
				Ĭ	1	1	1			j	
	ľ			1	1	1	1		ì	1 l	1 1
				1	1	1	1	İ		1 1	

-	F PROPERTY	St. Anthony Gold (Aubet)	
	o. <u>SA-03-1</u>	LENGTH	
LOCATIO	H		
LATITUD	C	DEPARTURE	
LEVATI	он	AZIMUTH PIP	

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	HTUMESA

HOLE NO. A-03-1 SHEET NO. S

FOO	TAGE	DESCRIPTION			5 A M P	LE			۸u ^	8 5 A.	r <b>5</b>	
FROM	τo		NO.	SULPH	FROM	FOOTAGE TO	TOTAL	*	บะ/Ton		oz/ton	
370.01-	416.01	continued  Occasional minor altered zone above and below this section persist to the end of the hole.	652 653	Trpy	404.2° 412.5°	407.0°	2.81 3.51		0.002 N11			
		370' - 402' white-gray, coarse grained granite, 10% qts. veins from 1" -18", 1-3% py, locally brecciated, tr. sphalerite at 389'.	654			ite na			0.002			
		402' - 412' coarse grained, 1% qts. stringers, trace pyrite 412' - 416' same as above with 15% qts. stringers, 2-3% pyrite										
		1 H										

NAME OF	PROPERTY	St.	Anthony Co	ld			
HOLE NO.	SA-83-2		LENGTH	407.0'			
LOCATION			····				
LATITUDE	0+93N		DEPARTURE	0+27E			
ELEVATION	ដែរ។	face	DEPARTURE	1100	DIP	-50°	
STARTED	Jan. 28,	1903	FINISHED	Jan. 30,	1903		

FOOTAGE	DIP	HTUMEA	FOOTAGE	DIP	AZIMUTH
100	56 <sup>0</sup>				
200	550				
300	550				
400	54 <sup>0</sup>				

HOLE NO. SA-83-2 SHEET NO. \_\_\_\_

LOGGED BY J. Hinzer

F00	AGE				<b>3</b> A M P	l E			Λu ^	5 8 A Y 5	
FROM	10	DESCRIPTION	NO.	50E51	FROM	FOOTAGE	TOTAL	*	Oz/Ton	02	/тон
0 -	16.0'	Caning (Bedrock at 15.5')	1								
15.51-	10.08	GRANITE (edium Grained)	655		16.51	19.11	2.61		Tr		
		Gray with light yellow-green cast - especially in more altered sections. Dominant felspars gray-pale white grains. Sections appear spotty where dark grained alteration patches, sercite, mica congregate. Spots may be up to 10% of core. Up to 1% py is common with 1-2 mm grains.  Surface weathering (leaching) along fractures is common in first twenty feet of core but persists on some fractures to 85 feet or more.  Altered zones (yellow-green cast) with associated quarts lacing, strong shearing (brecciated granite) and minor sulfides up to 2%.  36.5-46.8' altered, sheared, less than 2% py 62.0'-67.0' altered, sheared, less than 1% py 79.0'-88.0' medium-strong alteration, shearing (90°-10°-95/4) some massive quarts veins	656 657 658 659 660	2% p 1% p 1% p	80.2	25.8' 45.0' 67.2' 85.1' 88.9'			HII Tr Q.POL Tr		
88 <b>.</b> 01 -	254.7	GRANITS (Coarse Grained) Granite light gray some paler sections, extensive areas of spotted granite - due to mice (biotite) sericite knots. Yellow green alteration patches, shearing, etc. as above	662	1%py	101.5' 108.5' 116.7'	102.7 110.0 118.8	1.51		0.011 Tr 0.001		

NAME OF	PROPERTY	St. Anthony Gold (Aubet)	
HOLE NO	SA-03-2	LENGTH	
LOCATION	N		
LATITUDE	t	DEPARTURE	
ELEVATIO	ON	AZIMUTH DIP	

FOOTAGE	PiP	AZMUTH	FOOTAGE	DIP	AZMAUTH		

HOLE NO	SHEET	HO,	_2_
REMARKS	<del></del>		

LOGGED BY \_\_\_\_\_

OOTAGE	- I	1		5 A M P	L E			Au A S 1	B, A Y 5
10м то	DESCRIPTION	NO.	SUPP	FROM	FOOTAGE	TOTAL	*	0 <b>2/</b> Tor	02/TOH
1.7' 292.2'	Sulfide average less than 1% with some large lumpy (spongy) cubes on bull quartz veins. (i.e. 109.0'x 4" qv) Altered granite with shearing (texture) is significant at the following footages (most sections are qt. laced)  142'-146' massive qtz.veins 134-142 2-7% sulf.70-90% core axis 155'-161' " " little or no ""  192.5'-193.4' 196.2'-198.5' 206.8'-208.2' some py (tr sph 209.7') 220.3'-227.0' massive qtz. veing 1-29° py 235 - 244' qtz. veing 1-29° py 246' - 254.7' very strong altered and shearing	564 565 566 567 568 570 571 572 573 574 575 578 579 580 581 582 583 584 585	I%py I%py I%py I%py I%py I%py I%py Irpy Trpy Trpy	127.0° 133.0° 136.4° 143.5° 155.7° 162.7° 176.1° 190.9° 215.3° 219.5° 224.7° 234.6° 235.9° 240.2° 243.5° 247.8° 252.0° 270.1°	128.4' 136.4' 139.7' 145.7' 159.0' 167.0' 179.3' 210.2' 217.7' 223.0' 227.0' 235.9' 238.0' 240.2'	1.4' 2.53' 2.53' 2.3' 3.3' 3.4' 2.4' 2.4' 2.4' 2.53' 2.4' 2.53' 2.4' 2.53' 2.53' 2.6' 3.53' 2.6' 3.53' 2.6' 3.53' 2.6' 3.53' 2.6' 3.53' 4.53' 2.6' 3.53' 4.5		0.001 0.004 0.002 0.006 NII Tr 0.010 Tr NII Tr 0.004 NII 0.002 0.003 NII 0.006 NII Tr	02/104

NAME OF	PROPERTY	St. Anthony Gold (Ambet)	
HOLE NO.	SA-83-2	LENGTH	
LOCATION			
LATITUDE	<del></del>	DEPARTURE	
ELEVATION		AZIMUTH DIP	

FOOTAGE	DIĘ	HTUMESA	FOOTAGE	DIP	AZMUTH

FOO	TAGE	DESCRIPTION			5 A M I	PLE			Au A S	5 A Y S	<del></del>
FROM	TO		NO.	SULT	FROM	FOOTAG	TOTAL	V	)z/Ton	0Z/10H	
292.21	373.01	GRANITE (Course Grained)	606		291.91	, ,			0.013		
	·	Similar to 88.0'-254.7'. Major sections of alteration, shearing, quartz lacing as follows:	687 688 689		296.81	300	1 2.0' 5 3.7' 9 4.0'		Tr Tr Tr		
		292.2-303' strong altered shearing 310' -311.8' medium altered shearing 333.5'-334.1' 343' - 346.5' 353'.6' - 354.2' 354.8' - 356.7' 360' - 373' moderate altered 40-50% qts. 14% py	692 693 694 695 696 697	2% P3	327.8° 334.8° 343.8° 349.2° 353.6° 357.1°	331. 337.0 346.0 351.0 357.1 362.0			0.002 Tr 0.001 0.008 0.001 0.002 0.013		
573.01	407.01	Intermitten qtz. veining with large 1 cm py cubes w 329.0', 350.1'  GRANITE (Medium Grained)  Similar to 15.5' - 88.0' slight alteration still present,	698 699 700 701		367.0° 371.3° 373.4°	371. 373. 376.	3' 4.6' 3' 4.3' 1' 2.1' 1' 2.7'		NII NII 0.001		
		much finer grained than above. Section is much lighter coloured, less aitered, with depth alteration spots are rare. Py occurs as large cubes both in qv, granite and also disseminatewery noticeable 1-2%. Traces of sphalerite, carbonate crystals not uncommon.	706	DX P3	303.2	386 . 390 . 395 . 398 .	2.4'		Nil 0.035 Nil Tr 0.002 Tr		
		Significant alteration, shearing and quartz lacing is present at 383.2' - 386.0' medium alteration 2% py.  398.0' - 402.0' weak alteration  E. O. H.	708 709 710 711	CI	400.4' 404.4' M P U	404.4 407.0 3 I T	4.0'		0.002 Tr 0.002 Tr		

HAME	OF	PROPERTY	St. A	nthony Go	ld (Aubet	)			
HOLE	NO.	SA-83-3		LENGTH _	1108.01				
LOCAT	HOI							<del></del>	
LATIT	UDE	3 & 30°6		DEPARTUS	£ 3 +	57 W			
ELEVA	TION	3 & 30°6 Surface		AZIMUTH _	1050	01	,	-650	
START		Feb. 3, 1	.983	FINISHED .	1020 Peb. 9,	1983			

FOOTAGE	DIP	AZIMOTH	POOTAGE	पुराय एक <b>नाक</b>	Allium
181	-680	5001	6420	900	63"
100	-6630	6001	640	10001	650
2001	-660	7001	65"	11001	620
3001	-6630	800	640	- T	
400	-650	·		<del></del>	

HOLE	ю.	SA-83-3	SHEET	нo.	
REM	ARK	8			

F 0 0	AGE	DESCRIPTION	l		5 A M P			K	Au A S	SAYS
FROM	70		HO.	SULPH	FROM	TO	TOTAL	τ,	Uz/Ton	02/TON
0 .	18.0'	CASING (Bedrock at 15.5')								
5•51	69.01	GRAY GRANITE  15.5'-33.0'  Tan-buff siliceous rock with no discernable grain size or texture (felsite). With depth texture becomes sugary and 2-3 mm.grains become visible as mafic component of rock gradually increases.  Dark 1 mm. fractures healed with qts.,carb., and up to 1% py abound from 19-28' at 450to c.a.  Occasional ½" qts. vein at 800 to c. a.  33.0'-56.0'  Transition (gradual) from Tan to brown-gray with minor biotite—as mafic content of rock increases resembling granite, locally carbonitized qts.veins at -36-37' (20% carb )at 100 to c.a. shear-breccia-39.2-42.0' contains 1-2% diss. py. 46-48.5 contains - 6" quarts vein, 2-3% py, chlorite  56.0'-69.0' medium grained dark granitic texture (blue-gray) with little or no sulfides. Locally sheared finer grained sections. sheer breccia-60-61'  Trensitional lower contact.	712 713 714	ру	55.0'	28.01 42.51 58.01	2.2' 2.7' 3.0'		0.003	
9.01 -	171.6	Altered Felsic-Mafic Greenstone with minor Granite  Identification of component rock types is difficult approximately 60% are mafic volcanics 30% are felsic volcanics and clastics and 10% are granitic.	715 716 717 718	Trpy l'hpy	79.0' 106.0' 115.8' 131.9'	81.0* 108.0 118.0 134.9	2.0'		Nil Nil Nil Nil	

NAME OF	PROPERTY _	St. Anthony Gold (Aubet)
HOLE NO.	5h-03-3	LENGTH
LOCATION	<del></del>	
LATITUDE		DEPARTURE
ELEVATIO	N	AZIMUTH DIP

FOOTAGE	DIF	AZMUTH	FOOTAGE	DIP	HTUMISA

HOLE NO. SA-85-3 SHEET NO. 2

001	AGE	DESCRIPTION			5 A M P	LE			Λu A	5 5 A Y	<b>*</b> \$
FROM	TO		NO.	SUEST	FROM	FOOTAGE	TOTAL	×	12/Ton		OZ/TON
9.01	171.81	continued									
		69.0'- 79.0' - Fine grained .' mm. equigranular homogeneous sandy gray coloured rock. Upper few feet are	719		134.91	136.61	1.71		Nil		
	]	transitional. Unit is possibly bedded as minor		Trpy	138.0				nil		İ
		contacts at 30° to core axis are seen(carboratized) 79.0' - 81.5' -coarse grained-dark-blue gray granite with joint	721		140.71	142.7	2.01		Nil		
		4-6" fine grained margins 81,5'-86.5' same as 69.0' - 79.0'	722	294.04	145.01	148.01	3.01		Tr		
		86.5'- 88.7' same as 79.0' - 81.5' granitic 88.7'- 90.5' same as 69.0' - 79.0'	723	1	148.01	}	1		0.004		
		90.5'- 93.5' same as 79.0' - 81.5' granitic	724	1	151.21				0.003		
		93.5'-109.5' aphenitic-fine grained brown-gray with 1-2% py at 107.5' at internal contact		ру							
		109.5'-113.0', same as 79.0' - 81.5 granitic 113.0'-136.5', fine grained brown to greenish gray - resembling	725	1%py	164.01	166.01	2.0'		0.002		
		greywacke-carbonate rich and very highly sheared locally 113-115-greenish-fault gauge material- chloritic									
		mud 118-120 - shear-breccia 127-130.3 - resembles section 15.5 - 33.0°									
		136.5'-138.5' Mafic Dike-fine grained black-atrongly foliated at 20° to c-axis. Sinuous upper contact over 1.5' - sharp lower contact at 80° to c.o. with 2" chilled margin.									
i											
											j

LOCATIO LATITUD ELEVATI	SA-6	DEPARTURE	FOOTAGE	DIP	AZ M	AUTH	FOOTAG	OIP	AZIMUTH	HOLE NO. GA-85-3 SHEET NO. REMARKS LOGGED BY			·	
F 0 0	AGE						3 A M	PLE			Au A S	8 8 A Y	3	
FROM	10	DESCRIPTION			10.	SULT	FROM	FOOT			)z/Tor		02/TOH	
69.01-		continued  158.5'-144.8' Andesite Tuff-dark green highly sheared chloritised and carbonitised - extremely; grained 2-3% disseminated py for 6" near contact  144.8'-166.7' predominantly felsic-tuff or intrusive  144.8'-151.0' similar to 113.0-136.5 - brown grey rice and strongly sericitic  151.0'-166.7' highly sheared-buff-greenish-gray fine 2-5% diss.py - local shear-bx (xtal twite 166.7'-171.8' - Mafic dike same as 136.5'-138.5' l" bleat chilled margins - upper contact at 80° to axis - lower contact at 70° to core axis  The entire unit is strongly sheared and carbon' except for the lower felsic unit 144.5 - 166.7 - which may an x-tal tuff or possibly a very highly sheared quarts possibly a very highly sheared quarts possibly a very highly sheared and carbon	dike  ch im c  graine  ff)  ched  core  tized  ay be	,d										
171.8	-285.5	DARK GRANITE Biotite Bich  Medium to coarse grained dark blue-gray colour,  containing many strongly sheared - sheer-bx sections, a  zones. Silicification (remove of mafics) minor carbon tion and parity point on shear alice												

HOLE NO. GA-83-3 SHEET NO. \_\_ 3

NAME OF PROPERTY St. Anthony Gold (Aubel)	FOOTAGE	DIP
HOLE NO. SA-83-3 LENGTH	<b> </b>	
LOCATION	<del></del>	
LATITUDE DEPARTURE	<b></b>	<del> </del>
ELEVATION AZIMUTH DIP		

HOLE NO. GA-03-1 SHEET NO	<del>4</del>
REMARKS	

DIP AZMUTH

AZIMUTH FOOTAGE

LOGGED	BY	

FOOTAGE	DESCRIPTION	8 A M P L E					Au ABSA,YS				
FROM TO		HO.	105.81	FROM	FOOTAGE TO	TOTAL	*	)z/Ton		oz/ton	
283.51-295.31	Alteration is characterized by 1) finer texture and shear-bx 2) loss of mafics to green-brown-gray colour 3) almost apmanitic texture 4) increased loss of mafics-pale gray with appearance of pink patches (K-spar) strong silicification, carbonatization and sulfide enrichment.  192194' - 4th stage altr. (24" py seams 3-5% py) 209.8'-213.5' - 2nd stage 5% qtz. laced-py paint 216216' - 1st stage 3-5% qtz. laced 1% py 218'-275' - Numerous 4-12" zones of 2nd stage altered with central quartz veins and 1-2% py (qt. vein at 50° to-a) 273'-283.5' - entire section stage 2 alteration 282-283.5' 10-15% qtz. laced and 1% py  QUARTZ FORPHYRY (Sheared)  Mid gray highly sheared matrix with minor carbonate. Quartz phenocrysts are dark gray 3.4 mm1 cm. often broken sub-rounded to angular making up 20% of core. Occasional white quartz pheno- crysts and many dark shards 3-8 mm. long 1-2 mm. thick are composed of dark (black) quartz with trace up to 5% py.	726 727 728 729 730 731 732 733	2%py 2-3%	186.0° 193.1° 195.4° 199.4° 210.6° 239.1° 276.5° 280.8°	189.01 195.41 198.01 204.01 240.91 280.81 283.91	2.51 2.61 5.41 3.41 4.31 3.11		Nil Nil Tr Nil Nil Tr O.003			

\_\_\_\_\_ FINISHED \_

STARTED ....

HAME OF	PROPERTY	St, Anthony Gold (Aubet)
HOLE NO.	SA-83-3	LENGTH
LOCATION		
LATITUDE		DEPARTURE
ELEVATION	·	AZIMUTH DIP

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZMUTH

HOLE NO. <u>UA-81-3</u> SHEET NO. <u>5</u>

FOOT	AGE	DESCRIPTION	SAMPLE					Au Assa, Ys			
FROM	10	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL		U2/Ton	02/1	ОН
283.5	-295.3	continued  Many 1-2mm, quarts phenocryst are also found in the matrix.  Occasional {-i" qts. carb veins cross at 5-30° to c-axis - upper contact sharp -lower, sharp at 70% c. s.		1							
295.31-2	297.01	Altered Sheared Granite	736		295.61	297.5	1.91		NII		
297.01-	301.01	ANDESTTE DIKE	737			299.3			NII		1
		Fine grained, dark green, chloritized, faint granular pepper texture, occasional qtxcarb" altered section, similar to (138.5-144.8). 1" quartz vein and 1% py at upper contact.									
501.81	-347.51	GRANITE ? (Altered Felsic Rock)	738	Рру	316.81	319.29	2.41		Tr		
		Upper part of this unit contains many granitic looking dark blue gray sections with altered lighter gray sections similar to 171.8'-283.5'. If granitic, this section is much more	739 740	F py 1-2%		344.01 346.41			0.001		
j			741	руро 5-7%	346.41	347.8	1.4'		0.009		
		301.8-303.2-granitic 303.2-304.3 - rescables a felsic tuff-sheared. 304.3-353.0'-granite with altered zones 6*-1' usually 333.0'347.5'-Schistose light gray strongly sheared mafic minerals are foliated. 343.4-347.5' - silicified qts. veining, 2-3% py, carb* tiny 1 mm. healed seams (chlorite) below 346.4-foliation almost gneissic at 10° to c.o. 5-10% py to po cpy.		ру							

HAME OF PRO	OPERTY St. Anthony Gold (Aubet) FO	OTAG
HOLE NO	SA-85-3 LENGTH	
LOCATION		<del></del> -
LATITUDE	DEPARTURE	
ELEVATION	AZIMUTH DIP	

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	HTUMISA

HOLE	но, <sup>55</sup>	1-03-3	SHEET	NO.	_6_	
REM	ARKS		****		<del></del>	

LOGGED	BY	 

F 0 0 1	AGE	DESCRIPTION	l		5 A M F	LE	'	Au ABBAYS			
FROM	10	DESCRIPTION	HO.	SUES	FIROM	FOOTAGE TO	TOTAL	K	Uz/Ton	oz/TON	
47.5'-	357.01	ANDESITE DIKE									
		Very fine grained highly sheared near contacts, 1% diss. py. Numerous tiny carb. and occasional qtz. veins at random angles. General pepper texture similar to 297.0 - 301.8'.  Contacts at (45° to c. axis upper) (60° lower), 1-3% py on lower contact.	742 743	1%ру	347.8' 356.1'	350.21 357.61			0.008 Nil		
57.01	715.01	DIORITE ZONE	l						}	ŀ	
		The entire section is composed of approximately 60% diorite and 40% which consists of altered diorite? and or biotite granite, felsic dikes and shrd? granite.	744 745 746		373.0' 374.4'	373.01 374.71 376.71	1.7'		Nil Nil Nil		
		357.0'-461.0' Medium grained spottly texture 2-4 mm grain size white felspar-dark mafic minerals. Trace pyrite - many altered sections centred on quartz veins or shr-breccia. Altered zones usually 6"-2' contain silcarb-2-3% py (dark quartz silicification) give core a dark blue gray appearance-resembling granite.  -no clear contacts between sub units are discernable therefore, it may be possible that some altered granitic sections are disrite.	747 748 749 750 751		403.61 433.21 454.81	392.5° 405.5° 437.6° 457.1° 460.6°	1.9' 4.4' 2.5'		0.001 0.001 0.001 Nil Nil		

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AM E	OF	PROPERTY	St. Anthony Gold	(Aubel)		 FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	HTUMISA	
		34-03-3	LENGTH									
ATIT	DE		DEPARTURE _			 						
LEVA		·	AZIMUTH		DIP	 						

LOGGED BY \_\_\_\_\_

00TAGE	]			5 A M P	LE	ĺ	AU ABSAYS			
ROM TO	DESCRIPTION	NO.	514 P1	FROM	FOOTAGE	TOTAL	- 15	Uz/Ton	02/104	
7.01-715.0	continued  357.0'-461.0' continued  Tiny 1/8 - 1/4" carb and qtm. veinsform a hairline network at random angles.  429.4-437.5' dark blue grmy-granitic looking section qtm. carb. veins-1.2% py centred on shr-bx zone at 434.7'  449.4'-455.5' as mbove-major carb vein 1' w 453 distinct foliation at 20° to c.m. near base.  455.3'-461.0' Transition some-extremely sheared. 59 to core axis-1% dism. py carbonate abundant - pale gray colour 461.0'-540.0' Zone of major shearing-milicification and alteration. Original rock types almost completely obscured. Unly Tr pyrite.  461.0-468.0'-shearing most intense-rock is a schist. Hay be a sheared qtm. pophryr?  468.0'-480.0-schistose 30-40% .l-1 mm. qtm. eyes along foliation (probably sheared qtm. vein stetched 50-40 times). gneismic texture last two feet.  478.0'-480'-resembles 455.3-461.  488.0'-493.0' - similar to 449.4'-455.3' strongly silicified-dark gray intrusive texture-5-10% qtm. lacing  493.0'-501.8'-very siliceous fine grained schistome 501.8'-509.5'-crosm between altered diorite and biotite granite  509.5-517.0' Dierite 517.0'-540.0' altered diorite or altered granite	753	11 11 11 11 11 11 11 11 11 11 11 11 11	474.8' 488.7' 494.0' 504.4' 512.7' 525.5' 537.5' 584.0'	494.01	2.51 2.61 4.51		0.004 Nil Nil T'r Nil Nil 0.001 Nil Nil 0.001		

HAME	OF	PROPERTY	St. Anthony Gold (Aubet)
HOLE	NO.		LENGTH
LOCAT	HOI	<del></del>	
LATITU	30€		DEPARTURE
ELEVA'	TION	<u> </u>	AZIMUTH DIP
CTABT	<b>.</b> .		******

FOOTAGE	DIF	HTUMISA	FOOTAGE	DIF	AZIMUTH

HOLE	<b>н</b> о. <sup>5</sup>	1-13-3	91887	NO.	_8_
REM	ARKS				
					••

F 0 0 1	TAGE	DESCRIPTION			5 A M P	LE		Au Absays				
FROM	10	DESCRIPTION	NO.	5 Not 3"	FROM	FOOTAGE	TOTAL	×	0z/Ton	02/TOH		
57.0'-	715.01	continued										
		540.0'-583.0' - Diorite 583.0'-607.5' - Combination of sheared diorite blue-gray granite and gray granite centred on a felsic shear zone strong chlorite up to 5% carb.  607.5'-615.0' - Diorite 615.0-532.0' - Siliceous - sheared fine grained gray rock with local faint granitic texture at centre of unit. 5-10% i'' curb veins tr py. 632.0'-651.0' - Diorite, many minor altered sections. 651.0'-668.0' - Similar to 615-632, alternating gray fine grained curb rich sectione and darker granitic looking sections. 660.7-668.0 - shear-breccia. 668.0'-688.7' Strongly silicified- cherty looking quarts laced section. 2-3% pyrite locally 671-675-predominantly shr-bx'd dark granitic texture appearing below 675.0' 678.6'-679.4' Bull qtz. vein at 30° to c-a. 3% py some earb 681.6-688.7 - many dark qtz. veins with 2-3% py.po-and granitic texture 697.6'4702.8'- Sheared dark gray granitic texture, locally carbonated 702.8'-715.0'- Predominantly Diorite	762 763 764 765 766 767 770 771 772 773	Py  R  R  Py  Py  Py  Po  1-2%  Py  Po  1-2%  Py  Po  1-2%	671.8° 675.2° 678.0°	641.9' 646.5' 664.1' 669.6' 671.8' 675.2' 678.0' 680.0'	4.1' 2.0' 2.1' 1.6' 2.2' 3.4' 2.8' 2.0' 3.7' 2.0'		Nil Nil Nil Nil Nil Nil Nil Nil Nil			

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NAME	or	PROPERTY St. A	inthony Gold (Aubet)		FOOTAGE	DIF
HOL E	HO.	5A-03-3	LENGTH		<b> </b>	
LOCAT	ION					
LATIT	UDK	*	DEPARTURE			
ELEVA	TION		AZIMUTH	DIP	<b></b>	<del> </del>

						HOLE NO. $\frac{6\Lambda-63-3}{2}$ sheet no. $9$
OTAGE	DIP	HTUMSA	FOOTAGE	DIP	AZMUTH	REMARKS
						NEMANOS
				I		
		i				

FOOTAGE	DESCRIPTION	SAMPLE						Au ABS,AYS			
FROM TO				FROM	FOOTAGE	TOTAL	*	)2/Ton	0z/10H		
15.0'-745.4'	GRANITE? (ALTERED Felsic Hock)		3/25.24			10174					
	Very similar to 301.8'-347.5!. Darker granite material dominates twenty feet interrupted by many silicified-shr-bx'd.	174 175 176		716.5' 742.2' 744.5'	744.51	2.5' 2.3' 2.4'		Tr Tr Nil			
745.4'-1108.0	Hedium to coarse grained dark bluish-gray with approximately 1% diss. pyrite, numberous local alteration patches and shear-bx'd. sections. Upper 100° of unit is tan coloured zone. Several major quartz-vein and shear zones occur in the lower 200 feet. Local sulfide content within these major qtzshear zones may reach 5-10% including py, po, tr cpy, sph and galena. Chlorite development is abundant with little or no curb but extensive silicification.  745.4°-039.7'- Transitional contact zone whitish to buff-hard siliceous lightly foliated and cherty in appearance (possible felsite). By 775.0° slight darkening with pale-yellow-green (alteration) colour mafic content gradually increasing between 830-839.7 unit grades into granitic dark rock.  Many strong shr-bx sections and chlorite stringers and 2-3% py and po are common.  (Tr sph w 757).	778 779 780 781 782 783 785 786 787 788	1% py 1-2% py 2% py 2% py 1-2%	769 01 1 21 773.61 788.61 794.01 798.01 806.0 811.51 815.31 819.81 823.61	762.0' 765.7' 768.0' 771.2' 773.6' 777.0' 794.0' 801.1' 811.5' 815.3' 819.8' 923.6' 926.7'	3.2° 2.4° 3.4° 5.4° 4.0° 3.1° 5.5° 3.8°		Nil Nil Nil Nil Nil O.080 Nil O.002 Nil Nil Nil Nil Nil			

		FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	HTUMESA	REMARKS
	SA-83-3 LENGTH							REMARKS
LOCATION								
	DEPARTURE							
	AZIMUTH DIP							LOGGED BY
STARTED _	FINISHED *							

FOOTAGE	DEBCRIPTION			5 A M P	LE			Λu ^ !	5 8,A Y 5
FROM TO	OEBCATP110A	NO.	SUPPL	FROM	FOOTAGE TO	TOTAL	16	Oz/Ton	ог/тон
745.4'   1108.0'	765-760.4 - shr-bx 3-5% py & po 771.3-773.6 - " 3-5% py & po 776.7-778.8 shr-bx 000-830'- qtz. lacing 5-10%, 5% py.po diss. & in qv. 805- shr-bx 814.5' gray q.v. 1-2" 20% po to carb. 818.2 several 1-2 mm py-po seams 820.0' 2" q.v. 50% po	791 792 793 794	‰ро 3% рору	819.8 823.6 826.7 846.8	10	3.6° 4.8°		N11 N11 N11 N11 0.017	oz/taH
	821.0'-824.0 - 5-10% po & py 825-826 - qtz. vein breccia 5% po 839.7'-1108.0' - Dark bluish-gray coarse grained granite, 1-2% diss. sulfides. Many altered sections. Alteration consist of 1) shear-bx zones, 2) bleaching (removal of mafics)-addition of yellow-green tint. 3) bluish or white q.v. at centre 4) po-py diss. and on veins-some chlorite. (average 6"-1" conesections) 860-863-Shr-bx 10% qts.lase Trpo 894.3-897.6-Shr-bx 10% qts.lase 1-2% po 905-905.2 - Shr. 1-2 sm. py-po seams at 10° lacing.	796 797 798 799 800 801 801	ро Ггрурс Зуруро 2-3% руро 2-3% руро	860.5' 870.0' 879.3' 886.4' 893.1' 895.9' 907.5' 915.6' 924.1' 927.6'	862.21 873.51 882.41 889.51 895.91 892.01 910.61 919.01	1.7' 3.5' 3.1' 2.8' 5.1' 3.4' 3.4' 3.5'		1 Nil Nil Nil 0.001 Tr 0.001 0.021 0.003 0.001	

NAME OF PROPER	St. Anthony Gold (Aubet)
HOLE NO. SA-85	-5 LENGTH
LOCATION	
LATITUDE	DEPARTURE
ELEVATION	AZIMUTH DIP
STARTED	FINISHED

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZMUTH

24.5-969.4 major qtz.	915-916, 920-921 q.v. py, po	807 808		939.01	939.01 944.21		*	0.007 0.007	oz/ron
924.5-969.4 major qtz.	915-916, 920-921 q.v. py, po 924.5'-930.4' 50-60% qtz. veins 3-% local chlorite	807 808	трур	935.0' 939.0'	939.01	4.01			
924.5-969.4 major qtz.	915-916, 920-921 q.v. py, po 924.5'-930.4' 50-60% qtz. veins 3-% local chlorite	808		939.01	944.21				
major qtz.	924.5'-930.4' 50-60% qtz. veins 3-% local chlorite	808		939.01	944.21				ļ
major qtz.	924.5'-930.4' 50-60% qtz. veins 3-% local chlorite	808		939.01	944.21			n ood	
major qtz.		809							ļ
	seams dendritic pattern 1% po & py Tr cpy		11-670	1944.2"	948.01			0.015	i
vein zone			руро	1					
· ·	935.6-930.2' Bull quarts-vein				951.81			NI 1	1
	939-7-943-3 Bull " "	811	5%py	051.0	953.81	2.0'		0.370	
İ	950.1-954.6 Bull oursts				יס. 8לכן	4.2'		Tr	1
		1.,,	pypo	050 01	hea 01	4 04		0.001	
1	965-969.4 Otz. laced 60% ots. 3.5% pv.	1017	176	320.0.	305.9.	4.6		0.001	Ì
1		RIA	1146	962.81	966.01	4.21		0.003	
j		1027			,,,,,,	,			
<b>,</b>	989-990.2 shr-bx - altr. Chl-py on shear slips	815	1%	966.01	969.31	3.31		0.004	1
1005 1017 8	992-999.5 shr-bx 3-4% py po tr copy chl.		руро	ł					1
017-1009	1005-1008 " " up to 5% py po diss. 8 on q.v.	816	1-2%	969.31	974.81	5.51	i	0.007	
	1010.5-1014.5- shr-bx 65% qts. laced and (1.2' qtz.	1	рору	1	1		l	j	
	vein at 10° to c.axis with 30% py 5% Chl.	817			779.5	4.7'	1 1	NI)	] ]
		1	bybo		l			mr.	
zone.	1017.2-1017.8" - 4-5" q.v. 15-20% po 5% py Tr chl.	818			784.5	5.01		••	i i
, , , , , , , , , , , , , , , , , , ,		010			D07 11	2.04	. 1	0.006	<b>i</b> !
	1026-1065.0' -Biotite-chlorite-granite, no shear-bx	1013	11-670	204.2.	٠,٢٠١م	2.0			1
	zones-some sections of 4-5" bull qtz.vein	820	170VW	GAR.21	1000 . S	2.11	i 1	0.001	
1	with Tr py po chi(1031-1033,1057-1060)	Horo	1-22	1,00.2	1000.	4.1	i I	1	i i
	silicified -best mineralized	992-999.5 shr-bx 3-4% py po tr copy chl.  992-999.5 shr-bx 3-4% py po tr copy chl.  1005-1017.6 1005-1008 " up to 5% py po diss. 8 on q.v.  1010.5-1014.5- shr-bx 65% qts. laced and (1.2 qtz.  1010.5-1014.5- shr-bx 65% qts. laced and (1.2 qtz.  1010.5-1014.5- shr-bx 65% qts. laced and (1.2 qtz.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1017.6 shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1017.6 shr-bx 3-4% py po tr copy chl.  1010.5-1017.6 shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 3-4% py po tr copy chl.  1010.5-1014.5- shr-bx 65% qts. laced and (1.2 qtz.	950.1-953.5 Bull quarts 951.6-953.4 15% py 965-969.4 Qtz. laced 60% qts. 3.5% py. 969.4-978 10% qtz. laced - many small shr-bx zones 985.2-987 -Shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl. 1005-1017.8 1005-1008 " " up to 5% py po diss. 8 on q.v. Qtz-laced 1010.5-1014.5 shr-bx 65% qts. laced and (1.2' qtz. silicified vein at 10° to c.axis with 30% py % Chl. 1017.2-1017.8 - 4-5" q.v. 15-20% po 5% py Tr chl. 1021.9-1022.8 - Altered l½" qv. T-py po chl.	945.3-947.2' 50% qts. Tr py Chlorite 950.1-953.5' Bull quartz 951.6-953.4 15% py 965-969.4 Qtz. laced 60% qts. 3.5% py. 965.2-987 -Shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 989-990.2 shr-bx 3-4% py po tr copy chl. 1005-1017.8' 1005-1008 " " up to 5% py po diss. 8 on q.v. 1005-1014.5- shr-bx 65% qts. laced and (1.2' qtz. 1010.5-1014.5- shr-bx 65% qts. laced and (1.2' qtz. 1010.5-1014.5- shr-bx 65% qts. laced and (1.2' qtz. 1011.9-1022.8 - Altered li qv. T-py po chl. 1021.9-1022.8 - Altered li qv. T-py po chl.	945.3-947.2' 50% qts. Tr py Chlorite 950.1-953.5' Bull quartz 951.6-953.4 15% py 965-969.4 Qtz. laced 60% qts. 3.5% py. 965.2-987 -Shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl. 1005-1017.8' 1005-1008 " " up to 5% py po diss. 8 on q.v. 1010.5-1014.5- shr-bx 65% qts. laced and (1.2' qtz. 1010.5-1014.5- shr-bx 65% qts. laced and (1.2' qtz. 1011.9-1022.8 - Altered la qv. T-py po chl. 1021.9-1022.8 - Altered la qv. T-py po chl.	943.3-941.2' 50% qts. Tr py Chlorite 950.1-953.5' Bull quarts  951.6-953.4 15% py 965.969.4 Qtz. laced 60% qts. 3.5% py. 969.4-978 10% qtz. laced - many small shr-bx zones 989-990.2 shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl.  1005-1017.8' 1005-1008 " " up to 5% py po diss. 8 on q.v. Qtz-laced silicified -best vein at 10° to c.axis with 30% py % Chl.  1017.2-1017.8' - 4-5" q.v. 15-20% po 5% py Tr chl. 1021.9-1022.8 - Altered la qv. T-py po chl. 1021.9-1022.8 - Altered la qv. T-py po chl. 1021.9-1022.8 - Altered la qv. T-py po chl. 1021.9-1022.8 - Altered la qv. T-py po chl. 1021.9-1022.8 - Altered la qv. T-py po chl.	943.3-941.2' 50% qts. Tr py Chlorite  950.1-953.5' Buil quarts  951.6-953.4 15% py  965-969.4 Qtz. laced 60% qts. 3.5% py.  985.2-987 -Shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl.  Qtz-laced silicified -best vein at 10° to c.axis with 30% py 5% Chl.  1007.2-1017.8' 1007.9' 1007.9' - 4-5" q.v. 15-20% po 5% py Tr chl.  1007.2-1017.8' 1007.9-1022.8 - Altered 1½" qv. T-py po chl.	945.3-947.2' 50% qts. Tr py Chlorite 950.1-953.5' Bull quarts  951.6-953.4 15% py 965.969.4 Qtz. laced 60% qts. 3.5% py. 969.4-978 10% qtz. laced - many small shr-bx zones 989-990.2 shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl.  1005-1017.8' 1005-1008 " " up to 5% py po diss. 8 on q.v. Qtz-laced silicified -best vein at 10° to c.axis with 30% py % Chl.  Tr pe)  1007.2-1017.8' - 4-5" q.v. 15-20% po 5% py Tr chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl.	943.3-944.2' 50% qts. Tr py Chlorite 950.1-953.5' Bull quarts  951.6-953.4 15% py 951.6-953.4 15% py 965.969.4 Qtz. laced 60% qts. 3.5% py. 969.4-978 10% qtz. laced - many small shr-bx zones 989-990.2 shr-bx-5% qts. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips 992-999.5 shr-bx 3-4% py po tr copy chl.  1005-1017.8' 1005-1008 " " up to 5% py po diss. 8 on q.v. Qtz-laced silicified -best vein at 10° to c.axis with 30% py % Chl.  Tr pe)  1017.2-1017.8' - 4-5" q.v. 15-20% po 5% py Tr chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl. 1021.9-1022.8 - Altered 1½" qv. T-py po chl.

NAME OF	PROPERTY	St. Anthony Gold (Aubet)
		LENGTH
LOCATION		
LATITUDE		DEPARTURE
ELEVATION		AZIMUTH DIP
STARTED _		FINISHED

FOOTAGE	DIP	HTUMISA	FOOTAGE	DIP	AZIMUTH
				-	

HOLE NO. UA-03-3 SHEET NO. 12

FOOTAGE	DESCRIPTION			5 A M	PLE			λu ^	8 5 A	Y \$
FROM TO	DESCRIPTION	NO.	31023	FROM	FOOTAGE	TOTAL	*	Oz/Ton		OZ/TON
745.4-1108.0	continued  839.7'-1108.0' continued  1065-1108.0' Blotite-chlorite altered granite with many local shear-bx sections and 4-6" q.v. with up to 2% py & po Tr Chl.  1084.7' - 1087' altered 1' shr-bx 5-10% qtz. laced 1% po py 1104.3'-1106' oltred-5-4" shr-bx 6" q.v. white 1% py chl.  1108.0' E.O.H.	821 822 823 824 825 826	1 Pyr Pypol 1 -2% Pypol 1 -2% Pypol 1 -2% Pypol 2 -2%	1004.1 1008.0 1012.1 1014.6 1021.1 1021.1 1035.1 1030.0 1047.0 1056.6 1070.5 1078.1 1082.0 1098.0 1106.5	1006.0 1012.5 1014.6 1018.0 1021.3 1025.7 1030.5 1033.3 1030.0 1041.0 1050.7 1060.6 1074.5 1087.2 1087.2 1108.0 11108.0 11108.0	3.3' 4.5' 2.1' 3.4' 4.8' 4.7' 3.7' 3.68' 3.68' 3.69' 4.90'		0.003 0.042 0.140 NII 0.003 NII NII NII NII NII NII NII NII NII NI		

NAME OF	PROPERTY	St. A	nthony Gold	(Aubet)		
HOLE NO.	SA-83-4		LENGTH	1248.01		
LOCATION		2 8	<del></del>			
LATITUDE			DEPARTUR	3+70 W		
ELEVATION		lace	AZIMUTH	105 <sub>0</sub>	. 017	-65°
STARTED .	rub	.13/83	FINISHED	Feb. 20/03		

FOOTAGE	DIP	Patrones	บัi p	rootag	e Dip
100	650	500	<u> </u>	200	630
200	660	6()	650	1000	630
500	66°	700	650	1100	650
400	6520	UOU	650	1200	610

HOLE NO. 5A-83-4 SHEET NO. 1

LOGGED BY JHINZER

F 0 0 1	AGE	DESCRIPTION			5 A M P	LE			Au A	5 iS .A Y S	
FROM	10	DESCRIPTION	NO.	SUES	FROM	FOOTAGE	TOTAL	*	02/70	02/104	
0 -	8.01	CASING (Bedrock badly broken around 5-6' no core recovery)							,		
8.01	19.01	Altered Granite? (Chloritized Felsic Volcanic)?	845	≵‰ро ∍усру		11.4	2.7'		1111		
		Strongly altered, pale gray, silicified, locally chloritized locally brecciated with qtz. lacing 10-20% of core. Irregular fractures 1 mm-are chlorite filled. 2-3% diss. py throughout.	846		20.01	24.01	4.0'		Tr		
19.01	21.01	mafic Dike	847	2-3% ypo	24.0'	28.01	4.01		NTI		
		Dark gray-green fine greined silicified unit. Qtz. veining at both ends, with 3-4% diss. py	646			31.91	3.91		Tr		
1.0' - 5.0' -	23.0° 25.7°	same as 8.0'-19.0' altered granite?  same as 19.0'-21.0' safic dite qtz, veins at contacts 6-8", 10° to c. axis at top, 55° to c. axis at base.							_		
.7'	58.01	similar 8.0'-19.0' Altered Granite?	849		57.61	61.5'	3.9'		Tr		
		Medium gray intrusive texture, chlorite segregation along shears at 10-20° to core axis, 2-3% py in top 8' 1% for remainder. 45-47.0' shrbx.	850	рору 1-2% ру	1	66.31	4.81		NII		
3.01	82.01	GHANITE (Border Thase)	851		66.31	72.0'	5.7'		0.002		
		Duff to ebony, granular medium grain texture, some local faint pink (K-spar) patches. Very low (% leached)-Fe-Mg minerals. Alteration (yellow-green) quartz lacing (silification) and brecciation locally present. Up to 2% sulfides py. 58-6)-contact zone- 3-5% py,sericite, K-spar chl. & carb. veinlets	852	%ру	80.9'	82,21	1.3'		Hil		
		74-82 - lower contact zone occasional shr-bx, altr.									
		4									
				1	1		ı			<b>\</b> \	

		St. Anthony Gold (Aubet)		
HOLE NO.	SA-83-4	LENGTH		<del></del>
LOCATION				
LATITUDE		DEPARTURE		
ELEVATION	)	AZIMUTH	DIP	
STABTED		FINIANER		

FOOTAGE	DIP	HTUMESA	FOOTAGE	DIP	AZMUTH

HOLE HOPA-03-4	SHIEE F	NO.	_2_
REMARKS			

LOGGED	B٧	

FOOT	AGE		SAMPLE				-	Au A S A Y S			
FROM	70	DESCRIPTION	NO.	SULP	FROM	FOOTAGE TO	TOTAL	3	Oz/Tor	OZ/TON	
82.01-	102.01	GREENSTONE ANDESITE  Ratk green, chloritic, very strongly shid, at 0-5% to core axis. Shearing has imparted a gneissic bonding dark chloritic mafic bonds and white qts. rich bonds(carb. & fel ep.)  Silicified, carbonated. Qts. veining at 10° to core axis. Trace pyrite Lower contact at 10-15° to core axis.	853	1%ру	96.21	98.01	1,6*		HEI		
102.01	-112.51	Altered Granite? (Felsic Tuff)? Similar to 8.0-19.0, 27.5-58.0', 1-2% diss. py.(po)		l ba	103.5' 112.5'				NII NII		
113.01	- 376 . 31	GRANITE (Border Phase)  Similar to 58.0-82.0'  Light gray, to buff to ebony colour very gradually assuming increasingly darker colour (i.e. mafic content) Local brecciation, shearing, alteration throughout. Chlorite, sericite (muscovite) and diss. py & po 1-3% throughout.  128-156 Silicified 15-20% qtz. lacing 2-3% py(128-140)  140-154 60-70% qtz. laced.  175'185' K-spar patches(several), minor chlorite, carb.  198.0'-222' 20-25% qtz. lacing, dendritic chlorite (6") 205-206  1-2% py up to 5% locally.  0" q.v. at 213, 218, 220 light gray, 1-2% py	857 858 859 860 861 862	2%py 1-2%p 140py 1-2%p 1%py 1-2%p	115.9° 153.6° 153.8° 153.8° 174.2° 181.6° 188.0° 198.5° 202.6° 212.7° 216.5°	128.0' 143.4' 156.7' 178.0' 184.9' 190.0' 202.6' 208.0' 214.7'	4.4' 5.4' 2.9' 3.8' 3.3' 2.0' 4.1' 5.4' 2.0'		Nil Tr Nil 0.001 0.005 0.005 0.011 0.004 0.003 Tr 0.010		

HAME OF	PROPERTY	St. Anthony Gold (Aubet)	FOOTA
HOLE NO	SA-83-4	LENGTH	
LOCATIO	•		
LATITUDE	<u> </u>	DEPARTURE	
ELEVATIO	эн	AZIMUTH DIP	
			L

						HOLE NO. BA-B3-4 SHEET A
TAGE	DIP	AZMUTH	FOOTAGE	DIP	HTUMISA	HOLE NO SHEET N
		ļ			ļ	REMARKS
					<b>i</b>	

FOOTAGE	DESCRIPTION			5 A M P	L E		Au A 5 4, A Y 5			
FROM TO		NO.	SUPP	FROM	FOOTAGE	TOTAL	1	02/To	. : 02	/TOH
376.31.383.51	243-285' - pale, creamy colour, yellowish tinge below 256.0',  10-7.5% qtz. lacing throughout  250-252 - 5% py  257-258 - qtz. vein - 5% py  262-263 - " " - 2-3% py.chl.) gray qtz.  285-376.3'-mixture of pale-cream to yellow green and dark chlorite-biotite granite.  Average 1-2% diss. py. also 10% qtz. lacing throughout-at 60-80° to core axis.  305-306-buff-cream colour 314-315 " "  321-325 - y-green altr. 323-324-30% qtz. 327-330 - y-green " .15% qtz. 352-360.5 strongly altered.  362.0-362.4 - chlorite-to (c zone-soft) extremely shrd (fault gauge).  632.4-365.8 - fine grained strongly altered greenish. sharp contact at 40° to c-axis - 2% py at contact.	067 068 069 070 071 872 873 674 875 876	1%py -2%p 1%py " " 1-2%	225.91 248.01 256.31 259.61 274.31 298.01 313.01 323.31 339.81 361.21 361.21 375.31	252.0 259.6 263.6 270.0 290.0 301.5 317.0 327.1 344.2 366.2 378.0	4.0° 3.3° 4.0° 5.7° 5.5° 4.0° 5.8° 4.4° 5.0° 2.0°		0.001 0.005 Ni1 0.003 0.001 0.003 0.003 0.007 0.005 Ni1 Ni1		

	FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZMUT
OLE NO. SA-03-4 LENGTH						<del> </del>
OCATION						
LEVATION AZIMUTH DIP						
TARTED FINISHED			L			

HOLE NO. SHEET NO. 4

FOOTAGE	DESCRIPTION	Ì		5 A M P	LE			Au A	A 5, A Y	•
FROM TO	OESCHIP I I OH	но.	10E3	FROM	FOOTAGE	TOTAL	*	0z/Tor	0	2/TOH
	GRANITE  Medium to coarse grained gray to greens, sh gray granitic rock, Biotite and chlorite provides darker colour in sections alternating with light gray and altered yellow-green sections. Upper 200-300° are pale gray to cream coloured with occasional pink sections. Alteration and shearing is concentrated in narrow 10-50° zones throughout. Quartz veining of 3-6° bull qtz. and qtz. lacing up to 40-50% of core over narrow 5-50° sections is not uncommon.  Mineralization 3-5% py & po tr cpy is common in the pale pink zone. Darker chloritic section averages 1-2% py po with local sph, galena cpy. Zones of interms shearing carry up to 5-10% py & po over 1-3° widths.  Silicification and chloritization is especially prominent from 900-1100 feet.  383.5°-760.0° Predominantly pale gray, whitish or pinkish with minor local dark green section 10-30° especially near the base of the section. 3-5% py & po common (tv qv. occasionally) local silicification.  389.5-397 - Pale cream strongly bleached.  397-422 - 5-10% qtz. lacing, rapidly diminishing uclow 422-440 - pale gray-minor chl-biotite dark green sections 2% diss. sulfide.  448-458 - pinkish tinge 2-3% diss. py 463-468- dark green - chloritized 5-10% py common 3-4° qtz. veins.  468-535 - pale gray occasional chl, biotite patches 1-3° + sulf.	881 882 803 004 885 886 887 888 889 890 891 892 893	7 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	388.0' 392.4' 410.0' 428.0' 445.8'	394.5 413.5 453.9 450.6 455.7 460.7 473.0 488.0 488.4 501.3 514.1	4.4' 2.1' 3.3' 5.9' 4.8' 5.1' 3.0' 5.0' 5.0' 5.0' 5.0'		0.079 0.008 0.001 0.003 Nil Tr 0.003 0.001 0.002 Tr Tr 0.160 0.010		

NAME OF PROPERTY St. Anthony Gold (Aubet)	FOOTAGE	DIP	AZ MUTH	POOTAGE	DIP	A2 MUTH
HOLE NO LENGTH						
LOCATION	<del></del>					
LATITUDE DEPARTURE	}		<del> </del>			
ELEVATION AZIMUTH DIP	<b> </b>	<b> </b>				
STARTED PINISHED	<u> </u>		<u> </u>		L	<u> </u>

001AGE	DESCRIPTION			5 A M P	LE		1	Au A 5,1	8 A Y S
ROM TO	DESCRIPTION	NO.	312.57	FROM	FOOTAGE	TOTAL	3	12/Ton	OZ/TON
3.51-1248.0	Granite continued  4(88-535-(505-525) pinkish section strongly altered yellow-green for remainder of section  535-560-pale-whitish with minor greenish tint.  560-573 1-2" patches (mafic xenoliths or fragments) po is now dominant over py (2-3% po)  573-653 - 2-5% po & py pale-cream colour local shear bx. zones  608-617' 10" pinkish qtz. vein at centre  617-630 shr-bx.  630-693 many 3-4" qtz. veins darker greenish core  653-691 dark section dominates with only 1-2% py.  691-755.5 alternating dark green-creamy granite qtz.veins in patches w 691-709, 10-15% 70° to core axis 1-2% py-po  755.5-760 buff-pinkish, fine grained 1-2% dies. py  (looks like pink felspar porphyry)  760-771 - strong sheer-breccia. (769.4-770) dark green soft (fault gauge?)  771-1248.0' Predominantly dark greenish granite with minor pale gray sections. Coarser in appearance, 1-2% py more locally. Several strong shear zones.  870-912' very strong local shear-bx, parallel to core axis green to buff sheared sections in dark granite  1-2% sulfides.  shr-bx w 808 up to 10% qtz. lacing  810.5-814.5' 817, 839-843  853-912.1 - 3% py, 10-15% quartz laced up to 25% (883-893) entire section strongly sheared and breccisted almost paralle to core axis	895 897 898 899 900 901 902 903 904 905 907 909 912 913 914 915		553.8' 564.5' 568.5' 549.4' 596.9' 606.9' 612.1' 625.7' 645.5' 648.0' 652.0' 677.5' 705.4' 720.6' 775.2' 7760.2' 7768.8' 838.8' 838.0'	558.1' 568.5' 573.5' 553.4' 601.5' 612.1' 617.4' 628.4' 648.0' 652.0' 666.8' 680.3' 691.0' 709.1' 723.6' 764.6' 771.5' 778.0' 788.0'	4.5' 4.0' 4.6' 4.6' 5.2' 5.7' 2.5' 4.8' 4.0' 4.7' 4.0' 4.0' 4.0'		0.006 Tr NII NII 0.003 NII 0.500 0.018 0.021 0.009 Tr 0.018 0.004 0.001 NII 0.018 0.006 Tr 0.002 NII 0.002	

NAME OF	PROPERTY St. Anthony Gold (Aubet)
HOLE NO.	SA-83-4 LENGTH
LOCATION	**************************************
LATITUDE	DEPARTURE
ELEVATIO	N AZIMUTH DIP

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMES
L1					

HOLE NO/A-03-4 SHEET NO. \_ &

LOGGED	BY	
LOGGEN	BY	

FOOTAGE	DESCRIPTION			SAMP	LE		A S S,A Y S				
FROM TO		HO.	1913.	FROM	FOOTAGE TO	TOTAL	7	(72) TON	02/TON	02/TOH	
383.5- 248.01	Granite continued  925-958 - mid green- altered granite, large blebs of py/po/sph (up to li*) along occasional narrow seams heated with gray qtz. locally 10-15% qtz., 3-5% py po. Sph. blebs (928-955.5').  950-987 Strongly shr'd bx-altered locally up to 40% qtz. lacing - 5-10% py po, 983-983  987-1022 -chlorite on shear slips - mod. alteration, minor shearing.  1051-1039 -light coloured 20% qtz. laced chlorite & py patches(po) 1045-1048 -altered zone, light 1045.5-1047-30% qtz., 10% py po 1070-1081 -80% shr-bx-altered Tr, py, po, ph. 1094.5-1097.6 strong shr. bx 60% qtz. 3-5% py po 1097.6'-1151 strongly altered and sheer-bx. local quartz lacing up to 40%, sulphides up to 10%. Silicified, pale green colour, heavy chlorite on shears (blue green mud) 1114.0 -6* py, po (10%) 1125.6'-shrbx 6* qtz. vein 1-2% po 1135-1145-50% gray-white quartz, massive and veined 3-5% py patches & chlorite 1144.3'-1145.0' qtz. vein 30% py 1145-1151 5% qtz. laced 2-7% diss. py.  1151-1248 Biotite granite with pale greenish altered sections. Gradually distnishing alteration with depth. iocal alteration, shear-bx and itz. veining.	930 931 932	1-2/2 2/2 - 3/2 2-	878.0 888.0 892.0 898.0 902.2 911.1 914.8 664.4 921.0 928.0 939.5 945.1 958.0 960.9 965.1 969.4 974.4 974.9	879.8 892.0 894.5 902.2 905.6 914.8 918.0 667.2 926.0 929.0 941.6 942.5 945.1 947.4 960.9 965.1 974.4 979.4 983.6 998.6 1005.5 1027.6 1030.0 1048.0	1.0° 4.0° 2.5° 4.2° 3.4° 3.7° 3.2° 2.8° 5.0° 1.0° 2.1° 2.9° 4.2° 4.2° 4.2° 4.2° 4.2° 4.2° 4.2° 4.2		Hil J. 2005 Will D.001 Will D.002 D.005 D.006 D.00			

NAME OF	PROPERTY	St. Anthony Gold (Aubet)
HOLE NO.	UA-83-4	LENGTH
LOCATION		
LATITUDE .		DEPARTURE
ELEVATION		AZIMUTH DIP

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZMUTH

HOLE HO. SA-83-4 SHEET HO. 7

FDOTAGE	DESCRIPTION	SAMPLE	AUMASAYS
FROM TO		HO. SOES FROM TO TOTAL	# 1/3/10H oz/10H
FROM TO	Granite continued  1160-1185 - minor local alteration, occasional local 2-3% py-pozones & shearing at 1160, 1169, 1183 (1173-1176-shr-bx)  1185-1248 - minor chl. on slips - shr. bx local gray i quartz veins at 45° to core axis  1206.5-1208 white qtz. vein barren 1218.4-1222 sheared, bleached, chloritized 1% po 1225-1227.6 shr-bx Tr sph. 1238.4 - 12" qtz. vein, 20% py 1243.6 - 1245.8' shr-bx  E.O.II.	947	X
		969 - 1218.0 1221.9 3.9' 970 - 1224.7 1228.0 3.3' 971 - 1234.5 1239.1 4.6' 973 - 1244.4 1248.0 3.6' 974 - C O M & O S I T E	N11 0.001 Tr 0.001 Tr 0.007

NAME OF	PROPERTY SA-83-5	St. Anthony Gold			
HOLE NO.	SA-83-5	LENGTH	1307.01		
LOCATION	7. 100		7.360		
LATITUDE	6+495	DEPARTURE	<u> </u>		
ELEVATION	Suriace	AZIMUTH	1020 March 2/03	DIP	-600
STARTED _	Feb.22/83	FINISHED	March 2/03		

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMISA
2001	57"	105"	10001	5820	1150
400	600	1079	15001	570	1195"
6001	610	1110			1
8001	600	1120			

HOLE HO!A-03-5 SHEET NO. \_\_\_\_\_

LOGGED BY J. Hinzer

00144	DESCRIPTION		\$ A M P L &				ASSAYS			
NOM TO	DESCRIPTION	NO.	300	FROM	FOOTAGE	TOTAL	*	Uz/Ton	0	2/10H
0 - 4.0'	CASING (Bedrock at 2.5 feet.)		1333	<del></del>						
0 - 4.01										

NAME	OF	PROPERTY	St. Anthony Gold (Aubet)	
HOLE	NO.	51-03-5	LENGTH	
LOCAT	HOS	·····		
			DEPARTURE	
ELEVA	TION		AZIMUTH DIP	

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZIMUTH

HOLE NO. SA-HS-5 SHEET NO. 2

FOOTAGE	0.5.5.5.1.0.1			5 A M P	LE			Au A	A Y 8
FROM TO	1	NO.	-10F3.	FROM	FOOTAGE	TOTAL	*	z/Ton	OZ/TON
	208-218 cherty bx, micro faulting etc. 234-256.5 bx.healed with carbonate 263-267 bx. " " chlorite patches. 269-273 cherty locally 203-288 cherty. 288-515.1' Massive andesitic unit with still some evidence of possible bedding but much less obvious or intense than above. 538 - 1-3% py, po minor chlorite, qtz. veins. 357-378 abundant carb. veinlets, up to 20% bluish colour, in rock, chert, K spar 4 375' 365-366 -major sheared qtz vein 30-40° to c-axis 5% po, py 378-454 - slightly more bedded features again hairline fractures diminish below 400'.  414-417 Quartz Porphyry (as in all previous drill holes) 1 intense carb. veining and sil. for three ft. above & below. 428' - 6" qtz., fels. vein pink tr.chl, py. 428' - 454 - 2-3% py po-darker, more siliceous. 454' - 479 - Bark green chlorite rich andesite 479' - 515.1' - Contact Zone  GRANITE  Biotite granite, medium to coarse grained with darker biotite	975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992	1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	268.0' 281.0' 350.0' 563.3' 373.6' 413.2' 425.5' 436.8' 440.0' 445.2' 479.0' 485.3' 498.0' 501.3' 503.5' 508.0' 512.0'	273.0° 283.6° 342.0° 368.0° 377.0° 418.0° 428.6° 440.0° 445.2° 450.2° 480.2° 498.0° 501.3° 505.5° 508.0° 512.8° 515.1°	5.0' 2.6' 4.0' 4.7' 2.4' 4.8' 5.2' 5.2' 5.2' 5.2' 5.2' 2.9' 4.5' 4.5' 4.5' 4.5'		0.004 0.001 Tr 0.002 0.077 Hill Hill Nill Hill 0.009 0.026 Tr 0.026 0.002 Hill 0.003	
	chlorite rich sections, with numerous yellow-green shrd. altered zones, and some buff-gray-pinkish zones. Shear-breccia and strongly sheared section parallel to the core axis are opresent	994 995	-5%°	519.6' 522.3' 525.7'	522.31	2.7' 3.4' 4.2'		0.005 Tr Tr	

NAME OF	PROPERTY St. Ant	hony Gold (Aubet)		
HOLE NO.	5A-U3-5	LENGTH		
LOCATION				
LATITUDE		DEPARTURE		
ELEVATION		AZIMUTH	DIP	

FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	AZIMUTH

HOLE NO. SA-83-5 SHEET NO. 3

LOGGED BY ...

FOOTA	G E	``			5 A M F	LE	Au ASBAYS			
FROM TO	0	DESCRIPTION	NO.	51025	FROM	FOOTAGE	TOTAL	×	12/Ton	OZ/TON
15.11-130	0.80	GRANITE Continued locally. Average 2-3% py & po with local sections up to 10% py party py, sph, galena. Silicification (quartz lacing locally up to 40%) and sericite (yellow-green areas) and chlorite (shear slips) in lower portion of hole are the most prominent alteration features Contact is sharp at 50° to core axis 515.1-543 - Light buff-green gray contact alteration.	1000 8936	2-3% 3-5%	560:4 607.0	615.7	4:9: 4.0: 3.9:		0.004 8:881 0.003 0.00? 0.031	
		515.1-522 - shr. bx.5-10% py po. 522-525.5 - pink-buff, 65% qtz. laced, 1-2% py po 525.5-531 - shr-bx 20% qtz. laced "" 533-535 - 20% qtz 2-3% py.	8939	2Хру	620.0 631.0 536.0	622.3 636.0 640.1	1 5.0'		0.002	
		560-562.5 buff - 5-10% qts. 607 - 620 - Light green-gray to pink (615-620) qtz. laced 10-15% 2-3% py, epidate, chlorite, K-spar locally			640.1	i			0.002 NII	
		664-669-qtz. ladder veins 10% py & po 15-20% qtz. 670-714 25-30% qtz.lacing with up to 70% qtz. locally. 668.5-669.5' qtz. vein bx.zone 60% qtz. 676 - 677.5' ", gray-green, chl. biotite 714 - 762 dark chlorite biotite rich core	8944 8945 8946 8947 8948 8949	10%" 2-3% 3%" 1-2% 2-3% 1-2% 2%py	653.8 668.2 672.4 678.0 682.9 687.5 692.1 702.3	668.2 659.7 672.4 678.0 682.9	3.1' 5.9' 4.2' 5.6' 4.9' 4.6' 4.6' 4.9' 5.2'		0.011 0.056 0.005 0.007 0.001 0.006 0.005 0.003 0.005 0.001	

NAME OF PROPERTY	St. Anthony Gold (Aubet)	FOOTAGE	DIF
HOLE HO. <u> </u>	LENGTH		<b> </b>
LOCATION			
LATITUDE	DEPARTURE		_
ELEVATIC 1	AZIMUTH DIP	<del></del>	
STARTED	FINISHED	<b></b>	Щ.

						HOLE NO. SA-03-5 SHEET N
AGE	DIP	AZMUTH	FOOTAGE	DIP	AZMUTH	HOLE NO. THERE W
						REMARKS
_						

	SAMPLE AU ASSA.YS
70	NO. SUE PROM TO TOTAL & 02/TON 02/TO
To 1508.0 cuntinued  762-801 gray green, silicified qts. lucing greater than 20% occasional dark chl-biotite sections, 1-2% py & po 767-770 60% qts. laced 780-781 " " " 796-798 " " " Local buff sections with q.v. at 765, 769, 782, and shr. bx. w 708.  801-845 mixed gray green and biotite chlorite rich core average 5% qts., 1-2% sulfidos.  845-888 Light gray-greenish and buff coloured (pinkish) with local strong yellow-green alteration, 5-10% qts. and 1-3 py. po.  861-867-buff-pink 869-870-" " shr-bx w 873, 875, 877-879.  880-888 strong yellow-green alteration 883.5 6" qts. vein with 2" py bleb 884.5-886 buff-green  880-981 Mixed altered greenish gray and biotite chlorite-dark granite, local shr-bx & sulfide concentrations to 3-5%, 4-6" qts. veins common below 928' 893 - shrbx 895 - 8" gray qts. vein w 50° to core axis 911-912- shr-bx 934.5-935.5 shr-bx qts. vein 4" py & po possible ankarite w 937, 939 941-942 shr-bx 944-945 " "	FOOTAGE

100

NAME OF PRO	PERTY St. A	nthony Gold (Aubet)		
HOLE NO. BA	-413-5	LENGTH		
LOCATION	<del></del>			
LATITUDE		DEPARTURE		
ELEVATION		HTUMISA	DIP	

FOOTAGE	DIP	HTUMESA	FOOTAGE	DIP	AZMUTH

HOLE	но.Ш	سيجيات	SHEET	HO,	
REMA	A # K 5		<del></del>		

FOOTAGE					5 A M P	LE	AU ASSAYS			
ROM	70	DESCRIPTION	HO.			FOOTAGE			Oz/To	OZ/TON
, ,,,,,,,				SULS!	FROM	10	TOTAL			02/104
15.14	-1308.d	continued	8900	1-5%	1965.4"	960.51	3.1'	ı	Hii I	- 1
,	.,	880-901 cont'd.	8981	3-5%	968.51	972.31	3.81	1	0.088	1
	1	957-974 20-30% qtz. veining % py po blebs-much dark			972.3		2.91	!	NLI	1
	1	bluish green chi. mud on shear slips.			975.21		3.71		0.002	1
- 1	1	981-1085 - chloritized biotite mixed dark & light granite, chlorite				993.31	4.01	ŀ	NII	1
	]	stringers common, local strong silica & heavy sulfide	8985			1005.0			Tr	ı
- 1	1	mineralization.				1006.6			0.005	
i	ļ	1004.5-1006 - 50% qtz. (5%-10% py)				1008.0			17	i
Ì	1	1022 - 1023 - 0% qtz. veln white, barren	กากเ	1-24	1020.0	1025.1	4.3		i ri	j
		1030 - 1031 - 11 11 11 11 11								1
		1040 - 1052 - common 4-6" qtz. veins, chlorite wisps Tr.py	8909	67 X	1030.3	1044.0	4.7'		0.001	
	- 1	1052 - 1055 - light buff 30% white qtz. 3"-1' veins 1-2%py				1040.5			0.004	
	İ	1077 - 1078 - qtz. vein parallel to core axis 3" py blebs				1056.1			0.004	1
	- 1	10/1 - 10/8 - qtz. vein paratter to core axis 2" py bress		l PJ	ł					
	- 1	1002 - 1083 - 6" qtz. vein tr py po				1074.5			0.004	
1	1	1085 - 1468 - as above, but much less chloritized, and more yellow-	//			1078.4			0.019	l l
ì	1	green alteration with 1-2% sulfides. 1098.5-1105.5 - Shr-bx yellow-green altr'd, qtz. lase 10%				1088.8			H11	j
		1-2% diss. py.	8995	1-88	1096.0	11099.1	3.1'		1111	1
	1	10991100.5 - shr. bx. dark green	8996	H 11	1099.1	1024.4	3.31	ŀ	0.020	
	- 1	1105.5'-1141-yellow-green (similar to DDh 4, 83-1,2) with				1105.3			0.005	
]	1	local 10% qtz.lacing 1-2% py po				1124.3			0.005	l i
	- 1	1141 - 1160 - increasing yellow-green alteration & shrbx.	•	ı vj	ı	1			000	
	1	1160 - 1308 - sheared and altered granite, alternating chlorite-				1139.5			0.008	- 1
	- 1	biotite, buff-pink and yellow-green sections, local	,w	5ÿ77°	742.5	950.2	5.0'		0.002	1
i	]	qtz. lacing and splashes of sph, galena and up to	9001	H H	11147.0	1151.0	4.0'		0.019	l l
i	- 1	3-5% py & po. Shr. breccia zones abundant. Hajor	9002	1-2%	1157.8	1163.8	6.01		0.002	
	- 1	shearing is almost parallel to core axis over 5-20	1	F#		1085.0			0.004	
	- 1	foot sections.		1					0.016	
	]	1001 BECATOUR!				1171.1			0.005	[ ]
			2007	TANDA	111111	1175.9	4.81			
	1	·	2006	1 - 276	1184.5	1189.1	4.61		0.005	
			I	,,,	1	1198.0	5.21		0.032	1

NAME OF PROPERTY Ut. Anthony Gold (Aubet)	FOOTAGE DIP AZIMUTH FOOTAGE DIP AZIMUTH	HOLE NO.
HOLE NO. <u>UA-85-5</u> LENGTH		REMARK
LOCATION		
LATITUDE DEPARTURE		
ELEVATION AZIMUTH DIP		
WILLEST FAMILIES		LOGGED

HOLE NO. 10-13-15 SHEET NO
REMARKS

FOOTAGE	DESCRIPTION			5 A M P	LE			Au Assa,ys				
FROM TO		NO.	all s	FROM	FOOTAGE	TOTAL	*	UZ/TOII .	02/TOH			
17.11-1308.0	continued  1160-1190 - strong shr-bx, 20% qtz. lacing, Tr sph, galena 1-2% py po (shr.bx over 2' sections) yellow-green 1190-1204.5 chlorite biotite-granite 1204.5-1219 buff-cream, locally talcose 5-10% qtz. laced 2-5% py 1219-1226 - gray granite 1226-1237.5' - altered gray granite 10% qtz. lacing, 1-2% py p Tr. galena 1235.5-1235 (20% qtz. lacing) 1237.5-1270 - strongly shr-bx with yellow-green alteration 20-50% qtz. lacing at 10° to core axis 1248-1268 - 3-5% suf. py, po, sph, gal. 1262-1264 - strong shr-bx. 1258-1260 - 5-10% py po. 1270-1208 - locally altered gray granite 1-2% 1208-1501 - pale cream-gray local pink (1290-94) yellow-green 3-5% py in small blebs throughout 1301-1308 - locally altered gray granite. 10% qtz. lace 0hr-bx w 1305.3 - 1306 1305-1307 altered yellow-green 3-5% py E.O.H.	9000 9009 9010 9011 9012 9013 9014 9015 9016 9019 9019 9020 9021 9022 9023	2-py 4x py 10 15% py 6 15% py	1202.8 1207.8 1216.7 1233.0 1243.2 1243.2 1248.2 1253.0 1260.6 1260.6 1260.6 1265.1 1284.5 1293.7 1298.9 1303.6	1207.8 1211.9 1219.2 1235.8 1243.2 1243.2 1253.0 1253.0 1260.6 1265.1 1260.7 1288.5 1293.7 1298.9 1303.6 1308.0	5.0' 2.9' 5.0' 4.0' 5.0' 4.5' 3.6' 4.5' 4.6' 4.7' 4.4'		0.004 0.001 0.005 0.003 0.004 111 0.002 0.009 0.002 0.007 0.005 Tr Nil Nil Hil				

APPENDIX E

Geological Rock Unit Descriptions

#### 1. Granite

The granite is a medium to coarse grained generally massive, grey to green intrusive which has been altered and sheared to various degrees. Mineralogically, the granite is made up of feldspar, quartz and one or more of biotite, chlorite and sericite, totalling less than 10% of the unit. Almost all the granite has been altered to some degree and this alteration consists of sericitization. silicification, minor chloritization and very local potassium feldspar alteration. Sericitization is ubiquitous and the granite is a bleached white-pale yellow-green colour where this alteration is pervasive. Where shearing is strong, the granite appears to have been micro-brecciated and the term "Shear Breccia" was used in logging the core. Chloritization is present mainly as clots and stringers associated with silicification although chlorite is commonly present as an alteration of biotite. Disseminated pyrite is ubiquitous in the altered granite and blotchy pyrite and pyrrhotite as well as trace sphalerite, galena and chalcopyrite occur associated with veins and stringers in it.

#### 2. Mafic Volcanics

The mafic volcanics are medium to dark green, fine-grained, foliated rocks of probable basaltic composition. The foliation is generally subparallel to the core axis. The mafic volcanics may be locally tuffaceous and in places narrow, hard, pale grey bands occur which might be interflow sediments. These bands in many places appear to be spatially related to fractures and narrow quartz veinlets and it is probable that they represent alteration of the volcanics. Disseminated pyrite is common in the mafic volcanics and does not appear to be related to alteration or quartz veining.

#### 3. Quartz Porphyry

The quartz porphyry is a medium grained, felsic intrusive unit characterized by up to 30% quartz phenocrysts up to 1 cm across. The phenocrysts are high temperature quartz as Beta pseudomorphs are commonly observed. The quartz porphyry intrudes the granite as witnessed by the strong alteration in the granite on both the hanging and foot wall side of the quartz porphyry. The quartz porphyry contains virtually no sulphides and no quartz vein material despite being sheared. This unit is believed to be a dyke or system of dykes.

#### 4. Diorite

The diorite is a coarse grained, generally massive intrusive characterized by feldspar phenocrysts in a medium to fine-grained matrix of hornblende and biotite and very minor quartz. This unit has gradational contacts with the granite and appears only in hole SA83-3.

#### 5. Mafic Dykes

These dykes are very fine-grained, black to dark green, narrow rock units which show intrusive relationships with the mafic volcanics and the granite. Their volumes are insignificant by comparison with the other rock units encountered in the drilling.

#### 6. Quartz Veins & Lacing

Quartz veins are bull white quartz containing local blotchy patches of pyrite and pyrrhotite with occasional sphalerite, galena and chalcopyrite. A few of these veins, which range from 6 inches to

feet of core length, contain minor potassium feldspar and have a pinkish-orange colour.

Quartz lacing is characterized by narrow 1/2 to 2 inch quartz veins, randomly oriented and often forming a lace-like network of veins within the host rock. This lacing can comprise up to 60% of the rock unit. Local patches and stringers of pyrite and pyrrhotite

with trace sphalerite and galena occur in the quartz lacing. The quartz is generally milky white to grey-white in colour.

#### 7. Sulphides

Pyrite occurs as disseminated cubes less than 1/8 inch across within the altered granite, the diorite, and the mafic volcanics in quantities up to 3% of the rock. Local stringers and patches of pyrite occur in the shear zones and large blotches up to 1.5 inches across occur in a few places within the quartz veins.

Pyrrhotite occurs as blotchy patches and in narrow seams within the shear zones and associated with the quartz veins. Pyrrhotite occurs only in holes SA83-3, SA83-4 and SA83-5 and only in the deeper sections of the holes.

Sphalerite occurs in very minor amounts associated with bull quartz vein material. The sphalerite is a reddish-brown colour and occurs in patches up to 1/2 inch across.

Galena and chalcopyrite occur in trace amounts associated with quartz veins and quartz lacing.

APPENDIX F

Core Assay Results

#### Y-RAY ASSAY LACORATORIES LIMITED

1895 LESELE STREET. UCN MILLS. UNTAKIO MAR 334

PHONE 410-445-5755

TELEX 06-936947

#### CERTIFICATE OF ANALYSIS

TU: AUP RESOURCES
ATTN: J.M. GILL PRESIDENT
2 JAME STREET, SUITE 209
TORONTO, ONTARIO
MOS 4M3

SUSTUMER NO. 452

CSTTIKEUZ BTAU EB-837-6

"EPORT 17115

REF. FILE 12020-P3

110 S.CURES

WERE ANALYSED AS FOLLOWS:

AU CZ/TCN

METHOD FA

DETECTION LIMIT 0.001

CERTIFIED by ......

017: 10-f-0-63

SAMP	ACT\SC UA	SAMPLE	∆U DZZTCN
. 601	NIL	. 556	NIL
1 602	HIL	. 657	NIL
1503	NIL	· 558	TRACÉ
: 504	7.003	. 659	0.031
<u></u> 605	0.001	. 560	TRACE
<b>১</b> ৩১	NIL	. 661	0.011
607	2.003	. 995	TRACE
603	0.005÷	. 663	0.001
503	RIL	654	0.001
613	NIL	665	9.064
611	NIL	. 660	0.002
. 612	0.002	· 567	0.Cü6
013	5.011	. 666	NIL
1614	2.002	. 664	TRACE
داه	TRACE	. 670	9.C10
.012	NIL	· 671	TRACE
617	NIL	· 672	NIL
613	TRACÉ	'673	TRACE
619	NIL	. 674	0.004
520	0.002	- 675	NIL
521	NIL	. 076	0.002
672	9.001	· 677	0 • CO3
- 623	0.004	675	NIL
6 ? 4	NIL	.079	0.006
ာ ဦးခံ	0.008	680	NIL
15?5	NIL	581	TRACE
. 627	0.002	·682	NIL
6?3	NIL	·633	TRACE
. 629	NIL	1094	TRACE
- 6 <u>7</u> 0	TRACE	√o35	TRACE_
- 531	NIL	636	0.013
035	NIL	.087	TRACE
573	NIL	693	TRACE
534	NIL	.689	TRACÉ
035	NI L	. 690	0.002
635	NS3	-691	TRACE
5?7	NIL	692	0.001
- 63d -539	NIL	693	0.008
	NIL	694	0.001
-640 -541	0.061	695	0.002
. 542	NIL	696	0.013
	TRACE	698	NIL
· 643 · 544	0.001 NIL	-649 -700	NIL
- 545	0.001	701	0.001
-645	2.430	702	NIL NIL
. 547	TRACE	703	0.035
. 548	NIL	.704	NIL
549	0.003	·1'55	TRACE
らうり	9.005	.706	0.002
651	NIL	.707	TRACE
11.652	9.002	.708	0.002
1.653	NIL	739	TRACE
1, 254	0.002	710	0.Cú2
675	TRACE	-711	TRACE
	SUFFICIENT SAMPLE		

X-RAY ASSAY LABORATORIES LIMITED

1385 LESLIE STREET. UON MILLS. ONTARIO M38 3J4

PHONE 410-445-5755

TELEX 06-985947

#### CERTIFICATE OF ANALYSIS

TO: AUR PESCURCES ATTN: J.w. GILL PRESIDENT 2 JANE STREET. SUITE 209 TORONTO . ONTARIO H65 4WB

CUSTOMER NO. 492

DATE SUBMITTED 1-MAR-83

PEPDRT 17294

REF. FILE 12961-P1

39 S.CORES

HERE ANALYSED AS FOLLOWS:

METHGO AU CZ/TON

DETECTION LIMIT

FΔ 0.001

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY ......

DITE 14-MAR-83

### UNLESS INSTRUCTED OTHERWISE HE WILL DISCARD PULPS AND REJECTS ### PO DAYS FROM DATE OF THIS REPORT

5 1 MPE	MCT\SC UA	SAMPLE	MOTYSC UA
<b>3</b> 37	TRACE	939	NIL
529	0.001	940	0.001
901	TRACE	941	TRACE
992	TRACE	942	TRACE
893	0.160	943	0.003
395	2.006	944	0.061
900	NIL	945	0.004
901	2.500	946	0.002
902	9.018	947	TRACÉ
903	9.021	943	0.003
474	0.0 <b>0</b> 9	949	0.005
905	TRACE	950	NIL
906	0.018	951	NIL
<del>3</del> 0.7	0.004	952	0.021
<b>3</b> 0.8	0.001	953	0.001
90 <del>)</del>	NIL	954	NIL
910	NIL	955	0.040
911	0.018	956	0.003
912	0.006	957	0.011
913	TRACE	958	0.035
914	0.002	959	0.004
915	NIL	960	0.002
916	0.002	961	0.008
917	0.001	962	2.002
<del>9</del> 13	HIL	963	0.049
919	TRACE	964	0.003
920	0.003	965	NIL
921	MIL	966	0.001
922	9.011	967	TRACE
9?3	NIL	968	NIL
924	3.002	959	NIL
925	0.002	970	0.001
925	0.003	971	TRACE
927	0.003	972	0.001
923	0.011	973	TRACE
<b>3</b> >3	0.001	974	0.007
930	0.020	975	0.004
931	0.005	976	0.061
9?2	2.205	977	TRACE
973	0.005	978	0.002
934	0.004	979	0.077
935	0.002	980	NIL
936	NIL	931	NIL
937	TRACE	932	NIL
933	TRACE		· - • •

X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET. DON MILLS. UNTARIO MAR 344

PHONE 410-445-5755

TELEX U6-936947

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CERTIFICATE OF ANALYSIS

TJ: AUR RESCURCES
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TURGNTO, UNTARIÚ
MDS 4W8

CUSTUMER NO. 432

DATE SUBMITTED 1-MAR-83

2EPOST 17295

REF. FILE 12970-H4

178 S.CORES

WERE ANALYSED AS FOLLOWS:

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SAMP	AU OZ/TON	SAMPLE	AU DZZTON
712	0.003	767	NIL
713	0.003	768	NIL
714	7.001	769	NIL
715	NIL	770	NIL
716	NIL	771	0.002
717	NIL	772	0.003
716	NIL	773	NIL
719	NIL	774	TRACE
720	NIL	775	TRACE
721	NIL	770	NIL
7 ? 2	TRACE	777	NIL
723	0.004	778	NIL
724	0.903	779	NIL
725	0.002	780	NIL
726	NIL	791	NIL
727	NIL	782	0.000
723	NIL	783	NIL
729	TRACE	734	NIL
730	NIL	795	0.002
721	NIL	786	NIL
732	TRACE	787	NIL
733	0.003	788	NIL
734	NIL	789	NIL
735	NIL	790	NIL
730	NIL	791	NIL
737 738	NIL	792	NIL
739	TRACE 0.001	793	NIL
740	0.003	794 705	0.017
741	0.003	795 796	0.004
742	0.009 0.008	797	NIL
743	NIL	798	NIL NIL
744	NIL	199	NIL
745	NIL	300	0.001
745	NIL	801	TRACE
747	0.001	802	0.001
748	0.001	803	0.021
744	0.001	304	0.003
750	NIL	805	0.001
751	NIL	305	NIL
752	7.004	807	0.007
753	NIL	808	0.002
754	NIL	309	0.015
755	TRACE	810	NIL
755	NIL	811	0.370
757	NIA	312	TRACE
758	0.001	813	0.001
759	NIL	d14	0.002
760	NIL	815	200.0
751	0.001	616	0.003
762	NIL	817	NIL
753 754	NI L NI L	318 419	TRACE
₹. 755	NIL	319 320	0.006
756	NIL	∂2ù 321	0.001
, · · · · ·	17 L	361	0.003

SIMP	AU DZ/TON	SAMPLE	NOT/150 UA
822	9.042	860	0.003
623	0.140	861	0.005
324	NIL	362	0.011
825	0.003	363	0.004
326	NIL	864	0.003
327	NIL	365	TRACE
823	NIL	366	0.010
329	NIL	867	0.001
830	NIL	368	0.005
831	TRACE	869	NIL
832	NIL	8 <sup>-</sup> 0	0.003
333	0.001	871	0.001
<b>834</b>	N'L	<b>37</b> 2	0.002
835	TRACE	873	0.003
326	NIL	874	0.003
837	NIL	875	0.007
83 è	NIL	376	0.005
839	NIL	877	NIL
340	0.005	878	NIL
845	NIL	<b>879</b>	NIL
846	TRACE	08 s	NIL
847	NIL	881	0.079
843	TRACE	382	0.008
849	TRACE	. 883	0.001
まうひ	NIL	884	0.CO1
251	0-002	885	0.003
352	NIL	886	NIL
853	NIL	888	0.004
354	NIL	890	0.002
5 5 5	NIL	394	0.010
855	NIL	496	TRACE
957	TRACE	897	NIL
353	NIL	898	NIL
859	0.001	899	0.003

X-RAY ASSAY LABORATORIES LIMITED

1895 LESLIE STREET. DON MILLS. ONTARIO MASS 314

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TELEX 06-986947

CERTIFICATE OF ANALYSIS

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MOS 4W8

CUSTUMER No. 492

UATE SUBMITTED

PEPURT 17294

REF. FILE 13019-63

107 S.CORES

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SAMPLE	AU DZ/TON	SAMPLE	AU OZZTON
993	0.003	8932	NIL
994	0.005	3983	0 • Cù Z
995	TRACE	3984	NIL
995	TRACE	3985	TRACE
. 997	0.004	3986	0.005
998	0.001	3987	TRACÉ
999	0.001	3998	TRACE
1000	0.003	8989	0.001
२ २ ३ ४	0.002	3990	0.004
3937	0.031	8991	0.004
<b>ব</b> 93৳	0.002	8992	0.004
1939	0.007	8993	0.019
9940	0.002	3994	NIL
9941	0.002	8995	NIL
3942	NIL	8996	0.020
1943	0.011	3997	0.005
3944	0.056	3998	0.005
3945	0.005	3999	0.008
9946	2.207	9000	0.002 0.019
1947	0.001	9001	0.017
1943	0.005	9002	0.002
3949	0.005	9003 9004	0.016
1950	3.003 0.005	9005	0.065
2951	0.005	9006	0.005
3952	0.001 0.004	9007	0.032
R953	0.005	9008	0.004
4954	0.006	9009	0.001
8955 3956	0.008	9010	0.006
3957	0.002	9011	0.003
3921 3958	0.001	9012	0.004
4959	0.001	9013	NIL
3960	2.001	9014	0.002
3961	0.011	9015	0.009
3962	0.001	9016	0.002
3963	0.044	9017	0.007
3964	0.002	9018	0.005
≥9.55	0.040	9019	TRACE
2956	0.001	9020	MIL
1967	0.001	9021	NIL
° 968	NIL	9022	NIL
1959	0.003	9023	NIL
3970	0.002	9024	0 • 0 ú 2
3971	0.001	983	NIL
2972	0.001	984	NIL
9973	0.010	785	NIL
2974	0.003	986	NIL
8975	0.001	987	0.009
3976	2.307	988	0.026
2977	TRACE	969	TRACE
3978	NIL	99 O	0.025
4979	2.002	991	0.002
9930	NIL	395	NIL
3991	0.038		

APPENDIX G

Expenditure Summary

Appendix G:

# Expenditure Summary

Drilling Drilling	•	4,487 feet	\$87,363.38
Linecutting	-		3,180.00
Geophysics	-	Magnetic and VLF-EM	2,355.00
Geologist	-		5,250.00
Supervision	-		4,500.00
Assays	-		4,651.00
Reports	-		4,950.00
Associated E	Expens	ses - travel supplies equipment, etc.	9,055.28
		Total Expenditures	\$121,304.66

63.42**64** pt.2



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020

A REPORT ON THE DIAMOND
DRILLING, TAILINGS SAMPLING
AND GEOLOGICAL SURVEY WORK
CONDUCTED ON THE ST. ANTHONY
GOLD MINE PROPERTY OF
AUBET RESOURCES INC.
BETWEEN MAY 18 AND AUGUST 2, 1983

by

Halo Centrex Inc.
Suite 1608
330 Bay Street
Toronto, Ontario
M5H 2S8

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#### LIST OF PLATES Pocket # in App**endi**cies DRILL HOLE LOCATION MAP 1" = 400' 1 Plate 1 DETAILED STRUCTURAL GEOLOGY MINE AREA 1" = 50' Plate 1 2A Plate 2B SECTION PLAN A 1" = 40' 3 Plate 3A PROPERTY SKETCH PLAN (Circa 1929) 1" = 330' 1 TAILINGS SAMPLING PLAN Plate 1 38 1" = 50'LEGEND FOR TAILINGS CROSS SECTIONS 3C Plate 3 Plate 3C-L TAILINGS SAMPLE CROSS SECTIONS 3 D - 1 + 25S, 1 + 00S3 E - 0 + 75S, 0 + 50S, 0 + 25S3 F - 0 + 00, 0 + 25N, 0 + 50N3 G - O + 75N, 1 + 00N, 1 + 25N3 H - 1 + 50N, 1 + 75N, 2 + 00N I - 2 + 25N, 2 + 50N, 2 + 75N 3 3 3 J - 3 + 00N, 3 + 25N, 3 + 50N, 3 + 75NK - 4 + 00N, 4 + 25N3 L - 4 + 75N, 5 + 25N, 5 + 75N, 6 + 25N 6 + 75N, 7 + 25N. 3 2 Plate 4 GEOLOGICAL SECTION DRILL HOLE SA-83-3 GEOLOGIC SECTION SA-83-4, SA-83-7, SA-83-8 2 Plate 5 GEOLOGIC SECTION SA-83-5, SA-83-9 2 Plate 6 Plate 7 GEOLOGIC SECTION DRILL HOLE SA-83-6 2 GEOLOGIC SECTION DRILL HOLE SA-83-10 Plate 8 2

## Summary

A program of geological mapping, tailings sampling and additional diamond drilling was carried out on the St. Anthony Gold Mine Property of Aubet Resources Inc. located near the north end of Sturgeon Lake Ontario during the period of May 16 and August 2, 1983. The geological mapping program was undertaken to evaluate 7 magnetic and 8 electromagnetic anomalies outlined previously and to examine the andesite-granite contact and the extensive quartz veining noted on surface. The tailings sampling program was carried out to locate and, if present, establish the grade and tonnage of stamp mill tailings reported to contain 37,800 tons at an average grade of 0.18 oz. Au/ton. The additional diamond drilling was to further evaluate the No. 2 Vein System, to test beneath the old workings on the No. 1 Vein System further to the north and to drill one geophysical anomaly believed to represent the southern extension of the No. 1 Vein System.

The work program consisted of five diamond drill holes for a total of 3,445 feet, a 217 tailings sampling program, and both surface structural mapping and rock geochemical sampling.

The drilling program extended the No. 2 Vein System for at least 600 feet along strike and intersected ore grade mineralization over mineable widths along a 200 foot strike length extending to a depth of over 600 feet. Hole No. SA-83-8 intersected 0.22 oz. Au/ton over 25.0 feet from 612.0' to 637.0' including a zone grading 0.36 oz. Au/ton over 15.0 feet from 622.0-637.0 feet. The presence of ore grade mineralization over mineable widths in three out of five holes on the No. 2 Vein indicates this system to have a very high potential of hosting an economic ore deposit. Substantial further drilling is recommended to define the dimensions of this potential ore bearing zone.

A new "Carbonate" zone was located between the No. 1 and No. 2 Vein Systems. Hole No. SA-83-9 intersected 0.17 oz. Au/ton over 8.1 feet from 116.3-124.4 feet. Holes SA-83-7 and SA-83-8, located 100 feet north of SA-83-9 encountered anomalous values of 0.036 oz. Au/ton over 5.6 feet from 237.0-241.6 feet and 0.065 oz. Au/ton over 5.3 feet from 277.7-283.0 feet. This new zone is open along strike and has the potential to host ore grade mineralization over mineable widths. Additional drilling is highly recommended to further evaluate this new zone.

Drill hole SA-83-10 confirmed the extension of the No. 1 Vein System below the old mine workings for a distance of 100 feet to the north of previous drilling. Gold values of 0.014 oz. Au/ton over 7.0 feet were encountered in this System. The presence of erratic high grade gold mineralization in the No. 1 Vein System, as observed from the old mine assay plans, indicates that further drilling from surface is unlikely to outline the ore zones and that underground exploration will be warranted to further evaluate the No. 1 Vein System. Further work on the No. 1 Vein System should be deferred until the drilling of the No. 2 Vein System and the Carbonate zone has been completed and evaluated.

Drill testing of geophysical Anomaly "C" failed to identify the southern extension of the No. 1 Vein System. Hole No. SA-83-6 encountered weakly graphitic felsic to intermediate tuff locally mineralized with pyrrhotite and minor sphalerite and chalcopyrite which accounted for this anomaly. The No. 1 Vein System is believed to have been displaced by faulting to the north of Anomaly "C".

Surface bedrock sampling encountered two areas with anomalous gold values. Sample No. 9093 assayed 0.200 oz. Au/ton from a quartz vein at an intrusive contact in the north eastern portion of the property and sample No. 9086 assayed 0.014 oz. Au/ton southwest of the present mine area.

The extensive tailings sampling program indicates that the old stamp mill tailings have been reprocessed. A narrow channel of stamp mill tailings, which leads to the main area where the stamp mill tailings were deposited, contains a drill proven reserve of 12,635 tons grading 0.062 oz. Au/ton when the overlying cyanide tailings are included with the stamp mill tailings for reserve calculations. This reserve is uneconomic by itself but should be kept in mind should a mining operation be renewed on this property.

The St. Anthony Gold Mine Property has an excellent potential for hosting an economic gold deposit and a budget of \$575,000 should be provided to carry out the recommended exploration program.

## Conclusions

On the basis of the work completed to date the following conclusions have been drawn:

- The No. 1 Vein System from which past production has taken place is characterized by local high grade ore pockets within an en-echelon Vein System.
- 2) Drilling to date has outlined the existence of the No.1 Vein System along a 600 foot strike length, without encountering gold assays of economic grade over mineable widths. Due to the erratic nature of gold mineralization only dewatering of the shaft and underground exploration can fully evaluate its ore making potential.
- 3) The No. 2 Vein System occurs over a drill indicated length of at least 600 feet. Ore grade gold values over mineable widths in three out of five drill holes outline a mineralized zone along a 200 foot strike length extending from near surface to a depth of over 600 feet. The No. 2 Vein System has the potential to host an economic ore deposit.
- 4) Substantial further drill testing is required to define the dimensions of the ore bearing zone in the No. 2 Vein System.
- 5) A new ore zone (the "Carbonate zone") located between the No. 1 and No.2 Vein Systems returned ore grade gold mineralization over mineable width in one out of three holes. This zone has considerable economic potential warranting further drill testing.

- 6) The presence of free gold makes accurate assaying difficult.

  At least two cuts are required for all samples from mineralized zone to provide a reasonable indication of mineralization present.
- 7) Surface geological and structural mapping of the immediate mine area indicate at least three major episodes have contributed to the present picture. The intrusion of the granite, the subsequent major shearing and the intrusion of the quartz porphyry have all influenced the distribution of the mineralalization as presently observed.
- 8) The field examination of geophysical anomalies has identified three areas which warrant further field investigation.
- 9) The tailings sampling program indicated that the old stamp mill tailings have been reprocessed. The small tonnage of reworked remnants are uneconomic at the present time.
- 10) Drill testing of geophysical Anomaly "C" failed to locate the southern extension of the No. 1 Vein System.
- 11) The St. Anthony Gold property especially the No. 2 Vein System and the new Carbonate zone has an excellent chance of hosting an economic gold deposit and a substantial exploration effort is warranted to evaluate this potential.

#### Recommendations

On the basis of the work completed to date the following recommendations are made.

- 1) Conduct a detailed surface geological investigation during the summer of 1984 including geochemical sampling and trenching if warranted of the anomalous areas along VLF conductor "F", around sample location 9086 on line 20 S at 4 + 00 E and the gossan zone just west of magnetic Anomaly "D".
- 2) Conduct a 3 mile IP survey to evaluate magnetic Anomaly "F" and VLF-EM Anomaly "J" to identify and locate the northern extension of the shear zones hosting the mineralization at the St. Anthony Gold Mine. The survey will be conducted on lines 8 N to 44 N and must be done after freeze up as part of the survey area is under the lake.
- 3) Drill 27 holes SA-83-11-37 totalling 16,125 feet (Table V) to further test the No. 2 Vein System and the Carbonate Zone on 50 foot centres along a 400 foot strike length centred on the present zone of economic meneralization. These holes should be drilled from east to west to provide additional statigraphic information and control
- 4) Geologically map the area south of the E-W fault which displaces the No. 1 Vein System in an effort to locate the extension of this Vein System to the south of the old mine workings.

- 5) Provided the drilling of the No. 2 Vein System proves encouraging the dewatering of the St. Anthony Mine should be considered to provide underground access.

  The Phase II program as outlined in the G.M. Hogg and Associates September 1981 report would then be warranted.
- 6) Provide \$575,000 to conduct this program. Table VI presents an estimated breakdown of the costs to be incurred for these purposes.

J.B. Hinzer

D.W. Gil

# Introduction

On November 29, 1982 Aubet Resources Inc. contracted Halo Centrex Inc. to manage and conduct the Stage 1 evaluation program on its St. Anthony Gold Mine property as recommended by the G.M. Hogg and Associates Ltd. engineering report of September 22, 1981.

Between January 19 and March 3, 1983 Halo Centrex Inc. completed the first part of this program. Five diamond drill holes totalling 4,486 feet tested the ore producing No. 1 Vein System both along strike to the north and down dip below the existing mine workings with three of these holes also testing the parallel No. 2 Vein System. In addition 12 line miles proton magnetic and 10.5 line miles of V.L.F. electromagnetic surveying was completed to test for new exploration drill targets.

Encouraging drill results, especially on the No. 2 Vein System, and the identification of 7 magnetic and 8 electromagnetic anomalies on the property prompted additional diamond drilling and a comprehensive field investigation of the geophysical conductors. This work was carried out along with the scheduled tailings sampling program. Between May 16 and August 2, 1983 five additional drill holes totalling 3,445 feet explored the No. 1 and No. 2 Vein Systems, detailed surface geological mapping and sampling of all the favourable geophysical conductors, as well as the immediate mine area, was carried out and a total of 217 drill holes sampled the tailings area.

The drilling program outlined ore grade gold mineralization over substantial core lengths in the No. 2 Vein System and a major drill program to evaluate the ore making potential of this zone is warranted. Further investigation of 2 geochemically anomalous areas associated with geophysical conductors should be carried out.

# Property Location and Access

The St. Anthony Gold Mine property lies near the north end of Sturgeon Lake, approximately 130 miles northwest of the city of Thunder Bay, Ontario, and 13 miles south of the community of Savant Lake (Figure 1).

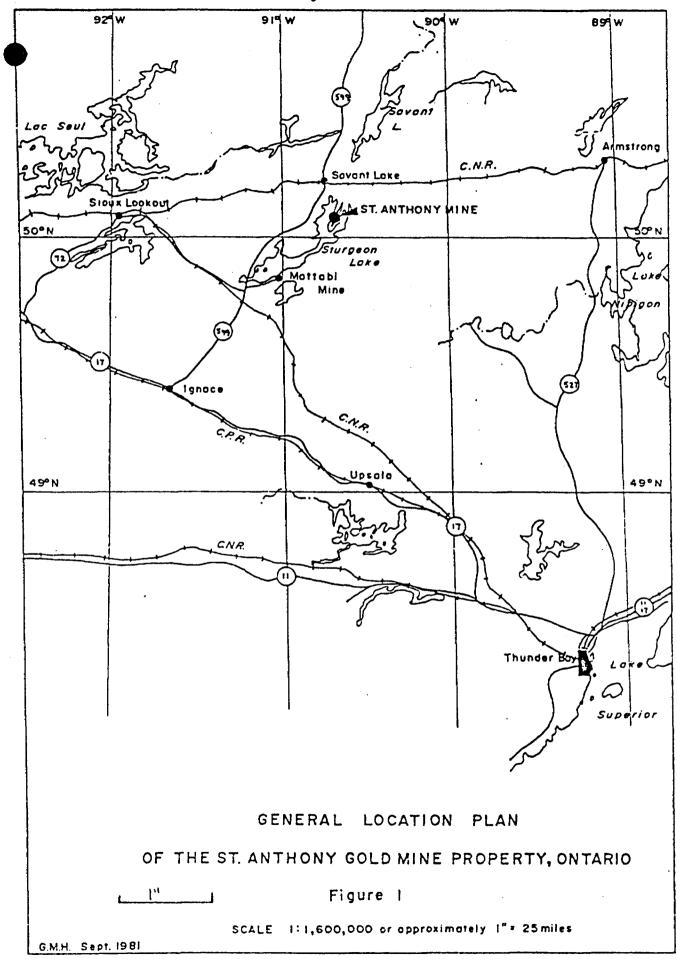
Access to the property is by paved Highway 599 north from Ignace or south from Savant Lake to within 1 mile of the north-west side of Sturgeon Lake. Numerous gravel roads provide access to Sturgeon Lake from Highway 599 and the property is then reached by boat. The Horizontal Bay road off Highway 599, 12 miles south of Savant Lake, leads to the Marie's Bay Lodge landing on Sturgeon Lake which provides for the most direct access to the property by boat. Boat rental is available at this Lodge. The property can also be reached by float or ski equipped aircraft from Ignace or Savant Lake.

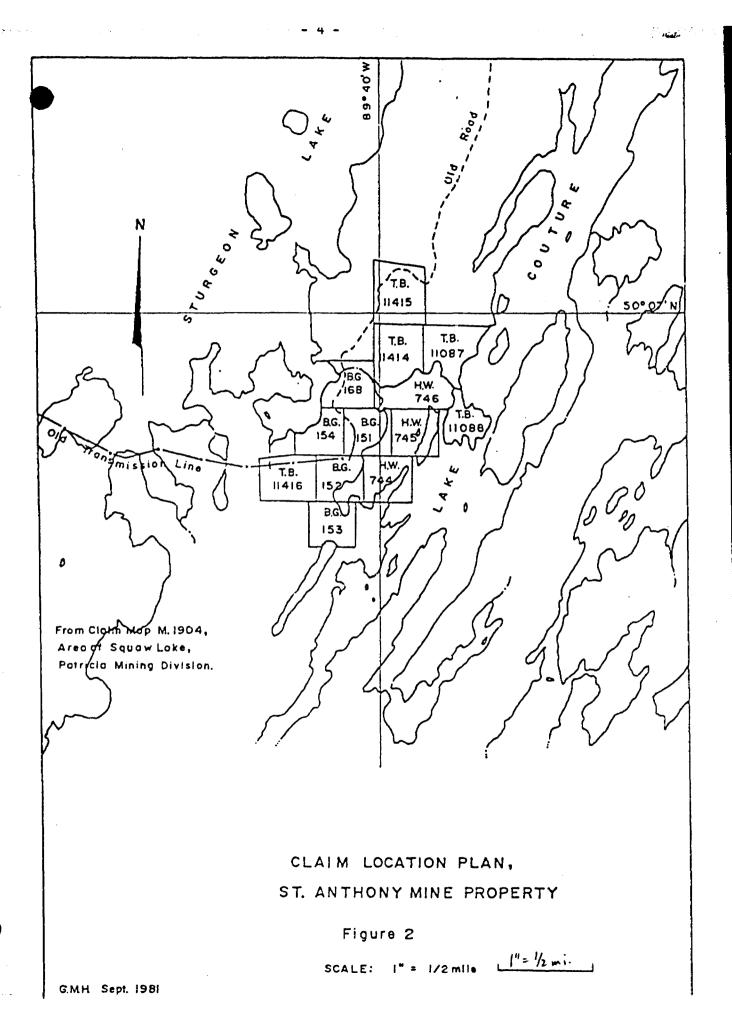
An old winter road leading south from Savant Lake to the property is at present not useable, however, rehabilitation is possible if required.

Lodging can be arranged at Marie's Bay Lodge located approximately I mile southeast of the property and from which the property is accessible by foot along a bush road. The 1983 winter drilling program was operated out of this camp.

#### Land Position

The property consists of 13, contiguous, patented mining claims located in the Patricia Mining Division of the Thunder Bay Mining District of Ontario (Figure 2). The claims are registered in the name of Aubet Resources Inc. in the Land Titles Registry Office in Thunder Bay, Ontario, and are shown on Claim M1904 - Area of Squaw Lake. A list of the claims is presented in Appendix A to this report.





# Geology

The St. Anthony Gold Mine property lies within the Superior Structural Province of the Precambrian Shield of Canada and all rocks in the area are of Precambrian age. Geologically the area is characterized by a northeasterly trending belt of mafic to intermediate volcanic rocks which wrap around the eastern margin of a large granitic-granodioritic batholith to the west. Major faulting has resulted in a well developed NNE-SSW trending pattern of lake development and roughly E-W faulting has offset stratigraphy at various locations.

On the St. Anthony Gold Mine property the batholith-volcanic contact zone is apparent. A mixture of basaltic and mafic volcanic rocks, granite, diorite and granitized volcanics are observed as well as numerous shear zones and faults. Silicification, sericitization and chloritization is abundant within this mixed, contact-zone rock package and quartz veins and stringers are abundant within the shear zones. Late quartz porphyry dykes and mafic dykes cut the other rock units in the area.

A more detailed geological summary, as well as surface geological maps, of the property are given in the report of G.M. Hogg & Associates l.td. dated September 22, 1981.

#### Previous Work

Between January 19 and March 3, 1983 Aubet Resources Inc. completed 4,486 feet of diamond drilling in 5 holes, 12 line miles of proton magnetic surveys and 10.5 line miles of V.L.F. electromagnetic surveys on the St. Anthony Gold Mines property. The drill program confirmed the extension of the No. 1 Vein System below the old mine workings and, although anomalous gold values were encountered, no ore grade mineralization over mineable widths was encountered. The No. 2 Vein System was intersected by three holes which extended

its strike length to at least 600 feet and its depth to at least 350 feet. An intersection of 5.3 feet grading 0.50 oz. Au per ton in hole SA-83-4 together with other anomalous gold values and previous shallow high grade intersections indicated that further drilling of this zone was warranted. The reader is referred to the April 19, 1983 report A Report On The Diamond Drilling And Geophysical Survey Work Conducted On The St. Anthony Gold Mine Property Of Aubet Resources Inc. between January 19 And March 3, 1983 by Halo Centrex Inc. for details of the previous work.

## 1983 Summer Work Program

During the period May 18, 1983 to August 2, 1983 a geological survey program, a 217 hole tailings sampling program, and a 5 hole, 3,445 foot diamond drilling program were completed on the St. Anthony Gold Mine property.

# A. <u>Geological Investigation of Geophysical Anomalies</u>

The 1983 winter geophysical program outlined eight magnetic and fourteen V.L.F. electromagnetic conductors. Seven magnetic anomalies C' D' E' F' G' H' and I and eight V.L.F. anomalies were recommended for follow up work (Plate I). This geological investigation was designed to attempt to explain the cause of the anomalies from surface examination.

Magnetic and V.L.F. Anomaly "C" (Plate I) appeared to represent the southern extension of the shear zone which hosts the No. 1 Vein System of the St. Anthony mine. Surface examination revealed an easterly dipping shear zone with a narrow local gossan zone and minor quartz veining hosted in sheared intermediate volcanic tuffs. Minor graphitic bands, and local zones of pyrite, massive pyrrhotite minor sphalerite and chalcopyrite over a 20 to 30 foot core length are believed to be the cause of geophysical anomaly "C" (Plate 1).

No gold or silver values of economic interest were encountered in this hole and the No. 1 Vein System was not identified in the drill core. On the basis of this drill hole it is believed that the southern extension of the No. 1 Vein System has been offset by a fault which strikes roughly E-W through the bay in Couture Lake south of mine workings. A previously planned second drill hole to further evaluate anomaly "C" was not drilled.

Magnetic Anomaly "O" located on Line 8 + 00N at 7 + 00E lies 50-100 feet east of the granite-andesite contact (Plate I). This anomaly is underlain by pillowed andesites intruded by several narrow dioritic sills (possibly coarse flows). Narrow 1-4" quartz veins are common near the dioritic units. Rock geochemical sample No. 9084 (see Table I) collected from a 4" quartz vein assayed 0.002 oz. Au/ton. A large 10-15', wide gossan zone (previously trenched) along the granite andesite contact was too badly weathered to allow a fresh sample to be obtained. Re-trenching and sampling of this zone is recommended.

Magnetic Anomaly "E", located on Line 16 + 00 N at 8 + 00 W (Plate I), corresponded with a local scrap on garbage dump and is interpreted to be a cultural anomaly.

Magnetic Anomaly "F" and coincident V.L.F. Anomaly "J" outline a major structural feature traversing most of the property in a north westerly direction parallel to the baseline between 0 + 00 and 4 + 00 E. Traverses across these anomalies on L44 N, L40 N, L36 N, L30 N, L25 N and L16 N revealed the entire area to be underlain by pillowed andesites, locally sheared and interlayered with coarse dioritic sills (flows?). Rock geochemical samples Nos. 9095, 9096, 9097, 9098, 9099 and 9100 (see Plate I and Table I) collected from local shears, quartz veins, contact zones and gossan patches contained only background values of Au, Ag, Cu, Zn and Pb.

<u>Magnetic Anomaly "G"</u> and adjacent <u>V.L.F. Anomalies "G" and "F"</u> are located along a large peninsula in the north-east portion of the property between L28 N and L40 N from 18 + 00 E to 26 + 00 E.

Two traverses across this peninsula encountered an interlayered succession of dioritic-gabbroic-amphibolitic mafic intrusives (?) and felsic quartz-feldsparand quartz porphyries, fragmentals and cherty, locally mineralized members (see Plate I). Anomaly "G" corresponds to the eastern margin of the large central amphibolitic unit while anomaly "F" outlines an extensive shear and gossany-cherty zone within the felsic rocks.

Seven rock geochemical samples Nos. 9088-9094 were collected (Plate 1, Table I). Samples No. 9091, 9092 and 9093 were collected just south of the anomalous areas where abundant outcrop exposured revealed considerable previous trenching. Sample No. 9094 tested a narrow quartz-vein within a shear zone near a local quartz-felspar porphyry contact believed to be the same zone recently drill tested by A. Best just north of the property boundary. Sample 9093 taken from a major gossany quartz vein at the felsic-mafic volcanic rock contact assayed 0.26 oz. Au/ton, 0.18 oz. Ag/ton and 870 ppm Cu. This together with a nearby rhyolitic volcanic sample (9092) which is depleted in sodium (0.77% Na<sub>2</sub>0), a characteristic observed in the immediate area of many ore deposits, indicate that further investigation is warranted. Samples 9088,9089, 9090, 9091 and 9094 assayed trace or nil in precious metals and had very low base metal content.

Magnetic Anomaly "H" and V.L.F. Anomaly "E" on L12 S, L16 S and L20 S between 3 + 00 W and 5 + 00 W are underlain by a highly sheared, locally carbonitized andesite with minor sediments in the west and more pillowed, locally variolitic, andesites and dioritic sills (flows?) towards the east. Most of this area is underlain by swamp. Samples 9085 and 9086 (Plate 1, Table I) taken from the sheared and variolitic andesite respectively both showed slightly anomalous Cu and Zn values while No. 9086 was anomalous running 0.014 oz. Au/ton. This area also warrants further investigation.

Table I: Rock Geochemical Samples Assays

<u> </u>	u oz/ton	Ag ppm	Cu ppm	Zn ppm	Pb ppm	Na 20	Description
#9084	0.002	-	-	-	-	-	4" quartz vein in andesite 50'- 70' east of contact
#9085	NIL	NIL	170	72	-	-	Shear zone 4-5 feet wide
#9086	0.014	NIL	160	110		-	Variolite? in andesite flow
#9087	NIL	-	-	-	-	-	Gossany pillowed andesite
#9088	NIL	NIL	8	23	2	4.92	Quartz-felspar porphyry
#9089	TR	NIL	52	35	-	•	Gossany quartz vein in intrusive
#9090	-	-	149	75	-	-	Coarse grained - amphibolite - intrusive (Ni-100 ppm)
#9091	TR	NIL	12	42	8	3.83	Cherty - blue quartz eyes, Tr py
#9092	TR	NIL	80	24	6	0.77	Sheared felsics. Tr py
#9093	0.260	9.18	870	23	-	-	Gossan in quartz vein at contact
#9094	TR <u>Au ppb</u>	-	-	-	-	-	Quartz vein in felsic shear drilled by Alan Best
#9095	8	1.0	130	48	8	-	Pillowed andesite
#9096	5	0.5	170	21	4	-	Gossany contact andesite/diorite
#9097	4	1.0	150	52	10	-	Sheared pillowed andesite
#9098	4	0.5	74	22	2	-	Quartz-vein (in above)
#9099	4	0.5	55	49	6	•	Quartz-gossan in pillow rim
#9100	3	0.5	91	13	2	-	4" rusty quartz vein in andesite

Magnetic Anomaly "I" on L36 N at 8 + 00 E coincides with a contact between pillowed andesite and diorite. Sample number 9087 from a local quartz vein assayed nil in gold.

<u>V.L.F. Anomaly "A"</u> on L8 S at 6 + 00 lies in a deep channel in Couture Lake approximately 50 feet off shore. A strongly sheared carbonatized intermediate tuff exposed on shore appears to be the same material often seen in the mine dump.

<u>V.L.F. Anomaly "I"</u> between L8 S and L20 S from 1 + 00 E to 1 + 00 W corresponds to the sheared contact between pillowed andesite and several narrow dioritic sills.

<u>V.L.F. Anomaly "M"</u> located on L0 + 00 at 3 + 00 W coincides with the small pond and creek at the southwest edge of the tailings pond. DDH #SA-83-10 intersected a highly sheared zone along the andesite granite contact. No gold values were indicated.

The surface geological mapping of geophysical anomalies revealed most of the property to be underlain by pillowed andesitic lava flows. The northeast portion contains several felsic and felsic porphyritic units, while the southeast is more tuffaceous with occasional graphitic, locally barren sulfide bearing zones. Most of the eastern portion is underlain by granite.

Rock geochemical sampling encountered two areas of anomalous gold values. The area of V.L.F.-EM Anomaly "F" and magnetic Anomaly "G" should be geologically mapped in detail and trenching to properly sample the gold bearing quartz vein material exposed along the contact between the amphibolitic unit and the altered felsic volcanic should be carried out to evaluate the gold potential of this zone.

Geological mapping together with detailed sampling and trenching should also be carried out in the area of magnetic Anomaly "H" and V.L.F.-EM conductor "E" where anomalous gold and base metal values have been identified and along the granite-andesite contact northeast of the mine area near magnetic Anomaly "D" on Line 8 N where 10-15' wide gossan zone is exposed.

# B. Surface Bedrock Investigation Mine Area

# 1. Granite Contact and Shear Zones

Outcrops in the immediate mine area shown on Map No. 2 in the G.M. Hogg report dated September 1981 were examined to outline the nature of the granite-andesite contact and the structural controls of numerous quartz veins in areas of quartz laced granite.

Detailed surface mapping of the granite-andesite contact (Plate 2A) revealed the exposed contact area to be strongly structurally controlled. The southern granite boundary appears to be strongly influenced by a series of east-west and north-south bearing structures creating a jagged block or step like shape. North-South displacements appear to be the most extensive especially those along the No. 1 and No. 2 Vein Systems. Most displacements and offsets appear to be less than 100 feet in magnitude but actual movement directions were not determined. Evidence of this structural deformation is not readily visible within the granite block, however numerous zones of quartz lacing where exposed, appear to exhibit the same structural controls.

# 2. Quartz Vein Orientation

The observed quartz lacing consists of two dominant sets of quartz veins oriented approximately at right angles (Plate 2A). One set trends  $010-030^{\circ}$  with a steep westerly dip and parallels the No. 1 and No. 2 Vein Systems. The second set strikes at approximately  $90^{\circ}-120^{\circ}$  with a variable northerly dip averaging near 45°. Quartz

knots are often centred on these vein intersections. The large quartz vein zone north of the No. 1 shaft may represent a major intersection of veins.

The most prolific surface veining occurs north of the No. 1 shaft. The N-S Vein System average 30-65 feet in width in this area, while the E-W Vein System average 3 to 12 feet in width. A secondary zone of abundant quartz veining located southwest of the mill on the No. 2 Vein zone averages 1-3 feet in width for N-S veins and 4 inches to 1 foot for the E-W veins.

N-S veins tend to be lensoid and are concentrated along the No. 1 Vein and No. 2 Vein Systems which are major shear structures. Several lesser concentrations of minor quartz veins are located along weaker parallel shears between the No. 1 and No. 2 Vein Systems.

E-W quartz veining is restricted to the granite suggesting this to be a tensional feature resulting in brittle fracture of the more competent granite as opposed to plastic deformation in the enclosing greenstones. The most prolific development of E-W quartz veining, located just north of the No. 1 shaft, may be related to the nearby quartz porphyry intrusive.

#### 3. Mineralization Model

The most massive quartz veining is observed in the No. 1 Vein System near the granite-andesite contact just east of the quartz porphyry intrusive (Plate 2A). The quartz veining is lensoid in nature as seen on mine section A (Plate 2B), it is most prolific along the major N-S shear zones and is most extensive near the granite-andesite contact and where N-S and E-W structures intersect. The quartz veining thus appears to be controlled at least in part by the structure, the granite-andesite contact and the quartz porphyry. Although the

absence of underground geological information prevents the establishment of a definite correlation between intersecting quartz veins and higher gold values, underground assay plans indicate that high grade gold mineralization is concentrated in local pockets along the major vein structure - with intervening areas only bearing minor gold values for the No. 1 Vein System.

Several stages of, or phases of, gold mineralization appear likely. Initial gold mineralization or re-mobilization of pre-existing gold and sulfide mineralization from a local volcanic-sedimentary basin (as proposed by Hogg 1981) occurred during the intrusion of the small granite plug localizing the minerals along the volcanic-granite contact. Subsequent major compressional forces deformed the pre-existing granite plug forcing major N-S shear planes or fault zones and creating perpendicular E-W tension fractures in the brittle granite. During this stage mineralization would be re-mobilized along quartz veins into the existing shear zones especially along the andesite granite-contact. The late intrusion of the quartz porphyry (orientation unknown) and associated dykes would act as a local heat source effecting a third re-mobilization of the existing mineralization and quartz centred on the quartz porphyry. Additional gold, sulfides and quartz may also have been introduced at this stage.

# C. <u>Tailings Sampling Program</u>

A 217 hole tailings sampling program was carried out in two stages in an effort to locate and, if present, establish the grade and tonnage of stamp mill tailings reported to contain 37,800 tons at an average grade of 0.18 oz. Au/ton. The sampling was carried out by Sonic Soil Sampling Inc. using the Vibracore sampler which produces a continuous loggable core sample of the tailings. The sample locations are shown on Plate 3B and drill hole sections are presented in Appendix B along with the assay data.

The initial sampling program was carried out in May 1983 with holes spaced at 25 foot intervals to cover the tailings area recommended by G.M. Hogg & Associates in their report of September 22, 1982. This program identified a narrow channel covering an area of approximately 75 feet wide by 250 feet long leading northward from the mill building. Numerous high grade assays indicated that stamp mill tailings were present. Subsequent to the completion of this phase of the program an old location map showing the true location of the stamp mill tailings was obtained and this map (Plate 3A) indicated that the high grade channel identified by the initial program represented a channel leading to the tailings pond area. A follow-up program was carried out in late July 1983 and the location of the stamp mill tailings pond area was sampled on a 50 foot grid (Plate 3B). The results of this program (Appendix C) indicate that the stamp mill tailings have most likely been reprocessed. Very narrow intersections of ore grade tailings were identified in a few holes which confirms that stamp mill tailings did exist in this area at one time. The evidence gathered to date strongly suggests that no significant volume of stamp mill tailings remain on the property.

The narrow channel containing stamp mill tailings outlined in the initial sampling program contains approximately 12,635 tons of tailings at an average grade of 0.062 oz. Au/ton (Table II). This tonnage represents a combination of cyanide tailings and underlying stamp mill tailings. Although uneconomic at the present price of gold by itself this reserve should be kept in mind should a gold mill be operational on the property in the future.

## D. Drill Program

Five holes totalling 3,445 feet were drilled to further evaluate the St. Anthony property. Three holes were drilled to evaluate the No. 2 Vein System and provide geological and structural data. One deep hole tested the No. 1 Vein System beneath the old workings further to the north as well as the No. 2 Vein System and one shallow

Table II: Reserve Calculation - Stamp Mill Channel Area

Hole #	Grade <u>Au oz/ton</u>	Length Feet	<u>Tonnage</u>
Block B			
38 43 32 34 47 31 35 46 30	0.018 0.088 0.021 0.044 0.040 0.053 0.038 0.034 0.032	7.0 8.5 8.0 7.0 5.5 9.0 5.5 3.0 8.0	437 531 500 437 344 562 344 187 500
Block A			
36 37 133 50 48 1 25 27 49 2 24 58 3 21 57 4 22 5 12 13 6 11	0.061 0.071 0.056 0.044 0.052 0.047 0.046 0.073 0.052 0.075 0.059 0.104 0.095 0.058 0.033 0.057 0.085 0.038 0.061 0.067 0.201 0.094 0.209	6.0 6.5 1.0 5.5 6.0 8.5 5.0 9.8 4.0 6.0 7.0 6.5 7.0 6.5 7.0 6.5 7.0 6.5	375 406 63 344 375 625 531 348 312 562 612 250 375 312 375 437 250 406 312 437 375 462 625 344
	0.065		8,973

Block A + B = 12,635 tons @ 0.062 oz. Au per ton

hole tested geophysical anomaly "C" believed to represent the extension of the No. 1 Vein System to the south.

Drill hole data is presented in Table III. Surface projections and cross sections are shown on Plates No. 1, 4, 5, 6, 7 and 8 Diamond drill logs are presented in Appendix D.

### 1. Drill Holes SA-83-6 (Plate 7)

Hole SA-83-6 was drilled to evaluate V.L.F. conductor "C" and coincident magnetic anomaly "C" (Plate 1) thought to represent the southward extension of the No. 1 Vein System. Andesite flow material interbedded with intermediate to felsic matavolcanic tuffs and cherty tuffite horizons were encountered. Minor graphitic shale interbedded with laminated chert and 2-10% disseminated pyrite, pyrrhotite with minor sphalerite, and chalcopyrite, were encountered between 225.0 feet and 264.0 feet. Local patches of massive pyrrhotite and mineralized graphitic shale are believed to be the cause of the anomalies. No anomalous metal values were encountered in this section and the No. 1 Vein System was not intersected in this drill hole.

2. Drill Holes SA-83-7, SA-83-8, and SA-83-9 (Plate 5 and 6) These holes were drilled to test for the up and down dip, and strike extension of the intersection of 0.500 oz. Au/ton over 5.0 feet encountered and in hole SA-83-4, and to provide a better understanding of the stratigraphy. These holes were drilled from east to west in order to crosscut stratigraphy as well as to test the No. 2 Vein System.

Hole SA-83-7 was drilled west to intersect the No. 2, Vein System approximately 50.0 feet below the zone where 0.50 oz. Au per ton was encountered in hole SA-83-4. The hole was collared in pillowed andesite and encountered granite between 31.6 feet and 780.0 feet passing back into andesite to the end of the hole at 798.0 feet.

Table III: Drill Hole Data - SA-83-1 to SA-83-10

Hole No.	Collar	Bearing	Dip at Top	Dip at Bottom	Total Footage
Winter Program					
SA-83-1	2+92N, 0+60W	1100	-500	-530	416'
SA-83-2	0+93N, 0+27E	1100	-50°	-540	407'
SA-83-3	3+30S, 3+57W	1020	-65 <sup>0</sup>	-620	1,108'
SA-83-4	5+52S, 3+70W	1020	-65 <sup>0</sup>	-610	1,248'
SA-83-5	6+49S, 3+46W	1020	-60°	-570	1,307'
				Total	4,486'
Summer Program					
SA-83-6	20+00S, 8+00E	300o	-450	-420	355'
SA-83-7	3+65S, 2+85E	2880	-600	-540	798
SA-83-8	3+655, 2+85E	2880	-450	-410	707'
SA-83-9	4+63S, 2+85E	2880	-450	-420	577'
SA-83-10	1+66S, 3+03E	1020	-670	-610	1,008'
·				Total	3,445'
	TOTAL DIAMOND	DRILLING 198	3		7,931'

Two significant zones of gold mineralization were encountered associated with massive quartz veining, quartz lacing and shearing with locally 5-10% pyrite, traces of sphalerite, chalcopyrite and galena. The upper zone from 260.0 feet to 290.0 feet, the best section of which assayed 0.065 oz. Au/ton over 5.3 feet from 277.7-283.0', appears to correlate with a surface sheared carbonate zone located approximately halfway between the No. 1 and No. 2 Vein Systems. The lower zone between 660.0 feet and 690.0 feet which forms part of the No. 2 Vein System assayed 0.029 oz. Au/ton over 5.0 feet from 668.0-673.0 feet. Local buff to pink alteration, 10 to 15% pyrite and pyrrhotite and minor chalcopyrite, sphalerite and galena mineralization are localized at the transition zone from medium to fine grained (chilled margin) granite in this hole.

Hole SA-83-8 was drilled from the same set up as SA-83-7 and was designed to intersect the No. 2 Vein System approximately 250 feet up dip from SA-83-7 near where a 0.160 oz. Au/ton over 1.3 feet assay in hole SA-83-4 was encountered. The hole collared in andesite and encountered the granite, as before, from 28.0 feet to 682.7 feet then passed into andesite to the end of the hole at 707.0 feet. As in hole SA-83-7 two major zones of gold mineralization were encountered within highly altered granite characterized by local massive quartz veining, shearing and adjacent quartz lacing. Disseminate iron sulfides from 3-10% and trace sphalerite galena and chalcopyrite are common as is bleaching and buff to pink alteration in the mineralized zones. Local quartz veining shearing, brecciation alteration (buff-pink) and sulfide patches are randomly distributed throughout the entire granite section rather than being restricted to major zones as in SA-83-7. The upper mineralized zone corresponding to the carbonate zone in SA-83-7 assayed 0.036 oz. Au/ton over 5.6 feet from 237.0-241.6 feet. The No. 2 Vein System appears to consist of two zones. One zone between 488.0-506.0 feet returned 0.011 oz. Au/ton over 15.0 feet from 487.0-502.0 feet from a strongly bleached, altered pink zone with heavy quartz veining and up to 5% pyrite. The other

zone from 610.0 to 637.0 feet is locally altered (buff coloured) with 10% dendritic pyrite and pyrrhotite between 623.0 to 633.0 feet. Gold assays of 0.22 oz per ton over 25.0 feet from 612.0 feet to 637.0 feet were obtained from this zone which contained a zone grading 0.36 oz. Au/ton over 15.0 feet from 622.0-637 feet.

Hole SA-83-9 was set up 100 feet south of SA-83-7 and SA-83-8 and was drilled to intersect the No. 2 Vein System and intersect previous hole SA-83-5. The hole cored pillowed andesite to 121.0 feet and drilled in granite for the entire remainder of the hole to 577.0 feet. As in the two preceeding holes many strongly sheared quartz veined, quartz laced, locally brecciated, altered and bleached, as well as sulfide mineralized zones are scattered throughout the granite. Unlike the previous two holes, however, three quartz-porphyry dikes from 5 to 15 feet wide were encountered between 217 and 330 feet. Gold mineralization was associated with heavy quartz-veining in the carbonate zone and with major shearing and alteration in the No. 2 Vein System. Assays of 0.17 oz. Au/ton over 8.1 feet from 116.3 feet to 124.4 feet and 0.13 oz. Au/ton over 5.0 feet from 152.0 to 157.0 feet come from a massive quartz vein zone with minor pyrite, sphalerite and galena in the carbonate zone. Values from the No. 2 Vein System are much lower with ranging from 0.015 to 0.022 oz Au/ton over several 4.5-5.5 foot sections between 414.0 and 527.0 feet. Although abundant quartz lacing and local pyrite cubes are present only traces of sphalerite and galena were noted in this section.

#### 3. Drill Hole SA-83-10 (Plate 8)

Hole SA-83-10 was located approximately 100 feet north of previously drilled hole SA-83-3 and was designed to test both the northern continuation of the No. 2 Vein System near surface and the No. 1 Vein System beneath the old mine workings.

The hole was collared in granite at 18.0 feet remaining in granite to 190.4 feet except for a narrow andesite zone from 26.4 to 37.4 feet. Alternating zones of massive andesite and massive diorite were then encountered from 190.4 feet to 731.2 feet. A narrow quartz porphyry was intersected near the top of this zone from 235.2-240.0 feet. The hole remained in granite from 731.2 feet to the end of the hole at 1009.0 feet. Three weakly mineralized zones, one corresponding to the No. 2 Vein System, and two corresponding to the No. 1 Vein 5 stem were encountered. A highly sheared amphibolitized enclastic at the projected No. 2 Vein System intersection assayed 0.013 oz. Au/ton over 5.0 feet from 283.0-288.0 feet. No gold values were found within the diorite zone. A strongly shear-brecciated and altered granite with massive white quartz veins and heavy pyrite and pyrrhotite from 765.0 to 783.0 feet assayed 0.014 oz. Au/ton over 7.0 feet from 776.0 to 783.0 feet. A second shear-brecciated zone locally bleached with minor pyrite pyrrhotite and traces of chalcopyrite, similar to the mineralized zones in previous DDH Nos SA-83-1 and SA-83-2 assayed only 0.012 oz. Au/ton over 7.5 feet from 992.5-1000.0 feet.

#### E. Additional Assaying

Additional sampling and assaying of zones adjacent to mineralized areas was recommended following the winter 1983 drilling program. 58 samples were collected and assayed from DDH Nos. SA-83-2 to 5. Five samples with anomalous gold values ranging from 0.007 to 0.017 oz. Au/ton significantly extended the previously indicated anomalous zones. The reader is referred to the diamond drill logs attached as part of Appendix D for the results.

# F. Re-assays

During the reexamination of core from the highly mineralized zones (drilled during the winter of 1983) visible gold was noted in the split core from DDH No. SA-83-5 in a 3.1 foot section between

665.1-668.2 feet which assayed (1.056 oz. Au/ton. A subsequent assay on the remaining core returned only 0.049 oz. Au/ton an indication that the free gold observed was not yet sampled. Three additional re-runs from this sample assayed 0.99 oz. Au/ton, 0.97 oz. Au/ton and 0.14 oz. Au/ton. This high degree of variability (0.049-0.99 oz. Au/ton) between re-runs of the same sample is due to the nature of the gold. The free gold is not homogeneously distributed throughout the sample causing some considerable assay problems.

In consideration of this fact samples from all the mineralized sections from holes No. SA-83-1 to 10 were re-run (see drill logs and assays Appendix C and D for all assays and re-assays). The assays from the re-runs in many cases dramatically improved previously indicated values. One section in hole No. SA-83-2 was changed from 0.029 oz. Au/ton over 8.5 feet to 0.197 oz. Au/ton over 17.8 feet, in hole No. SA-83-8 a section assaying 0.09 oz. Au/ton over 30.0 feet was upgraded to 0.22 oz. Au/ton over 25.0 feet and in Hole No. SA-83-9 0.004 oz. Au/ton over 4.7 feet re-ran at 0.022 oz. Au/ton over 4.7 feet. Table IV summarizes all the mineralized zones encountered to date using the highest assay values obtained (where more than one assay per sample was available) to calculate section assays.

# Discussion of Results

The 1983 summer drilling was designed to test a coincident V.L.F. and magnetic anomaly possibly representing a southern extension of the No. 1 Vein System, to further evaluate the No. 2 Vein System and to test for the No. 1 and No. 2 Vein System further to the north.

SA-83-6 encountered an extensive cherty-tuffaceous zone with minor graphite locally mineralized with pyrrhotite and sphalerite but failed to encounter any indications of the No. 1 Vein System. Further

Table IV: Zones of Mineralization

DDH SA-83-1	DDH SA-83-2	DDH SA-83-3	DDH SA-83-4	DDH 5A-83-5	DDH 5A-83-7	DDH 5A-83-8	DDH 5A-83-9	DDH 5A-83-10	MTHERAL TZED ZONES
		0.008 3.8° 346.4' - 350.2'	0.014 6.5' 640.0' - 648.0' 0.500 5.3' 612.1' - 617.4' 0.160 1.3' 512.8' - 514.1'	0.031 615.7' - 620.0' 0.016 13.2' 493.8' - 508.0' 0.077 2.4'	0.029 or 0.016 5.0' or 20.0' 668.0'- 668.0'- 673.0' 688.0' not tested	0.024 5.0' 442.0' - 447.0' 0.011 15.0' 487.0' - 502.0' 0.60 or 0.22 5.0' or 25.0 622.0' - 612.0' 627.0' 637.0' 0.021 5.0' 667.0' - 672.0'	0.019 5.57 413.0' - 418.5' 0.015 4.57 429.0' - 434.0' 0.022 5.07 527.0' - 532.0'		HO. 2 V E 1 1 N 7 O N E
and the factors					0.067 7.31 134.2' - 141.5' 0.059 2.7' 260.0' - 0.026 262.7. or 28.0' 0.065 5.3' 288.0' 277.7' - 283.0' 0.016 5.0' 318.0' - 323.0'	0.036 5.8' 237.0' - 241.6'	0.17 or 0.092 8.11 or 15.71 116.3'- 116.3'- 124.4' 132.0' 0.13 5.0' 152.0'-157.0' 0.068 5.0' 277.0'-282.0'		C A R Z O O N N A E T E
<u>0.430</u> 1.71 387.2'-368.9'	0.035 3.3 <sup>1</sup> 383.2'-386.9'	0.017 8.4 910.6' - 919.0' 0.370 or 0.064 2.0' 18.8	0.011 4.21 898.0' - 902.2' .016 14.3' 1131.0'-1145.3' 0.049 4.5' 1192.8'-1198.0'	0.088 3.8' 968.5' - 972.3' 0.062 6.8' 1074.5'-1081.3' 0.030 3.3' 1099.1'-1102.4'				0.014 7.0' - 783.0' 776.0' - 783.0' 0.012 7.5' 992.5' -1000.0	No. 1 V E I N 2 O N E

exploration to locate the No. 1 Vein zone offset by the east-west fault assumed to pass through the bay just south of the mine workings is recommended.

Holes SA-83-7, 8 and 9 tested the No. 2 Vein System for a strike length of 100 feet between the vertical depths of 350 to 600 feet and encountered local areas of economic grade gold mineralization within a 100 to 150 foot wide area centered on the No. 2 Vein-shear zone. SA-83-8 intersected 25.0 feet assaying 0.22 oz. Au/ton, and gold values in the range of 0.011-0.029 oz. Au/ton over widths ranging from 4.5 to 20 feet were encountered in the other two holes. Visible gold found in hole No. SA-83-5 and subsequent re-assaying returned 0.197 oz. Au per ton across 17.8 feet. The presence of ore grade gold mineralization over mineable widths in three (SA-83-4, 5 and 8) of the five recent holes and ore grade values over narrow widths in two shallow holes previously reported by Holbrooke (see G.M. Hogg and Associates September 1981/report) indicates that the No. 2 Vein System has the potential of hosting a substantial tonnage of ore grade mineralization.

A new mineralized zone, the "Carbonate zone", lying between the No. 1 and No. 2 Vein Systems was also encountered in these three holes. The best intersections of 0.170 oz. Au/ton over 8.1 feet and 0.13 oz. Au/ton over 5.0 feet are from hole No. SA-83-9 which drilled closest to the andesite-granite contact to the south. Values ranging from 0.065 oz. Au/ton over 5.3 feet to 0.036 oz. Au/ton over 5.6 feet were encountered in holes No. SA-83-7 and 8, 100 feet to the north.

An extensive drilling program of 27 holes for a total of 16,125 feet (Table V) is strongly recommended to further evaluate the ore making potential of the No. 2 Vein System and the new Carbonate zone.

Drill holes SA-83-7 and 8 intersected both the upper and lower andesite-granite contact. The lower contact is highly sheared and dips approximately 700 to the east. Although local brecciation and strong alteration is present no major quartz veining or mineralization is found at this contact. The north contact appears to dip steeply eastward, however this may due to local faulting.

Table V: Proposed Diamond Drill Holes

Hole No.	Location	<u>Dip</u>	Bearing	Depth	Target	_
SA-83-11 12 13 14 15 16	2 + 85 S - 0 + 40 E 3 + 35 S - 0 + 40 E 3 + 85 S - 0 + 40 E 4 + 35 S - 0 + 40 E 4 + 85 S - 0 + 40 E 5 + 35 S - 0 + 40 E	-450 -450 -450 -450 -450 -450	2880	475' 475' 450' 450' 425' 400'	No. 2 Vein	Zone
17 18 19 20 21 22 23 24 25 26	2 + 50 S - 1 + 65 E 3 + 00 S - 1 + 65 E 3 + 50 S - 1 + 65 E 4 + 00 S - 1 + 65 E 4 + 50 S - 1 + 65 E 5 + 00 S - 1 + 65 E 5 + 50 S - 1 + 65 E 6 + 00 S - 1 + 65 E 6 + 50 S - 1 + 65 E	-450 -450 -450 -450 -450 -450 -600 -600	11 11 11 11 11 11 11 11 11	600' 600' 600' 550' 500' 550' 550' 550'		11 11 11 11 11 11 11 11 11 11
2 <b>7</b> 28 29	2 + 15 S - 2 + 85 E 2 + 15 S - 2 + 85 E 2 + 65 S - 2 + 85 E	-450 -600 -450	11 11	700 ' 800 700	No. 2 Veir Carbonate	e Zone
30 31 32 33 34	2 + 65 S - 2 + 85 E 3 + 15 S - 2 + 85 E 3 + 15 S - 2 + 85 E 4 + 15 S - 2 + 85 E 4 + 15 S - 2 + 85 E	-60° -45° -60° -45° -60°	11 11 11 16	860' 700' 800' 650' 750'	H H H	11 11 11 11
35 36 37	4 + 55 S - 3 + 15 E 5 + 05 S - 3 + 15 E 5 + 55 S - 3 + 15 E	-550 -550 -550	10 10 18	700' 650 650'	11 11 11 11	11 11

TOTAL 27 holes for

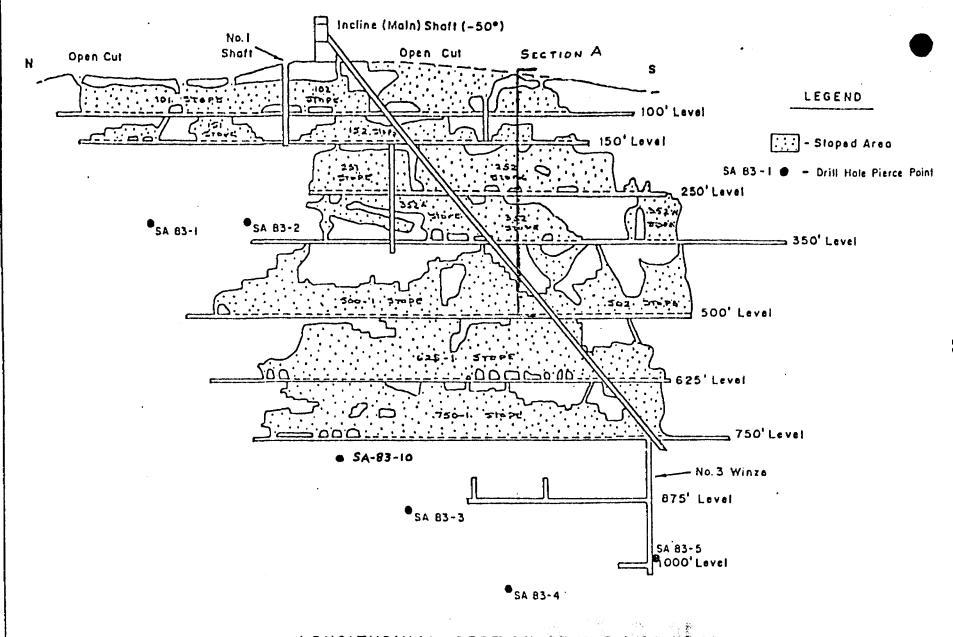
16,125 feet

Although extensive major quartz veining is present within the granite along this contact in all three holes only hole No. SA-83-9 encountered significant gold values.

SA-83-10 intersected the No. 2 Vein System within a diorite zone similar to previous hole SA-83-3 100 feet to the south. No economic gold values were encountered. The No. 1 Vein System was penetrated at a vertical depth of approximately 800 to 850 feet (Figure 3). The shear brecciated alteration structure with minor quartz veining was intersected but no significant gold values were encountered.

Visible gold has only been observed in one hole to date SA-83-5. However the high degree of variability in many samples sent out for re-assaying indicates the presence of free gold. Inhomogeneous distribution of gold within the sample to be assayed presents a significant problem. Several assay cuts are recommended for all mineralized sections to achieve the best possible results from future programs. Table IV summarizes the mineralization encountered to date.

Generally ore grade gold mineralization is restricted to three major zones, the No. 1 and No. 2 Vein Systems and the newly recognized Carbonate Zone located in between. Surface mapping of the granite contact and the orientation of the quartz veining indicates a strong relationship to the regional structure. Quartz veining appears to be most prolific near the quartz porphyry, at the granite-andesite contact (within the major vein zones) and at the intersection of N-S and E-W structures. The best mineralization to date appears to be within the most prolific quartz veining at the granite-andesite contact within the major north-south structures. However a complete evaluation of the relationship between quartz porphyry, the granite-andesite contact and the N-S and E-W quartz veining (structures) is considered important in understanding the controls to mineralization.



LONGITUDINAL SECTION OF THE WORKINGS
OF THE ST. ANTHONY MINE TO DECEMBER, 1941

Adopted from G.M. Hogg B. Associates Ltd., 1981 Report

SCALE: 1" = 20011. 1" = 2001

Figure 3

The field examination of geophysical anomalies encountered one assay of 0.260 oz. Au/ton (sample No. 9093) from a quartz vein along a contact between an amphibolitic intrusive and a quartz feldspar porphyry 300 feet east of the main anomaly. Further sampling and trenching in this area is highly recommended. An assay of 0.014 oz. Au/ton (sample No. 9086) soutwest of the mine area may be related to the possible faulted offset extension of the No. 1 Vein zone and requires further investigation. A large previous trenched gossan zone along the granite-andesite north of the mine area across the bay from the pump house should also be cleared out and sampled.

The extensive tailings sampling program completed indicates that the old stamp mill tailings have previously been reworked. A narrow channel of tailings probably representing the reworked remnants of the original stamp mill material has been outlined just north of the mill building. The approximately 12,000 tons grading 0.062 oz. Au/ton outlined are not economic however this material may be mineable if the St. Anthony Mine were revitalized.

# Conclusions

On the basis of the work completed to date the following conclusions have been drawn:

- 1) The No. 1 Vein System from which past production has taken place is characterized by local high grade ore pockets within an en-echelon Vein System.
- 2) Drilling to date has outlined the existence of the No.1 Vein System along a 600 foot strike length, without encountering gold assays of economic grade over mineable widths. Due to the erratic nature of gold mineralization only dewatering of the shaft and underground exploration can fully evaluate its ore making potential.

- 3) The No. 2 Vein System occurs over a drill indicated length of at least 600 feet. Ore grade gold values over mineable widths in three out of five drill holes outline a mineralized zone along a 200 foot strike length extending from near surface to a depth of over 600 feet. The No. 2 Vein System has the potential to host an economic ore deposit.
- 4) Substantial further drill testing is required to define the dimensions of the ore bearing zone in the No. 2 Vein System.
- 5) A new ore zone (the "Carbonate zone") located between the No. 1 and No.2 Vein Systems returned ore grade gold mineralization over mineable width in one out of three holes. This zone has considerable economic potential warranting further drill testing.
- 6) The presence of free gold makes accurate assaying difficult. At least two cuts are required for all samples from mineralized zone to provide a reasonable indication of mineralization present.
- 7) Surface geological and structural mapping of the immediate mine area indicate at least three major episodes have contributed to the present picture. The intrusion of the granite, the subsequent major shearing and the intrusion of the quartz porphyry have all influenced the distribution of the mineralalization as presently observed.
- 8) The field examination of geophysical anomalies has identified three areas which warrant further field investigation.
- 9) The tailings sampling program indicated that the old stamp mill tailings have been reprocessed. The small tonnage of reworked remnants are uneconomic at the present time.

- 10) Drill testing of geophysical Anomaly "C" failed to locate the southern extension of the No. 1 Vein System.
- 11) The St. Anthony Gold property especially the No. 2 Vein System and the new Carbonate zone has an excellent chance of hosting an economic gold deposit and a substantial exploration effort is warranted to evaluate this potential.

# Recommendations

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On the basis of the work completed to date the following recommendations are made.

- 1) Conduct a detailed surface geological investigation during the summer of 1984 including geochemical sampling and trenching if warranted of the anomalous areas along VLF conductor "F", around sample location 9086 on line 20 S at 4 + 00 E and the gossan zone just west of magnetic Anomaly "D".
- 2) Conduct a 3 mile IP survey to evaluate magnetic Anomaly "F" and VLF-EM Anomaly "J" to identify and locate the northern extension of the shear zones hosting the mineralization at the St. Anthony Gold Mine. The survey will be conducted on lines 8 N to 44 N and must be done after freeze up as part of the survey area is under the lake.
- 3) Drill 27 holes SA-83-11-37 totalling 16,125 feet (Table V) to further test the No. 2 Vein System and the Carbonate Zone on 50 foot centres along a 400 foot strike length centred on the present zone of economic meneralization. These holes should be drilled from east to west to provide additional statigraphic information and control

# Table VI: Costs

1)	Diamond Drilling Program, 16,125 feet @ \$25	\$403,125
2)	Geophysics, 3 miles I.P. @ \$1,200	3,600
3)	Geology, Trenching	10,000
4)	Assays	27,000
5)	Diamond Drill Field Supervision	20,000
6)	Administration and Project Supervision	2 700
7)	Travel and Expenses	24,000
8)	Renort Preparation, Drafting	9,000
9)	Contingencies	50,000
	TOTAL	\$574,475
	Say	\$575,000

- 4) Geologically map the area south of the E-W fault which displaces the No. 1 Vein System in an effort to locate the extension of this Vein System to the south of the old mine workings.
- 5) Provided the drilling of the No. 2 Vein System proves encouraging the dewatering of the St. Anthony Mine should be considered to provide underground access.

  The Phase II program as outlined in the G.M. Hogg and Associates September 1981 report would then be warranted.
- 6) Provide \$575,000 to conduct this program. Table VI presents an estimated breakdown of the costs to be incurred for these purposes.

J.B.\Hinzer

J.W. Gill

APPENDICIES

# APPENDIX A

St. Anthony Gold Mine Property

Claim Listing

# Appendix A: St. Anthony Gold Mine Property Claim Listing

Patented Claim Number	Parcel Number	Registered Owner
B.G. 151	2307	Aubet Resources Inc.
B.G. 152	2307	Aubet Resources Inc.
B.G. 153	2307	Aubet Resources Inc.
B.G. 154	2307	Aubet Resources Inc.
B.G. 168	692	Aubet Resources Inc.
H.W. 744	7316	Aubet Resources Inc.
H.W. 745	7316	Aubet Resources Inc.
н. <b>w</b> . 746	7316	Aubet Resources Inc.
T.B. 11087	3414	Aubet Resources Inc.
T.B. 11088	3413	Aubet Resources Inc.
T.B. 11414	3417	Aubet Resources Inc.
T.B. 11415	3418	Aubet Resources Inc.
T.B. 11416	3419	Aubet Resources Inc.

APPENDIX B

Tailing Sampling Drill Hole Cross Sections Plates 3C - 3L

(See Pocket #3)

# APPENDIX C

# **ASSAYS**

- (i) Tailings Assays
- (ii) Additional Assays
- (iii) Re Assays
- (iv) Assays
- (v) Rock Geochemical

# X-RAY ASSAY LABORATORIES 21-JUN-83 REPORT 17972 REF. FILE 13687-U5 PAGE

SA	AU PPB	AU DZ/TON CU PPM	CU X	ZN PPM
64-1		0.0121,015		
6A-2		0.018)		
68-1		0-0647.069*		
68-2		0.0745		
6C-1		0.0147.014		
6C-2		ک 0.013		-
11 A-1		0.024 7.021		
114-2		0.018)		
118-1		0.300}.22		
11B-2		0.140)		
110-1		0.080].115		
116-2		0.150)		
14A-1		0.008 7.014		
14A-2		0.021)		
14B-1		0.029/,035		
14B-2		0.041		
16A-1		0.400 7.244		
16A-2		(860.0		
33 A-1		0.015 .016		
33A-2		0.016)		
338~1 338-2		0.0237.018 0.013		
33C-1		0.0332 1034		
33C-2		0.036		
384-1		0.013}.015		
36A-2		0.016		
388-1		0.240},235		
388-2		0.2305		
41A-1	~-	0 0107		
41 A-2		0.015 .013		
418-1		0.1007.110		
418-2		0.120) '		
55A-1		0.007 \.008		
55A-2		د 0.010		
558-1		0.022}.022		
558-2		0.021		
594-1		0.0217.026		
59A-2		0.031)		
598-1		0.028 3.026		
598-2		0.024)		
81 A-1		0.003 }.004		
81 A-2		0.005 0.006		
818-1 819-2		0.006 { .007		
82A-1		TRACE ) TR		
82A-1 82A-2		TRACE 5		
828-1				
828-2		0.006 (		
83 A-1	***	لاس ( 400ء		
93 A-2		0.004 }		
838-1		0.004 } . 004		
838-2		0.003		

TAILINGS SAMPLES

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 7 OF 11

MPLE	AU DZ/TON
14	0.027
2 A	0.032
3 A	0.029
4 A	0.100
5 A	0.061
7 A	0.033
8 A	0.012
9A 10A	0.070 0.036
10A 12A	0.066
134	0.027
15A	0.009
17A	0.017
18A	0.041
19A	0.014
A05	0.006
21A 22A	0.010 0.021
23A	0.059
24A	0.016
25A	0.014
26A	0.010
27A	0.014
28A	0.044
29A 30A	0.003 0.014
31A	0.026
32A	0.013
34A	0.010
35A	0.038
36A	0.011
37A 39A	0.018
40A	0.016
42A	0.015
43A	0.012
444	0.016
45A	0.027
46A	0.024
47A 48A	0.013 0.029
49A	0.017
50A	0.021
51A	0.019
52A	0.024
53A	0.017
54A	0.007
56A 57A	0.029 0.025
58A	0.025
<i>-</i>	0.0.1

TAILINGS SAMPLES

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF-FILE 13894-12 PAGE 8 OF 11

MPLE	AU DZ/TON
. 0.4	0 007
60A	0.007 0.009
62A	0.012
63A	0.012
64A	0.012
65A	0.090
66A	0.430
67A	0.009
68A-	0.005
69A-	0.008
71A	0.005
72A	0.003
73A	0.007
74A	0.004
75A	0.005
76A 77A	0.003 0.002
78A	0.002
79A	0.007
80A	0.023
84A	0.007
86A	0.018
87A	0.007
88A	0.007
89A	0.006
90A	0.010
914	0.007
92A	0.016
93A	0.010
94A 95A	0.011 0.019
95A 96A	0.019
97A	0.006
98A	0.008
994	0.006
100A	0.004
1014	0.005
102A	0.014
1034	0.017
19	0.014
28	0.027
38	0.091
48	0.071
58	0.062
78	0.016
88 08	0.033
98 108	0.240 0.098
128	0.071
138	1.070

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 9 OF 11

MPLE	AU OZ/TON
1881	0.019
1882	0.019
198	0.012
208	0.050
218	0.150
228	0.081
238	0.054
248	0.069
258	0.034
2 o B	0.016
27ช	0.140
288 308	0.008
318	0.031
32B	0.022 0.050
34B	0.041
35B	0.018
<b>3</b> 68	0.013
37B	0.190
398	0.023
408	0.024
428	0.038
438 448	0.280
458	0.060 0.031
478	0.031
488	0.140
498	0.120
508	0.084
518	0.050
528	0.037
538	0.013
548	0.013
568	0.008
578 538	0.050
60 <b>8</b>	0.160 0.011
628	0.001
638	0.017
658	0.014
668	0.008
685-	0.005
728	0.012
738	0.120
758	0.007
76 <b>8</b> 778	0.003
798	0.007 0.009
848	0.004
868	0.004

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 10 OF 11

MPLE	AU OZ/TON
878 888	0.009 0.025
908	0.005
91B 92B	0.037 0.016
93B	0.017
948 958	0.042 0.031
968	0.020
97B 988	0.010 0.048
998	0.008
1008 1018	0.010 0.008
1028	0.022
1038 1C	0.016 0.088
2 C	0.097
3C 5C	0.710 0.008
100	0.640
19C 22C	0.015 0.067
24C	0.091
250 260	0.098 0.014
30C	0.073
31C 32C	0.023
34C	0.560
35C 36C	0.018 0.090
40C	0.048
42C 43C	0.007 0.086
49C	0.097
53C 54C	0.085 0.022
57C	0.130
68C - 72C	0.003 0.005
73C	0.027
77C 79C	0.001 0.003
860	0.012
87C 88C	0.016 0.032
900	0.022
92C 93C	0.150 0.019
_	•

TATLINGS SAMPLES

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF-FILE 13894-12 PAGE 11 GF 11

MPLE	AU OZ/TON
940	0.026
10	0.061
20	0.440
180	0.013
190	TRACE
310	0.049
34D	0.013
36D	0.150
40D	0.006
540	0.046
57D	0.150
87D	0.021
90D	0.081
910	0.007
1 E	0.005
2 E	0.140
31E	0.240
91E	TRACE

#### X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET. DCN MILLS. CNTAFIC M38 3J4

PHONE 416-445-5755

TELEX C6-986947

#### CERTIFICATE OF ANALYSIS

TO: HALO CENTREX INC ATTN: JIP GILL 33C BAY STREET. SUITE 16C8 TCRONTC . CNTARIG M5F 258

CLSTCMER NG. 582

CATE SUBMITTED 4-AUG-83

A REPORT 18661

REF. FILE 1441C-P1

258 SOIL

WERE ANALYSED AS FOLLOWS:

AL CZ/TCN

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METHOD CETECTION LIMIT

C.CC1

X-RAY ASSAY LABORATORIES LIMITED CERTIFIED BY .........

DATE 24-AUG-83

X-RAY ASSAY LABORATORIES 24-AUG-83 REPORT 18661 REF.FILE 1441C-M1 PAGE 1 CF 6

SAPPLE	AU UZ/TON
104A 1048 105A	0.028 0.011 0.015
1C58	0.021
105C 106A	0.009 0.014
1068 1074	0.004 0.017
1078	0.006
1084 1088	0.015 0.008
1080	0.012
109A 1098	0.012 0.002
1090	0.018
1104 1108	0.007 0.010
1114	0.013
1119 1110	0.008 0.011
1110	0.010
112A 112B	0.015 0.014
1134	0.023
1139 114	0.015 0.018
1154	0.014
1158 1150	TRACE 0.008
1104	0.009
1168 1160	0.015
1174	0.023 0.011
1178 1170	0.008
1184	0.023 0.007
1188	0.017
118C 119A	0.031 0.014
1198	0.018
119C 119C	0.010 0.008
1204	9.010
1208 1214	0.012 0.014
1219	0.011
121C 122A	0.007 0.023
1228	0.014
1234	0.000

X-RAY ASSAY LAUCRATCRIES 24-AUG-83 REPORT 18661 REF.FILE 1441C-M1 PAGE 2 OF 6

1238 0.00 123C 0.01 123C 0.05 124A 0.01	5
1248	22 4 1 9 1 9 3 3 7 3 8 2 8 7 5 2 6 1 1 5 6 6 3 5 7 2 7 7 7 1 7 1 0 1 2 4
145A 0.0 1458 0.0	23 26
146 0.0 147 0.0 148A 0.0 1488 0.0 149A 0.0 1498 0.0 150 0.0 151A 0.0 1518 0.0	10 12 10 11 07 10 13

X-RAY ASSAY LABORATORIES 24-AUG-83 REPORT 18661 REF.FILE 14410-M1 PAGE 3 OF 6

SAPPLE	AU UZ/TON
152A	0.007
1528	0.010
152C	0.021
153A	0.007
1539	0.004
154A 154B	0.013 0.015
154C	0.019
1554	0.008
1558	0.009
155C	0.020
1564	0.005
1568	0.008
1574	0.005
1578	0.016
158	0.020
1594	0.007 0.015
1598 160A	0.015
1608	0.005
1614	0.008
1618	0.035
1624	0.005
1628	0.004
1634	0.005
1638	0.006
1644	0.003
1640 1654	0.018 0.004
1658	0.004
1664	0.006
1668	0.004
1674	0.004
1678	0.010
168	0.004
1694	0.009
1698	0.014
169C	0.026
170A 1708	0.009
1700	0.110
1714	0.008
1718	0.018
1724	0.005
1728	0.014
1734	0.013
1738	0.017
1744	0.008
1748 1740	0.010
1/40	0.001

X-RAY ASSAY LABORATORIES 24-AUG-83 REPORT 18661 REF.FILE 14410-M1 PAGE 4 OF 6

SAPPLE	AU DZ/TON
1754	0.008
1758	0.003
175C 176A	0.039 0.005
1768	0.022
1774	0.011
1778	0.030
177C	0.150
1770	0.220
178A 1788	0.020 0.017
178C	0.170
176C	0.110
1794	0.020
1798	0.015
1804	0.021
1808	0.009
1814 1819	0.013 0.019
1810	0.012
1824	0.018
1828	0.013
182C	0.014
1834	0.009
1838 1830	0.025
1844	0.033 0.022
1848	0.023
1954	0.015
1858	0.018
185C	0.013
1864	0.020
186C	0.022 0.042
1974	0.042
1878	0.016
1870	0.066
1884	0.005
1888	0.007
189A 1898	0.009
1904	0.013 0.012
1908	0.012
1914	0.017
1918	0.006
1924	0.019
1928	TRACE
1534 1938	0.096 0.017
1930 1930	C.067

X-RAY ASSAY LABORATORIES 24-AUG-83 REPORT 18661 REF.FILE 14410-M1 PAGE 5 OF 6

SAMPLE	AU CZ/TON
1944	0.007
1948	0.017
195A	0.005
1958	0.013
1964	0.009
1968	0.012
1974	0.008
1979	0.013
1984	0.006
1988	0.007
1990	0.059
199A 199B	0.011 0.012
2004	0.012
2009	0.017
2014	0.005
2018	0.008
2C1C	0.055
2C24	0.004
2C 2 e	0.009
2020	0.084
203A	0.012
2032	0.014
2030 2044	0.083
204B	0.013 0.101
2054	0.016
2058	0.020
206A	0.010
2068	0.005
206C	0.040
2074	0.008
2078	0.012
2C8A	0.005
5683	0.011
2080	0.054
209A	0.005
2098	0.010
210A 210B	0.011 0.021
21 1A	0.010
2118	0.008
2110	0.073
2110	0.073
2124	0.007
2128	0.015
2134	0.005
2138	0.029
213C	0.030
2144	0.006

X-RAY ASSAY LABORATORIES 24-AUG-83 REPORT 18661 REF.FILE 14410-M1 PAGE 6 GF 6

SAPPLE	AU OZ/TON
2148	0.013
2140	0.102
215A	0.020
2150	0.011
2164	0.005
2168	0.013
216C	0.051
217	0.011

# ADDITIONAL ASSAYS

X-RAY ASSAY LABURATORIES 21-JUN-83 REPORT 17972 .... FILE 19051-UD PAGE

MP LE	AU PPB	AU UZ/TON		CU %	ZN PPM
9025	==	NIL	·		
9026		NIL			
9027		NIL			
9028		NIL			
9029		TRACE	~-		
9030		0.017		-	
9031		0.001			
9032		TRACE			
9033		TRACE			
9034		0.002			
9035		0.01			
9036		0.002			
9037		0.002			_
9038		TRACE			
9039					
		NIL			
9040		NIL			
9041		NIL		~	
9042	~-	NIL			
9043		0.002			
9044	<b>~</b> →	NIL			
9045	en ***	0.004			
9046		TRACE			
9047		NIL			
9048					
	<b></b>	NIL			
9049		TRACE			
9050		0.004			
905.1		0.004			
9052		0.001			
9053		NIL			
9054		0.005	~~		
9055		0.003			
9056		0.002			
9057		0.001			
9058		NIL			
9059		0.002			
9060		0.002,			
9061		0.001			
9062		0.002			
9063		NIL			<b></b>
9064		NIL			
9065		0.001			
9066		TRACE			
9060 9067		0.002			
	<b></b>				
9068		0.001			
9069		0.002	_		
9070	, <b>***</b>	0.001			-
9071		0.002			
9072		0.004			~~
9073		0.012			
9074		0.001			
9075		0.007			
9076		0.001			
9077	•••	0.003			
9078.		0.004			
9079		0.004			
9080		0.004			
~		U . U U D		<del></del>	
9081		0.003			

RE-ASSAYS

X-RAY ASSAY LABORATORIES 11-AUG-83 REPORT 18504 REF.FILE 14325-83 PAGE 1 OF 4

SAMPLE	AU CZ/TON
703 704	0.017 TRACE
711	NIL
752 303	0.002 0.012
804	0.003
305	0.001
806	0.301
907	3.083
808	0.003
809	0.007
810 311	NIL 0.230
311	TRACE
813	NIL
314	0.002
315	0.002
316	TRACE
817 813	NIL NIL
319	0.003
820	0.002
821	0.014
322	0.320
823	0.064
324	0.001
381 332	0.035 0.011
393	0.067
894	0.001
900	0.001
901	0.021
902	0.002
922 923	0.004 0.001
329	0.002
930	0.007
931	TRACE
952	0.013
953	0.001
754	9.701
955 956	0.003 0.005
95 <b>7</b>	0.005
958	0.026
959	0.000
950	0.001
901	2.002
962	3.002
963	0.001

X-RAY ASSAY LAGGRATORIES 11-AUG-83 REPORT 18504 REF. FILE 14325-83 PAGE 2 LF 4

SAMPLE	MCTNSC UA
954 1527 1528 1528 1548 1549 1553 1553 1553 1553 1615 1617 1635 1617 1635 1707 1718 1718 1725 1726 1726 1727 1739 1744 1753 1774 1775 1776 1776 1776 1776 1776 1776 1776	3.001 TRACE TRACE 0.055 0.001 0.029 0.007 0.002 0.007 0.001 0.002 0.007 0.009 0.001 0.001 TRACE 0.003 0.001 TRACE 0.003 0.001 0.002 0.003 0.001 0.002 0.003 0.001 0.002 0.003 0.003 0.003 0.004 0.004 0.004 0.004 0.004 0.004 0.004
1808	

X-RAY ASSAY LABORATORIES 11-AUG-83 REPORT 18504 REF.FILE 14325-83 PAGE 3 OF 4

SAMPLE	AU DZZTON
3936	0.902
3937	2.001
3933	0.003
8943	0.007
8944	0.035
3 7 4 5	2.003
3946	2.307
9947	0.005
8948 3949	0.083 0.003
3950	0.003
8951	0.003
3962	0.001
3963	9.002
3964	NIL
8965	0.001
3930	JIL
3931	0.047
8992	NIL
3993	0.095
8995	TRACE
3996	0.030
5497	0.004
3978	0.007
3999 9001	0.013
9001	0.304
9002	0.001 0.001
9003	0.017
9005	0.009
9006	0.203
9007	0.015
9008	0.003
9031	0.015
9032	TRACE
9033	0.001
9034	0.003
9040	TRACE
9041	TRACS
9042	TRACE
7043	0.001
9044	TRACE
7045	TRACE
9346	TRACE
9047	0.001
9348	TRACE
9049	0.003
9056 9060	0.701 0.702
7060	TRACE
4 J 17 L	I NAUS

X-RAY ASSAY LAGGRATORIES 11-AUG-03 REPORT 18504 REF-FILE 14325-83 PAGE 4 DF -

SAMPLE	AU DZZTON
3062	0.002
3003	0.002
9073	0.013
9074	9.001
0.)75	0.009
9076	0.002
9377	0.003
9078	0.007
9079	0.005
3080	0.006
9031	0.003

X-RAY /	ASSAY	LABORATORIES	21-JUN-83	REPORT	17972	REF.	F'LE	13687-05	PAGE	4
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SAMP (	ZN %	AG PPM	AG OZ/TON P	B PPM	P8 %	
1502	0.04		NIL	***	NIL	
1503	TRACE		NIL		NIL	
1504	TRACE	~ <b>~</b>	NIL	10° may	NIL	
1505	TRACE		TRACE		NIL	
1506	TRACE		NIL		NIL	
1507	0.01		NIL		NIL	
1508	TRACE		NIL		NIL	
1509			• •			
1510		40 40				
1511		~-		~ ~		
1512						
1513						
1514					~-	
1515						
1516			-			
1517					~~	
1518						
1519			~ ~			
1520 .						
1521						
1522	~-		~ ~			
1523						
1024			400 400			
1525	• • •					
1526						
1527						
1528	=-	<b>Q</b> /I <b>Q</b> <sub>1</sub>				
1529	***					
1530						
1531						
1532	Nago and			~ ~		
1533	~~			~ ~		
1534	<b>₩</b> ₩					
1535						
1536						
1537						
1538						
1540						

### X-RAY ASSAY LABORATORIES 13-JUN-83 REPORT 17897 REF. FILE 13684-Q2 PAGE 1

1603	SAMPLE	AU DZ/TON	
	1501	0.049	

### X-RAY ASSAY LABORATORIES 22-JUN-83 REPORT 17983 REF. FILE 13727-Q2 PAGE 1

SAMPLE	AU ÖZZTÜN
1501A-PULP	0.970
15018-PULP	0.032
1501C-REJECT	0.990
1501D-REJECT	0.140

X-RAY ASSAY LABORATORIES 29-JUN-83 REPORT 18072 REF. FILE 13785-M2 PAGE

SAMPLE AU OZ/TONAG OZ/TONSAMPLE AU OZ/TONAG OZ/TON ---------1539 0.002 --1592 NIL 1541 0.001 --1593 TRACE --1542 0.004 --1594 0.002 --1543 0.008 --1595 TRACE 1544 TRACE --1596 TRACE 1545 0.001 --1597 NIL 1546 TRACE --1598 0.001 1547 0.001 ---1599 0.002 1548 0.059 ---1600 0.002 1549 0.013 --1601 0.001 --1550 0.011 --1602 0.002 1551 0.002 --1603 NIL 1552 0.015 --1604 0.003 1553 0.013 --1605 0.001 0.002 1554 --1606 NIL 1555 --NIL 1607 0.003 1556 0.001 --1608 NIL --1557 0.003 \_\_ 1609 0.001 1558 --NIL 1610 0.002 1559 0,005 --1611 NIL 1560 0.016---1612 0.003 0.002 1561 --1613 0-029 1562 --0.002 1614 0.016 --1563 0.002 --1615 0.005 1564 0.003 --1616 0.010 1565 0.002 --1617 0.002 1566 0.003 --1618 0.001 1567 0.001 --1619 0.004 1568 0.003 --1620 0.002 --1569 0.003 --1621 0.001 --1570 NIL 1622 0.002 1571 0.002 --1623 0.002 \_-1572 0.003 --1524 0.004 1573 0.003 --1625 0.004 --1574 0.001 --1626 NIL 1575 0.002 --1627 NIL 1576 0.004 --1628 TRACE 1577 TRACE --1629 NIL --1578 0.001 --1630 0.005 1579 \_\_ 0.006 1631 NIL 1580 0.001 --1632 TRACE --1531 0.001 ---1633 NIL 0.002 --1582 1634 NIL 1583 0.001 NIL 1635 0.004 --0.002 1584 \_\_\_ 1636 NIL 0.001 1585 --1637 0.005 1586 0.001 --1638 TRACE 1587 TRACE --1639 0.001 1588 TRACE --1640 0.007 1589 TRACE --1641 0.002 1590 TRACE 1642 0.004

1591

NIL

ASSAYS

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF-FILE 13894-12 PAGE 1 OF 11

MPLE	AU UZ/TON
1643	0.011
1644	NIL
1645	0.002
1647 1648	0.006 NIL
1649	0.005
1650	0.001
1651	0.005
1652	TRACE
1653 1654	NIL 0.002
1655	0.002
1656	NIL
1657	0.002
1658	0.001
1659	NII.
1660 1661	0.001 N1L
1562	TRACE
1663	0.001
1664	NIL
1665	NIL
1666	TRACE
1667 1668	TRACE NIL
1669	0.001
1670	NIL
1671	0.001
1672	0.003
1673	0.006
1674 1675	0.003 0.036
1676	200•0
1677	0.001
1678	0.004
1679	0.001
1680 1681	0.002
1682	0.001
1683	0.001
1684	0.003
1685	0.001
1686	NIL
1687 1688	0.003 0.003
1689	0.003 NIL
1690	TRACE
1691	0.003
1692	NIL
1693	0.006

A-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF-FILE 13894-12 PAGE 2 OF 11

O HPLE	AU DZ/TON
1404	0.003
1695	0.004
1690	0.002
1697	0.002
1693 1699	0.002
1700	0.002 0.004
1701	0.004
1702	0.004
1703	TRACE
1704	0.003
1705	0.005
1705 1707	0.002 0.024
1703	0.002
1709	0.002
1710	0.003
1711	0.001
1712	TRACE
1713 1714	0.009
1715	0.093 0.013
1716	0.013
1717	NIL
1713	0.004
1717	0.005
1720	0.002
1721 1722	0.001 TRACE
1723	0.005
1724	TRACE
1725	0.012
1726	0.005
1727	0.520
1729 1729	0.002 0.010
1730	0.005
1731	0.001
1732	TRACE
1733	0.002
1734	NIL
1735	0.001
1736 1737	0.021 0.003
1739	0.002
1739	NIL
1740	NIL
1741	600.0
1742	0.003
1743	0.002

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 3 OF 11

1744 1745 1746 1746 0.049 1747 0.010 1748 0.007 1749 0.010 1750 0.002 1751 0.007 1752 1786 1753 0.002 1754 0.130 1755 178CE 1755 0.002 1757 0.001 1758 178CE 1759 0.002 1760 1761 0.006 1762 1763 1764 NIL 1765 NIL 1766 NIL 1767 0.002 1763 0.003 1769 1770 178ACE 1771 0.001 1772 0.001 1772 0.001 1773 0.003 1774 0.068 1775 0.002 1776 0.001 1777 17RACE 1778 0.003 1777 17RACE 1778 0.003 1779 0.001 1777 17RACE 1780 0.002 1781 0.003 1779 0.001 1777 17RACE 1780 0.002 1781 0.003 1779 0.001 1777 17RACE 1788 0.002 1789 NIL 1788 0.002 1789 NIL 1789 NIL 1790 1780 0.002 1789 NIL 1790 1780 0.002 1781 0.003 1791 NIL 1792 1788 0.002 1789 NIL 1792 178ACE	Mo LE	NOTISG UA
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1789 NIL 1790 0.005 1791 NIL 1792 TRACE		0.002
1790 0.005 1791 NIL 1792 TRACE		
1791 NIL 1792 TRACE		
1792 TRACE		

ASSAYS

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 4 OF 11

SAMPLE	AU OZ/TON
1794	TRACE
1795 1796	0.019 0.015
1797	TRACE
1797 1798	0.001
1799	NIL
1800	0.008
1801	0.004
1802 1803	0.003 0.003
1804	0.005
1805	0.004
1806	0.001
1807	0.006
1808	0.022
1809 1810	0.002 0.002
1811	TRACE
1612	0.003
1813	NIL
1814	0.002
1315	0.006
1816 1817	0.006 0.002
1818	NIL
1819	0.016
1820	0.001
1821	NIL
1822	0.004
1823	0.003
1824 1825	0.001 0.002
1826	0.001
1827	NIL
1818	0.004
1829	0.001
1830	0.006
1831 1832	0.002 TRACE
1833	NIL
1834	NIL
1835	0.003
1836	NIL
1837	NIL
1838 1839	NIL
1840	0.013 NIL
1841	NIL
1842	NIL
1843	0.091

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 5 OF 11

MPLE	AU DZ/TON
1844	0.005
1845 1946	NI L NI L
1847	0.009
1848	NIL
1849	NIL
1850	NIL
1851 1852	NIL
1853	TRACE NIL
1854	NIL
1855	0.001
1856	NIL
1857	NIL
1858 1859	NI L NI L
1860	NIL NIL
1861	NIL
1862	NIL
1863	NIL
1864	NIL
1865 1866	NIL 0.001
1867	NIL
1868	NIL
1869	0.003
1870	0.002 0.002
1871 1872	0.002
1873	TRACE
1874	TRACE
1875	0.002
1876	0.011
1877 1878	0.009 0.002
1879	0.002
1880	0.002
1881	0.002
1.882	0.001
1883 1884	0.005 0.004
1385	0.003
1886	0.001
1887	0.002
1888 1889	0.001 0.001
1889	0.001
1891	0.001
1892	0.002
1893	0.002

ASSAYS

X-RAY ASSAY LABORATORIES 18-JUL-83 REPORT 18215 REF.FILE 13894-12 PAGE 6 OF 11

MPLE	AU OZ/TUN
1894	TRACE
1895	TRACE
1896	0.004
1897	TRACE
1998	0.001
1899	TRACE
1900	TRACE
1901	TRACE
1902	NIL
1903	0.002
1904	0.001
1905	0.001
1906	0.001
1907	0.001
1903	0.001
1909	TRACE
1910	0.012
1911	0.003
1912	TRACE
1913	0.020

#### ROCK GEOCHEMICAL

# X-RAY ASSAY LABORATORIES 19-JUL-83 REPORT 18225 REF. FILE 13920-16 PAGE 2 OF 2

MPLE	ZN PPM	AG UZ/TUN	РВ РРМ
9084			
9085	72.0	NIL	
9086	110.	NIL	
9087			
9038	23.0	NIL	2
9089	35.0	NIL	
9090	75.0		
9091	42.0	NIL	8
9092	24.0	NIL	6
9093	23.0	0.18	- <del>-</del>
9094			

# KAY ASSAY LABORATORIES 21-JUN-83 REPORT 17972 REF. FILE 13687-US PAGE

SAMPLE	ZN Z		· IIII R			P
	211 4	AG PPM	AG DZ/TON	N PB PPM	PB *	
9095						_
9096		1.0		8	*	
9097		0.5		4	No. 100	
9098	~-	1.0	***	10	~~	
9099		<0.5	~ ~	2	~-	
9100		0.5		6		
		<0.5		<b>6</b> 2		

#### ROCK GEOCHEMICAL

ROCK GEOCHEMICAL -RAY ASSAY LABORATORIES 19-JUL-83 REPORT 18225 REF.FILE 13920-16 PAGE 1 OF 2

MPLE	AU OZ/TON	NA20 %	NI PPM	CU PPM
9084	0.002			
9085	NIL			170.
9086	0.014			160.
9087	NIL		***	
9088	NIL	4.92		8.0
9089	TRACE		~-	52.0
9090	tus 400		100	140.
9091	TRACE	3.83		12.0
9092	TRACE	0.77		80.0
9093	0.260			870.
9094	TRACE			

AY ASSAY LABORATORIES 21-JUN-83 REPORT 17972 REF. FILE 13687-U5 PAGE

SAMPLE	AU PPB	AU 02/T	ON CU PPM	CU %	ZN PPM
9095	8	•	130.		48.0
9096	5		170.		21.0
9097	4		150.		52.0
9098	4		74.0		22.0
9099	4		55.0		49.0
9100	3	~-	91.0		13.0

APPENDIX D

Diamond Drill Logs Holes No. SA-83-1 - SA-83-10

NAME OF	PROPERTY	St. Anthony Gold	(Aubet)	
HOLE NO.	SA-83-1	LENGTH	416.01	
LOCATION	292.01 N	DEPARTURE	6.01 4	
	H Surface	DEPARTURE	1100	-50°
	Jan. 23, 1	983 FINISHED		3

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMISA
100°	57° 56°				
3001	5420				
400	530				

HOLE NO SHEET NO	
REMARKS	-

LOGGED BY J. Hinzer

FOOTA	GE	DESCRIPTION	1		8 A M P	LE		Ī	Au ^	5 8 A 1	/ <b>5</b>
FROM T	70		но.	SULPH-	FROM	FOOTAGE	TOTAL	×	Uz/Ton		OZ/TOH
0.01	4.01	CASING (overburden to 12.01)									
12.0' 163	1.21	Granite - medium grained.  Granite is medium gray, with some buff coloured sections.  Most of the rock is altered at least partially reflected by a greenish-yellow tint due to alteration mineralogies.  Buff felspar phenocryst (2-4 mm) are the dominant feature.  Rock is fairly massive and homogeneous. The granite texture is destroyed in some areas where strong shearing and silification reduce the rock to fine grained dark green material often containing many qt:2 lattice veins and or quartz	603	Тгру	29.7'	50.1' 63.9'	2.5' 1.9' 2.4'		Nil Nil Nil 0.003	•	
		blebs (small).  Mineralization consists of up to 2% fine grained disseminated pyrite and up to 2% pyrite crystals up to 1 cm. occurring along quartz veins.	606 607 616 608	Тгру	88.7' 95.0' 112.7' 131.9'	97.7' 115.0'	2.71		Nil 0.002 Nil 0.005		
2001 - 2005 - 20		12.0'-32.0' - granite is weathered due to pentrating fluids from the overlying tailings pond.  Practures open to surface penetrate 30' or more and are strongly zoned for up to six inches on either side. Granite is dark brown where weathered often marked by a red-brown halo (rim).  33.0'-39.0' dark green mottle or spotting up to 10% of granitic core due to alteration minerals crude mineral alignment (shearing) is present.	609 610 611 612 613		138.3° 141.3° 153.0° 155.6°	141.3' 141.1 155.6' 158.8'	3.0° 1.8° 2.6° 3.2° 2.3°		Nil Nil Nil 0.002		

			0. (3.3
NAME OF PROPERTY St. Anthony Gold (Aubet)	FOOTAGE DIP AZIMUTH FOOTAGE DI	AZMUTH HOLE NO.	SA-83-1 SHEET NO2
HOLE NO. <u>SA-83-1</u> LENGTH		REMARK	\$
LATITUDE DEPARTURE			
ELEVATION AZIMUTH DIP	<del>             -</del>		
STARTED FINISHED	<u> </u>	LOGGED 6	BY

F 0 0 1	AGE	DESCRIPTION			5 A M P	LE			Au A	5 5 A Y S	
FROM	70		NO.	SULPH	FROM	FOOTAGE	TOTAL	×	0z/Ton	02/10	N
12.0'-	161.2'	continued									
:		39.0'-130.0' massive granite with minor quarz veining \frac{1}{2} = 2" qt. veins make up approximately 5% of the core. Minor shear zones end altered sections from 6" - 3", in length well dispersed throughout.									
		130-161.2 Strongly altered granite green to yellowish with finer grained texture. Very strong shear zone  133.8-134.3 - dark green fine grained, very soft.  130 - 150' - approximately 25-30% of core is quartz both massive and laced.  150 - 161.2' -approximately 35-40% of core is quartz.									
161.2'	-193.1	Quartz Porphyry (Sheared) medium to dark grey very strongly sheared, almost parallel to core axis (appears almost to be flow bended). Quartz phenocryst-dark gray occur as 1-2 mm. greins in the matrix and 5-10 mm large phenocryst (up to 30%) angular to sub-angular often brocken (brecciated) - matrix flows around these coarse grains.  Other constituents are 1-3 mm yellowish sericite flakes and	514 515 517		175.01	163.4' 177.0' 193.0'	2.01		0.001 Tr Nil		
		approximately 1/2% 1-2 mm py. cubes.									

NAME OF	PROPERTY St. A	Anthony Gold (Aubet)
HOLE NO.	- SA-83-1	LENGTH
LOCATION		
LATITUDE		DEPARTURE
ELEVATION	' <del></del>	AZIMUTH DIP
		P1111P11PP

FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	AZ IMUTH

HOLE NO. SA-B3-1 SHEET NO. 3

' LOGGED BY

FOOT	AGE	DESCRIPTION			5 A M P	L C			Au A	5 5 A Y	5	
FROM	TO		NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	X	(12/Ton	c	2/TON	
161.21-	193.11	continued.										
		The lower 10-15 feet of core is more strongly sheared, rock is pale gray - almost lalcose, large quartz phenocrysts are less frequent and small ones are almost obliterated.										
	,	Quartz veining within the unit is restricted to one 3" vein.		1	!							
		Upper and lower contacts are irregular but fairly sharp. Contact zones were not discernable.										
193.11-	370.01	Granite Medium Grained similar to 12.0' - 161.2' above.  193.1-235.2 strongly altered & sheared granite green to yellowish	618 619 620 621		220.3' 228.9' 247.5'	232.9	3.0' 4.0'		Tr Nil 0.002 Nil			
		green finer textured. Entire section averages 10-15% quartz both massive and laced. Shear brecciation of the granite occurs up to 204' \$\times 222' alteration is greatly reduced. \$\times 219' sphalerite bleb in bull quartz	622 623 624 625 626 627		274.6'	270.61 274.61 278.91	4.5' 3.2'		D.001 D.004 Nil D.008 Nil D.001			-
66-1158		235.2' - 270.9' medium grained granite with occasional shear zones and minor altered sections  # 260' small veinlet of sph 259' - 270.9' shear zone 1 - 5% py avg. 2%	628	Ттру		313.61	2.8'		Nil Nil			
455 TORONTO 3												
DOMENT												

HAME	OF	PROPERTY	St. An	thony Go	ld (Aubet		
LOCAT	ION						
LATIT	UĐE .			DEPARTU	9 E		**************************************
ELEVA	TIOH			HTUMISA		DIP	

FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	AZIMUTH

HOLE NO. SA-83-1 SHEET	но4
REMARKS	

FOOTAGE	DESCRIPTION			5 A M P	Lε		Au ASSAYS			
FROM TO	22301,71,01	NO.	SUL PH	FROM	FOOTAGE	TOTAL	7	02/Ton		02/TOH
93.11-370.01	continued									
93.1'-370.0'	270.9 - 277.0' shear zone-quartz laced 60-70% quartz dark green fine textured 1-2% disseminated py tr. sph? gale::a? minor carbonate.  277.0' -289.6' altered granite. 10-15% qtz. laced  289.6' -370.0' medium to coarses grained granite upper and lower sections are altered and sheared along 3 -5' sections, randomly, most noteably between 319' - 321.6' and 348 - 353.0' below 312' pale gray - while green unsheared except small local shearing at 1-12" quartz veins - 1% diss. biotite.  Granite Coarse Grained  Similar to the above but coarse grained - lightly spotted with darker alteration patches, chlorite and biotite. Occasional section with strong shearing and/or alteration accompanied by 10-30% quartz are also present. Up to 1% disseminated pyrite (1-2 mm. grains) is also present.	631 632 633 634 635 636 637 639 640 641 642 643 644 645 647	Tipy Tipy Tipy Tipy Tipy	331.3' 337.0' 342.7' 349.0' 350.2' 352.8' 357.0' 369.1' 373.2' 375.6' 378.0' 380.4' 383.6' 385.0' 387.2' 388.9' 393.9'	322.4! 333.0! 338.6! 344.4! 350.2! 352.8! 357.0! 360.8! 371.2! 375.6! 378.0! 383.6! 385.0! 387.2! 388.9! 393.9!	2.1' 1.7' 1.6' 1.7' 1.2' 2.6' 4.2' 3.8' 2.4' 2.4' 2.4' 2.4' 3.1' 2.7' 3.1' 3.9' 3.8'		Tr Nil Nil Nil Nil Nil Nil Nil Nil Nil Nil		

HAME	OF	PROPERTY	St.	Anthony Go	ig (vnoer)		
HOLE	ΝО.	5A-83-1		LENGTH			
LOCAT	OH						
LATITU	DE			DEPART	URE		·····
ELEVAT	ION			AZIMUTI	t	DIP	
					_		

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH

+OL.E	NO.S.A.	-83-1	SHEET	NO.	
REM	ARKS				·

LOGGED BY

FOOTAGE	DESCRIPTION			5 A M P				Au ^	5 5 A 1	′ S
FROM TO		NO.	SULP	FROM	FOOTAGE TO	TOTAL	×	Uz/Ton		02/10N
370.01-416.01	Continued  Uccasional minor altered zone above and below this section persist to the end of the hole.  370' - 402' white-gray, coarse grained granite, 10% qtz. veins from 1" -18", 1-3% py, locally brecciated, tresphalerite at 389'.  402' - 412' coarse grained, 1% qtz. stringers, trace pyrite 412' - 416' same as above with 15% qtz. stringers, 2-3% pyrite			404.2' 412.5'	407.0'	2.8' 3.5'		0.002 Ni1 0.002		
No. 1-day - 5 - March - Carpentor 1	J.A.									

NAME OF	PROPERTY .	St.	Anthony Col	ld		
HOLE NO.	SA-83-2		LENGTH	407.0'		
LOCATION	•					
LATITUDE	0+93N		DEPARTURE	0+27E		
ELEVATION	0	'ጸሮድ	AZIMUTH	1100	DIP .	-50°
******	Jan. 28,	1983	EINIENED	Jan. 30,	1983	

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZMUTH
100	56 <sup>0</sup>				
200	55 <sup>0</sup>				
300	550				
400	54 <sup>0</sup>				

HOLE HO. SA-83-2 SHEET HO. \_\_\_\_

LOGGED BY I HINZER

FOOT	AGE	DESCRIPTION			5 A M P	LE		Au ABSAYS			
FROM	το	DESCRIPTION	но.	SULPH	FROM	FOOTAGE	TOTAL	×	Oz/Ton	OZ/TON	
0 -	16.0'	Casing (Bedrock at 15.51)	1	1							
15.51	88.01	GRANITE (Medium Grained)	655		16.51	19.11	2.61		Tr		
		Gray with light yellow-green cast - especially in more altered sections. Dominant felspars gray-pale white grains. Sections appear spotty where dark grained alteration patches, sercite, mica congregate. Spots may be up to 10% of core. Up to 1% py is common with 1-2 mm grains.  Surface weathering (leaching) along fractures is common in first twenty feet of core but persists on some fractures to 65 feet or more.  Altered zones (yellow-green cast) with associated quartz lacing, strong shearing (brecciated granite) and minor sulfides up to 2%.  36.5-46.8' altered, sheared, less than 2% py 62.0'-67.0' altered, sheared, less than 1% py 79.0'-88.0' medium-strong alteration, shearing (90°-40°) some massive quartz veins	656 657 658 659 660 9025 9026 9027	2% p. 1% p. 1% p. 1% p.	62.8' 80.2' 85.1' 88.9' 95.2'	23.8' 45.0' 67.2' 85.1' 88.9' 95.2' 101.5'	2.1' 4.8' 4.4' 4.9' 2.8' 6.2' 6.3' 5.8'		Nil Tr O.001 Tr Nil Nil Nil		
38.0' -	254.7	GHANITE (Coarse Grained)  Granite light gray some paler sections, extensive areas of spotted granite - due to mice (biotite) sericite knots. Yellow green alteration patches, shearing, etc. as above	662	1%py	101.5' 108.5' 116.7'	102.79	1.5'		0.011 Tr 0.001		

HAME	OF	PROPERTY St.	Anthony Gold (Aubet)
HOLE	NO.	5A-83-2	LENGTH
LOCAT	ION		
LATIT	UDE		DEPARTURE
ELEYA	TION	·	AZIMUTH DIP

FOOTAGE	DIP	HTUMI SA	FOOTAGE	OIP	AZ#AUTH

HOLE NO. \_\_\_\_\_ SHEET NO. \_\_\_\_2

LOGGED BY

FOOTAGE		DESCRIPTION	SAMPLE					AU ASSAYS			
FROM	70	DESCRIPTION	NO.	SULTH	FROM	FOOTAGE	TOTAL	7.	Oz/Tor	02/104	
	292.21	Granite (coarse grained) continued  Sulfide average less than 1% with some large lumpy (spongy) cubes on bull quartz veins. (i.e. 109.0'x 4" qv)  Altered granite with shearing (texture) is significant at the following footages (most sections are qt. laced)  142'-146' massive qtz.veins 134-142 2-3% sulf.70-90% core axis 155'-161' " " " little or no ""  192.5'-193.4' 196.2'-198.5'  206.8'-208.2' some py (tr sph 209.7')  220.3'-227.0' massive qtz. veing 1-29° Py  235 - 244' " qtz. veing 1% py  246' - 254.7' very strong altered and shearing  QUARTZ PORPHYRY (SHEARED)  Dark gray, five grained matrix, very highly sheared at 5-10° to core axis. Matrix quartz phenos are dark - 1-2 mm with 10-30% large angular qtz. phenos up to 1 cm. (often brocken). contact with granite is sharp at top. Lower contact has 6" quartz vein. Occasional minor disseminated pyrite	564 565 566 567 568 569	1%py 1%py 1%py 1%py 1%py 1%py 1%py 1%py	127.0° 133.0° 136.4° 143.5° 155.7° 162.7° 176.1° 190.9° 207.9° 215.3° 219.5° 224.7° 234.6° 235.9° 238.0° 240.2° 243.5° 247.8° 252.0° 254.9° 270.1°	128.4' 136.4' 139.7' 145.7' 159.0' 167.0' 179.3' 193.3' 210.2' 227.0' 223.0' 235.0' 236.0' 240.2'	1.4' 2.5' 3.3' 2.2' 3.3' 4.3' 3.2' 2.4' 2.3' 2.4' 2.3' 2.1' 2.2' 3.3' 4.2' 2.2' 3.3' 4.2' 2.9' 2.0'		0.001 0.004 0.002 0.006 Nil Tr 0.010 Tr Nil Tr 0.004 Nil 0.002 0.003 Nil 0.006 Nil Tr Tr Tr		

AME	OF	PROPERTY St. Anthony Gold (Aubet)	FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH	HOLE
OLE I	ΝО.	SA-83-2 LENGTH						<b> </b>	REMA
OC ATI	ON							<b> </b>	
ATITU	DE	DEPARTURE						<del> </del>	
LEVAT	ION	AZIMUTHDIP	<del> </del>	<del> </del>	ļ			<del>  </del>	
TARTE	. 0	FINISHED	L	l	L	L	L	·	LOGGI

HOLE NO, SA-83-2 SHEET NO
REMARKS

FOOTAGE	DESCRIPTION	SAMPLE				Au A S AU A Y S					
FROM TO	DESCRIPTION ,	NO.	SULP	FRUM	FOOTAGE	TOTAL	x		REASSA	02/TON	
292.2' -373.0'	Similar to 88.0'-254.7'. Major sections of alteration, shearing, quartz lacing as follows:  292.2-303' strong altered shearing 310'-311.8' medium altered shearing 333.5'-334.1' 345'-346.5' 353'.6'-354.2' 354.8'-356.7' 360'-373' moderate altered 40-50% qtz. 14% py  Intermitten qtz. veining with large 1 cm py cubes w 329.0', 350.1'  GRANITE (Medium Grained)  Similar to 15.5'-88.0' slight alteration still present, much finer grained than above. Section is much lighter coloured, less altered, with depth alteration spots are rare. Py occurs as large cubes both in qv, granite and also disseminate-very noticeable 1-2%. Traces of sphalerite, carbonate crystals not uncommon.  Significant alteration, shearing and quartz lacing is present at 383.2'-366.0' medium alteration 2% py. 398.0'-402.0' weak alteration  E. O. H.	686 687 688 689 690 691 692 693 694 696 697 700 701 702 703 705	1%py  2% p;  v  1% p;  1% p;  1% p;	291.9' 293.8' 296.8' 309.9' 313.9' 327.8' 334.8' 343.8' 343.6' 357.1' 0 362.4' 367.0' 371.3' 373.4' 376.1' 386.5' 399.6' 404.4' 404.4' M P 0	298.8 296.8 296.8 296.8 296.8 296.8 296.8 296.5 296.8	1.9' 2.0' 3.7' 4.0' 3.1' 3.5' 2.8' 1.8' 3.5' 5.3' 4.6' 4.3' 2.1' 2.4' 4.0' 2.6'		0.013 Tr Tr 0.002 Tr 0.001 0.008 0.001 0.002 0.013 Nil Nil 0.005 Nil Tr 0.002 Tr 0.002 Tr	0.017 TRACE		

	PROPERTY	St. Anthony Gold (Aubet)	
HOLE NO.	SA-83-3	LENGTH 1108.01	
LOCATION			
LATITUDE	3 & 30°S	DEPARTURE 3 + 57 W	
ELEVATION		AZIMUTH DI	-650
STARTED	Feb. 3, 19	983 FINISHED Feb. 9, 1983	

FOOTAGE	DIP	OUTUE AMOUNT	POOTAGE	क्राउंग्या <b>नाव</b>	AZIUUZH
181	<u>-680</u>	5001	64 <u>2</u> °	9001	630
1001	-ce 30	6001	640	10001	650
2001	-66°	7001	650	11001	620
3001	-6630	800	<u>540</u>		
400	-650				

HOLE NO. SA-83-3 SHEET NO. \_\_!

LOGGED BY J. Hinzer

FOO	TAGE	DESCRIPTION			SAMP	LE		AU ABSAYS			
FROM	10		NO.	SUL PH	FROM	TO	TOTAL	×	Oz/Ton		OZ/TON
0	18.0'	CASING (Bedrock at 15.5')									
15.5'	69.01	GRAY GRANITE  15.5'-33.0' Tan-buff siliceous rock with no discernable grain size or texture (felsite). With depth texture becomes sugary and 2-3 mm.grains become visible as mafic component of rock gradually increases.  Dark 1 mm. fractures healed with qtz., carb., and up to 1% py abound from 19-28' at 450to c.a. Uccasional i qtz. vein at 800 to c. a.  33.0'-56.0' Transition (gradual) from Tan to brown-gray with minor biotite -as mafic content of rock increases resembling granite, locally carbonitized qtz.veins at -36-37' (20% carb )at 10° to c.a. shear-breccia-39.2-42.0' contains 1-2% diss. py. 40-48.5 contains - 6" quartz vein, 2-3% py, chlorite  56.0'-69.0' medium grained dark granitic texture (blue-gray) with little or no sulfides. Locally sheared finer grained sections. sheer breccia-60-61' Transitional lower contact.	712 713 714	py "	39.81	28.01 42.51 58.01	2.2' 2.7' 3.0'		0.008		
69.01	171.8		715 716 717 718	Trpy 1, py	79.0' 106.0' 115.8' 131.9'	118.0	2.0' 2.0' 2.2' 3.0'		Nil Nil Nil Nil Nil		

HAME	OF	PROPERTY St.	Anthony Gold (Aubet)	
HOLE	NO.	SA-03-3	LENGTH	
LOCAT	HOI			
LATIT	UDE		DEPARTURE	
ELEVA	TION		AZIMUTH DIP	

FOOTAGE	DIP	A2 MUTH	FOOTAGE	DIP	HTUMESA

HOLE	но.	SA-83-3	SHEET	но,	_2
8 E M	ARK:	t			

LOGGED	₽Y	 

001	AGE	DESCRIPTION			SAMP	LE		Au ASSAYS				
FROM	TO		NO.	SULPH	FROM	FOOTAGE TO	TOTAL.	×	)2/Ton	OZ/TON		
9.01	171.81	continued										
		69.0'- 79.0' - Fine grained .5 mm. equigranular homogeneous sandy	719		134.9' -	126 61	1.7		Nil			
		gray coloured rock. Upper few feet are transitional. Unit is possibly bedded as minor	1 .	1	138.01-	1 -	1.31		N11			
		contacts at 30° to core axis are seen(carbonatized)	1	ı	1		'	ļ	Nil	1		
		79.0' - 81.5' -coarse grained-dark-blue gray granite with joint	721		140.7'-	142.7	2.0'		1111			
		4-6" fine grained margins 81u5'- 86.5' same as 69.0' - 79.0'	222	2/2	1345 01	140 01	3.01	ļ	Tr	1		
	ĺ	86.5'- 88.7' same as 79.0' - 81.5' granitic		1	145.0'-	1 (			0.004			
		88.7'- 90.5' same as 69.0' - 79.0'	l .	1	148.0'-		. 1		1	1 1		
į		90.5'- 93.5' same as 79.0' - 81.5' granitic 93.5'-109.5' aphenitic-fine grained brown-gray with 1-2% py at	724	1	151.21.	153.61	2.41		0.003	l		
		107.5' at internal contact		ру	]							
		109.5'-113.0', same as 79.0' - 81.5 granitic	725	1%ру	164.01-	166.01	2.01		0.002	1 1		
		113.0'-136.5', fine grained brown to greenish gray - resembling greywacke-carbonate tich and very highly sheared			}				1	1		
		locally	ļ	1	İ				[ [	1 1		
		113-115-greenish-fault gauge material- chloritic			ļ	[				ļ		
		mud 118-120 - shear-breccia			1	[						
	i	127-130.3 - resembles section 15.5 - 33.0'				] ,						
		136.5'-138.5' Mafic Dike-fine grained black-strongly foliated			1				1			
		at 20° to c-axis. Sinuous upper contact over 1.5' - sharp lower contact at 80° to c.o. with 2"						l	1			
		chilled margin.		1	1			1	1			
			ļļ.						{			
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			K	1	1	1			1			

HOLE NO. SA-E	FOOTAGE	DIP	AZ MUTH	FOOTAGE	DIP	НТИМІ ХА			-2_ SHEET NO	ــــــ	
ELEVATION	DEPARTURE							1.OGGE0	) BY		
FOOTAGE	DESCRIPTION			NO. SUL	5 A M	FOOTAG		-	Au A	02/TOH	
69.0'- 171.8'	continued  138.5'-144.8' Andesite Tuff-dark green highly sheared chloritized and carbonitized - extremely grained 2-3% disseminated py for 6" near contact  144.8'-166.7' predominantly felsic-tuff or intrusive  144.8'-151.0' similar to 113.0-136.5 - brown grey rand strongly sericitic  151.0'-166.7' highly sheared-buff-greenish-gray fin 2-5% diss.py - local shear-bx (xtal the chilled margins - upper contact at 80° taxis - lower contact at 70° to core axis.  The entire unit is strongly sheared and carbon except for the lower felsic unit 144.5 - 166.7 - which an x-tal tuff or possibly a very highly sheared quartz.  DARK GRANITE Biotite Rich Medium to coarse grained dark blue-gray colour, containing many strongly sheared - sheer-bx sections, zones. Silicification (removal of mafics) minor cart tion and pyrite paint on shear slips.	ich im come graine ouff) cached co core catized may be porphyr; alterat;	earl.		S FROM	TO	TOTAL			02/104	

HAME OF PROPERTY St. Anthony Gold (Aubet) HOLE NO. SA-83-3 LENGTH	FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMISA	HOLE NO. VA-U.S-5 SHEET NO
LOCATION							
LATITUDE DEPARTURE	}		<b></b>	<u> </u>			
STARTED FINISHED							LOGGED BY

F 0 0	TAGE	0.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5			5 A M P	LE		i	Au A S	5 A Y 5
FROM	70	DESCRIPTION	но.	SUL PHI-	FROM	FOOTAGE TO	TOTAL	8	12/Ton	02/104
171.81-	-283.5'	continued  Alteration is characterized by 1) finer texture and shear-bx 2) loss of mafics to green-brown-gray colour 3) almost aphanitic texture 4) increased loss of mafics-pale gray with appearance of pink patches (K-spar) strong silicification, carbonatization and sulfide enrichment.  192194' - 4th stage altr. (24" py seams 3-5% py) 209.8'-213.5' - 2nd stage 5% qtz. laced-py paint 216218' - 1st stage 3-5% qtz. laced 1% py 218'-273' - Numerous 4-12" zones of 2nd stage altered with central quartz veins and 1-2% py (qt. vein at 30° {oc-a} 273'-283.5' - entire section stage 2 alteration 282-283.5' 10-15% qtz. laced and 1% py	726 727 728 729 730 731 732 733	2-376	186.0' 193.1' 195.4' 199.4' 210.6' 239.1' 276.5' 280.8'	189.0° 195.4° 198.0° 204.8° 214.0° 240.9° 280.8° 283.9°	3.0° 2.3° 2.6° 5.4° 3.4° 1.8° 4.3° 3.1°		Nil Nil Tr Nil Tr Nil Tr O.003	
?83 <b>.</b> 51	295.31	QUARTZ PORPHYRY (Sheared)  Mid gray highly sheared matrix with minor carbonate. Quartz phenocrysts are dark gray 3.4 mm1 cm. often broken sub-rounded to angular making up 20% of core. Occasional white quartz phenocrysts and many dark shards 3-8 mm. long 1-2 mm. thick are composed of dark (black) quartz with trace up to ½% py.			283.9' 294.3'	285.51 295.61	1.6'		Nil Nil	

NAME	OF	PROPERTY	St. Anthony Gold (Aubet)	
HOLE	HO.	SA-83-3	LENGTH	
LOCAT	KOL			
LATIT	UDE		DEPARTURE	
ELEVA	T101	·	AZIMUTH DIP	
START	ED .		FINISHED	

FOOTAGE	DIP	HTUMI SA	FOOTAGE	DIP	HTUMESA

LOGGED BY

FOOTAGE	DESCRIPTION			5 A M P	LE			Au A S	5 A Y 5
FROM TO			SUL PH	FROM	FOOTAGE	TOTAL	£	Oz/Ton	. 02/TON
283.5 -295.3	continued				,				
	Many 1-2mm. quartz phenocryst are also found in the matrix. Occasional 2-1 qtz. carb veins cross at 5-30 to c-axis - upper contact sharp -lower, sharp at 70% c. a.								
297.01	Altered Sheared Granite	736		295.61	297.5	1.91		NII	
297.01-301.81	ANDESITE DIKE	737			299.3	-		Nil	
	Fine grained, dark green, chloritized, faint granular pepper texture, occasional qtzcarb" altered section, similar to (138.5-144.8'). 1" quartz vein and 1% py at upper contact.								
301.81-347.5	GRANITE ? (Altered Felsic Rock)	738	F py	316.81	319.2	2.41		Tr	
	Upper part of this unit contains many granitic looking dark blue gray sections with altered lighter gray sections similar to 171.8'-283.5'. If granitic, this section is much more	739 740	1-2%		344.0 346.4	2.51		0.001	
	strongly altered than granite above.  301.8-503.2-granitic 303.2-304.3 - resembles a felsic tuff-sheared. 304.3-333.0'-granite with altered zones 6"-1' usually 333.0'347.5'-Schistose light gray strongly sheared mafic minerals are foliated. 343.4-347.5' - silicified qtz. veining, 2-3% py, carb" tiny 1 mm. healed seams (chlorite) below 346.4-foliation almost gneissic at 10° to c.o. 5-10% py to po cpy.	741	руро 5-7% ру	346-41	347.8	1.44		0.009	

NAME OF PROPERTY St. Anthony Gold (Aubet)	FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZM
HOLE NO. SA-85-3 LENGTH						
LOCATION						<b> </b> -
LATITUDE DEPARTURE						<b></b>
ELEVATION AZIMUTH DIP	<del> </del>		i			ļ
STARTEDFINISHED	<b></b>	لسسسا		لـــــــــــــــــــــــــــــــــــــ		i

LOGGED BY

F 0 0 1	AGE	DESCRIPTION	Ì		5 A M P	LE			Au Ass	AYS
FROM	то	DESCRIPTION	но.	SULPH	FROM	FOOTAGE	TOTAL	1	Uz/Ton	02/104
47.5'-	357.0'	ANDESITE DIKE								
		Very fine grained highly sheared near contacts, 1% diss. py. Numerous tiny carb. and occasional qtz. veins at random angles. General pepper texture similar to 297.0 - 301.8'.  Contacts at (45° to c: axis upper) (60° lower), 1-3% py on lower contact.	742 743	1%py	347.8' 356.1'	350.21 357.61			0.008 Nil	
57.01	715.01	DIORITE ZUNE								ļ.
		The entire section is composed of approximately 60% diorite and 40% which consists of altered diorite? and or biotite granite, felsic dikes and shrd? granite.	744 745 746		373.0° 374.4°	373.01 374.71 376.71	1.71		Nil Nil Nil	
		357.0'-461.0' Medium grained spottly texture 2-4 mm grain size white felspar-dark mafic minerals. Trace pyrite - many altered sections centred on quartz veins or shr-breccia. Altered zones usually 6"-2' contain silcarb-2-3% py (dark quartz silicification) give core a dark blue gray appearance-resembling granite.  -no clear contacts between sub units are discernable therefore, it may be possible that some altered granitic sections are discrite.	747 748 749 750 751		403.61 433.21 454.81	392.5° 405.5° 437.6° 457.1° 460.6°	2.6° 1.9° 4.4° 2.3° 1.8°		0.001 0.001 0.001 Nil Nil	
:										

NAME OF PROPERTY St. Anthony Gold (Aubet)	FOOTAGE	DIP	AZIMUTH	FOOTAGE	OIP	HTUMISA
HOLE NO. SA-83-5 LENGTH				<b>i</b> i		
LOCATION		<del> </del>	-	H	l	
LATITUDE DEPARTURE		ļ	<del> </del>			·
ELEVATIONAZIMUTHDIP			<del> </del>	H		l
STARTED FINISHED		1	L	L	L	
		I				
FOOTAGE		A		5 A M	r i. E	

HOLE NO. SA-83-3 SHEET NO
REMARKS

OOTAGE	DESCRIPTION	SAMPLE										Au ASSAYS			5
FROM TO	DESCRIPTION	NO.	SUES	FROM	FOOTAGE	TOTAL	x	02/Ton	REASSAY	02/104					
715.0	continued  357.0'-461.0' continued  Tiny 1/8 - 1/4" carb and qtx. veinsform a hairline network at random angles.  429.4-457.5' dark blue gray-granitic looking section qtz. carb. veins-1.2% py centred on shr-bx zone at 434.7  449.4'-455.5' as above-major carb vein 1' & 453 distinct foliation at 20° to c.a. near base.  455.3'-461.0' Transition zone-extremely sheared. 5° to core axis-1% diss. py carbonate abundant - pale gray colour 461.0'-540.0' Zone of major shearing-silicification and alteration. Original rock types almost completely obscured. Only Tr pyrite.  461.0-468.0'-shearing most intense-rock is a schist. Nay be a sheared qtz. pophryry?  468.0'-480.0-schistose 30-40%.1-1 mm. qtz. eyes along foliation (probably sheared qts. vein stetched 30-40 times). gneissic texture last two feet.  478.0'-480'-resembles 455.3-461.  488.0'-493.0' - similar to 449.4'-455.3' strongly silicified-dark gray intrusive texture-5-10% qts. lacing  493.0'-501.8'-very siliceous fine grained schistose 501.8'-509.5'-cross between altered diorite and biotite granite  509.5-517.0' Diorite  517.0'-540.0' altered diorite or altered granite	752 753	Ттру	467.8' 474.8' 488.7' 494.0' 504.4' 512.7' 525.5' 537.5'	477.0' 494.0' 497.6' 508.0' 514.9' 528.0' 540.1' 588.5'	2.2° 5.3° 3.6° 3.6° 2.2° 2.5° 2.6° 4.5°		0.004 Nil Tr Nil Nil 0.001 Nil Nil 0.001	0.002						

							HOLE NO. 51-83-3
NAME OF PROPERTY St. Anthony Gold (Aubet)	FOOT AGE	DIF	HTUMISA	FOOTAGE	DIP	HTUMISA	
HOLE NO LENGTH					ļ		REMARKS
LOCATION	<b> </b>			<del> </del>	<b></b>		
LATITUDE DEPARTURE		}			<b> </b>	<del></del>	
ELEVATION AZIMUTH DIP	<u> </u>	<del> </del>		<del> </del>	<del> </del>		
STARTED FINISHED		L	<u></u>	L	I	L	LOGGED BY

HOLE NO. 114-83-3 SHEET NO. 8
REMARKS

FOOTAGE	D * S * D * L O * L			5 A M P	LE	AU ASSAYS			
FROM TO	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL.	# Oz/Ton		OZ/TON
57.01-715.0	continued								
57.0'-715.0	continued  540.0'-583.0' - Diorite  583.0'-607.5' - Combination of sheared diorite blue-gray granite and gray granite centred on a felsic shear zone strong chlorite up to 5% carb.  607.5'-615.0' - Diorite  615.0- 532.0' - Siliceous - sheared fine grained gray rock with local faint granitic texture at centre of unit.  5-10% i curb veins tr py.  632.0'-651.0' - Diorite, many minor altered sections.  651.0'-668.0' - Similar to 615-632, alternating gray fine grained curb rich sections and darker granitic looking sections.  660.7-668.0 - shear-breccia.  668.0'-668.7' Strongly silicified - cherty looking quartz laced section. 2-3% pyrite locally  671-675-predominantly shr-bx'd dark granitic texture appearing below 675.0'  678.6'-679.4' Bull qtz. vein at 30° to c-a.  7% py some earb  681.6-688.7 - many dark qtz. veins with 2-3% py,po-and granitic texture  697.6'-702.8' Sheared dark gray granitic texture, locally carbonated  702.8'-715.0' - Predominantly Diorite	766 767 768 769 770 771 772	Py " " 2% Pypo Py Po Py Po Py Po Py Po Py Po Py Po Py Po Py Po	637.8' 644.5' 662.0' 668.0' 669.6' 671.8' 675.2' 678.0'	646.5' 664.1' 669.6' 671.8' 675.2' 670.0' 680.0' 683.7'	3.5' 4.1' 2.0' 2.1' 1.6' 2.2' 3.4' 2.8' 2.0' 3.7' 2.0' 5.2'		Nil Nil Nil Nil Nil Nil Nil O.002	

NAME OF	PROPERTY	St. anthony Gold (Aubet)
HOLE NO.	SA-83-3	LENGTH
LOCATION		
LATITUDE	·	DEPARTURE
ELEVATION		AZIMUTH DIP

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMESA

HOLE HO. GA-83-3 SHEET HO. 9

LOGGED BY \_\_\_\_\_\_

FOOTAGE	DESCRIPTION			5 A M P	L E		Au ASSAYS				
FROM TO		NO.	SULPHI IDES	FROM	FOOTAGE	TOTAL	8	2/Ton		az/tan	
715.01-745.41	GRANITE? (ALTERED Felsic Rock)										
	dominates twenty feet interrupted by many silicified-shr-bx'd.	774 775 776		716.5' 742.2' 744.5'	744.51	2.31		Tr Tr Nil			
745.41-1108.01	BIOTITE GRANITE		;							1 1	
	hedium to coarse grained dark bluish-gray with approximately 1% diss. pyrite, numberous local alteration patches and shear-br'd. sections. Upper 100' of unit is tan coloured zone. Several major quartz-vein and shear zones occur in the lower 200 feet. local sulfide content within these major qtzshear zones may reach 5-10% including py, po, tr cpy, sph and galena. Chlorite development is abundant with little or no carb but extensive silicification.  745.4'-839.7'- Transitional contact zone whitish to buff-hard siliceous lightly foliated and cherty in appearance (possible felsite). By 775.0' slight darkening with pale-yellow-green (alteration) colour mafic content gradually increasing between 830-839.7 unit grades into granitics dark rock.  Many strong shr-bx sections and chlorite stringers and 2-% py and po are common.  (Tr sph w 757).	778 779 780 781 782 783 785 786 787 788	1% py   1	773.6' 788.6' 794.0' 798.0' 806.0 811.5' 815.3' 819.6' 823.6'	762.0' 765.7' 768.0' 773.2' 773.6' 777.0' 794.0' 798.0' 801.1' 811.5' 815.3' 819.8' 823.6' 826.7'	3.2' 3.7' 2.3' 3.2' 2.4' 3.4' 5.4' 4.0' 3.1' 5.5' 3.8' 4.5' 3.8'		Nil Nil Nil Nil O.080 Nil O.002 Nil Nil Nil Nil Nil			

NAME OF	PROPERTY St.	Anthony Gold (Aubet)
HOLE NO.	SA-83-3	LENGTH
LOCATION		
LATITUDE		DEPARTURE
ELEVATION	·	AZIMUTH DIP

DIP	AZMUTH	FOOTAGE	DIP	HTUMISA
	DIP	DIP AZHMUTH	DIP AZIMUTH FOOTAGE	DIP AZIMUTH FOOTAGE DIP

HOLE	NO.	Ş	A=82=3_	SHEET	HO.	-7,
REM	ARK	5				

LOGGED I	BY	,
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001	AGE	DESCRIPTION			5 A M P	LE		1	Au A	SALAY	\$
ROM	70	DESCRIPTION	NO.	SILE	FROM	FOOTAGE	TOTAL	×		REASSAY	
			-	IUCS	7.110.11	<del> :</del>	10175		1		
5.4'	1108.01	continued		1		j					
		765-768.4 - shr-bx 3-5% py & po	791	5%10	819.81	823 6	3.81		Hil		
		771.3-773.6- " " 3-5% py & po		3%	823.61	826.7	3.11	1	Nil	[ ]	
		776.7-778.8 shr-bx		popy	Į.	l	( ,		ļ		
		800-830'- qtz. lacing 5-10%, 5% py.po diss. & in qv.	793	1%	826.71	830.3	3.61		Nil		
	1	814.5' gray q.v. 1-2" 20% po to carb.	794	рору 1%ру	041 01	053 6		N		1	
	1	818.2 several 1-2 mm py-po seams	124	po .	040.8	851.6	4.8'		0.017		
	}	820.0° 2" q.v. 50% po	795	Trpy	851.6	855.11	4.51		0.004	]	
		821.0'-824.0 - 5-10% po & py		po	l			į	' '		
i	ł	825-826 - qtz. vein breccia 5% po 839.7'-1108.0' - Dark bluish-gray coarse grained granite, 1-2%	796	lrpypo	860.5	862.21	1.7'	l	Nil		
	1	diss. sulfides. Many altered sections. Alteration	797	,	870.0	873.5	3.5'	}	Nil Nil	}	
	İ	consist of 1) shear-by zones, 2) bleaching	799	ili by bo	886.4	889.51	3.11	1	Nil .		
	Ì	(removal of mafics)-addition of yellow-green		абруро	893.1	895.9	2.8	i	0.001		
	l	tint. ) bluish or white q.v. at centre 4) po-pv	801	"	895.91	892.01	5.1'	<b>!</b>	Tr		
			302	"	907.51	910.61	3.1'		0.001		
		860-865-Shr-bx 10% otr-lace Typo	1303 1304	2-3%	1	919.01		}	1.	0.012	
		694.3-897.6-Shr-bx 10% ots.lase :-2% no) "" Jor	1	hy no	924.1	927.51	3.4'	ì	0.003		
	1	903-905.2 -Shr. 1-2 mm. py-po scams ) all:	005			931.01	3.51	ì	0.001	0.001	
		at 10° lacing.	306	py po	933.01	035 01		l	Nil	0.001	
		70100 72017"" - 70 PO. DY CI CDY	P00	y po		1333.0.	4.0	į	1 111	0.007	
•		911.4-912.9- shr-bx qtz-laced 5-10% ) - 2" Bull q.v. at 30% c-o. )	9028	1, 7	830.31	835.81	5.51		רוא	\	
		- chlorite seam 1/8 x 14n	9029		835.81	841.31		ł	TRACE		
1	1	Troypo	9030	1	841.3		5.5'	1	0.017	1	
		,	9031 9032	1		915.61		1	0.001		
			3037		1313.0	324.1	3.1	1	TRACE	IRACE	
			1		1	{	1		}		
					1	İ		1	1		
	) )		l		ì	Ì	Ì	1	1	) [	

NAME OF PROPERTY St. Anthony Gold (Aubet) HOLE NO. SA-83-3 LENGTH	FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZ IMUTH
LOCATION						
LATITUDEDEPARTURE						
ELEVATION AZIMUTH DIP						
STARTEDFINISHED						

HOL.E	NO. SA-	83-3	SHEET	NO.	
REM	ARKS				

F 0 0 1	AGE	DESCRIPTION			<b>5 A M P L E</b>					Au ASSAYS				
FROM	70	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	*	O2/Tor					
45.41	1108.0	continued 839.7'-1108.0' cont'd.												
		915-916, 920-921 q.v. py, po	807 808		935.01					0.089				
		924.5-969.4 924.5'-930.4' 50-60% qtz. veine 3-% local chlorite		1-2%	939.01	948.0	5.21 3.81			0.007				
		major qtz. seams dendritic pattern 1% po & py Tr cpy vein zone 935.6-938.2' Bull quartz-vein	810	Labab babo	948.0	ו 1951.81	3.8'		1111	NIL				
ſ	!	939.7-943.3 Rull " " 943.3-947.2' 50% qtz. Tr py Chlorite	811 812	15%py	051.81 953.81	953.81	2.0' 4.2'		0.370   Tr	0.280 TRACE	ŀ			
		950.1-953.5' Bull quartz	813	1% 1%	958.01	1	4.81		0.001	NIL				
		965-969.4 Qtz. laced 60% qtz. 3.5% py. 969.4-978 10% qtz. laced - many small shr-bx zones	814		962.81	966.01	3.21		1 :	0.002				
		985.2-987 -Shr-bx-5% qtz. laced Trace galena 989-990.2 shr-bx - altr. Chl-py on shear slips	815		966.01	969.31	3.31		0.002	0.002				
		992-999.5 shr-bx 3-4% py po tr copy chl.  1005-1017.8 1005-1008 " " up to 5% py po diss. 8 on q.v.  1005-1016.5 1010.5-1014.5 shr-bx 65% qts. laced and (1.2 qtz.	816	1	969.31	974.81	5.51		i	TRACE	1			
		silicified vein at 10° to c.axis with 30% py 3% Chl.	817		974.81	979.51	4.7'		Nil	NIL				
		mineralized 1017.2-1017.8' - 4-5" g.v. 15-20% po 5% py Tr chl.	818		979.51	984.51	5.01		Tr	NIL				
		1021.9-1022.8 - Altered la v. T-py po chl. 1026-1065.0' -Biotite-chlorite-granite, no shear-bx	819	1-2%	984.51	987.31	2.81	ļ	0.006	0.003				
,		zones-some sections of 4-5" bull qtr.vei: with Tr py po chl(1031-1033,1057-1060)	820	труро Труро	988.21	1000.3	2.1'		0.001	0.002				
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i	ĺ													
			1					}	1	ì				

NAME OF	PROPERTY St.	Anthony Gold	(Aubet)		
	SA-83-3				
LOCATION					
LATITUDE		DEPARTURE .			
ELEVATION		AZIMUTH		DIP	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMESA

HOLE	но. ⊊	A-03-3_	SHEET	NO,	_12
REM	ARKS				

TARTED		FINISHED						LOGGE					
	TAGE			SAMPLE				Au ASSAYS					
FROM	70		NO	SULP	FROM	FUOTAGE	TOTAL	×	0 <b>2/1</b> 'on	REASSA	OZ/TON		
745.4	1108.01	continued				Ţ							

0.003 | 0.014 rpype1004.7 100<sup>18</sup>.0 1008.0 1012.5 839.7'-1108.0' continued 0.042 0.020 822 4.5' 0.140 0.064 823 % py 1012.5 1014.6 2.11 1065-1108.0' Biotite-chlorite altered granite with many Nil local shear-bx sections and 4-6" q.v. with up -3% 1014.6 1018.0 3.4 to 2% py & po Tr Chl. руро 0.003 1-2% 1018.0 1021.3 1084.7" - 1087' altered 1' shr-bx 5-10% qtz. ю ру laced 1% po py NI I 1021.3 1025.7 826 1% 1104.3'-1106' oltrd-3-4" shr-bx 6" q.v. white popy 1% py chl. 103.1 827Т руро 1025.7 1030.5 1-26 1030.5 1033.3 26 1033.3 1038.0 Nil 828 1108.0' E.O.H. mil 829 4.7' Ril 1038.0 1041.0 3.01 830 Tr 1047.0 1050.7 831 mi 832 1056.8 1060.6 1070.9\*1074.5 1078.4\*1082.2 1082.2\*1087.2 1093.5\*1098.0 1098.0\*1102.9 833 834 835 836 837 3.6° 0.001 Nil HC1 7,7% 1096.0 1102.9 7,7% 102.9 1106.3 7,7979 1106.3 1108.0 Nii 4.91 838 839 Nil Nil 840 COMPOSITE 0.005

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NAME OF	PROPERTY.	St. An	thony Gold	(Aubet)		
HOLE NO.	SA-83-4		LENGTH	1248.01		
LOCATION	<del></del>	<del>n (:</del>				
LATITUDE	2+2	2 S Tace	DEPARTURE	3+70 W		
ELEVATION		IACE	AZIMUTH	1050	DIP	-650
STARTED	ł'e b	.13/83	FINISHED	Feb. 20/83		

FOOTAGE	DIP	Poorties.	Di p	rootag	e Dip
700	650	500	649	1900	630
200	660	600	650	1000	63 <sup>0</sup>
300	66°	700	650	1100	650
400	6520	800	65°	1200	610

LOGGED BY JHINZER

F001	AGE	DESCRIPTION			SAMP			Au A Sis A Y S				
FROM	10	5 t 5 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t 1 t	NO.	SULPH	FROM	FOOTAGE	TOTAL	x	02/101	02/1	ON	
0 - 8.0'-	8.0' 19.0'	CASING (Bedrock badly broken around 5-6° no core recovery) Altered Granite? (Chloritized Felsic Volcanic)?	845	т%ро усру		11.4	2.7'		ni 1			
		Strongly altered, pale gray, silicified, locally chloritized locally breceiated with qtz. lacing 10-20% of core. lrregular fractures 1 mm-are chlorite filled. 2-% diss. py throughout.	846		20.01	24.01	4.01		Tr			
19.01	21.0'	mafic Dike lark gray-green fine grained silicified unit. Qtz. veining		pypo	, ,	28.01	4.01		Nil Tr			
21.0' - 23.0'	23.0° 25.7°	at both ends, with 3-4% diss. py  same as 8.0'-19.0' altered granite?  same as 19.0'-21.0' mafic dire gt2, veins at contacts 6-8", 10° to c. axis at top, 55° to c. axis at base.	848	4%py po		31.9'	3.9'		1.1			
25.7' -	58.01	similar 8.0'-19.0' Altered Granite?  Medium gray intrusive texture, chlorite segregation along shears at 10-200 to core axis, 2-3% py in top 8' 1% for remainder.  45-47.0' shxbx.	849 850	рору	61.5'	61.5' 66.3'	3.91 4.81		Tr Nil			
58.0' -	82.01	GRANITE (Border Thase)  Buff to ebony, granular medium grain texture, some local faint pink (K-spar) patches. Very low (% leached)-Fe-Mg minerals. Alteration (yellow-green) quartz lacing (silification) and brecciation locally present. Up to 2% sulfides py.	851 852		1	72.0' 82.2'	5.7' 1.3'		0.002 Nil			
		58-6)-contact zone- 3-5% py, sericite, K-spar chl. & carb. veinlets 74-82 - lower contact zone occasional shr-bx, altr.										
											İ	

NAME OF PROPERTY St. Anthony Gold (Aubet)	FO
HOLE NO. SA-83-4 LENGTH	-
LOCATION	-
LATITUDE DEPARTURE	-
ELEVATION ATIMUTH OIP	
STARTS. FINISHED	L

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	AZ MUTH
}					
		L		l	l

HOLE NOSA-83-4 SHE T NO. 2

LOGGED BY

FOOTAGE	DESCRIPTION	SAMPLE					Au ASSAYS			
FROM TO		ÑO.	SULPH	FROM	FOOTAGE	FOTAL	*	G2/Ton		02/TOH
82.0'- 102.0'	CHEENSTONE ANDESITE  Dark green, chloritic, very strongly shrd, at 0-5% to core axis. Shearing has imparted a gneissic bonding dark chloritic mafic bonds and white qts. rich bonds(carb. & fel sp.)  Silicified, carbonated. Qtz. veining at 10° to core axis. Trace pyrite Lower contact at 10-15° to core axis.		і%ру	96.21	98.01	1.81		Nil	!	
02.01-112.51	Altered Granite? (Felsic Tuff)? Similar to 8.0-19.0, 27.5-58.0', 1-2% diss. py.(po)		ĮРУ	103.3' 112.5'	1			Nil Nil	,	
113.01 376.31		857 858 859 860 861 862	%py 1-2%p 140py 1-2%p 1%py Trpy 1-2%p	212.7° 216.5° 184.9° 190.0° 194.3° 214.7	128.0' 143.4' 156.7' 178.0' 184.9' 190.0' 202.6' 208.0' 214.7'	4.4' 5.4' 2.9' 3.8' 3.3' 2.0' 4.1' 5.4' 2.5' 3.1' 4.3' 4.2' 1.8'		Nil Tr Nil 0.001 0.003 0.005 0.011 0.004 Tr 0.010 TRACE 0.002 0.001 0.002		

NAME OF PROPERTY St. Anthony Gold (Aubet)	F
HOLE NO. SA-83-4 LENGTH	-
LOCATION	-
LATITUDE DEPARTURE	-
ELEVATION AZIMUTH DIP	$\vdash$
	L

FOOTAGE	DIP	HTUMISA	FOOTAGE	OIP	AZIMUTH
			l		

HOLE NO. 51-83-4	SHEET	ю.	
REMARKS			

LOGGED BY

FOO	AGE	DESCRIPTION	SAMPLE						Au AS AAYS			
FROM	το	DEBCRIPTION .	NO.	SULP	FROM	FUOTAGE	TOTAL	z		REASSA		
376.3*	383.5	continued  243-285' - pale, creamy colour, yellowish tinge below 256.0',  10-7.5% qtz. lacing throughout  250-252 - 5% py  257-258 - qtz. vein - 5% py  262-263 - " " - 2-3% py.chl.) gray qtz.  285-376.3'-mixture of pale-cream to yellow green and dark chlorite-biotite granite.  Average 1-2% diss. py. also 10% qtz. lacing throughout-at 60-80° to core axis.  305-306-buff-cream colour 314-315 " " 321-325 - y-green altr. 323-324-30% qtz. 327-330 - y-green " .15% qtz. 352-360.5 strongly altered.  362.0-362.4 - chlorite-to (c zone-soft) extremely shrd (fault- gauge).  632.4-365.8 - fine grained strongly altered greenish. sharp contact at 40° to c-axis - 2% py at contact.	867 868 869 870 871 872 873 874 875 876 877 878	1%py -2%p, 1%py " " 1-3% "Py	225.9' 248.0' 256.3' 259.6' 274.3' 298.0' 313.0' 323.3' 339.8' 361.2' 375.3'	228.0 252.0 259.6 263.6 278.0 298.0 301.5 317.0 327.1 344.2 364.2 378.0	2.1' 4.0' 3.3' 4.0' 3.7' 3.5' 4.0' 2.0' 2.7'		0.001 0.005 Ni1 0.003 0.001 0.002 0.003 0.003 0.003 0.007 0.005 Ni1 Ni1			
		Similar to unit described in dd holes #1.2.3. Medium gray with large up to 1 cm. qtz. phenocrysts = (darks.fractured up to 30% of rock). Both contacts sharp at 75° to c. axis with 1" q.v. on lower contact.  382.0-382.5' granite inclusion	9038		1	384.4	3.6'		TRACE	0.001		

HAME	OF	PROPERTY St. Anthony Gold (Aubet)
HOLE	NO.	SA-83-4 LENGTH
LOCAT	ION	
LATIT	UD€	DEPARTURE
ELEVA	TION	AZIMUTH DIP

FOOTAGE	DIP	AZMUTH	FOOTAGE	DIP	HTUMISA

HOLE NO. SHEET NO. 4.

LOUGED BY

FOOTAGE	DESCRIPTION			SAMP	LE		Au ARSAYS			
FROM TO		NO.	SULPH-	FROM	FOOTAGE	TOTAL	5	O2/Tur	EASSAY	02/104
383.51-1248.0	Medium to coarse grained gray to greens, sh gray granitic rock. Biotite and chlorite provides darker colour in sections alternating with light gray and altered yellow-green sections. Upper 200-300' are pale gray to cream coloured with occasional pink sections. Alteration and shearing is concentrated in narrow 10-50' zones throughout. Quartz veining of 3-6" bull qtz. and qtz. lacing up to 40-50% of core over narrow 5-50' sections is not uncommon.  Mineralization 3-5% py & po tr cpy is common in the pale pink zone. Darker chloritic section averages 1-2% py po with local sph, galena cpy. Zones of interms shearing carry up to 5-10% py & po over 1-3' widths.  Silicification and chloritization is esrocially preminent from 900-1100 feet.  383.5'-760.0' Predominantly pale gray, whitish or pinkish with minor local dark green section 10-30' especially near the base of the section. 3-5% py & po common (tv qv. occasionally) local silicification.  309.5-397 - Pale cream strongly bleached.  397-422 - 5-10% qtz. lacing, rapidly diminishing below 422-448 - pale gray-minor chl-bio'.te dark green sections 2% diss. sulfide.  448-458 - pinkish tinge 2-3% diss. py  463-468- dark green - chloritized 5-10% py common 3-4" qtz. vcins.  468-535 - pale gray occasional chl, biotite patches 1-3' + sulf.	882 883 884 885 886 687 888 889 890 891 892 893		392.4' 410.0' 428.0' 445.8' 450.6' 457.7' 468.0' 473.0' 473.0' 483.0' 496.1' 512.8' 524.8' 394.5' 501.3' 504.5' 508.6 514.1' 519.4' 526.8' 531.2' 617.4 621.7' 628.4' 634.5' 640.0' 680.3'	508.6' 512.8' 519.5' 524.8' 531.2' 535.0'	2.1' 3.9' 4.8' 5.0' 5.0' 5.0' 5.2' 4.8' 4.8' 4.0' 5.55' 6.7'		Nil Nil Nil O.002 Nil O.004 TRACE Nil Nil	0.011	

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HAME OF	PROPERTY	St. Anthony Gold	(Aubct)		F
HOLE NO.	SA-83-4	LENGTH			 -
LOCATION					 -
LATITUDE		DEPARTURE			 -
ELEVATION		AZIMUTH		DIP	┝

DIS	AZIMUTH	FOOTAGE	DIP	AZIMUTH
				<b> </b>
	DIS	DIO AZIMUTH	DIP AZIMUTH FOOTAGE	DIP AZIMLITH FOOTAGE DIP

HOLE NO. SA-83-4 SHEET NO. \_\_5

LOGGED BY

FOOTAGE	DESCRIPTION			5 A M P	LE		Au Au AU			
FROM TO		но.	SUL PH	FROM	FOOTAGE	TOTAL	×	12/1'on	EASSAY	02/104
83.51-1248.0	468-535-(505-525) pinkish section strongly altered yellow-green for remainder of section 535-560-pale-whitish with minor greenish tint. 560-573 1-2" patches (mafic xenoliths or fragments) po is now dominant over py (2-3% po) 573-653 - 2-5% po & py pale-cream colour local shear bx. zones 608-617' 10" pinkish qtz. vein at centre 617-630 shr-bx. 630-693 many 3-4" qtz. veins darker greenish core 653-691 dark section dominates with only 1-2% py. 691-755.5 alternating dark green-creamy granite qtz.veins in patches & 691-709, 10-15% 70° to core axis 1-2% py-po 755.5-760 buff-pinkish, fine grained 1-2% diss. py (looks like pink felspar porphyry) 760-771 - strong sheer-breccia. (769.4-770) dark green soft (fault gauge?) 771-1248.0' Predominantly dark greenish granite with minor pale gray sections. Coarser in appearance, 1-2% py more locally. Several strong shear zones. 870-912' very strong local shear-bx, parallel to core axis green to buff sheared sections in dark granite 1-2% sulfides. shr-bx & 808 up to 10% qtz. lacing 810.5-814.5' 817, 839-843 853-912.1 - 3% py, 10-15% quartz laced up to 25% (883-893) entire section strongly sheared and brecciated almost parallel to core axis	896 897 898 899 900 901 902 903 904 905 906 907 908 911 912 913 914	が、する。 ・	549.4' 596.9' 606.9' 612.1' 625.7' 645.5' 645.0' 652.0' 677.5' 687.0' 705.4' 720.6' 7755.2' 7760.8' 7760.8' 783.8' 8810.3' 838.0' 870.5' 764.6' 894.5'	568.5; 573.5; 553.4; 601.3; 612.1; 617.4; 628.4; 648.0; 656.8; 691.0; 709.1; 723.6; 778.0; 778.0; 778.0; 778.8; 812.9; 874.5; 768.8; 898.0; 928.0; 934.0; 939.5;	4.0° 4.0° 4.6° 5.2° 5.3° 2.7° 2.5° 4.0° 4.8° 4.0° 3.7° 3.0° 4.4° 2.8° 4.0° 4.4° 4.9°		0.500	0.001	

NAME OF PROPERTY St. Anthony Gold (Aubet)	١,
HOLE NO. SA-83-4 LENGTH	$\vdash$
LOCATION	ŀ
LATITUDE DEPARTURE	ŀ
ELEVATION AZIMUTH DIP	+

						HOLE NOSA-83-4 SHEET NO
GE	DIP	AZIMUTH	FOOTAGE	DIP	AZ IMUTH	HOLE NOTH-1/2-4 SHEET NO!
			[			REMARKS
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		l	I	l		

FOOTAGE	DESCRIPTION	SAMPLE	A11 A S. S A Y 5
FROM TO	DESCRIPTION	NO. SUPPLIED FOOTAGE	S S OZ/TON OZ/TON RE
385.5-1248.0'	Granite continued  923-958 - mid green- altered granite, large blebs of py/po/sph	918 1-2x 874.5 878.0 3.5' 919 2xpo 878.0 879.8 1.8' 920 5-5%p 888.0 892.0 4.0' 921 2xpy 898.0 902.2 4.2' 923 15xpy 902.2 905.6 3.4' 924 1xpy 911.1 914.8 3.7' 925 -2x 914.8 918.0 3.2' 926 3xpy 664.4 667.2 2.8' 927 2-3x 921.0 926.0 5.0' 928 2-5x 939.5 941.6 2.1' 930 2xpy 941.6 942.5 0.8'	Nil

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HAME O			OTAGE	DIP	AZ IMUTH	FOOTAGE	DIP A	ZHMUTH				ET NO7
	-	3-4 LENGTH							REMAR	K S		
L A TITUD EL EVATI	E	DEPARTURE							LOGGED	BY		
	AGE	DESCRIPTION	<del>111-0 -</del>	T		S A M P			AU	Ayarm	5	
FROM	10				o. Sui P		TO	TOTAL	EASSAY	XX.		02/104
383.5°-	1248.0	Granite continued  1160-1185 - minor local alteration, occasional local 2-3% zones & shearing at 1160, 1169, 1183 (1175-11 bx)  1185-1240 - minor chl. on slips - shr. bx local gray i" q veins at 450 to core axis  1206.5-120. white qtz. vein barren 1218.4-1222 sheared, bleached, chloritized 1% 1225-1227.6 shr-bx Tr sph. 1238.4 - 12" qtz. vein, 20% py 1243.6 - 1245.8" shr-bx  E.D.H.	76-si warti	94999999999999999999999999999999999999	66   2-3% 67   1-5% 68   5% 69   5-4% 60   2-3% 61   1-2%	" 1090.6 " 1094.8 1098.0 1102.8 1113.5 11126.8 1131.0 1136.2 " 1138.8 y 1145.3 py 1145.3 py 1162.4 1170.9 1175.4 1188.9 1200.4 1200.4 1208.0 1218.0 1224.7 1234.5 1234.5 1234.6	1094. 1098. 1107. 1116. 1116. 1136. 1138. 1145. 1145. 1166. 1175. 1178. 1192. 1203. 1209. 1221. 1228. 1239. 1248. 1248. 1248.	4.2' 3.2' 4.8' 4.1' 4.2' 4.12'	0.013 0.001 0.001 0.003 0.005 0.006 0.006 0.006 0.001 0.002 0.001 0.001	0.001 Nil 0.020 0.003 0.011 0.002 0.008 0.002 0.008 0.002 0.009 0.003 Nil 0.001 Tr Nil Nil 0.001 Tr 0.001 Tr 0.007 TRACE		5'-1175.4 e Zon

HAME OF	PROPERTY	St. Anthony Gold (Aubet)	
HOLE NO.	SA-83-5	LENGTH	
LOCATION			
LATITUDE .	6+495	DEPARTURE 3+46W	
ELEVATION	Surface	AZIMUTH 1020 DIP	-60%
STARTED	Feb.22/83	FINISHED Harch 2/83	

Ì	FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZMUTH
	2001	59°	105°	1000'	5820	115
	400	600	1070	15001	576	11950
i	6001	610	1110			
İ	8001	60°	1120			

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FOOTAGE	DESCRIPTION	SAMPLE						ASSAYS			
TO MOS		NO.	SULPIT	FROM	FOOTAGE	TOTAL	K	Uz/Ton	02/104		
0 - 4.01	CASING (Bedrock at 2.5 feet.)										
4.0' -515.1'	GREENSTONE (Highly Sheared)  Dark green, fine grained, basaltic-andesitic rock. Extremely sheared with shearing, foliation, and possible bedding, varying from 0-20° to core axis. Rock is soft with carbonate velns it diss. throughout. Local silicification i.ehairline fractures massive patches giving bleached appearance next to fractures. Sairline fractures etc., are at 80° to core axis. Local narrow 2-5° bx zones are heafed with carbonate.  Thin cherty looking bands often highly fractured and contorted up to ½" thick are not uncommon.  The central portion of the unit has a distinct bedded appearance, a gritty texture and resembles graywacke and argillite locally. Some observed bedding features may, however, be due to shearing parallel to core axis and narrow qtz. veins 1/16" with bleached and altered rims.  Trace to 1% diss. py, po, cpy.  4.0-95.0° tuffs in appearance  18-23-bx-with carb. healing. 68.5° local patch of pink - K spar?  95.0°-190° Cherty ? Interflow section, many narrow cherty sections, greenish white, reddish brown, very hard 95-110°  115-117 shrd-bx'd.  138-142 MAFIC DYKE (lamprophyre) very fine grain, black, minor perpendicular fractures. Contacts obscure 6-8" wide irregular.  143-145 white chert 166.5-169.5 bx.he.led with carbanate 169-190 cherty bx.										

NAME OF PE	TOPERTY	Anthony Gold (Aubet)
HOLE NO.	SA-83-5	LENGTH
LOCATION _		
LATITUDE		DEPARTURE
ELEVATION _		AZIMUTH DIP

FOOTAGE	OIP	HTUMESA	FOOTAGE	DIP	HTUMSA
			<u></u>		

HOLE NO. SA-83-5 SHEET NO. 2

LOGGED BY

001	AGE	OESCRIPTION	1		5 A M P	LE		1	Au A 5 5 A Y 5  D2/Ton	
МО	70		NO.	SULPH	FROM	FOOTAGE	TOTAL	* 12/Ton	12/Ton	02/10
٠ _	515.1'	continued	975			273.01			0.004	
		208-218 cherty bx, micro faulting etc. ) some 1-2"			281.0		2.61			- [
		234-236.5 bx.healed with carbonate ) qtz. veins and å" 263-267 bx. " " " ) chlorite patches.	1077	2 '89	1210 01	1242 41	4.01		- 1	
		269-273 cherty locally	978	8×30	363.31	368.01	4.7'	8 K	0.002	ł
		283-288 cherty. 288-515.1 Nassive andesitic unit with still some evidence of	979	1 7284	213.0.	1311.0.	2.4'	<b>1</b> 1	0.077	Í
		possible bedding but much less obvious or intense than above.	N 980	T-DV	14}5.21	1418.01	1 4.8			}
		338 - 1-3% py, po minor chlorite, qtz. veins. 357-378 abundant carb. veinlets, up to 20% bluish colour, in rock, chert, K spar w 375' 365-366 -major sheared qtz vein 30-40° to c-axis 5% po, py	982	1 2 2 1	1436 01	428.61	3.21	<b>)</b>		
			983	руро	440-01	445.21	5,21		-	ļ
	ļ	365-366 -major sheared qtz vein 30-40° to c-axis 77 P°, Py 378-454 - Blightly more bedded features again hairline	984	pypo	445.21	450.21	5.01	l i	1	
		fractures diminish below 400°.			479.0		2.01			}
		414-417 (wartz Porphyry (as in all previous drill holes)	986	1 " " "	485.31		2.91			
		Intense carb. veining and sil. for three ft. above & below.	987	-2%p	493.8	498.01	4.21			
	j	428' - 6" qtz., fels. vein pink tr.chl, py.	988	ZEDYD	498.0	501.31	2.31	l le	0.026	- 1
		428' - 454 - 2-3% py po-darker, more siliceous.	989	1-2%	501.3	505.5	2.21	1	Tr	)
		454' - 479 - Dark green chlorite rich andesite 479' - 515.1' - Contact Zone	990	PANO PANO	503.51	508.01	4.51		0.026	- 1
		417 - 31311 - contact bone	991	PADOD:	508.0	512.81	4.81		0.002	
					512.81		2.3'			
5.1-	1308.0	GRANITE  Biotite granite, medium to coarse grained with darker biotite	001	3 m/	515 11	510.61	4.51		0.003	
		chlorite rich sections, with numerous yellow-green shrd. altered	001	pypo k-5%	510 61	519.61	2.7'		- 1	i
		zones, and some buff-gray-pinkish zones. Shear-breccia and		pygo	519.61	255.3		<b>!</b> [	0.005	
		strongly sheared section parallel to the core axis are upresent			522.3		3.41	1 (	Tr	- [
			H	odby	525.7'	529.91	4.2'		Tr	
			<b> </b> 9063	1	368.01		5.6'	]	Nil	-
			9064	}	377.01	382.0	5.0'		Níl	
	İ				1		:		•	}
			H	1	ł			i !	l l	}

AME OF PROPERTY St. Anthony Gold (Aubet) OLE NO. SA-83-5 LENGTH	FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	HTUMISA
OCATION						
ATITUDE DEPARTURE						
LEVATION AZIMUTH DIP						

HOLE NO. (11-03-5 SHECT NO	?
REMARKS	-

FOOTAGE	DESCRIPTION		SAMPLE	Au ASSAYS			
FROM TO		NO. SULPH	FOOTAGE FROM TO TOTAL		REASSAY 02/TO		
15.1'-1308.0	locally. Average 2-3% py & po with local sections up to 10% py po Tr py, sph, galena. Silicification (quartz lacing locally up to 40%) and sericite (yellow-green areas) and chlorite (shear slips) in lower portion of hole arethe most prominent alteration features Contact is sharp at 50° to core axis 515.1-543 - Light buff-green gray contact alteration. 515.1-522 - shr. bx.5-10% py po. 522-525.5 - pink-buff, 65% qtz. laced, 1-2% py po 525.5-531 - shr-bx 20% qtz. laced "" 533-535 - 20% qtz2-3% py. 543-607 - Dark biotite granite local weak altr. occasional 1-3" qtz. veins. 1% py & po. 560-562.5 buff - 5-10% qtz. 607 - 620 - Light green-gray to pink (615-620) qtz. laced 10-15% 2-3% py, epidate, chlorite, K-spar locally 620-653. mixed darker and lighter areas. 640.5-643.5 30% qtzlaced, K-spar. 644 6" buff with 7-8% py & po	997   1-26 999   1-26 1000   2-36 8936   3-55 8937   1-26 8938   2-26 990   1-26 1000   1-	529.9' 535.3 5.4' 535.3' 540.2' 4.9' 607.0' 611.8' 4.8' 611.8' 615.7' 3.9' 615.7' 620.0' 4.3' 620.0' 622.3' 2.3' 631.0' 636.0' 5.0' 636.0' 640.1' 4.1' 640.1' 644.2' 4.1' 644.1' 645.8' 1.7' 665.1' 668.2 3.1' 665.1' 668.2 3.1' 665.8' 672.4 4.2' 672.4' 678.0' 5.6' 678.0' 682.9' 4.9' 682.9' 687.5' 4.6'	0.002 0.003 0.003 0.003 0.002 0.002 0.002 0.003	0.002 0.001 0.002 0.003 0.003 0.003 0.003 0.003 0.003 0.003		

NAME	OF	PROPERTY	St. Anthony Gold (Aubet)	
HOLE	HO.	_5A-83-5	LENGTH	
LOCAT	ION			
LATIT	UDE	<del></del>	DEPARTURE	-
ELEVA	TION	·	AZIMUTH DIP	
			FINITA	

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH

HOLE NO. SA-83-5 SHEET NO. 4

LOGGED BY

FOOTAGE	DESCRIPTION	SAMPLE AU ASSAYS
FROM TO	DESCRIPTION	NO. SIDES FROM TO TOTAL & UZ/TOTREASSAY OZ/TON
515.1 1 308.0	continued  762-801 gray green, silicified qtz. lacing greater than 20% occasional dark chl-biotite sections, 1-2% py & po 767-770 60% qtz. laced 780-781 " " " 796-798 " " " Local buff sections with q.v. at 763, 769, 782, and shrbx. w 788.  801-845 mixed gray green and biotite chlorite rich core average 5% qtz., 1-2% sulfides.  845-888 Light gray-greenish and buff coloured (pinkish) with local strong yellow-green alteration, 5-10% qtz. and 1-3% py. po.  861-867-buff-pink 869-870- " " shr-bx w 873, 875, 877-879.  880-888 strong yellow-green alteration 833.5 6" qtz. vein with 2" py bleb 884.5-886 buff-green  888-981 Mixed altered greenish gray and biotite chlorite-dark granite, local shr-bx & sulfide concentrations to 3-5%, 4-6" qtz. veins common below 928' 893 - shrbx 895 - 8" gray qtz. vein w 500 to core axis 911-912- shr-bx 934.5-935.5 shr-bx qtz. vein 4" py & po possible ankerite w 937, 939  941-942 shr-bx 944-945 " " 971-972 extreme shr-bx chloritic.	## 1954   2-3%   712.8   716.0   5.2   0.006   8955   3-5%   726.5   730.3   3.8   0.008   8956   3-5%   726.5   730.3   3.8   0.008   8957   2%py   747.0   750.9   3.9   0.002   8958   2%py   762.0   762.2   4.2   0.001   8960   5-7%   767.0   772.0   5.0   0.001   8961   5-3%   772.0   775.4   3.4   0.011   8962   2%   780.1   784.9   4.8   0.001   0.001   8963   -3%   784.9   789.3   4.4   0.004   0.002   815.1   820.0   4.9   0.001   8965   2-3%   795.4   800.7   5.3   0.000   0.001   8967   1-2%   830.3   832.0   1.7   0.001   8968   2-3%   844.3   0.48.0   3.7   111   8969   1-2%   867.2   867.2   867.2   867.2   870.2   3.0   0.001   8971   -3%   867.2   870.2   3.0   0.001   8973   7-10.882.1   883.9   1.8   0.001   8974   3-4%   883.9   0.8   3.1   1.5   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8970   2.3   0.001   8976   7-2%   8976   3-4%   883.9   0.007   805.0   3.5   1.5   0.002   89771   -2%   928.5   932.0   3.5   1.5   0.002   8970   2.2   928.5   932.0   3.5   1.5   0.002   800.7   805.0   800.7   805.0   4.3   0.001   805.0   800.7   805.0   4.3   0.001   805.0   800.7   805.0   4.3   0.001   805.0   800.7   805.0   800.7   805.0   4.3   0.001   805.0   800.7   805.0   4.3   0.001   805.0   800.7   805.0   800.7   805.0   4.3   0.001   805.0   800.7   800.7   800.7   800.7   800.7   800.7   800.7   800.

C100001

NAME OF PROP	ERTY St. Anthony Gold (Aubet)
HOLE HO, SA-	83-5 LENGTH
	DEPARTURE
ELEVATION	AZIMUTH DIP

FOOTAGE	DIP	HTUMESA	FCOTAGE	OIP	AZMUTH

HOLE NO.34-83-5 SHEET NO. 5

LOGGED BY

700140	DESURIPTION	SAMPLE AU ASSAYS
FROM TO		NO. SILTEN FROM TO TOTAL X U"/TOREASSAY OZ/TON
515.11-13C	880-981 cont'd.  957-974 20-30% qtz. veining 3% py po ble bluish green chl. mud on shear slip 981-1083 - chloritized biotite mixed dark & light stringers common, local strong silica mineralization.  1004.5-1006 - 50% qtz. (5%-10% py) 1022 - 1023 - 8% qtz. vein white, barren 1030 - 1031 - " " " " 1040 - 1052 - common 4-6" qtz. veins, chl 1052 - 1055 - light buff 30% white qtz.; 1077 - 1078 - qtz. vein parallel to core 1082 - 1083 - 6" qtz. vein tr py po 1083 - 1168 - as above, but much less chloritized green alteration with 1-2% sulfider 1098.5-1105.5 - Shr-bx yellow-green altr'd 1-2% diss. py. 10991100.5 - shr. bx. dark green 1105.5'-1141-yellow-green (similar to DDh local 10% qtz.lacing 1-2% py 1141 - 1168 - increasing yellow-green alte biotite, buff-pink and yellow-gree	## ## ## ## ## ## ## ## ## ## ## ## ##
	3-5% py & po. Shr. breccia zones e shearing is almost parallel to core foot sections.	dant, Bajor   9002 1-2% 1157.8   1163.8   6.0'     0.002   0.001

AME OF PROPERTY St. Anthony Gold (Aubet)	FOOTAGE	DIP	AZIMUTH	FOOTAGE	01
DLE NO. SA-83-5 LENGTH		ļ	<b> </b>	<b> </b>	
DCATION	·	<del> </del> -		<b> </b>	<del> </del>
ATHTORE BRUTHAGED BOUTHTA				J	╂──
EVATION AZIMUTH DIP	}	<del> </del> -	<del> </del>	<b>}</b>	┼─
FARTEDFINISHED	L	<u></u>	1	4	ــــــ

HOLE NO.UA-83-5 SHEET NO. 6

LOGGED BY

AZIMUTH

001	A G E	DESCRIPTION			5 A M P	LE			Αυ A	SSA	r <b>5</b>
ROM	70	OESCRIPTION .	но.	SULP	FROM	FOOTAGE	TOTAL	*	Oz/Ton		
5.11	1308.0	continued	1	1	1202.8	11207 8	5.0'		0.004	0.003	· · · · · · · · · · · · · · · · · · ·
1		1168-1198 - strong shr-bx, 20% qtz. lacing, Tr sph, galenu l-2% py po (shr.bx over 2' sections) yellow-green		1 1/9		1		]	0.004	0.003	
1	}	1198-1204.5 chlorite biotite-granite	9009	11-2% Dy	1207.8	1211.9	3.1.		0.001		
ĺ		1204.5-1219 buff-cream, locally talcose 5-10% qtz. laced	9010	11 11	1216.7	1219.2	2.5!	Ħ	0.006		
- 1	}	2-3% py	1	I PY.	1233.0			1	0.003		
	- 1	1219-1226 - gray granite 1226-1237.5' - altered gray granite 10% qtz. lacing, 1-2% py p	9012	273%	1240.3	1243.2	2.91		0.004		
}		Tr. galena	9013	2%py	1243.2	1248.2	5.01	1	111.1		
-		1233.5-1235 (20% qtz. lacing)	9014	4-5%	1248.2	1253.0	4.8	1	0.002		
Į	į	1237.5-1270 - strongly shr-bx with yellow-green alteration 20-30% qtz. lacing at 10° to core axis	9015	10%	1253.0	1258.0	5.01		0.009		
		1248-1208 - 3-5% suf. py, po, sph, gai.	9016	PY	1258.0	11200 6	2.61	Ĭ	0.002		
ĺ	1	1262-1264 - strong shr-bx.	70.0	х́ру	1260.6	1200.0	2.0	ľ	i		
1	1	1258-1260 - 5-10% py po.						1	0.007		
- 1		1270-1288 - locally altered gray granite 1-2% 1288-1301 - pale cream-gray local pink (1290-94) yellow-green	9018	5-7%	1265.1	1268.7	3.61	l	0.005		
}	1	3-5% py in small blebs throughout	9019	1-2%	1284.5	1288.5	1.0'	1	rr		
	1	1301-1308 - locally altered gray granite. 10% qtz. lace		руро	1	1			-		
ļ	-	shr-bx w 1305.3 - 1306			1288.5				Nil		
l		1305-1307 altered yellow-green 3-5% py	9021		1293.7				Nil		
l	Į	E.O.H.	9023		1298.9				Nil Nil		
			100	уро	1,50,00	1. 700.0	7.4	ł	1		
	1		9024	C	∮ н Р о		:	l	0.002		
	1		9073	4	11078.4				0.012		
ļ	1	1/	9075		11131.0			I	0.001		
1	1	J. H. 7	907€		1139.5			8	0.001		
	1		9077		1143.0			1	0.003		
Į		V	9078		1151.0 1163.8			1	0.004 .J.004		
Į	]		9080		1189.1			Į	0.008		
1	1		9081		1198.0			i	0.003		
}	1							1		1	

NAME OF	PROPERTY	ST. ANTHONY GO	LD MINE (AUBET)	
HOLE NO.	SA-83-6	LENGTH	355.01	
LOCATION				
LATITUDE	20 + 00 S	DEPARTURE	3 00 + 8	
ELEVATION			3000	-450
STARTED _	May 27, 198	FINISHED	May 29, 1983	

FOOTAGE	DIP	A2 MUTH	FOOTAGE	DIP	AZ MUTH
100	450				
200	430				i
300	420				

HOLE NO. SA-83-6 SHEET NO. 1

LOGGED BY J. HINZER

FOOT	AGE		DESCRIPTION			5 A M P	LΕ			,	6 5 A 1	Y <b>S</b>	
FROM	70			NO.	SULPH	FROM	FOOTAGE TO	TOTAL	*	5	02/TON	OZ/TON	
0	24.0'	OVERBURDEN											
24.0	27.3	PORPHYRITIC AND	DESITE (FLOW)										
		Dark green matr to cream colour at 70 <sup>0</sup> to core	rix with large up to 3cm felspar phenocrysts - whered making up 30% of the rock. Lower contact - saxis.	ite narr									
27.31	99.5	ANDESITE (TUFF	OR FLOW)										
		sections, dark sections of 1-5 fitted vesicles flows. Irregul patches of hair	th local more medium grained tuffaceous looking green, highly sheared at 45° to core axis. Local feet contain tiny l-3mm white lapilli or carbon. Local bedded appearance may be shr'd pillowed ar 1/8"-4" quartz and carbonate veining and local line fractures and cross fracturing. Sharp lowe 15° to core axis.	ite									
		27.3'-33.0'	Tiny 1-3mm white loppilli? vesicles? occasiona po streaks.	۱									
Į		33.0'-55.0'	Fine grained - bedded tuff a shr'd pillows micro faulting 0 30° to core axis 0 41.5'										
			47'-51' 2-3% po/cpy Shearing at 60-70° to core axis an cross fractures at 20° to core axi 1/8" white veins with ½" dark halo locally bleached and brecciated.	š.									
		55.0'-99.5'	Sheared pillowed flow or tuff local silicification and bleaching with some brecciation between 79.5'-83.5', 95'-98', 86 - local po/cpy splashes at 77', 82', 85', 95'.	-88									

NAME OF PROPERTY SR. ANTHONY GOLD (AUBET)

F001	AGE.				SAMPI	. E				ASSAYS	····	· <del></del>
FROM	10	DESCRIPTION	NO.	9 846 PH	1870	FOOTAGE	TOTAL	,	,	DJ/TOM	01, 104	
99.5'	127.01	continued TUFFITE (CHERTY RHYOLITE TUFF)										. <del>A C -                                 </del>
		Greenish gray at top - more blue gray towards base. Very fine grained hard locally well bedded at 45° to core axis. Thin traces of pyrite and pyrrhotite throughout. Upper and lower contacts at 45-50° to core axis.										
		99.5'-102' Cherty greenish gray	Ī					ł	}			
		102'-103' Contact zone @ 200 to c-axis - irregular qtz carbn zone.										
		103'-114' FINE GRAINED ANDESITE DIKE - mid green very homo- geneous - hairline carb <sup>n</sup> fractures.										
		114'-116' Cherty	}	}		}		}				
į		116'-121' FINE GRAINED ANDESITE DIKE - mid green very homo- geneous - hairline carb <sup>n</sup> fractures.						}				
		124'-127' Coarse rhyotite tuff - lapilli tuff, 1-2mm bedded white lopilli.	1									
127.0	197.0	MIXED TUFF		1	i	ļ	[		ľ	1	1 1	
:		Intricately interbedded series of intermediate, felsic tuffs, charts and possibly sediments. Strongly silicified, locally chloritized. Dark green to mid green to bluish gray colour. Many local areas of hairline fractures and brecciation.	1									
		127'-151' Mid - light green - hard - faintly bedded, local chert.										
		130'-131' Possible local fault zone	Į				,	].	1			
		142'-143.5' Minor qtz carb <sup>n</sup> veins at 70° to core axis.										1
		152.3-157.8'Rhy X-tal Tuff - or Felsic quartz porphyry. Med. gray - 1-2mm gray lapilli (quartz) for up to 3% of core, occasional felspar phenocrysts. Upper contact at 45° to core axis.										

HAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-6 SHEET NO. 3

197.0'   1	FOO	TAGE		DESCRIPTION			SAMP			Cu	Zn	ASSAYS	AG	РЬ
157.8'-160.6' light gray - buff cherty tuff - bended at 50' to core axis.  160.6'-162.5' Blue-gray rhy. tuff.  162.5'-167.0' Gray-green, chloritic.  167.0'-197.0' Greenish tuff - very hard with many local blue gray cherty sections. Bedding at 50-600 to core axis.  e 190.5' 3/4" vein 10% py + po + Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy.  202'-203' Black chert.  210'-220.5' Laminated cherts Tr po/cpy.  220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  NIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carb <sup>n</sup> NI	FROM	10			NO.			~~~~~~~	TOTAL		١.	T		1
at 50° to core axis.  160.6'-162.5' Blue-gray rhy. tuff. 162.5'-167.0' Gray-green, chloritic. 167.0'-197.0' Groenish tuff - very hard with many local blue gray cherty sections. Bedding at 50-60° to core axis.  e 190.5' 3/4" vein 10% py + po + Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  1998'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert.  210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn  NI NI NI NI NI NI NI NI NI NI NI NI NI	127.0'	197.01	continued											
162.5'-167.0' Gray-green, chloritic. 167.0'-197.0' Greenish tuff - very hard with many local blue gray cherty sections. Bedding at 50-60° to core axis.  # 190.5' 3/4" vein 10% py + po + Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert. 199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert. 210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff. 225'-226' Laminated chert, 5-10% sulfides po, sph. cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py cpy.  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carb <sup>n</sup> NI XED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carb <sup>n</sup>			157.8'-160.6'											<u> </u>
167.0'-197.0' Greenish tuff - very hard with many local blue gray cherty sections. Bedding at 50-600 to core axis.  @ 190.5' 3/4" vein 10% py + po + Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert.  210'-2203' Black chert.  210'-2205' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, rp pocpy  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn  NI NI NI NI NI NI NI NI DIVFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn		[	160.6'-162.5'	Blue-gray rhy. tuff.										
local blue gray cherty sections. Bedding at 50-600 to core axis.  @ 190.5' 3/4" vein 10% py + po + Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert.  210'-220.5' Laminated cherts Tr po/cpy.  220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn		]	162.5'-167.0'	Gray-green, chloritic.							ļ			
Tr cpy.  197.0' 227.0' CHERTY RHYOLITE TUFF (TUFFITE)  Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy.  202'-203' Black chert.  210'-220.5' Laminated cherts Tr po/cpy.  220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, po, Tr py, cpy.  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn			167.0'-197.0'	local blue gray cherty sections. Bed-										
Predominently cherty - buff - gray very finely laminated banded at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert. 199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert. 210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff. 225'-226' Laminated chert, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn 1503 1% po 227.0' 232.0' 5.0' 0.02 TRACE NIL NI														
at 1/16"-1/18" layers or beds. Local sulfide patches.  198'-199' Black chert.  199'202' Chloritic, 1-2% po Tr cpy.  202'-203' Black chert.  210'-220.5' Laminated cherts Tr po/cpy.  220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn local po - cpy	197.0'	227.01	CHERTY RHYOLITE TUFF (TUFFIT	E) -					11			1		
199'202' Chloritic, 1-2% po Tr cpy. 202'-203' Black chert. 210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff. 225'-226' Laminated chert, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn 1503 1% po 227.0' 232.0' 5.0' 0.02 TRACE NIL NI			Predominently cherty - buff at 1/16"-1/18" layers or bed	- gray very finely laminated banded s. Local sulfide patches.						<u>,</u>		]	:	
202'-203' Black chert. 210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff. 225'-226' Laminated chert, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn 1503 1% po 227.0' 232.0' 5.0' 0.02 TRACE NIL NI		<u> </u>	198'-199'	Black chert.								1		
210'-220.5' Laminated cherts Tr po/cpy. 220'-225' Bedded green tuff. 225'-226' Laminated chert, 5-10% sulfides po, sph, cpy. 226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0') 227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn		]	199'202'	Chloritic, 1-2% po Tr cpy.	ŀ					l				
220'-225' Bedded green tuff.  225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn		}	202'-203'	Black chert.						İ				
225'-226' Laminated chert, 5-10% sulfides po, sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carbn	i		210'-220.5'	Laminated cherts Tr po/cpy.		į							Ì	
sph, cpy.  226'-227' Graphitic tuff - cherty, 5-10% sulfides po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carb <sup>n</sup> NI NI		}	220'-225'	Bedded green tuff.		İ		!		1		1	}	
po, Tr py, cpy.  227.0' 239.5' MIXED TUFF as above (127.0'-197.0')  227'-231' Banded - laminated green-gray tuff, local po - cpy stringers - minor carb <sup>n</sup> NI NI	}		225'-226'		1502			227.0	1.6'	0.03	0.04	0.002	NIL	NIL
227'-231' Banded - laminated green-gray tuff, 1503 1% po 227.0' 232.0 5.0' 0.02 TRACE NIL NI local po - cpy stringers - minor carb <sup>n</sup>			226'-227'	Graphitic tuff - cherty, 5-10% sulfides po, Ir py, cpy.										
local po - cpy stringers - minor carb <sup>n</sup>	227.0	239.51	MIXED TUFF as above (127.0'-	197.0')						•				
			227'-231'	local po - cpy stringers - minor carbn	1503	1% pc	227.0	232.0	5.0'	0.02	TRACE	NIL		NIL

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

F00	TAGE		DESCRIPTION			SAMPI			Cu	Zn	ASSAYS	AG	Pb
FROM	70			NO.	S SUL PH	FROM	POOTAGE	TOTAL	,	,	01,100	61/100	1
227.01	239.5	continued											
		231'236'	Chloritized gray - tuff up to 10% sulfide stringers po, cpy, sph.	1504	3-5% Po Ti		235.8	3.8'	0.05	TRACE	TRACE	NIL	NIL
		236'-239.5'	Heavily chloritic (238'-239.2' 2-3% sph.) Tr cpy po.	1505	3% py	235.8'	238.3	2.5'	0.03	TRACE	TRACE	TRACE	NIL
239.51	251.01	AMPHIBOLITIC MAFIC FLOW OR O	SABBROIC INTRUSIVE	1506		238.3	240.1	1.81	TRACE	TRACE	0.001	NIL	NIL
		Upper contact silicified at tional - qtz carb <sup>n</sup> veins ¼" grains, equant, coarse grand	$60^{\rm O}$ to core axis, lower contact gradacommon, med.green, 2-3mm dark amphibole plan up to $50^{\rm O}$ of core.		sph, 3% po								
		246.5'-251.0'	Altered dacitic tuff - possibly fine grained part of intrusive with quartz carbonate veining.										
251.0	264.0	TUFFITE - BEDDED CHERTY TUFF	•	}	}		}		1	1		ļ	
		Bedded tuff - trace of graph broken up and contorted, po sulfides into tiny veinlets	nitic material, well banded highly ossibly major fault or shear - remobilize of po, sph, cpy.	j									
}		254.4'-255'	25% po, Tr cpy minor graphite.	1507		254.5	258.0	3.5	0.02	0.01	NIL	NIL	NIL
ļ	Ì	255.8'	Local sph. blebs.	]	Trspl	1			1	ļ			'
ļ	{	262.0'	Strongly altered minor po, sph.	1508	20%pd	261.5	265.7	4.21	0.07	TRACE	NIL	NIL	NIL
		263'-264'	10-15% po 1% sph over 6" section strongly brecciated.		Trcp	1							
264.0	311.0'	AMPHIBOLITIC MAFIC FLOW OR (	GABBROIC INTRUSIVE						ŀ	1			
}		Similar to 239.5'-251.0':		1	1				1			Í	[ ]
		263'-270.0'	Altered dark med, green similar to 245.5'-251.0' - possibly sheared flow gabbro.										
		270'-275.6'	Gabbroic - amphibolitic										

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

70 311.0'	continued 276.5'-285.6'	Strongly altered - carb <sup>n</sup> veined (246.5'-251.0')  Amphibolitic - gabbroic 297'-306' Fine grained sheared sections	NO.	9 801 Fm 19£6	FROM	700 TABE	TOTAL	•	,	07/TOR	61,104	
	276.5'-285.6'	(246.5'-251.0') Amphibolitic - gabbroic 297'-306' Fine grained1										<del></del>
346.51		(246.5'-251.0') Amphibolitic - gabbroic 297'-306' Fine grained1										
346.51	285.6'-311.0'	297'-306' Fine grainedí		1		i .			ŀ		1	
346.51	•	297'-306' Fine grained sections										
346.51		308'-310' Fine grained["""""										
- 1	CHERTY RHYOLITE (TUFFITE)	•	ŀ							!		
1	Similar to 251'-264' above.											
	320'-331'	Possible - shrd altered mafic tuff or flow substantial carbonate veining.								:		
	331'-338'	Finely laminated cherty tuff - bedded 70-80° to core axis.										
	338'-341'	Otz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 80° to core axis.										
	341'-346.5'	Dark green silicified cherty section.										
355.0'	MIXED TUFF											
	Silicified dark green tuff w coarse and fine tuff and che	rith local cherty bands and alternating rt.						 				
	E.O.	н.										
		1.1										
3	:55.0	331'-338' 338'-341' 341'-346.5' MIYED TUFF Silicified dark green tuff we coarse and fine tuff and che	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-800 to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8', Upper and lower contacts short at 800 to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8', Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF  Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8', Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-800 to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 800 to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8', Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-800 to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 800 to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF  Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIYED TUFF  Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.	flow substantial carbonate veining.  331'-338' Finely laminated cherty tuff - bedded 70-80° to core axis.  338'-341' Qtz - eye Rhyolite (X-tal tuff) or porphyry identical to 152.3'-157.8'. Upper and lower contacts short at 80° to core axis.  341'-346.5' Dark green silicified cherty section.  MIXED TUFF Silicified dark green tuff with local cherty bands and alternating coarse and fine tuff and chert.

NAME OF	PROPERTY	ST. ANTHONY	GOLD MINE (AUBET)	
HOLE NO.	SA-83-7	LENGTH	798.0.	
LOCATION				
LATITUDE .			2 + 85 E	
ELEVATION	Surface	_ AZIMUTH	2880	- 600
STARTED	June 1, 1983	FINISHED	June 5, 1983	

FOOTAGE	DIP	HTUMISA	FOOTAGE	DIP	AZMUTH
100	590		500	560	
200	580		600	550	
300	570		700	540	
400	5640				

HOLE NO. SA-83-7 SHEET NO. 1

LOGGED BY J. HINZER

FOOT	AGE	DESCRIPTION			5 A M P	t E			,	SAUAY	* AG
FROM	70		но.	SIZES	FROM	FOOTAGE TO	TOTAL	5	K	02/10H	02/TOH
0	6.0	(Overburden) - Casing									
6.0'	31.6'	course grained. Patches of fracture brecciation with up to ½" carbonate-quartz veins healing fractures. 1-2% py mostly on		1-2% py Tr cpy 2% py		12.5'	5.5' 2.1'			0.007	
		19'-22' weathered vein or fracture. 23'28.6' granite intrusion - appears very coarsely porphyritic with some large .5-lcm bluish and gray qtz grains - possibly pegmatitic.	i .	3-5% Py	27.0'	29.0'	2.1'			0.002	
31.6'	780.01	27'-28' Barren white qtz vein -  @ 28.6' Contact sharp at 30 <sup>c</sup> to core axis irregular. Contact at 31.6' sharp at 50 <sup>o</sup> to core axis.									
		pink with abundant sericite-biotite grains up to lom in size in the upper part - to a slightly more bluish gray more medium grained section with little or no mica and much smaller sericitic flakes to a yellow-gray near the bottom even finer grained zone.	1513 1514	py Tr gal. 3% py	34.4'	34.4' 36.8' 39.1'	2.6' 2.4' 2.3'			0.002	
		Sections of strong pink alteration, white to buff bleached areas and yellow green-shear breccia occur throughout.	1515	3-5% py	39.1'	41.6'	2.5'			0.003	

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-7 SHEET NO. 2

FOO	TAGE		DESCRIPTION			SAMPL				411	ASSAYS	AG	
FROM	70		DESCRIPTION	NO.	1005	FROM	FOOTAGE	TOTAL	``	EASSAY		61,104	
31.6	780.01		Comment Marks are a state of the state of th										
		31.6'-130.0'	Coarse light gray-pink granite with large (lcm) sevecite biotite patches. <u>Coarse-(Pink)-Biotite-Granite</u> . Local quartz laced gray, yellow-green and bright buff-pink altered sections with or without quartz veins, throughout. Average 1-2% py content locally up to 10% traces of Sphalerite & galena abundant.										
		31.6'-35.8'	Highly sheared silicified contact zone many quartz meta? crysts. Quartz veins make up 20-30% of unit. Up to 5% pyrite.										
		35.8'-41.6'	Dark green altered strongly sheared rock locally shear brecciated. Quartz lacing up to 15% with veining 0 550 to core axis and shearing at 450 to core axis. Average 5-10% py content.										
		35.8'-36.6'	Quartz vein zone 2% galena, 1% sphalerite.			1				}			
		41.6'-130.0'	Coarse granite with many yellow-green altered sections and local pink patches 1-2% sulfides (by) Ir sph, galena throughout. Shearing at 45-60° to core axis and local qtz veins averaging 3-4" wide.	1517 1518 1519	2-3% py 1% py 1% py Trpy Trpy	56.8' 60.1' 69.4'	44.0' 56.8' 60.1' 63.5 74.3'	3.6' 3.3' 2.4' 4.9'			0.033 0.001 NIL 0.009 TRACE		
		57'-62.0'	20% cuartz Tr sph, galena (@ 58') - strong pink felspar alteration at		Tr py 12Sph	ıl .	78.3	4.0'			NIL		
			71.5-73.8', 76'-77', 92'103'(weak)120'122, 129'4'31 72'-75' - 10-15% qtz-laced (white-gray qtz) py (cubes) on small qtz veins @ 89, 101, 114,115'	1523 1524	py Trpy Trpy	96.9	98.5	1.9' 4.4' 1.4'			0.001 NIL		
, , , , , , , , , , , , , , , , , , ,		130.0'-190.0'	TRANSITION ZONE - COARSE BIOTITE GRANITE TO MEDIUM - BLUE - GRAY GRANITE	1525	Trpy	126.0'	130.6'	4.6'			0.001		
00 100 1 0 100 1 1			The sections is strongly sheared and altered with many qtz-laced, shear breccia zones and changes gradually from coarse biotite rich to medium grained darker bluish-greenish-gray granite.	1527	py Tr py	130.6° 134.2 138.8°	138.8			TRACE TRACE 0.066			

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

HOLE NO. SA-83-7 SHEET NO. 3

	130'-136' 130'-136' 151'-154' 166'-176.5' 181'-183'	Shear brecciated and altered dark greenish qt2-lacing parallel to core axis less than 1% py local pink alteration patches, 141±142', 144'-145', 146'-147', 156'-169' - local ½" py patches in last section.  60% quartz-barren white - 6" shr-bx at centre  Dark greenish shr-bx - 2-3% py Tr galena, sph, 20-25% qtz laced, 30-40% qtz - dark gray - barren - dark green qtz lacing - shr-bx	1530 1531 1532 1533 1534 1535 1536 1537 1538 1539	2% py 1% py 2% py 1-2% py 12 py 1-2% py 1% py 1% py 1% py	142.7' 147.5' 151.3' 155.2' 162.8' 166.2' 172.1' 177.1'	151.3 155.2 157.7 166.2 172.1 177.1 179.0	2.2' 3.8' 3.9' 2.2' 3.4' 5.9' 5.0'	1	REASSAY	**************************************	AG DZ/TON
130.	130'-136' 130'-136' 151'-154' 166'-176.5' 181'-183'	greenish qt2-lacing parallel to core axis less than 1% py local pink alteration patches, 141-142', 144'-145', 146'-147', 156'-169' - local ½" py patches in last section.  60% quartz-barren white - 6" shr-bx at centre  Dark greenish shr-bx - 2-3% py Tr galena, sph, 20-25% qtz laced,  30-40% qtz - dark gray - barren - dark	1530 1531 1532 1533 1534 1535 1536 1537 1538 1539	2% py 1% py 2% py 1-2% py 12 py 1-2% py 1% py 1% py 1% py	147.5' 151.3' 155.2' 162.8' 166.2' 172.1' 177.1'	151.3 155.2 157.7 166.2 172.1 177.1 179.0	3.8' 3.9' 2.2' 3.4' 5.9'			0.001 002 0.001 NIL NIL	
190.	· · · · ·	30-40% qtz - dark gray - barren - dark	1539			1192 31	5.01			0.008 N1L	ļ
	biotite qtz vein axis.	reenish-gray, occasional local coarse sections, sulfide content less than 1%, ing less than 2% average at 40° to core	1540 1541 1542 1543 1544 1545 1546 1547 1548	Py Py Py Py Py Py Py Py Py Py Py Py Py P	202.3' 192.3' 204.9' 220.0' 232.4' 237.3' 247.2' 250.7' 257.4' 260.0	204.9 198.0 208.4 222.4 234.4 240.3 250.7 254.0 260.0 262.7	2.6' 5.7' 3.5' 2.5' 2.0' 3.5' 3.3' 2.6' 2.7'			0.002 0.001 0.001 0.004 0.008 TRACE 0.001 TRACE 0.001	,
258	207.0'-208.0 258.0'-365.0' WHITE GR Entire a	'Shr-bx - minor qtz only dark green qtz veins at 20° to core axis 'As above - local shr-bx at 221, 237.5 (Tr py), 24.2, 252'. ANITE (To pinkish locally) rea may be a highly altered bleached zon artz veining is abundant throughout 15% qtz lacing (pink below 280')	1549 1550 1551 1552	3-4% py 1-2% py Tr Sph 1% py	268.0' 272.0' 277.7'	272.0	5.3' 4.0' 5.7' 5.3'		0.007 0.020 0.002 0.005	0.011	

NAME OF PROPERTY. ST. ANTHONY GOLD MINE (AUBET)

HOLE NO. SA-83-7 SHEET NO. 4

	AGE	DESCHIPTION	Ì		SAMPL	Æ		}		ASSAYS	AG	
FROM	70	DESCRIPTION	NO.	1 BULPH	7204	FOOTAGE	TOTAL	•	REASSAY	01/10#	02, 704	
31.6'	780.01	continued				<del></del> -		<u> </u>	IL NO DAT			
		258.0'-365.0'	1654	2 28	206 01	202.0	5 01		TDAGE	0 002		
	1		1554	DV	288.0'	293.0	5.0'		TRACE	0.002		
		200 mm 22 422, 7 m by 11 25m	1555	1-2%	293.01	298.0	5.0'			NIL		
1		287'-288' 5-10% diss. py		ру	200 01	202.01	C 01	1	1	0 001		
		@ 260.4' A gray qtz vein - 30% to core			298.0' 303.0'		5.0° 5.0°		]	0.001		
1		288'-309' Predominantly pink - with local	1558	1-2%	308.0	313.0	5.0'			NIL		
1		2-3% py patches	1650	5-34 Dr	313.01	318 0	5.0'			0.005		
		309'-325' MASSIVE QTZ VEIN ZONE			318.0		5.0'		ļ	0.016		
		85% qtz white to light gray - dark green shr-bx at top & bottom 1-3%	1561	11 py	323.0	328.0	5.01		1	0.002	1	11
j		py, Tr sph, galena and chlorite	1562	Trsph	328.01	333 0	5.01	Į	l	0.002		
		325'-338' Strong shr-bx 10% qtz lacing			333.0		5.0'		Į	0.002		!
		343.0'-365.0' Mod. shr-bx - gradually diminishing		Tr spl	247 01	352.01	£ 0.1		1	0.003		
}		silicification. 5-10% qtz laced	11004	Trspl	347.0'	352.0	5.0'			0.003		
		347'-349' 20% gray qtz laced		2-3%	356.5	361.45	4.91	í	l	0.002		
]		351'-353' 20% gray qtz laced	]	py Tr	]	] .						
		357'-362' 20% gray qtz laced	1566	1-2%	361.4	365.2	3.8'			0.003		
1		364'-365' 20% gray qtz laced		py Tr		· ·		1	]	1		í
			1567	sph 1-2%	369.0'	374.0	5.0'	1		0.001	ľ	1
)		365.0'-450.0' MEDIUM GRANITE (190.0'-258.0')		ру	1	1		1	1			l
		See description of previous unit	1568	17 py	438.0' 443.0'	443.0	5.0' 5.0'	1		0.003		l
	1	370′-372′ Pinkish altr. and qtz veining 5-10%		ру	1	1	1	1	Ì		) '	
		1 407.3 -411 Hoderate shear zone ithe grained bull-	1570	1% py	448.0	453.0	5.0' 5.0'	1		0.002		
		white	1572	2% py	453.0' 458.0'	463.0	5.0	}	1	0.002	1	
	[	440'-445' Local mica enrichment and light colour				468.0	5.0'	1		0.003		
		6" qtz vein at 444' Tr chl - shr-bx Tr py po @ 424', py @ 380'	1574	ру 2-3%	450 N	473.0	5.0'			0.001		
		11 py po e 424 , py e 360	13/4	Py	700.0	4/3.0	3.0			0.001		
			1575	2-3%	473.0	478.0	5.0'	1	}	0.002		ĺ
		,		ру	1			1	1			
					}			1	1			ĺ

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-7 SHEET NO. 5

F001	AGE	DESCRIPTION			SAMPL					ASAOYS	AG
FROM	10	occom vion	но.	S SUL PH IDES	FROM	FOOTAGE TO	TOTAL	`	`	01/104	01/10=
31.6'	780.0'	continued									
		450.0'-560.0' Moderately altered - QTZ LACED MEDIUM GRANITE	1575	2-3%	473.0'	478.0	5.0'			0.002	
		Similar to above but much more quartz-lacing and much higher by content 5-10% locally weak - moderate shear by is dominant below 465'		py 3-4% py 2-3%			5.0'			0.004	
		455'-468.5' Weak shr-bx 3-5% py qtz lacing @ 7%-?9% to core axis	1578	ру 2-3%	483.0' 488.0'		5.0' 5.0'			0.001	
		475'-476' Qtz veining 3-5% py - in qtz veins 480'-481' Qtz veining Tr py	1579	ру "	493.0'	498.0	5.0'			0.006	
		485'-486' Strong shr-bx - qtz lace - 3-5% py 504'-508' Strong alteration yellow-green 15% qtz laced	1	2-3%	498.0'	503.0	5.0'			0.001	
		0 511' 6" qtz vein 30-40% py Tr galena? (massive py cube)		ру 1-2% ру	503.01		5.0'			0.001	
		532'-537' Altered - weakly shr-bx yellow-green 20% qtz lace - 4-6" veins - 2-3% py  560.0'-675.0' Strongly altered PINK BLEACHED MEDIUM GRANITE	1583 1584	ру 25%ру 3-4% ру	508.0' 510.7' 512.4'	512.4° 517.5°	2.7' 1.7' 5.1'			0.002 0.001 0.002	
			1586 1587	ру <sub></sub> 2-3%	517.5' 523.0' 531.5'	526.0° 537.0°	5.5' 3.0' 5.5'			0.001 0.001 TRACE	
		560'-595' Local dark med. granite (unaltered) Average 2-5% py (po) in patches	1589	3% py	543.0' 548.0' 553.0'	553.0	5.0' 5.0' 5.0'			TRACE TRACE TRACE	
		574±575' l' barren white qtz vein 588'-593' Strong pink colour	1	ру	558.0'	1 !	5.0'			NIL	
		595'-602' in patches sometimes centred on small qtz veins py is usually central with dendritic po radiating outward. Patches usually greater than 1" in dia	1593	3-4% by 1-2% by	563.0°	568.0° 573.0°	5.0°			TRACE	

TOBONTO - TAK. 118

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-7 SHEET NO 6

FOOTAGE	DESCRIPTION	Ì		SAMPLE	1	AU	ASSAYS	AG	
FROM TO	DESCRIPTION .	HO.	3 BULPH IDES	FOOTAGE FAOM TO	TOTAL	REASSA		02:70W	
31.6' 780.0'	granite to reg grained granit a sheared fine of medium gran diss. througho  675'-780'  FINE GRAY GRANITE  Possibly a sheared version of med generally finer grained, 1-2% py al dark shr-bx-zones, and white b zones  679.5'  1" X 1/8" sph veinlet  678'-712' Weakly altered slightly qtz laced - 5-10% py, p to 15% Tr cpy, sph, gal  690'-710' 10-15% py, po, galena  710'-750' 716.5' barren 4" white slips  733'-734' Shr-bx	ith occasional 2 lacing 5%. 1596 lb., 619'-625'. 1597 lb., 619'-625'. 1598 lacing 5-10% lb., 619' py patches e - buff alteredular gray finer e - possible grained version ite. 1-2% py lb., 1602 lb., 1602 lb., 1604 lb., 1605 pinkish - 5-10% lb., 1606 pinkish - 5-10% lb., 1607 lb., 1608 lb., 1608 lb., 1608 lb., 1609 l	3 x py 5 2-3xpv 6 1x py 7 1-2xpy 8 6-7x 9 5-7x 1 1x py 1 1x py 2 1-2x ry 1 1x py 2 1-2x ry 9 1x 2x py 1 1x py 1 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 2 1x py 1 1x py 2 1x py 2 1x py 1 1x py 2 1x py 1 1x py 2 1x py 2 1x py 2 1x py 1 1x py 2 1x p	573.0' 578.0' 578.0' 583.0' 588.0' 593.0' 598.0' 593.0' 598.0' 603.0' 608.0' 613.0' 613.0' 613.0' 613.0' 623.0' 623.0' 623.0' 623.0' 623.0' 623.0' 643.0' 648.0' 648.0' 648.0' 648.0' 653.0'	5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0'	0.00	0.002 TRACE NIL 0.001 0.002 0.002 0.001 0.003 0.001 0.003 NIL 0.003 NIL 0.003		

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

F001	TAGE	DESCRIPTION			SAMPL				ΑU	ASSOYS	AG
FROM	70		NO.	1023	FROM	POOTAGE	TOTAL	`	REASSAI	02/10#	62,700
31.6°		750'-780' Contact zone - light coloured spotty white patches with py po xtals laced 778'-780' White bleached contact zone (pinkish) diss. py at andesite contact. Heavily chloritized py po @ 757', 766'-768', 774', 777'  ANDESITE (Sheared Tuff or Flow)  Dark green - highly shrd, locally silicified almost black graphitic in places  780'-782' Silicified black  782'-793' Coarse grained andesite - dike or flow centre - gradational contact - finer grained towards base	1614 1615 1616 1617 1618 1619 1622 1323 1624 1625 1627	2-3% py 2-3% py 7-3% py 17-2% py 10-12: py 15-2% py 1-2% py 2-3% py 1-2% py 1-	673.0° 678.0° 683.0° na 688.0° 698.0° 708.0° 736.0° 737.0° 743.0° 745.2° 752.0°	678.0° 683.0° 688.0° 693.0° 698.0° 703.0° 713.0° 713.0° 743.0° 745.2° 748.0°	5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0'		0.007 0.009 0.013	0.016 0.005 0.010 0.002 0.001 0.002 0.001 0.002 0.002 0.002 0.004 0.004 0.004	AG oz.ton
			1	2% po	758.0'	ì	5.0'			NIL	
			ļ	py po	768.0'	ŀ			0.001	0.005 N1L	

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

HOLE NO. SA-83-7 SHEET NO. 8

FOO:	TAGE		1	<del></del>	SAMP		<del></del>			^SAOYS	AG
FROM	70	DESCRIPTION	NO.	IDES	FROM	FOOTAGE	101AL	,	,	02/10#	61/104
780.01	798.0'	continued	1632	T		1				TRACE	
			1633 1634	cpy Tr p	773.0' 778.0' 779.7'	779.7 782.0	1.7 2.3'			NIL NIL	
l			1635	PO PAN	TAILINGS					0.004	
		11/-									
								,			

NAME OF	PROPERTY	ST. ANTHONY	GOLD MINE (AUBET)	
	SA-83-8			
LOCATION				
LATITUDE	3 + 65 S	DEPARTURE	2 + 85 E	
				-450
			June 10, 1983	

FOOTAGE	DIP	AZ IMUTH	FOOTAGL	OIP	AZIMUTH
100	440		500	420	
200	430		600	410	
300	430				
400	420				

LOGGED BY J. HINZER

F 0 0	TAGE	DESCRIPTION			SAMP					S ADA	ή̈ς
FROM	70		NO.	SULPH IDES	FROM	FOOTAGE TO	TOTAL	×	X	07/TON	02/10H
0	8.01	CASING (overburden @ 6.0)									
8.0	26.0'	ANDESITE Sheared (Tuff or Flow)  Dark green to black (locally), carbonate (1/8") healed fractures and along shears. Occasional qtz vein $(\frac{1}{2}")$ . Foliation - shearing at $45^{\circ}$ to core axis, minor diss. py, po.  20'-21' Qtz carb <sup>n</sup> vein zone (50-60% qtz) 10-15% py po. Lower contact at $60^{\circ}$ to core axis - sharp.	1637	10-15 by Tr po	13.0' 20.0 26.0'	18.0° 21.0°	5.0' 1.0' 5.0'				
26.0	682.7'	As in hole SA-83-7 Granite is highly variable. Three main types include a coarse sericite-biotite rich light gray to pinkish near the top, a bluish-greenish gray medium granite in the centre and a finer grained gray granite near the base. Super imposed on these variations is a strong local silicification and shearing which imports a yellow-green tint, K-spar alteration - very pink sections and bleaching whitish-buff granite. The latter two may be related features. Hineralization is generally related to these alteration areas and appears to be of more than one species.  N.B. Unlike hole #SA-83-7 - the alteration sections in the granite are more intermingled and not readily discernable as separate units.  26.0'-143.0' COARSE GRANITE (Biotite-Sericite-Pinkish) Light gray to pink with large lcm patches of sericite-biotite flakes. Local quartz-laced-yellow green alteration and some bright buff pink zones with or without quartz veins. Average 1-2% py locally 5-102 especially near top. Traces of Sph, galena not uncommon.	1640 1641 1642 1643 1644 1645 1646 1647 1648 1649	py " 1-2%py Trsph	V01D 76.3' 79.1' 82.1' 84.3'	36.0' 41.0' 46.0' 51.0' 53.7' 58.2' 64.4'  79.1' 82.1' 84.3' 87.0' 92.0'	5.0' 5.0' 5.0' 5.0' 2.7' 4.5' 6.2' 2.8' 3.0' 2.2' 2.7' 5.0			0.011 1.11 0.002 0.006 NIL 0.005 0.001	

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)

SHEET NO ....

HOLE NO. \_\_\_\_\_ SA-83-8

SAMPLE ARTAYS FOOTAGE DESCRIPTION FOOTAGE 3 BULPH 10 02/104 61. TO FROM TO TOTAL 1065 26.0 682.7 continued 26.0'-143.0' 1652 1% py 92.0' 97.0' 5.01 TRACE 1653 | -2% 97.0' 102.0' 5.01 NIL 26.0'-28.0' Gneissic granite - foliated mafic grains, porphyritic contact zone -1654 x py 102.0' 107.0' 5.0' 0.002 bluish tint 2-3% po Tr py. | 1%py | 107.0' | 113.2' 28.0'-32.5' Sheared granite similar to above -1655 6.21 0.002 bluish fine grained, indistinct mafic 1656 113.2' |117.0' 3.81 NIL foliation 3-5% py. 1657 117.0' 122.0' 5.0' 0.002 1658 B% py 125.8' 128.1' 2.31 0.001 32.5'-40.0' Sharp contact - partially weathered 1659 2% py 128.1' 132.0' 3.9' NIL zone significant qtz-carbn vein, -1660 | 1%py | 132.0' | 135.0' 3.0' 0.001 strong shear-bx with yellow-green to 1661 135.0' | 137.0' 2.0' NIL dark altr. 30-40% qtz laced 2-3% 142.4' 147.0' 1662 TRACE 4.4 diss. py. 40'-79' Coarse granite, local networks of 5" clear qtz veins laced, occasional K-spar alteration patches and white gtz veins 2-5" will carrying py etc. i.e. 45' - Tr py q.v. @ 60° to core axis 50' - 2% py 54' - 5% py Tr galena 30% to core axis 59' - Tr sph - gal. g.v. 30% to core axis 59'-62' - Irregular qtz veining 40% qtz 79'-117.5' Slightly darker greenish - yellow green alteration. 79.4'-80.6' Qtz vein 40% qtz Tr py, sph, gal. 82'-83' Dark green - 3-5% py Pinkish 10% qtz lacing 88'-99' 93'-95' 25% qtz laced -

shr-bx.

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HOLE NO. SA-83-8 SHEET NO. 3

F00'	TAGE					SAMPL	. Ε				ASSAYS	AG	
FROM	70	DESCRIPTION		NO.	SULPH	FROM	FOOTAGE	TOTAL	`	•	03/104	62/104	
26.01	682.71	continued										-	
		79 -117.5 '		1									
		99'-99.6'	Qtz vein - gray barren	İ	1						1		
		99'.6-108.0'	Yellow green alteration										
		103'-1	04' Shr-bx		!								
		104'-1	06' 50% qtz laced - 1% py Tr sph										
	i i	106'-1	07' Shr-bx				}					}	
		107'-1	08¹ Qtz laced	ì			l.						
		108'-113.5'	Qtz Vein Zone - white gray qtz 20-300 to core axis - 3% py patchy										
	1	113.8'-115'	Yellow green altr.										
	İ	115'-117.5'	Pink altr qtz lacing veins @ 30° to core axis										
		126.5'-127.3'	15% qtz veining gray 1-2% py				E						
		135'-136'	Massive qtz vein 9" - Tr galena							   			
	]	143.0'-610.0' MEDIUM GRAY-GREEN GRANITE		1663	1-2%	147.0'	150.4	3.4'			0.001		
		Finer grained than above sericite biotite flakes rining is even grained. I 157' occasional pink pate Zones of alteration both with or without quartz lazones are common throughd developed as in hole SA-8	hes present, rare later buff-pink bleaching, cing and shear breccia ut, buff,not as well	1664 1665 1666	py ∠1%py 5% py 1% py	150,4' 152.7' 162.0'	152.7' 157.0' 167.0'	2.3' 4.3' 5.0'			NIL NIL TRACE		

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-8 SHEET NO. 4

FOO'	TAGE		DETCHIRTION		1		SAMPL				AU	ASSAYS	AG
FROM	10		DESCRIPTION		NO.	3 301 PH	FROM	FOOTAGE	70741	,	REASSAY		61.10H
26.0'	682.7'	continued 143.0'-610.0'											
		143'-182'	to core axis	and. carb <sup>n</sup> . Tr py -	1668 1669	Trpy	167.0' 172.0' 179.9' 182.3'	174.39 181.29	2.3' 1.3'			TRACE NIL 0.001 NIL	
		182'-192'	with local s q.v. 10-20 <sup>0</sup>	•	1671	Tr galan Trpy Trpy	a 187.0' 207.0'		5.2' 5.0'			0.001	
			184'-187.8'	30-40% gray qtz-laced 1% py Tr galena, sph	1674	Trpy Trpy	212.0' 217.0'	222.31	5.3'			0.006	
			0 192.5'	4" pink vein 0 60° to c-axis.	116/5	irpy	237.0'	241.6	5.6'		0.001	0.036	
	]	192'-207'	Medium grain	ned granite	ł					l	1		
		207'-245'	10% or more colour, loca	ion strongly quartz laced - slightly paler green ally up to 10% py - average lly shear-breccia.									
			207'-217'	20% quartz with narrow qtz vein almost parallel to core axis. 2-3% pyrite									
			217'-226'	212'-214' 10% pyrite 10% qtz laced, 3-5% pyrite, local shear breccia 9224', 227'									
			228'-245'	Irregular qtz laced 10-15% qtz 1% py.	1676	≤1%py	241.6'	247.0	5.4'		TRACE	0.002	
		245'-257'	green alter	tz vein zone - local yellom ation - bleached - buff to - Avg. 1% py.								0.001	
			248.3'-250.	6' Bleached zone - several small 1-2" qtz veins, 1% pyrite - all at 40° to core axis.									

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-8 SHEET NO. 5

SHEET NO. SAMPLE ASSAYS FOOTAGE AG DESCRIPTION FOOTAGE & BULPH NO. FROM TO 02/104 62/104 1065 FROM 10 26.01 682.7 continued 245'-257' 253.7'-256.1' 90% quartz vein - graymilky with local dark green alteration - barres 257'-279' Medium green-gray granite - transi-1679 1 1 257.0 258.0 1.0' 0.001 tional to pink alteration over lower 1680 × 1%py 272.0 277.0 5.0' 0.002 3 feet. @ 262' Tr sph 275'-279' 3-5% py diss. - in qtz laced zone 279'-309' Bleached - altered granite, pink with 1681 <1%py 277.0 281.6 0.004 4.6' 1682 <1%py 281.6' 287.0 1683 <1%py 287.0' 292.0 local purple or yellow tint. Quartz 0.001 5.41 lacing strong locally with up to 5% 5.0 0.001 1684 KIRPY 292.0' 297.0 py in places. 5.0' 0.003 1685 21%py 297.0 301.6 5.6' 0.001 279'-284' Pink-purple 1-2% py -1686 41xpy 301.6 307.0 5.4' NIL 1% red altr. spots 1mm. 284'-289' 5% qtz, 1% py, Tr sph. 289'-295' Less altered. 291.4'-292.6' Clear qtz vein 2-3% py 10-20% qtz. 295'-298.6' 80%qtz laced (clear)Trpy 298.6'309' Bleached - buff 50-60% qtz - 1% py local pink purple (red altr. spotr) 309'-377' Medium green-gray granite - with loca 1687 2% py 311.4 312.5 1.1" 0.003 shr-bx and qtz laced zones and some 1688 10%py 317.01 322.0 5.0' 0.003 local qtz veins. rgal 1689 🗚 15py 327.0' 332.0 5.01 NIL 1690 41% DV 332.01 337.0 TRACE 5.01 1691 41%py 337.01 342.0 5.0 0.003

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-8 SHEET NO. 6

F001	FAGE			DE CENTRALION				SAMPL	. E			AU	ASSAYS	AG
FROM	70			DESCRIPTION		NO.	S BUL PH IDES	FROM	FOOTAGE 10	TOTAL	, 6	EASSAY		02/704
26.0	682.7	continued	309'-377'	<b>0321'</b>	10-15% quartz laced greenish 1-2% py Tr sph. '-315' 3% py. Qtz vein 4" - 5% py, @ 336', 2"q.v 2% py	1693 1694 1695	۱% ا ۱% ا ۱% ا ۱% ا ۱% ا	365.41	366.4 371.8	4.4' 5.4'			NIL 0.006 0.003 0.004	
				343'-348' 362'-365'	Qtz vein zone - 30% gray qtz 2" py cube @ 354.5% 10% qtz laced 1-2% py									
			377'-469'	Medium gray- strong quart 70-80%. Avg ing also, 3- 377'-381' 395'-396' 403.5'-406' 415'-417' 420'-425' 425'-436' 430'-438' 438'-456' 456'-459'	green granite with very z lacing locally up to 1 20-25% - local bleach 5% py.  70% qtz - laced 1% py 30% qtz - laced 1-2% py 70% qtz - laced 3-5% py 60-70% qtz - laced 1% py 10% qtz - laced 2-3% py 60% qtz - laced 2-3% py 60% qtz - laced 5% py 60% qtz - laced 5% py 60% qtz - laced 5.7% py bleached - pink - buff. 20-25% qtz - laced 3-5% py.	1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710	Tr p) Tr p) Tr p) 5% p) 2% p) Tr p) Tr p) Tr p) Tr p) Tr p) Tr p) Tr p) Tr p) Tr p)	402.0' 407.0' 412.0' 417.0' 422.0' 427.0' 432.0' 437.0' 442.0' 447.0' 452.0'	397.0 402.0 407.0 412.0 417.0 422.0 427.0 432.0 437.0 442.0 442.0 452.0 457.0 462.0	5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0' 5.0'		0.024	0.002 0.002 0.002 0.002 0.004 0.004 1RACE 0.003 0.005 0.002 0.024 0.002 0.002	
			469'-488'	@ 466.8' Relatively ( coloured	ነኝ" py cube. unaltered granite - dark		Tr p) 1-2% py	467.0' 487.0'				0.010	TRACE	

# Biamond Brill Record

HOLE NO. \_\_\_\_\_ SA-83-8 \_\_\_\_\_ SHEET NO. \_\_\_\_ ?

FOO	TAGE			DESCRIPTION		•		SAMPL	_			AU	* FLATS	AG	
FROM	10			DESCRIPTION		NO.	& SULPH	FAOU	FOOTAGE	TOTAL	,	REASSA		61/70H	
26.0'	582.7'	continued													
			488'-506'	pink colour	eached zone - buff - to heavily qtz & veined. tent average.	1715	1-2% py 1-2%	497.0'	497.0 502.0	5.0' 5.0'		0.011			
				488'-491'			ру 1-2%		507.0	5.0'			0.002		
					vein 0 5-100 to core axis	1717		507.0'	512.0	5.0'			NIL		
				493.5'-506'	1/16"-1/8" py seam.	1718	1-2%	536.6'	542.3	5.7		ŀ	0.004		
				433.3 -300	centred on massive qtz vein.	1719	Tr py	542.3'	547.0	4.7'			0.005		
				4	496.8'-500' Gray at 20° to core axis with thin 1/16"- 1/8" py seam.								:		
			506'-610'	green with o		1721	1-2%	552.0'	557.0	5.0'			0.002		
				veins - mine zones. Qtz	veins i/ib"-¼" gray	1722 1723	Tr py 2% py	591.5' 596.8'	596.8 602.0	5.3' 5.2'			TRACE 0.005		
				usually at 3 and minor o	30 <sup>0</sup> to core axis, 2-3% py chlorite are ubiquitous.	1724		607.0	612.0	5.0'			TRACE		
				529'-546' 536.5'-537.	10% qtz laced 5' 30% qtz laced bleached		ро								
				541'-543'	whitish 20% qtz laced bleached whitish Tr pink										
				546'-548.5'											
				591'-593'	Gray 1" qtz vein 11 to core axis 1-2% py										
	1			595'-596.6'	60% qtz laced py, chl Tr										
				597'-610.0'	3% py = 1% po.						1				i
				39/ -010,0	за ру – та ро.										

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HOLE NO. SA-83-8 SHEET NO. 8

FOOT	AGE		bei	CRIPTION				SAMPL				AU	ASSAYS	AG
FROM	τo		UE;	CKIPTION		NO.	10CS	FROM	FOOTAGE	107AL	, F	EASSAY		02/10#
6.0'	682.7	continued	ODAY CDAULTE					<b>630</b> ()	(12.0					
	1	610.0'-682.7'				ı	no l	612.01	, ,		i	0.022	0.012	
			cream coloure	d with domin	abundant felspars - pale ant greenish mafic mineral es are abundant. Chlorit	1726	Tr py	617.0'	622.0	5.01			0.005	
			flacks ama am	311	y - moderate mild shear- vy py + po mineralization	11/2/	7-10% py/po	622.01	627.0	5.0'			0.520	
			610.5'-612.2'	Otz-vein gr	ay @ 10-20% to core axis		lpy po	632.01					0.002	
			623'-633'	10% py - po		1730		637.0					0.005	
				623'-624.3'	40% sulfides (25 py/15 po po dendritic adjacent to central py cubes.	*	py po						0.001	
	]			629.51-632.	5' 5-7% py, po	1732	po 3-5*	647.0'	652 N	5.0'	1	}	TRACE	
			623'-668'	Only local zones 1% py	alteration - buff-pink , po, chl.		py po							
				648.5'-651.	5' Shr-bx shrd @ 70% to c-axis, 1-2% py local qtz, fels veins.	1	ру 3-5%	652.0' 657.0'					0.002 NIL	
				656'-658.4'	Bleached - pinkish - fracture - bx'd.			662.0'					0.001	
					657.2'-657.25' Fault zone 2-3mm ang.	1736	7-10%	667.0'	672.0	5.0'			0.021	
					2-3mm ang. qtz grains in chl. muci	1737	2-3% pych1	672.0'	677.0	5.01			0.003	
				660'-662'	matrix. Pink - buff white bleach zone gradational at top sharp at base.	1738	Tr py	677.0'	682.0	5.0'			0.002	
			668'-682.7'	Contact Zon	e Granite-Andesite									
						1		1		]	l			

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FOO	TAGE		FLORIBLION	İ		SAMPL			l		ASSAYS	AG
FROM	10	D.	ESCRIPTION	NO.	S BULPH	FROM	FOOTAGE	TOTAL	3	,	01/108	61/104
26.0'	682.71	continued										
		(36 -002.7	668'-673' Gray granite: 60% buff- white bleached - fracture bx'd, faintly pink - 5-10% py.									
			673'-675' Pink-buff fracture bx'd.	1	}		}		1	}		
			675'-679.9' Pink granite	l				İ			Ì	
			679.7'-679.9' Blue gray - chlorite/ fault/or andt. Zenolith.							•		
			679.9'-682.7' Fracture bx'd - pink granite.									
82.7'	707.01	ANDESITE		ł			ļ					į
			dark green tuff or flow material the the top of SA-83-5. The top 10-15 ft ntrusive material.									
		682.7-697' Contact Zone		1739	Tr py	682.0	687.0	5.0'	ļ		NIL	
		682.7'-683.7	'Siliceous - dike like sharp upper and lower contacts at 70° to core	1740	po Tr py	687.0	692.0	5.0'			NIL	
			axis - bluish gray with dark (black) phenocrysts or mafic mineral folia-	1741	1% py	692.0	697.0	5.0'			0.008	
			tion at 60° to core axis. Locally 3-5% py at centre qtz vein and at contacts.	1742		L COMPO	SITE				0.003	
		683.7*-686.4	1' Same as 679.9'-682." fracture bx'd buff - pink granite.									
		686.4'-687.5	5' Same as 682.7-683.7'								İ	
		687.5'-695.3	3' Gradational from siliceous dike like finer grained almost andesitic in places, containing some qtz-carb <sup>n</sup> veins.									

HOLE NO. SA-83-8 SHEET NO. 10

F001	AGE		DESCRIPTION			SAMPI					ASSAYS		
FROM	10		DESCRIPTION	NO.	10ES	FROM	FOOTAGE	TOTAL	,	•	02/104	61/104	
682.7'	707.0'	continued 682.7'-697' 697'-707'	695.3'-696.5' Qtz vein - granitic? chlorite fleck 696.5'-697' Siliceous dike material. Shrd Andesite tuff or flow.	3				10120					

NAME OF	PROPERTY	ST. ANTHONY	GOLD HINE (AUBET)	
	SA-83-9			
LOCATION				
LATITUDE	4 + 63 S	DEPARTURE	2 + 85 E	*****
ELEVATION	Surface	AZIMUTH		-450
	June 12 1083		June 15 1083	

F	OUTAGE	DIP	HTUMISA	FOOTAGE	DIP	AZMUTH
	100	430		500	420	
	200	420				I
Г	300	420				
	400	420				

HOLE NO. SA-83-9 SHEET NO. 1

LOGGED BY J. HINZER

FOOTAGE		DESCRIPTION	SAMPLE					AU A S & A Y B AG					
FROM	70		DESCRIPTION		SULPH	FROM	TO	TOTAL	2		OZ/TON		
0	5.0'	CASING (4.0' ove	rburden)	1									
5.0'	121.0'	ANDESITE (Sheare	ed Pillowed Flow)										
		Dark green - highly silicified, very hard - local chloritic sections. Occasional 1-2" quartz veins and patches of carbonate veinlets and healing hairline fracture. Shearing at 60° to core axis, 1-2% py, po on slips and veins Tr cpy. Traces of garnets @ 42.0'-43.0'.		1743	Tr py po	39.5	44.8	5.3			0.002		
		59'-71.0'	Mafic intrusive fine grained green-black with lnm white fels? flecks, aphanitic upper and lower contacts with several 1-2" qtz-fels veins with trace 1% py, po, Ir cpy, possible massive flow.										
		71.0'-99.0'	Sheared flow, 1/4" qtz veins at 600 to core axis Tr py, cpy.									İ	
		99.0'-121.0'	Highly altered sheared and granitized zone, altered flow, 1-3% py strongly chloritized.	12	1-2% py	1	104.7				NIL		
			116.8'-117.5' Quartz vein zone 1% py Tr po.	1745	ру 1-2% ру	111.8'	116.3	4.5			NIL		
			118.8'-119.4' White quartz ve <sup>4</sup> n 5% py sharp lower contact at 60° to core axis.		3-5 <b>%</b> py	116.3	121.0	4.7'		0.220	0.049		
121.0	577.0'	GRANITE								<u> </u>			
121.0		green-gray - lo Granite not as	e grained - locally sheared dark green to medium cally heavily altered, massive quartz vein zone. coarse as in previous holes, local quartz veining, shear brecciation. Local buff coloured section.										

NAME OF PROPERTY....

ST. ANTHONY GOLD MINE (AUGET)

HOLE NO. \_

SA-83-9

SHEET NO. \_\_\_\_\_2

FOOTAGE		DESCRIPTION		SAMPLE					AU ASSAYS AG				
FROM	70	DESCRIPTION	NO.	S SULPH IDES	FROM	FOOTAGE	TOTAL	•	REASSAY	02/104	62:10m		
121.0'	577.01	continued											
	i	121.0'-155.0' QUARTZ VEIN ZONE	1747		121.0'	124.4	3.4'		0.004	0.010			
	<u>.</u>	121.0-132.5' 75-80% quartz, massive quartz veining 1-2% py Tr. sph, galena.		2% py	124.4' 127.0'	127.01 132.0	2.6' 5.0'			0.007 0.010		1	
		121'-124.4' White quartz 2-3% py, T galena. 124.4'-125.4'Buff to pink altered	- 1	Irspr gal. 1% py Sph/	132.0'	137.0	5.0'			0.002			
		massive granite. 125.4'-129.8'Heavily quartz laced 70% altered buff to pink, 1- py, 1% galena, Tr sph.	1751	hal	137.0'	142.0'	5.0'	; ; ;		0.007			
;		129.8'-132.5'Massive white quartz, Tr py-sph-galena. 132.5'-138.0'Altered granite, 70% qua laced 1% galena, Tr sph	1753اليد	Trpy	142.0' 147.0'	152.0	5.0'		}	TRACE 0.002			
	i	138.0'-155.0'30% qtz laced at $40^{\circ}$ to core axis Tr sph, gal.	ו כיי	JI rspr	152.0'  gal.  157.0'	1			0.110	TRACE			
		153'-155' Quartz vein zone 60% (154.8'-155.0' - 5% gale	na 1756	ру 1-2%	162.0'	167.0	5.0'			0.002			
		155.0'-197.8' Granite locally weakly altered, 10-15% qtz laced throughout, buff to yellow-green, Tr py, galena, s	1757	2-3% py Tr	167.0'	172.0	5.0'			0.001			
		194.8'-197.8'Bluish gray qtz vein zor 1-2cm py patches.	e . 1758	gal. 2-3%	172.0	177.0	5.0'			TRACE			
		197.8'-217.3' Granite as above, 3-5% qtz laced some yellow-green alteration. Tr. py.		1-2% py		182.0				0.002			
3		217.3'-224.9' QUARTZ PORPHYRY (DIKE?)	1760	1 2 py	182.0' 187.0'	187.0	5.0' 5.0'	•	Ì	0.001			
		Gray-green very highly sheared matrix with large u to lcm large sub-rounded to angular qtz,X-tals - seemingly super imposed upon a felspar porphyrition granite.?? - possibly a sheared - meta-cryst zone.	P 1762	py Ti sph 2-3% py Ti	192.0'					0.004			
			1763	sph  Tr-1:  py	197.7'	200.01	2.3'			NIL			
										İ			

ANGINDGES - TORONTO - 344.

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-9 SHEET NO. 3

FOOT	224.9'-246.7 246.7'-251.2 251.2'-316.0	_	ESCRIPTION	1		SAMPL	-				ASSAYS	AG		
юм	70		· ·	ESCRIPTION	NO.	SUL PH	FROM	FOOTAGE	TOTAL	,		02/TON	01.10H	
1.0'	577.0"	continued		and the second second second second second second second second second second second second second second second										
1	1	217.3'-224.9'			1						1		i	
			217.3'-220.8' M t 220.9'-224.9' 3 ' Medium - buff - 10-20° to core ' QUARTZ PORPHYRY (similar to 217 250.9'-251.2' W 2 ' Medium - coarse buff - greenish 256.0'-259.3' M P @ 264.0' 3 274.0'-281.0' 2 3 281.0'-293.0' B s 293.0'-316.0' P Shear breccia a 1' QUAPTZ PORPHYRY Sharp upper and axis. Similar previous holes.	Massive quartz vein, Tr. carb $^{\text{n}}$ at $40^{\text{o}}$ to core axis.	1	DΥ	213.0		4.0'			NIL		
	Ì		220.9'-224.9'	30-40% quartz - white, barren.	1765		217.0'		5.0' 3.2'	1		NIL NIL		
- }		224.9'-246.7'	220.9'-224.9' 46.7' Medium - buff 10-20° to core 51.2' QUARTZ PORPHYI (similar to 2' 250.9'-251.2'  16.0' Medium - coare buff - greenie 256.0'-259.3'  @ 264.0' 274.0'-281.0' 281.0'-293.0'  293.0'-316.0' Shear breccia 30.3' QUAPTZ PORPHYI Sharp upper al axis. Simila previous hole in a highly s	- pink altered granite, irregular at axis, 5% quartz lacing 3-5% pyrite.	1767	2-3% py	225.21	230.01	4.8'	<u> </u> 		0.002		
İ		246.7'-251.2'		RY (DIKE - META? ZONE) 17.3'-224.9') Contacts gradational.	1769	1% py	242.0' 247.0' 252.0'	252.0	5.0'			0.003 0.009 TRACE		
				White - gray quartz vein - barren at 200 to core axis.	1771	1% py	257.0' 262.0'	262.0	5.0' 5.0'			0.001		
		251.2'-316.0'	Medium - coars buff - preents	se grained granite 5-10% quartz laced in colour.	1773	py Tr py	274.8' 277.0'	277.0	2.2' 5.0'		0.024	0.003		
			256.0'-259.3'	Massive - white gray, qtz vein, 3-5% py, Tr. sph/gal.	1	ру	282.0'			 	0.024	0.002		
1	- [		@ 264.0'	3-5% py cubes.	,,,,	ру	202.01	202.06	5.01	ŀ		0.001		
Ì	1		274.0'-281.0'	20-30% qtz lacing - pink - buff. 3-5% py minor shr-bx.			287.0' 292.0'					TRACE		
	Ì		281.0'-293.0'	Buff - slightly yellow(green) highly silicified up to 60% qtz laced - loca	1778 1779	12 P) Tr P)	297.0' 302.0'	302.0 307.0	5.0' 5.0'			0.003		
Ì		256 @ 2 274 281 293 She 316.0'-330.3' QUF Sha axi	293.0'-316.0'	Pink spots, 2-3% py.	11780	II P	307.0	312.0	5.0' 5.0'			0.002		ł
	į			at 301'-307', 309'-310',	1782	Tr py	317.0	322.0	5.0'	1	1	NIL		i
Ì	-			10% qtz laced 2-3% py.			327.0' 332.0'					TRACE		l
	-		QUAPTZ PORPHY	RY			351.7		1.2'	l		TRACE		
				nd lower contacts at 30º/60º to core r to quartz porphyries encountered in	1796	ру 1-24	358.7'	362 0	3.3'			0.002		ĺ
- 1	1		previous hole	s. Large up to 1cm qtz phenocrysts -	17700	ру	330.7	302.0	3.3	}	1	0.002		ĺ
		i	in a highly s	heared gray matrix.	1787	1% P)	362.0	367.0	5.0'			0.002		
			329.3'-330.3'	50% quartz Tr. py.	1788	1-2%	367.0' 372.0'	3/2.0°   377.0°	5.0' 5.0'			0.002 NIL		
					1	рy	377.0					0.005		
Į					ĺ									

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NAME OF PROPERTY\_\_\_\_\_ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. \_\_\_\_SA-83-9 SHEET NO. \_\_\_\_4

FOOT	AGE			DESCRIPTION				SAMPL				AU	ASSAYS	_AG	
FROM	10			DESCRIPTION		NO.	SOLPH	FROM	POOTAGE	TOTAL	``	FEASSAY		07.70m	
21.0	577.0	continued								-					
		330.3'-438.0'	greenish. St quartz veinii	near-breccia zo	ff - spotty locally ones common. Little or no acing. Local 2-3% py.										
	ļ		@ 352.0'	4-6" qtz veir py cubes 1-2			2-3% Py	389.2'	395.0	5.8'			NIL		
			360'-390'		aced 0 5-200 to core axis, Tr. sph, 1-2% py.	1792	3-5% py	395.0'	400.0	5.0'			TRACE		
				368'-370'	15-20% qtz laced - Shr-bx		ł				l	1			
				370'-372'	60% qtz vein - laced. 3-5% py cubes					! 			' :		
				385'-387'	3% py.							1		}	
			390'-438.8'		ced - light to dark green- n local shr-bx, buff - pin aching	1794	Tr py		405.0 409.7 418.5	5.0' 4.7' 5.5'			0.001 TRACE 0.019		
				390'-395.5'	20% qtz laced 2-3% py cubes.	1796	ру 3% ру	429.5'	434.0	4.51		0.012	0.015		
				395.5'-398'	10% qtz laced, qtz veins buff coloured coarse granular - 2-3% py.										
				398'-405'	20% qtz laced 2-3% py cubes.										
				405.5'-407.2	' (similar to 395.5'-398.0' 1% py.	)		i L		İ	İ				
				White qtz ve 418.5' Tr -	ins @ 409.5', 411', 417'- 10% py.						•				
				418.5'-438.8	' Weakly shr-bx'd little or no qtz veining shr-bx @ 429', 430', 435'-439', 2-3% py + chl.		Tr py	434.0	438.8	4.8'		0.001	TRACE	:	

- WALLING

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-9 SHEET NO. 5

F00'	TAGE		DES	CRIPTION				SAMPI					ASSAYS	_AG	
FROM	10					NO.	10ES	FROM	FOOTAGE	101AL	`	,	07/104	02, 10w	
121.0'	577.01	continued 438.8'-455'	sharp boundarie	fine grained si	licified alteration ore axis with 1 foot	1799 1800	Tr py 2-3%	438.8' 442.8' 447.0'	447.0	4.0' 4.2' 5.0'			0.001 NIL 0.008		
			438.8'-441.0'   442.7'-445.3'   449'-455'	as above As above 5-	ነዐጀ py, Tr. galenaove ns - gray-white, ኒ"		py 2-3% py	452.0'	457.0	5.0'			0.004		
		455'-484'	Altr'd medium g	chlorite wis ranite	ps.			482.0' 483.5'					0.003		
		484'-488'		Shr-bx'd, Tr Zone o core axis, 20%		l		488.31	l				0.006		
		493'-506.0'			· · · · · · · · · · · · · · · · · · ·			492.0' 497.0'					0.004		
			493'-495' 495'-499'		, 3-5% py. eached - yellow - buft Q.v. Tr. py, felspar patches.	l			<u> </u>						
				495'-496.5'	•										
				500.5'-506.0	'Altered shear-bx'd zone.										
				501'-502'	Shr-bx (as 495'-499')	)									

NAME OF PROPERTY ST. ANTHONY GOLD MINE (AUBET)
HOLE NO. SA-83-9 SHEET NO. 6

FOOT	AGE						·	SAMP	. E			ΑU	ASSAYS	AG	
FROM	TO 577.01		DESC	CRIPTION		NO.	SULPH	780M	7001AGE	TOTAL	•	REASSA	02/10#	01/10#	
121.0'	577.0	continued 493'-506.0'													
		506'-577	gray and or shearock up to 1% - py-po developmen 534'-535' 551'-553' 555.5'-558.5' 559.5'-562' \$63'-577'	ered medium gra ir breccia zones locally 2-3% py it.  1% py po.  Buff - gray Very coarse 1/2-1" qtz vei Tr. py.  Local zone c 1-2' section 567'-577'  575'-576.5'	grained, Tr pink altr. in gray 20% to c-axis of fracture bx over ns. 3-5% diss. dendritic py/po.	1808 1809 1810 1811 1812 1813 1814 1815	2% Py 1-2% Py 1-2% Py 1-2% Py 2% Py 2% Py 2% Py 2% Py 1% Py 2% Py	537.0' 552.0' 557.0' 562.0' 567.0' 672.0'	532.0 537.0 542.0 557.0 562.0 567.0 572.0 577.0	5.0' 5.0' 5.0' 5.0'		0.002	0.006 0.022 0.002 TRACE 0.003 NIL 0.002 0.006		
				э.н.											

NAME OF	PROPERTY	St. Anthony	Gold (Aubet)		
HOLE NO.	SA-83-10	LENGTH	1008.01		
LOCATION					
LATITUDE	1 + 66 S	DEPARTURE .	3 + 03	W	
ELEVATION		AZIMUTH		DIP	-670
STARTED_	1000 10/02	_ FINISHED	June 23	/83	

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH
100	-650	<del> </del>	600	630	
200	-640		700	620	1
300	-640		800	620	
400	-630		900	610	
<u> </u>	- 630				

HOLE	NO.	SA-83-1	O SHEET	NO.	l_
REM	ARK	s			

J. HINZER

0 O T A	GE		DESCRIPTION			5 A M P	LE			AU A	S S A `	AG	
ROM 7	70			NO.	SUL PHI IDES	FROM	TO	TOTAL	×	REASSA	02/TON	02/10H	
0   18	8.0'	CASING (17.0' ove	rburden)										
8.01 26	6.4	GRANITE										]	
		common groundmass,	- medium grained, felspar grains 2-3mm white gray patches of mafic minerals. Local ouff-yellow-green. %" clear-gray qtz veins										
		Local 1-2" re cyanite tailings,	ddish dark rusty brown alteration due to Traces of py on 4tz veins.			 							
		23.6'-26.4'	green gray - fine grained INTRUSIVE sharp upper/lower contacts at 80° to core axis very fine grained - possibly sheared. Felsic composition 1-2% .1mm py specks.	1817	1-2%p	y 26.0'	29.0'	3.0'			0.002		
6.4' 37	7.4'	ANDESITE	sneared dark green, strong at 0-10° to core axis carbonate veins and spleshes common, locally cherty and silicified up to 1-2% py. Lower contact at 30° to core axis, local gneissic texture. ? Possible fault zone?	1818	н	29.0'	32.0'	3.0'			NIL '		
7.4' 190	0.4'	GRANITE	as (18.0'-26.4' above) - many strongly bleached, altered zones, some local strong quartz veining, generally very little qtz.	1819	Тгру	42.2	46.9	4.7		0.014	0.016		
		60-63.4	bleached, slightly quartz laced. ½" quartz veins at 10° and 70° to core axis Iv-1% py.	1820	1≵ ру	59.51	63.4	3.9'			0.001		
		78-84.6	moderately Shr-bx - fine grained, 4-6" quart: vein @ 84.0' - 20-30% qtz laced, Tv py.	1821	Tr py	81.0'	85.41	4.0'			NIL		

NAME OF PROPERTY St. Anthony Gold Mine (Aubet)
HOLE NO. SA-83-10 SHEET NO. 2

FOOT	AGE					SAMP	E				ASSAYS	AG
FROM	10		DESCRIPTION	NO.	1065	FROM	FOOTAGE	TOTAL	`	3	01/198	6/ 10m
37.4	190.4	continued										
		•	93.5' - local Shr-bx and bleaching centred on l" gray-white quartz	1822	3% py	93.01	97.4	4.0'			0.004	
		94.5'-102	<ul> <li>bleached altered zone, yellow-green. 94.5-97.0 strong Shr-bx, 1" py vein 0 70° to core axis in bleached zone 0 95.0'.</li> </ul>	1823	Tr py	97.0'	101.7'	4.7'			0.003	
			99–101 strong Shr-bx and bleaching qtz laced 10–15%, Tv py.									
ļ		118.8'-121.0'	<ul> <li>Moderately shear-bx and altered large 3-4cm clear qtz patches, py paint.</li> </ul>		2-3%	119.0' 127.0'					0.001	
		128.0'-151.0'	<ul> <li>Major alteration shear zone. Lt gray core (resembling gray granite in previous holes) faint yellow green alteration - moderate to heavy shear bx - throughout. Local py patches</li> </ul>			131.0'					0.001	
ļ			up 2-3% py some qtz veins.	1	1	136.0'	1	i !			NIL	
			130-135 strongly sheared 141-141.8 mafic dike, 1-2% diss py. sulfides 128-129 3% py, 139-143, 2-3% py	1828	1 <b>2</b> py	153.0'	158.0	5.8'			0.004	
		151.0'-169.0'	weak to moderate shear-breccia slightly altered.	1829	1 <b>%</b> py	168.0'	173.8	5.8'			0.001	
ļ		169.0'-177.0'	moderate to strong shear-breccia 20% qtz lace - 6" @ 172.8' locally bleached	1830	r py	173.8'	178.0	4.2'			0.006	
ł			1-2% py.	1831	ћ% ру	178.0	183.0	5.01			0.002	
		177.0'-190.4'	weak to moderate shear breccia contact at 30° to core axis - irregular			183.0' 188.0'					TRACE	
										)   		
							}	1	1			]

911 990 - OLMOSOT - 880

NAME OF PROPERTY St. Anthony Gold Mine (Aubet)

HOLE NO. \$A-83-10 SHEET NO. 3

F001	AGE		DESCRIPTION				SAMPL				AU	ASSOYS	.AG	
FROM	то		DESCRIPTION	NO.	1015		HOM	FOOTAGE	TOTAL	•	REASSAY		61,104	
		continued		1		1	**				1			
190.4	302.8'		MASSIVE ANDESITE (Flow)	Ì										
		carb <sup>n</sup> -veins up to 1/ veins. Some section	, very fine grained homogeneous, minor 8" throughout, Tr-1% py, occasional quartz s appear as flows with periodic 1-2" zones Other sections are very massive and	1834	Tr p	y 21	06.0'	212.0	6.0'			NIL		
			190.4-205 Hassive andt 205 -220 Pillowed flow	1835	Tr p	y 2	30.4	235.7	5.3'			0.003		
		235.2'-245.0'	220 -235.2 Massive andt, bleached Tr py OUARTZ PORPHYRY	1836	Tr p	y 2.	35.7'	241.0	5.3'		<u> </u>	NIL		
			as in previous holes - light gray matrix fine grained with large dark gray up to lcm quartz phenocrysts angular to sub angular. Tr py/po. 2" white qtz vein at centre, 6" white qtz vein at base. Upper/lower contacts sharp at 80° to core axis.	1										
			245-267 - contorted shrd pillowed andesite local amphibolite patches	1837	Tr p	y 2	44.4'	250.0	5.61			NIL		
			267-302.8 - contact zone - intermixed altered, locally amphibolitized ondesite and diorite.	1838	Tr p	у 2	78.8'	283.0	5.0'			NIL		
		a d 2 2 2 2 2 2 5	267-283 - shrd, amphibolitized 2-3% py 283-285 - diorite 285.5-288.5 - silicified, shrd, chloritized	1839	Tr p	y 2	83.0'	288.0	5.0'		0.005	0.013		
			carb <sup>n</sup> , zone 2-3% py 288.5-291 (as 267-283) 291-302.8 highly shrd - local 1-2cm azure	1840	Tr p	y 2	97.0'	302.0	5.0'			NIL		
			blue qtz patches 0 298.0' shrg at 5-100 to core axis	1841	Tr p	у 3	02.0'	305.0	3.0,			NIL		
					1									

NAME OF PROPERTY St. Anthony Gold Mine (Aubet)

HOLE NO. SA-83-10 SHEET NO. 4

F001	TAGE	DESCRIPTION			SAMPL	. F				ASSAYS	AG	
FROM	10	DESCRIPTION	NO.	% SULPH IDES	FROM	FOOTAGE	TOTAL	``	,	02/10#	61/104	
		continued										
302.8'	3)1.7'	Diorite Spotted dark mafic grains on white felspar ground mass 1-3m mafic grains, local 1-4" blue gray shear zones - silicified	1842	Tr py	311.8'	316.2	4.4'			NIL		
311.71	321.5	Amphibolitized Andesite (as 267-283 above)	ļ									
321.5'	335.61	Diorite (as 302.8'-311.7' above) locally more abundantly shrd.	1843	Tr py	333.0'	336.7	3.71			0.001		
335.6	361.0	Amphibolitized Andesite (similar to 311.7'-321.5') - highly sheared section, several 6"-1 foot diorite and or amphibolite zones. Strong shearing at 10-20° to core axis. Locally 2-3% po Tr cpy.	1844	Tr p)	346.5'	352.5	6.0'			0.005	:	
361.0	372.5'	Diorite (as 302.8'-311.7' above) - strongly sheared at lower contact	1845	Tr p:	372.0'	376.0	4.0'			NIL		
372.5'	440.0'	Amphibolitized Andesite (similar to 311.7'-321.5') - very highly sheared. Significant quartz-carb veining @ 732.0'-375.0', gray quartz vein at		Tr py		377.6	1.6'			NIL		
	!	376.0'-377.0' with Tr py, po, cpy @ 200 to core axis 4-6" quartz veins Tr py, chlorite fleks at 20-300 to core axis at	1847	Tr py	377.6'	1	l			0.009		
ĺ		403.5'-405.0', 408.0'-409.0' at 409.5' - azure blue qtz - (alteration) fragments Tr py/cpy	1	CDY	403.0'	]	l		•	NIL		
!		424-432 - massive andesite 432-440 - sheared quartz laced brecciated 10-20% - contact zone.	1849	Tr p)	y 433.0'	438.0	5.0'			NIL		
440.0	553.0	Diorite	1850	Tr p	438.0°	443.0	5.0'			NIL		
		Massive (as above 302.8'-311.7' etc.) many local sheared sections, bluish gray - local qtz veining and Tr-1% py.  @ 459 - l foot quartz vein			y 443.0' y 461.0'					NIL TRACE		
	İ	462-465.5' - dark blue gray shear zone 3" white	1853	Tr p	ن518.0 لو	523.0	5.0'	İ		NIL		
		q.v. Tr py, chlorite 517-548 - dark gray shear zone Tr-1% py	1854	Tr p	y 523.0'	528.0	5.0'	l	1	NIL		
		517-548 - dark gray shear zone Tr-1% py 544-545 - white-buff qtz vein - barren			y 528.0' y 533.0'					0.001 NIL	1	
		lower contact at 30° to core axis shar	1857	Tr p	544.0'	546.5	2.5'			NIL		
			1				1					

NAME OF PROPERTY St. Anthony Gold Mine (Aubet)
HOLE NO. SA-83-10 SHEET NO. 4

70		DESCRIPTION	1							AU	AG	
The second secon			NO.	S SULPH IDES	FROM	FOOTAGE	10141	,		02/104	01.704	
continu	ed											
5.5' An Fi Py	desite ne grained mas . cpy. @ 571.0				568.0'	573.0	5.0'			NIL		
Ma	ssive (as abov	ve 440.0'-553.0'). Many sheared sections, iroughout.	1859 1860	1% py Ir py	573.0' 624.1'	578.0° 626.6'	5.0' 2.5'			NIL NIL		
1	582-584	bluish shear zone 1-2% py	1861	Tr py	636.7	642.7	6.0'			NIL	}	
	624-626		1862	Tr py	642.7'	648.0	5.3'		İ	NIL		
		i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire	1863	Tr py	654.6'	660.6	6.0'			NIL		
	630-669.2	rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at	1864	Тг ру	660.6'	666.2'	5.6'			NIL		
Hi	ghly sheared.	strongly chloritized and many amphibole zone	s. 1865	2-3%	671.0'	677.4	6.4'			NIL		
51	rong azure bli	ue altered quartz patches with 2-3% py locall	1866	ру 2-3% Ру	684.0'	690.5	6.5'			0.001		
Si	milar to 1576	.5-669.2'). Mostly strongly sheared. Locall	y 1867	2-3% py	701.6'	706.6'	5.0'			NIL		
	700-731.2	bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.		1-2%	730.0		5.0' 3.0'			N1L 0.003		
	728-731.2	gradational contact. Shrd. buff-gray colour At granite contact (irregular) 4" blue quart 2-3% py.	ed 2									
5.	5' An Fi py ba 2' Di Ma 1-	Fine grained mas py. cpy. @ 571.0 base.  2' Diorite Massive (as about 1-2% py diss. the S82-584 624-626  630-669.2  Amphibolitized Highly sheared. Strong azure blue Similar to \$576 2-3% py.  700-731.2	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss py. cpy. @ 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones Strong azure blue altered quartz patches with 2-3% py locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray colour. At granite contact (irregular) 4" blue quart	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  2' Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 1867 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg, at 100 to core axis - bluish faint felspar in qtz veins 728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 1866 2-3% py  Diorite Similar to (576.5-669.2'). Mostly strongly sheared. locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg, at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with 1"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 1865 2-3% py  Diorite Similar to (576.5-669.2'). Mostly strongly sheared. locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  2' Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally  Diorite Similar to (576.5-669.2'). Mostly strongly sheared. locally 2-3% py 700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 1866 2-3% 684.0' py 1866 2-3% 684.0' py 1866 2-3% 684.0' py 1866 2-3% 701.6' 706.6' 5.0' 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg, at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd, buff-gray coloure At granite contact (irregular) 4" blue quartz	Andesite fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone 7r py occasional 1"-4" bluish shear zones with i*-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 2.2'  Diorite Similar to (576.5-669.2'). Mostly strongly sheared. Locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite fine grained masssive, homogeneous possible flow. 1-2% diss. pp. 568.0° 573.0° 5.0° pp. cpy. 6 571.0° 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0°-553.0°). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py 0ccasional 1"-4" bluish shear zones with i*-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis - zerbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 2' Diorite Similar to (576.5-669.2'). Mostly strongly sheared. locally 1867 2-3% py 700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg, at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd, buff-gray coloured At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with i"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-6692 major bluish shear zone - resembles a sheared rhyolite tuff locally, shearing almost parallel to core axis. Throughout the entire healing fractures on breccisted zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 2-3% py.  Diorite Similar to (576.5-669.2'). Mostly strongly sheared. locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py @ 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloure At granite contact. Shrd. buff-gray coloure At granite contact. Shrd. buff-gray coloure At granite contact (irregular) 4" blue quartz	Andesite Fine grained masssive, homogeneous possible flow. 1-2% diss. py. cpy. 6 571.0' 6" variolitic or cherty - amphibolitic at base.  Diorite Massive (as above 440.0'-553.0'). Many sheared sections, 1860 % py 568.0' 573.0' 578.0 5.0' NIL 1-2% py diss. throughout.  582-584 bluish shear zone 1-2% py 1861 % py 636.7' 642.7' 6.0' NIL 624-626 bluish shear zone Tr py occasional 1"-4" bluish shear zones with 1"-1" clear-gray qtz veins at 10"-30" and 600-700 to core axis. Throughout the entire section.  630-669.2 major bluish shear zone - resembles a sheared rhollite tuff locally, shearing almost parallel to core axis - carbonate often healing fractures on brecciated zones at 637-645, 659-663 (best quartz veins).  Amphibolitized Andesite Highly sheared, strongly chloritized and many amphibole zones. Strong azure blue altered quartz patches with 2-3% py locally 1865 2-3% 684.0' 690.5' 6.5' 0.001  2' Diorite Similar to [576.5-669.2'). Mostly strongly sheared. locally 2-3% py.  700-731.2 bluish sheared zone, chl, ser, Tr py 6 705 - shrg. at 100 to core axis - bluish faint felspar in qtz veins.  728-731.2 gradational contact. Shrd. buff-gray coloured At granite contact (irregular) 4" blue quartz

NAME OF PROPERTY St. Anthony Gold Mine (Aubet)
HOLE NO. SA-83-10 SHEET NO. 5

FOOTAGE		DESCRIPTION		SAMPI E						AU ASSIJ S			
FROM	70		DESCRIPTION	NO.	10€5	FROM	F001AGE	TOTAL	•	EASSAY	01, 104	ue	
731.21	70	in top of hole. Mo to moderately shear brecciated sections	d, mottled (due to mafic grain patches) as any local buff-sections altedred and weakly received. Stronger qtz-laced and shear and local po, py massive zones.  medium gray - buff local alteration and quartz veining. Some massive and diss. po and py.  734-742 - 5-10% quartz laced locally shear-breccia 1-2% py Tr po.  742-751.5' - darker more regular less	1870 1871 1872 1873 1874	1-2% py po 2% py po 1-2% py po Tr py 1% py po 3% py	733.0° 738.0° 743.0°	738.0° 743.0° 748.0° 753.0° 758.3° 776.0°	5.0' 5.0' 5.0' 5.0' 5.3' 3.0'		0.002	0.4 '2 0.002 0.014 TRACE TRACE		
			altered granite rare quartz veins.  751.5'-765' - buff coloured - yellow green alteration occasional darker shr-bx, 5% qtz laces - 2-3% po py.  765-783 - shear-brecciated and altered - mass. qtz vein, po.  776-777 - white qtz vein 75% sulfides massive po - 95% py 5%.  780.8 - 2" white qtz vein 10% pyrite	1877 1878 1879 1880 1881	5% py 5-10% py po 3% po py 1-2% py 2% py 2% py	778.0'	783.0 1 788.0 1 793.0 1 801.0 805.4 1	5.0' 5.0' 5.0' 5.3' 4.4		0.016 TRACE	0.009		
		783-860	heavily altered - strongly - Shr-bx locally with 10-30% quartz lacing 2-3% po. py.  783-800 - 10-15% qtz laced white-gray qtz veins (2-6") local shr-bx 3% py po  783-788 - 3-5% py po.  800-804 - massive - white-clear quartz vein 11 to core axis - 75% quartz - 1% py at margins.	1884 1885 1886 1887 1888	Py Py Po Py Py Py Py Py Py Py Py Py Py Py Py Py	816.0° 821.0° 824.5° 831.0° 836.0° 841.0°	824.5 1 831.0 1 836.0 1 841.0 1	3.5' 6.5' 5.0' 5.0' 5.0'			0.005 0.004 0.003 0.001 0.002 0.001 0.001		

300



NAME OF PROPERTY St. Anthony Gold Mine (Aubet)
HOLE NO. SA-83-10 SHEET NO. 6

FOOTAGE		OKECHIRAIAN				SAMP	L.E		ASADYS AG				
FROM	10	1	DESCRIPTION	NO.	1010	FROM	7007AGE	TOTAL	· ·	· ·	87/104	02/100	
		continued				1				<b> </b>			
,			804-816 - 10% quartz laced - altered, shear-bx.		ру	851.0'	İ				0.002		
			811-816 - 60% qtz laced - shr-bx	1891	2% py	856.0'	861.0	5.0'	1		0.001		
	(		818-819 - 30% qtz lace - shr-bx 1-2% py	1892	3-5%	861.0	865.0	4.0			0.002		
			820-824.5 - 5% qtz-lace - shr-bx 1-2% py	1803	py	876.0	880 0	4.0'			0.002		
			824.5' - 3% py on 2" qtz vein.		po	I		l			0.002		
	1		828-860 - 20-25% quartz laced - 4-6" quart:	1894	5% py	885.5'	891.9	6.4	1		TRACE		
			vein sections associated with shr-bx zones local patches of 10-15% po (py) and chlorite - in quartz veins.	l	po	891.9'		!			TRACE		
	1	]	831-836 - shear-breccia zone	1896 1897	Tr py	907.6'	913.0	5.4' 6.0'			0.004		
			832.8-833.5 massive quartz vein zone barren	l	po 2-3%	925.0	1	1			0.001		
			833.5-836 - 15% quartz laced (10% po., chl.)	1	2% py	930.0	1	3.0'			TRACE		
	1		838-840 - shr-bx	1900	2% ps	933.0'	938.5	5.5'	l		TRACE		
			840-841 - shr-bx		po	1	Ì						
			843.5-845 - shr-bx 2-4" qtz veins 2-3% py po										
			849-851 - shr-bx 2" qtz veins 2% py po				j		1		1		
		860-B86	5-10% quartz laced - less sheared and brecciated then above - more granitic unaltered.		i.			:					
			862-864 - 10% qtz lace 1% py			1	1				1		
			867.5-868.8 - shr-bx 1% p/, 2"qtz vein	1				[					
			871-872 - 10% qtz lace. Tr-1% py, or 1 qtz veins.										
			876.5 - 2" qtz vein 25% po, 3% py.						1				
					1								

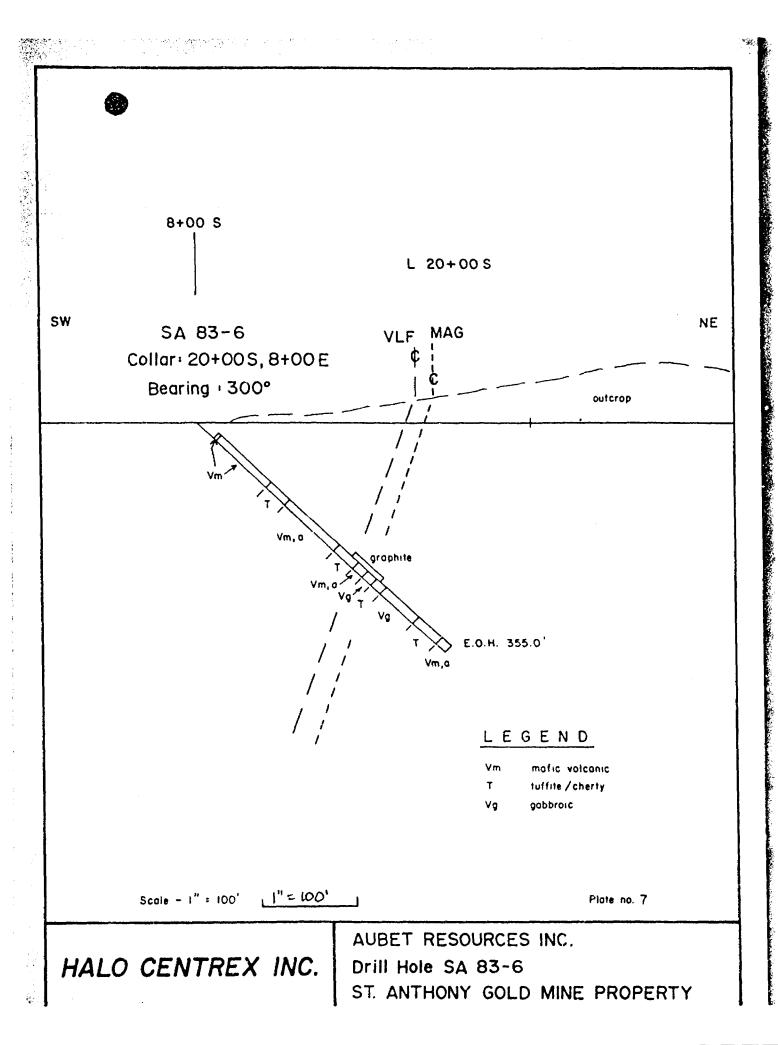
NAME OF PROPERTY St. Anthony Gold Mine (Aubet)
HOLE NO. SA-83-10 SHEET NO. 7

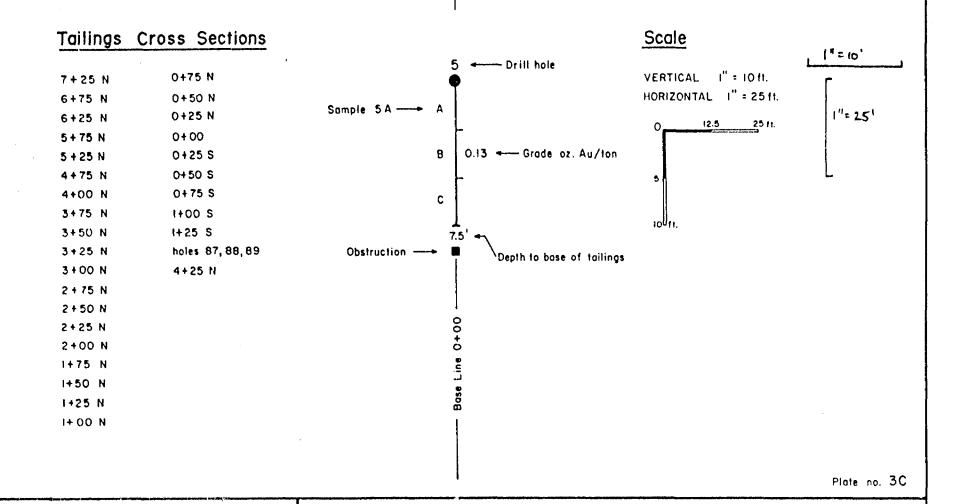
10	continued	DESCRIPTION	NO.	& BULPH					·	ASSAYS 5 02/10H 02/10H					
	continued			1065	FROM	F001AGE	TOTAL	•	` `	01/100	POT - 10				
										}					
	<u>'</u>	877-879.5 - buff coloured.						j							
	886-899.5	moderately sheared and altered.	,				j								
		887-888 - 80% quartz laced gray qtz 2% py+po.													
		890-891 - shr-bx 6" qtz vein 10% Trpy/cpx						ļ							
		892.7-894.5 - shr-bx 10% qtz, 2% py po.					[		[	•					
i		897-898.2 - shr-bx 4" qtz vein 1% py po.	l						1						
	899.5-923.0	dark granite, 70% buff altered, local shear breccia.													
		905-906 - shr-bx 5% qtz Trpy	l				ĺ								
		908-908.8 - shr-bx					}		}						
		911-913 - shr-bx 1% py			 				)						
		918-923 - several 1" qtz veins $\theta$ 70° to core axis.						ļ							
	923.0-943.0	Dominant buff gray-alteration, 15% quartz laced, local shear breccia													
		923-925 - 15% qtz laced - bleached, barren 4° q.v.							}						
		926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py.													
		929-931.4 - shr-bx strong 6" qtz vein, chl, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937.													
		937-943 - weakly altered, 5% qtz laced buff gray													
					}				-						
			890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 70° to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 70° to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 70° to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 70° to core axis. 923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 700 to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 22-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins 8 70° to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, chl, 30% po, 3% py shr-bx Trpy 8 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 70° to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, chl, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpy 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 700 to core axis. 923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, chl, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpx 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 700 to cord axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, chi, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced	890-891 - shr-bx 6" qtz vein 10% Trpy/cpx 892.7-894.5 - shr-bx 10% qtz, 2% py po. 897-898.2 - shr-bx 4" qtz vein 1% py po. 899.5-923.0 dark granite, 70% buff altered, local shear breccia. 905-906 - shr-bx 5% qtz Trpy 908-908.8 - shr-bx 911-913 - shr-bx 1% py 918-923 - several 1" qtz veins @ 700 to core axis.  923.0-943.0 Dominant buff gray-alteration, 15% quartz laced, local shear breccia 923-925 - 15% qtz laced - bleached, barren 4" q.v. 926.5-927.5 - shr-bx, bleached 2" q.v. 2-3% po, py. 929-931.4 - shr-bx strong 6" qtz vein, ch1, 30% po, 3% py shr-bx Trpy @ 934-935, 936-937. 937-943 - weakly altered, 5% qtz laced			

HOLE NO. SA-83-10 SHEET NO. 8

FOOT	AGE		DESCRIPTION				SAMP				AU ASSAYS				
f nou	10	1		DESCRIPTION	W0	441	-7400	TORTAGE	1.672.	•	TASSAT	61/100	61 160	424.2	
		continued	1												
			943.0-958.0	dark gray, unaltered granite, local buff coloured or shr-bx zones 1% py shr-bx @ 947.8-949, 952-953, 954-955.	ļ	Dy DO	948.0° 954.0°	1				TRACE			
			958-1008	altered granite with local buff (bleached) shr-bx, and quartz veined zones. Average	Ĭ	ру ро 1-2%	959.51					0.002		! [	
				2% py + po with common chl, py - on most slips, diminishing down section.	1904	py po 2% py po	964.01	969.0	5.0'			0.001			
				959-961 - shr-bx	1905	1	969.0'	974.0	5.0'	}		0.001		ĺ	
				959.4-961.3 - qtz-vein zone <u>5% po</u> 2% py	1906	po py 2% py po	974.01	978.0	5.0'			0.001			
				963-964 - shr-bx, bleached, several 1-2" q.v. 2% po py.	1907		978.01	982.5	4.51			0.001	!		
1				967 - 6" shr-bx minor q.v. 2% po py.	1908	py po	982.5	987.5	5.0'			0.001		ĺ	
	-			968-972 - lightly bleached - 5% qtz laced 1-2% py po.			987.5' 992.5'				0 001	TRACE 0.012		,	
				973.5-975 - buff-altered 2% py. 975-977.8 - qtz vein - shr-bx zone 40% qt.	11911	py 2% py	1000.0	003.8	3.8'			0.003			
				1-2% sph - 1-2% py, po Tr cpy. 978.5 - 2-3" shr-bx.	1912	ру ро	1003.81 DMP051T	l	4.2'			TRACE 0.020			
1				981 - 4" shr-bx 1% py.		`						0.020			
				983-985 - bleached - shr-bx, 30% qtz 2% po, py Tr cpy											
				986 - 2" barren white q.v.	l		1								
				988.5-989.5 shr-bx + 30% qtz - barren, 1-2% chl, 3% py 1% po.											
				999.6-1003 - qtz laced 30-40% qtz 2% po, 7% py buff-gray.											
				1006.5 - 2" q.v. 2% py, po.											
I															

at Canadada agos



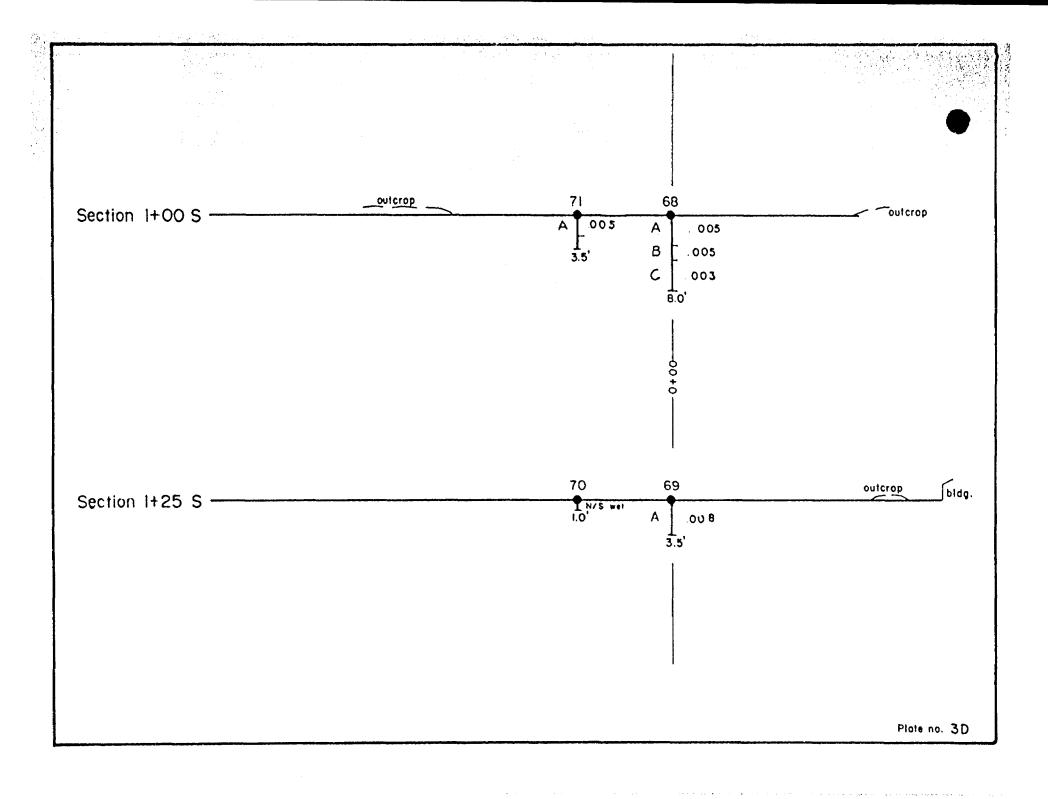


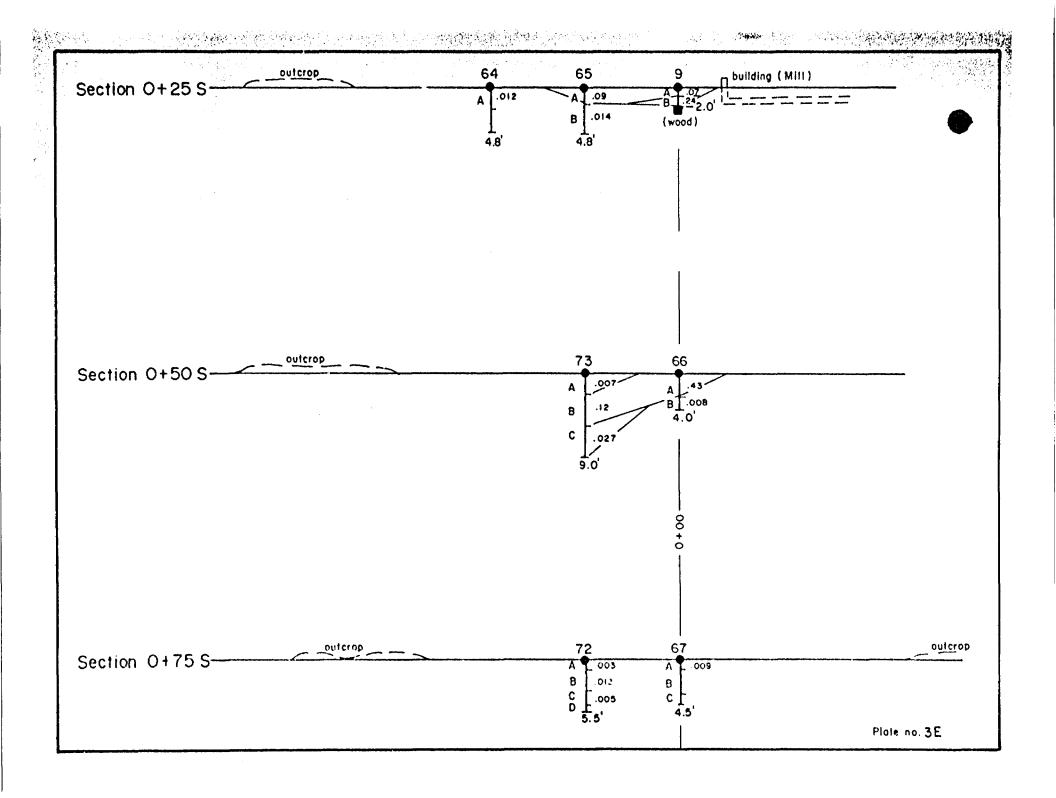
LEGEND FOR TAILINGS CROSS SECTIONS (Plate 3D - Plate 3L)

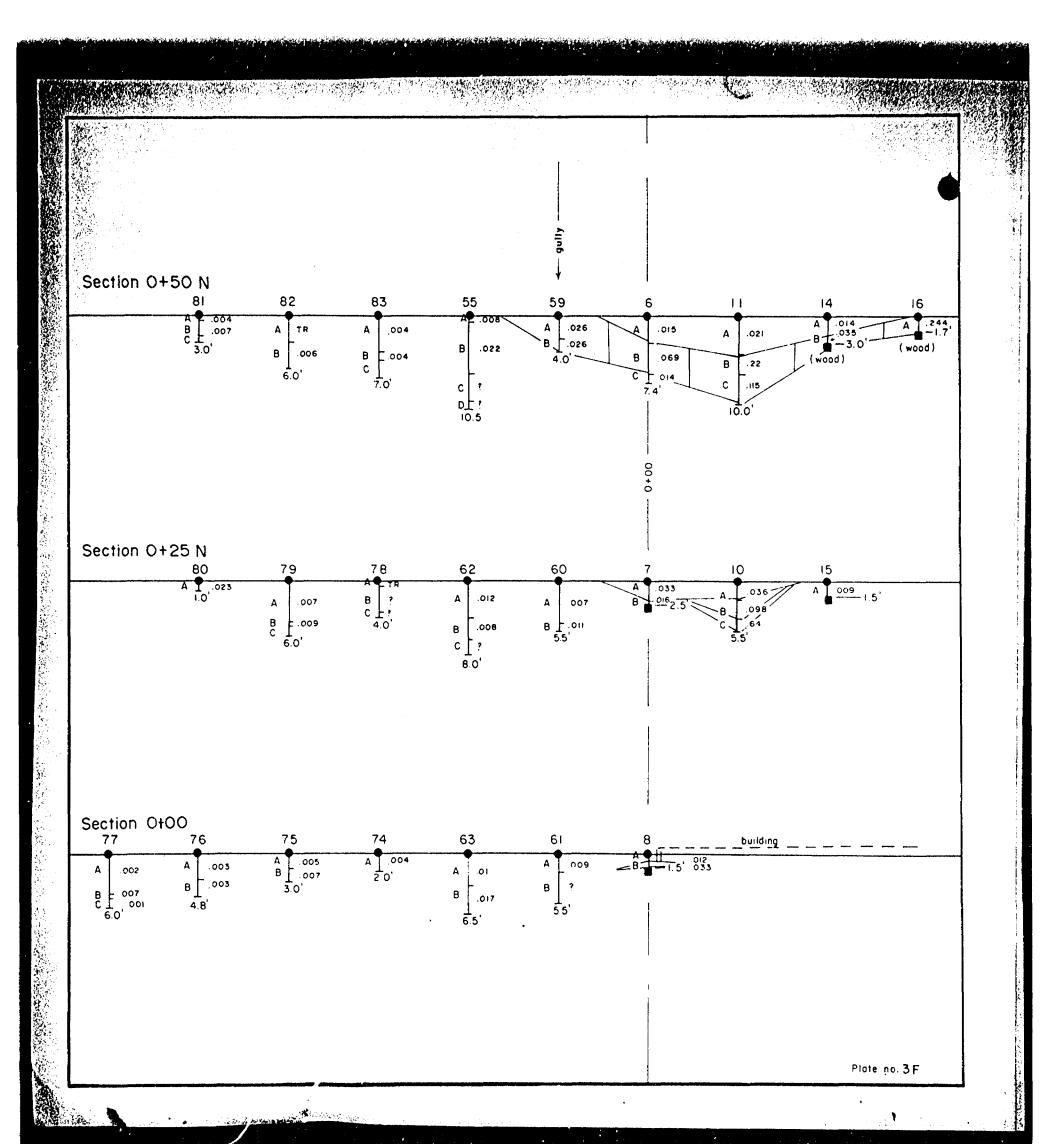
AUBET RESOURCES INC.

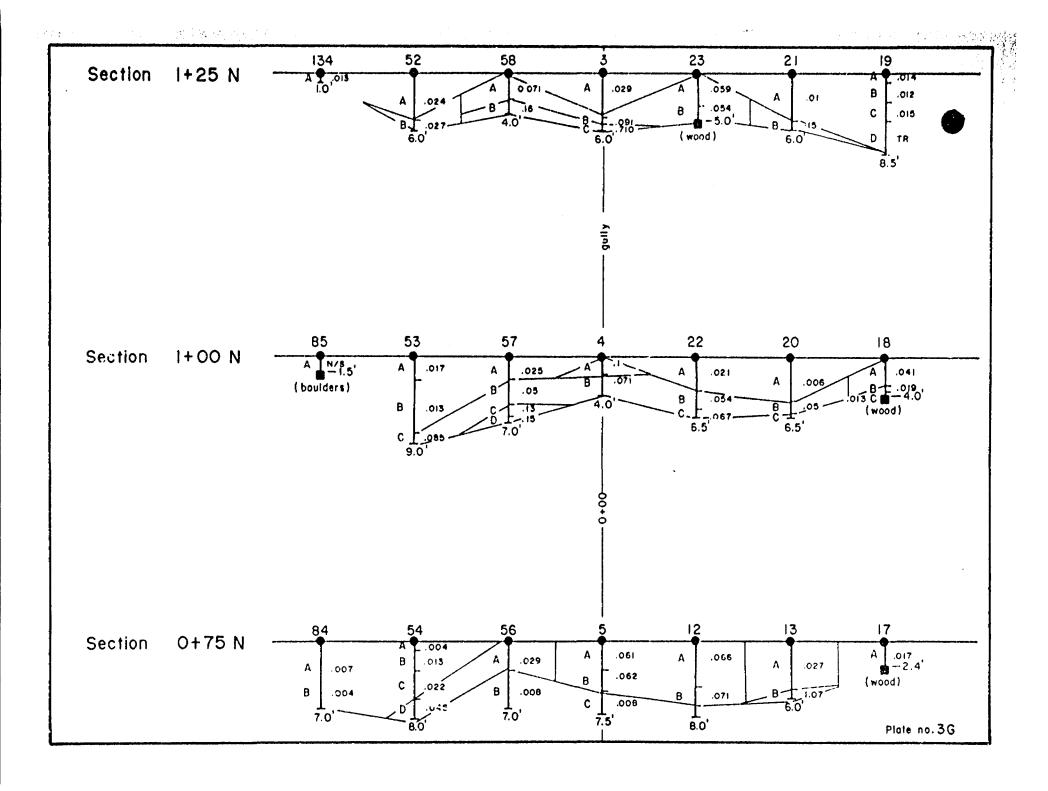
ST. ANTHONY GOLD MINE PROPERTY

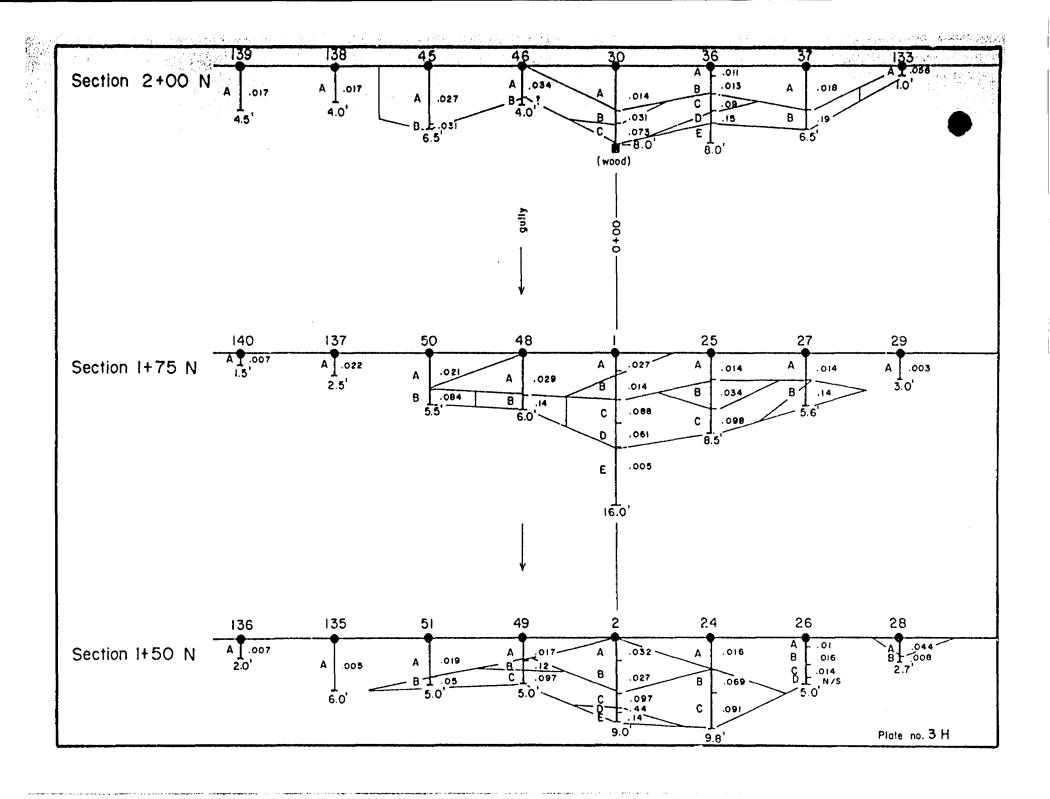
HALO CENTREX INC.

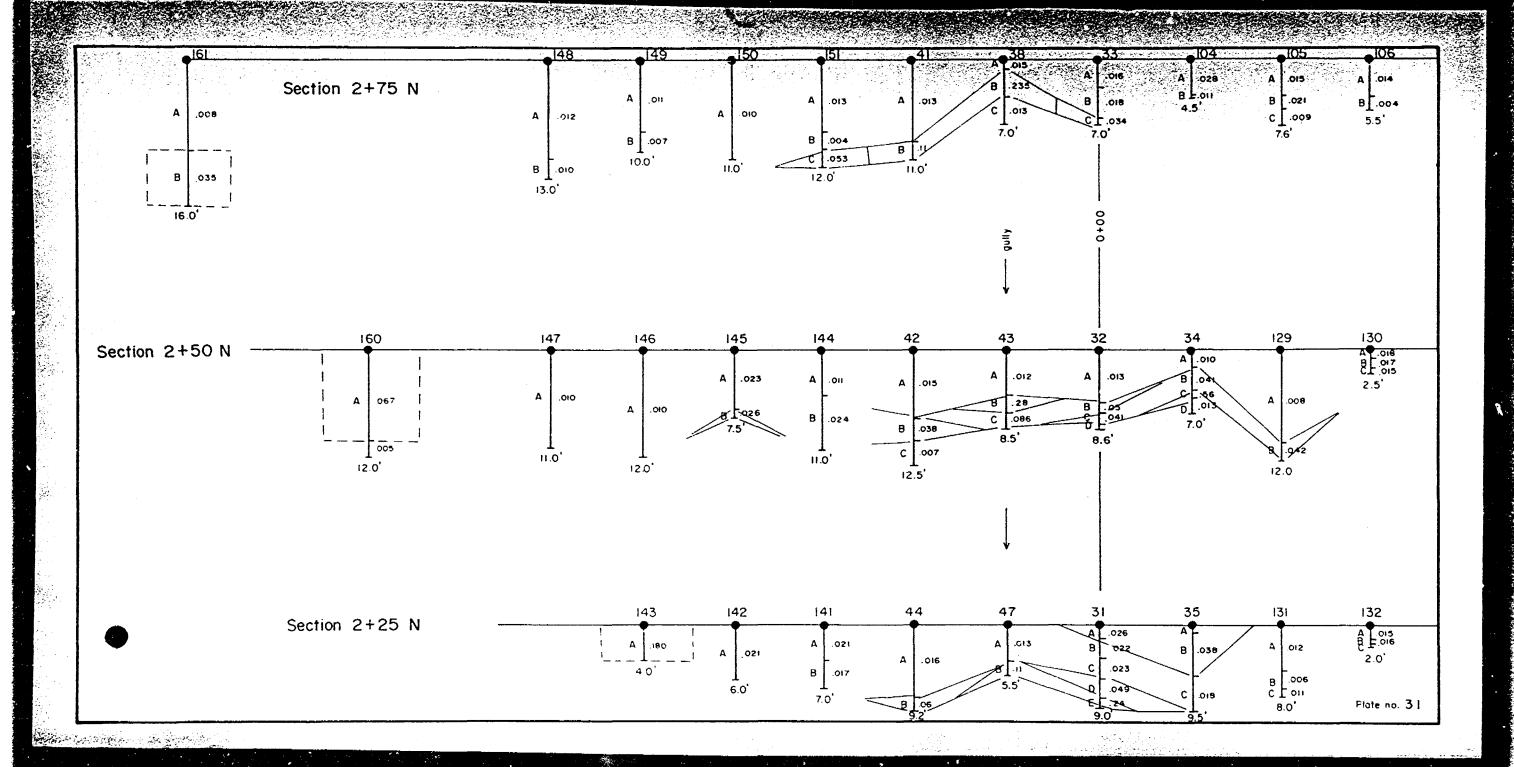










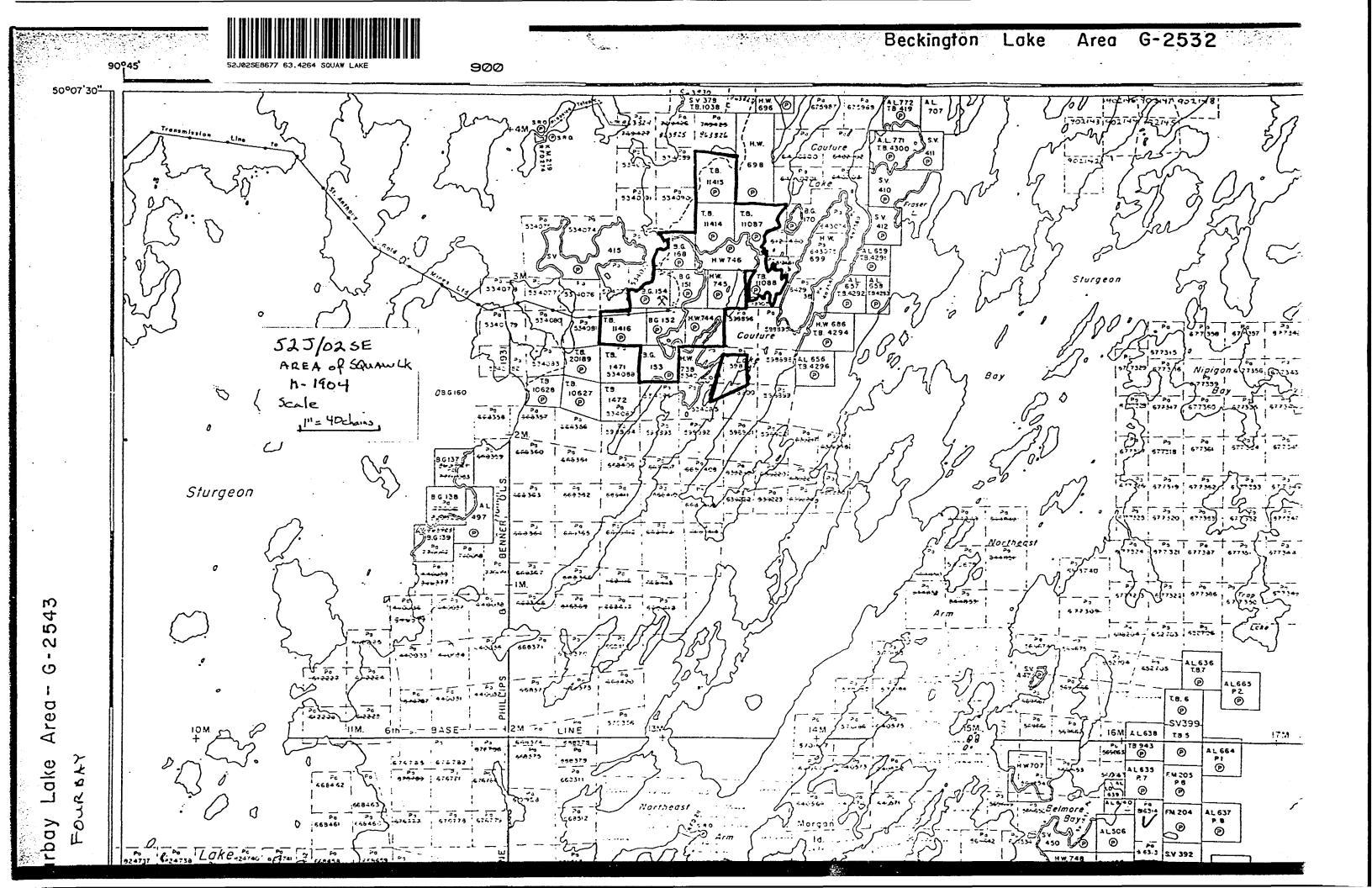


APPENDIX E

Exploration Expenditure Summary
May 6 - September 15, 1983

#### Appendix E: Exploration Expenditure Summary - May 6 - September, 1983

1.	Diamond Drilling		\$66,526.50
2.	Tailings Sampling		18,759.63
3.	Assays		10,206.08
4.	Geologist		6,943.33
5.	Supervision		4,000.00
6.	Reports		3,133.33
7.	Shaft Fencing		5,175.00
8.	Associated Expenses - travel, sequipment, administration	supplies,	10,185.12
		Total	\$124,928.99

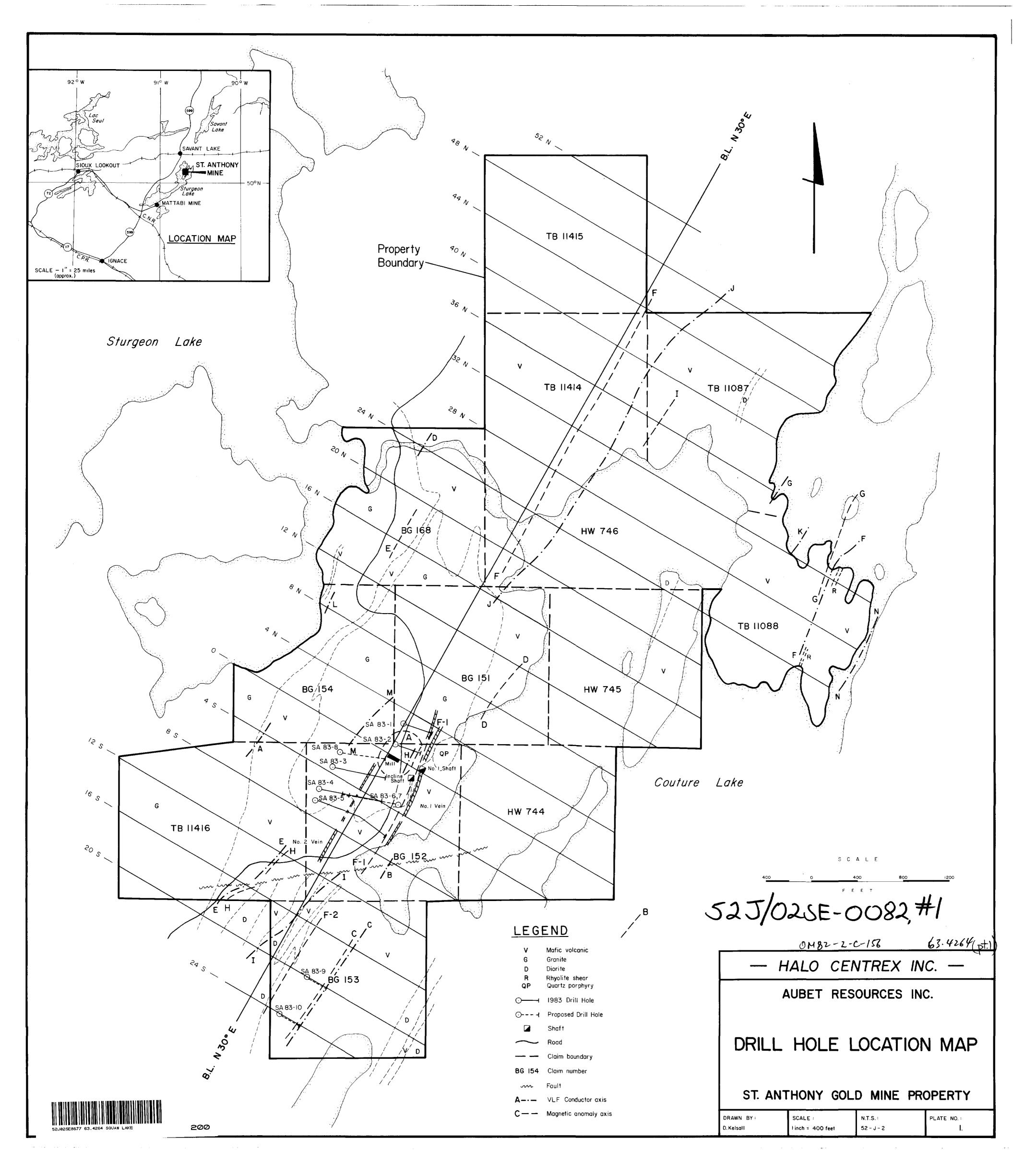


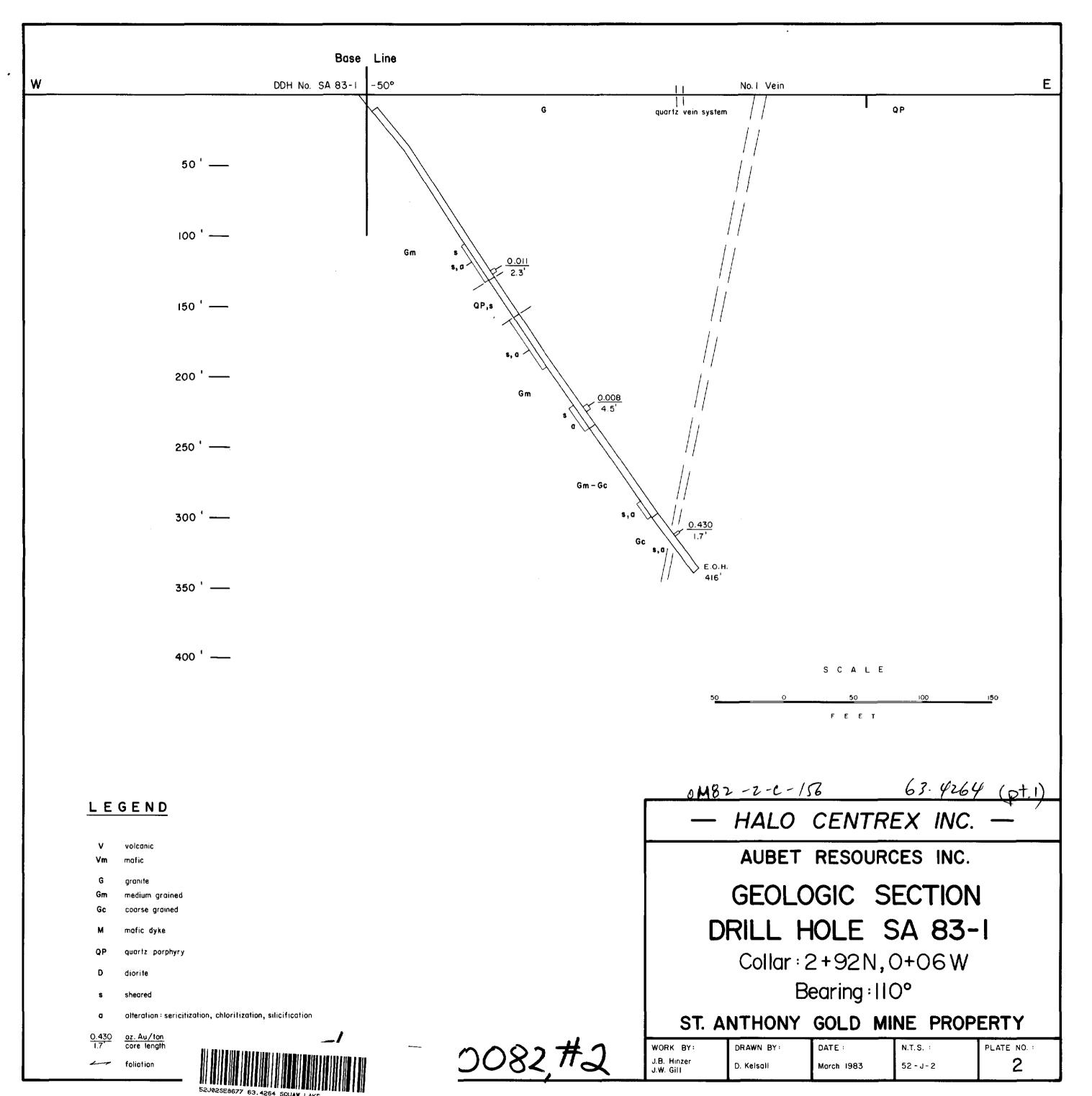
# FOR ADDITIONAL

INFORMATION

SEE MAPS:

525/02SE-0082 #1-24





Base Line DDH No. SA 83-2 No. I Vein 50 ' — 100 ' ---Gc 150 ' ----200 ' ---250 ' — 300 ' ----350'— 400 ' ---SCALE ⊦ € E 1 OM 82-2-C-153 63.4264 (pt.1)

— HALO CENTREX INC. — LEGEND volcanic AUBET RESOURCES INC. granite GEOLOGIC SECTION medium grained coarse grained DRILL HOLE SA 83-2 mafic dyke quartz porphyry Collar: 0+93N, 0+27Ediarite Bearing:110° sheared alteration: sericitization, chloritization, silicification ST. ANTHONY GOLD MINE PROPERTY PLATE NO. N.T.S. WORK BY: DRAWN BY DATE: J.B. Hinzer J.W. Gill 3 March 1983 foliation D. Kelsall 52 - J - 2

