PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8301

| | DIP TEST | | | | |
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| | Angle | | | | |
| Footage | Reading | Corrected | | | |
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Hole No. DDH 8301 Sheet No. 1 of 17
Section

Date Begun Coring July 26/83

Date Finished Coring Aug 3/83

Dep...

Bearing 125°, -60°

Flex Caller 1320m approx.

Total Depth 1,223 ft.

Logged By RB, TL

Claim Cataract 3 M.C.

Core Size NQ with water only

| Conversion | Factor 1 foot = 0.305 m. | | Recovery | | | | |
|------------|---|------------|------------------------|-------------|--------------|-----------|--|
| DEPTH | DESCRIPTION | SAMPLE No. | WANDEN ONE SYMMITTE | M.S. No. | C.A. M.S. | | |
| | Hole collared in bedrock, casing not used, hole | 0~5 | 5 | 6 | 5,30,40, | 80 | |
| | plugged. | 5-10 | 5 | 7 | 10 | | |
| | Definitions (1) "M.S. No." = number of mineralized | 15 | 5 | 2 | 30,40 | | |
| | structures. This is the number of | 20 | 5 | 1 | 20 | | |
| | veins and/or fractures containing one | 25 | 5 | 3 | 40,45 | | |
| | or more of the following: galena, | 30 | 4 | 2 | 10,40 | | |
| | sphalerite, chalcopyrite. Fractures | 35 | 5 | 2 | 30,55 | | |
| | or veins with only pyrite and/or | 40 | 5 | 6 | 30,45,60 | ,70 | |
| | pyrrhotite are not included. Base metal | 45 | 5 | 1 | 45 | | |
| | sulphide structures usually contain | 50 | 5 | 7 | 30,40,60 | ,70 | |
| | pyrite and/or pyrrhotite. | 55 | 4.5 | 7 | 20,30,40 | ,45,50 | |
| | | 60 | 5 | 1 | 85 | | |
| | | 65 | 5 | 2 | 50,70 | | |
| | (2) C.A.M.S. = core angle of mineralized | 70 | 5 | 3 | 35,80 | | |
| | structures | 75 | 5 | 5 | 30,45,50 | ,80 | |
| -227' | Tuff to lapilli tuff. Dark coloured, massive fragmental | 80 | 5 | 9 | 20,25,35 | ,55,60,70 | |
| | material with predominant lithic fragments in the size | | | | | | |
| | range 1 mm to 4 mm. Tuff size range: 1 mm to 4 mm; | 85 | 5 | 5 | 35,40 | | |
| | lapilli tuff: 4 mm to 64 mm. Clasts are mostly accident | - 90 | 5 | 0 | | | |
| | al consisting of quartz, metamorphics (schist, | 100 | 5 | 2 | 0,30 | | |
| | quartzite), sediments, and Scuzzy quartz diorite. | 100-105 | 4.5 | 3 | 25,30 | | |
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PROPERTY CATARACT - EAST ZONE

HOLE No. . .

DDH **\$**301

| DIP TEST | | |
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| Reading | Corrected | Hole No |
| | | Section |
| | | Date Begun |
| | | Date Finished |
| | An | Angle |

| Hole NoSheet No. 2 of 17 | Lot | Total Depth |
|--------------------------|--------------|-------------|
| Section | Dep. | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | | | |
|-----------------|----------|--|------------|--------------------|---------------------------------------|---|---|---|
| 0-227' (cont'd) | Scuzzy f | ragments occasionally up to 7 cm in diameter. | | | | | | |
| | Typical | Scuzzy fragment sizes: 1-3 mm. | | | | | | |
| | 0-24' | Section of particularly abundant Scuzzy | | | | | | |
| | | clasts - occasionally up to 7 mm. Abundant | | | | | | |
| | | quartz fragments - probably derived by | | | | | - | |
| | | breaking of Scuzzy quartz diorite. | | | | | | |
| | 0-146' | Mineralization. Finely disseminated galena, | | | | | | |
| | | sphalerite, chalcopyrite, pyrite and pyrrhotit | е. | | | 4 | | |
| | | The same minerals also occur in fractures. | | | | | | |
| | | The drill core is moderately magnetic through | ut. | | | | | |
| | 0-146' | Alteration. Occasional bleaching along | | | | | | ļ |
| | | sulphide bearing fractures. Coarse sericite | | | | | | |
| | | occasionally along these fractures. | | | | | | |
| | 39' | 10 cm wide envelope of bleaching along base | | | | | | ļ |
| | | metal fracture. | | | | | | - |
| | 61-86' | A few late fluorite bearing fractures. These | | | · · · · · · · · · · · · · · · · · · · | | | |
| | | cut base metal structures. | | | | | | ļ |
| | 72' | Possible accretionary lapilli. | | | | | | |
| | 76-80' | Bleaching. | | | | | | |
| | 98-103' | Particularly abundant Scuzzy clasts. | | | | | | |
| | יווו | Intense shearing. Gouge at core angles 10, 20 | 0 | | | | | |

PROPERTY CATARACT - EAST ZONE

| | DIP TEST | | | | | |
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| Hole No Sheet No. 3 of 1 | 7 Lat | Total Depth |
|--------------------------|--------------|-------------|
| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | |
|---------------|----------|---|------------|--------------------|--|---------|
| 227' (cont'd) | 121-122' | Post mineral fau lt ing. Gouged and slicken- | | | | |
| | | sided sulphides. The fault cuts a sphalerite | | | | |
| | | seam @ 20°. Fluorite also present. | | | | |
| | 128-136' | Lapilli size fragments about 5 mm. Abundant | | | | |
| | | "basement fragments" - Scuzzy and metamorphic | | | | |
| | | clasts. | | | | |
| | 138-139' | l cm wide seam of sphalerite. Minor bleachin | g | | | |
| | | alongside. | | | | |
| | 149' | Massive sphalerite in 1.5 cm wide vein @ 40° | ., | | | |
| | 151-206' | Large Scuzzy clasts are common largest | | | | |
| | | 34 cm. | | | | |
| | 154' | 1 by 4 cm pod consisting of quartz, calcite, | | | | |
| | | sphalerite and chlorite. | | | | |
| | 199' | Sphalerite seam @ 40° 0.5 cm wide. | | | | |
| | 146-227' | Mineralization. Similar to 0-146'. Sphaleri | te | | | |
| | | >> galena in seams up to 5 mm. Also fine | | | | |
| | | grained disseminated base metal sulphides. | | | | |
| | | Locally heavy disseminated base metal sulphid | e | | | |
| | | e.g. 200-201'. The sphalerite occurring in | | | | |
| | | seams is very dark and the disseminated varie | ty | | | |
| | | a little lighter. Pyrite and pyrrhotite pres | ent | | | |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8301

| | DIP TEST | | | | | |
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Hole No. Sheet No. 4 of 17
Section Dep.
Date Begun Bearing
Date Finished Elev. Collor

Total Depth

Logged By

Claim

Core Size

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| | | | Recovery | | |
|---------------|---|------------|--------------------------|-------------|----------------|
| DEPTH | DESCRIPTION | SAMPLE No. | KATALKAK LAKAKAKEKAKO | M.S. No. | C.A. M.S. |
| 227' (cont'd) | as disseminations and fracture filling. | | | | |
| | 146-227' Alteration. Widespread pinkish non-metallic | | | | |
| | mineral of hardness about 7. Probably garnet. | | | | |
| | 220-227' Faulting throughout. Some slickensides. The | | | | |
| | core is very broken. Core angles typically | | | | |
| | about 10°. Chalcopyrite + pyrrhotite are | | | | |
| | slickensided. | | | | |
| 227-333' | Matrix supported breccia. Fragments are of aphanitic | | | | |
| | rock, medium grey, set in a siliceous ground mass. | | | | |
| | Fragments contain abundant fine grained biotite and | | | | |
| | quartz. Fragments are monolithological. Few, if any, | 105-110 | 5 | 1 | 40 |
| - | basement fragments are present unlike the pyroclastics | 115 | 5 | 3 | 30,35 |
| | of the hanging wall. Fragments may be either rounded | 120 | 5 | 7 | 15,20,30,45,70 |
| | or angular. Fragments are most typically in the lapilli | 125 | 5 | 3_ | 25,40,50 |
| | tuff size range (4 mm to 64 mm). Fragments typically | 130 | 5 | 11 | 60 |
| | contain very heavy disseminated sulphides - principally | 135 | 5 | 2 | 0,15 |
| | in the form of pyrrhotite and sphalerite. The siliceous | 140 | 5 | 3 | 0,10,70 |
| | ground mass also contains these sulphides. A few | 145 | 4.5 | 1 | 15 |
| | sphalerite bearing fractures also noted. Galena usually | 150 | 5 | 1 | 40 |
| | occurs with the sphalerite or in separate fractures. | 155 | 5 | 0 | |

PROPERTY CATARACT - EAST ZONE

HOLE No.

DDH 8301

Claim

| DIP TEST | | | | | | |
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| Hole No Sheet No. 5 of 17 | Lat |
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| Section | Dep |
| Date Begun | Bearing |
| Date Finished | Elev. Collar |

Core Size

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|-----------------|-------------|--|------------|--|------------|----------|--------|
| DEPTH | | DESCRIPTION | SAMPLE No. | ************************************** | M.S. No | C.A. | |
| 7-333' (cont'd) | Sphalerit | e≫galena. Post mineral faulting in the | 160 | 5 | 1 | 50 | |
| _ | breccia c | ontact. The sphalerite content decreases | 165 | 5 | 0 | | |
| | from 304 | to 333. This unit is regarded as a possible | 170 | 5 | 0 | | |
| | breccia p | ipe. | 175 | 5 | 0 | | |
| | | | 180 | 5 | 9 | 10,40,50 | ,70,90 |
| | | | 185 | 5 | 2 | 60,70 | |
| | | | 190 | 5 | 1 | 0 | |
| | 227-304 ' | Heavily mineralized with sphalerite. | 195 | 5 | 2 | 60,70 | |
| | | | 200 | 5 | 2 | 25,40 | |
| | | | 205 | 5 | 2 | 0,25 | |
| | | | 205-210 | 4 | 0 | | |
| | | Sphalerite >> galena. Breccia fragments | 210-215 | 5 | 0 | | |
| | | are loaded with sphalerite and pyrrhotite. | 220 | 5 | 2 | 50,60 | |
| | | | 225 | 5 | 0 | | |
| | 230' | Heavy chalcopyrite, pyrrhotite in fractures. | 230 | 5 | 2 | 40,50 | |
| | | | 235 | 5 | 1 | 20 | |
| | | | 240 | 5 | 0 | | |
| | 2691 | Late galena bearing fracture cuts breccia | 245 | 5 | 1 | 35 | |
| | | fragments mineralized with sphalerite. | 250 | 5 | 0 | | |
| | | | 255 | 5 | 3 | 30,50,60 |) |
| | | | 260 | 5 | 0 | | |

PROPERTY CATARACT - EAST ZONE

HOLE No.

DDH 8301

| DIP TEST | | | | | | |
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Hole No...... Sheet No. 6 of 17 Lat.

Section Date Begun Bearing

Date Finished Blev. Collar

Core Size

| | | kecovery | | | |
|-----------------|--|------------|------------------|-------------|----------------|
| DEPTH | DESCRIPTION | SAMPLE No. | XXXI BO XX PILXE | M.S. No. | C.A. M.S. |
| 7-333' (cont'd) | 280' Late calcite veining. Minor fluorite. | 265 | 5 | 0 | |
| | | 270 | 5 | 1 | 70 |
| | | 275 | 5 | 4 | 0,20,45 |
| | 304-333' Breccia as 227-304' except much less | 280 | 5 | 6 | 10,25,50 |
| | sphalerite. | 285 | 5 | 7 | 10,20,40,50,70 |
| | | 290 | 5 | 2 | 60,70 |
| | | 295 | 5 | N/D | 60,70,80 |
| 333-343' | Dark, massive tuff-size pyroclastics. No fragments of | 300 | 5 | 3 | 20,40,60 |
| | Scuzzy or metamorphics. | 305 | 5 | 3 | 50,65 |
| | | 310 | 5 | 0 | |
| | 333-343' Mineralization. Fine grained disseminated | 315 | 5 | 3 | 50,60,80 |
| | sphalerite, locally very heavy. Minor | 315-320 | 5 | 2 | 25,40 |
| | pyrite. | 320-325 | 5 | 2 | 25,50 |
| | | 330 | 5 | 1 | 15 |
| | | 335 | 4 | 2 | 30,60 |
| 343-378½ ' | Light to medium grey tuff. Fragments are occasionally | 340 | 3 | 1 | 40 |
| | in the lapilli tuff size (4 mm to 64 mm). The largest | 345 | 4.5 | 1 | 25 |
| | fragments are subangular to subrounded. Chloritization | 350 | 4.5 | 1 | 10 |
| | pervasive. Narrow chlorite - pyrite fractures | 355 | 4 | 1 | 20 |
| | occasionally present. Sample etched and stained show | 360 | 4 | 1 | 20 |
| | appreciable Kspar. | 365 | 4.5 | 0 | |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8301

| DIP TEST | | | | | |
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| Hole No. | Sheet No. 7 of 17 | Lat | Total Depth | |
|---------------|-------------------|--------------|-------------|--|
| Section | | Dep | Logged By | |
| Date Begun | | Bearing | Claim | |
| Date Finished | | Elev. Collar | Core Size | |

| | | | | Recovery | | | |
|-----------------|------------|---|------------|--|-------------|---------------|---|
| DEPTH | | DESCRIPTION | SAMPLE No. | W.H.T.T.H.K R.K.K.K.K.K.K.K.K.K.K.K.K.K.K.K.K.K.K | M.S. No. | C.A. M.S. | |
| 3-378½' (cont'o |) | | 370 | 5 | 1 | 70 | · |
| | | | 375 | 5 | 0 | | |
| | 344-353' | Abundant magnetite - fractures and | 380 | 5 | 5 | 0,20,30,45,70 | |
| | | disseminations. | 385 | 5 | 3 | 10,25,30 | |
| | | | 390 | 5 | 0 | | |
| | 369' | 9 inch section of breccia with opaline matrix | 395 | 5 | 0 | | |
| | | | 400 | 5 | 0 | | |
| | | | 405 | 5 | 0 | | |
| | 371' | Two-foot fault zone. Gouge. Core angle | 410 | 4.5 | 0 | | |
| | | 40°. | 415 | 5 | 1 | 45 | |
| | | | 420 | 4.5 | 0 | | |
| | 376' | One half inch thick sphalerite seam @ 30° | 420-425 | 5 | 2 | 50,80 | |
| | 386-3881 | Calcite - fluorite veining. | 425-430 | 5 | 11 | 20 | |
| | | | 435 | 5 | 0 | | |
| 378½-435¹ | Dark fine | grained intrusive or crystal tuff. Frequently | 440 | 5 | 1 | 80 | |
| | "crackle b | precciated". Minor brecciation as 227-333'. | 445 | 5 | 1 | 65 | |
| | | | 450 | 5 | 1 | 45 | |
| | | Minor brecciation | 455 | 5 | 3 | 0,30,70 | |
| | as 227-333 | 3'. | 460 | 5 | 3 | 30,50,70 | |
| | | | 465 | 5 | 3 | 20,60 | |
| | | | 470 | 5 | 2 | 30,60 | |

PROPERTY CATARACT - EAST ZONE

HOLE No.

DDH 8301

DIP TEST

Angle

Footage Reading Corrected

Hale No. Sheet No. 8 of 17 Lat. Total Depth

Section Dep. Logged By

Date Begun Bearing Claim

Date Finished Elev. Collar Core Size

| | | , | Recovery, | | , |
|-------------------------|---|--------------|--|-------------|---------------|
| DEPTH | DESCRIPTION | SAMPLE No. | SEXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. No. | C.A. M.S. |
| 8½-435' (c a ntd | Mineralization 378½-435'. Rare sphalerite in fractures. | 475 | 5 | 2 | 0,20 |
| | Minor sphalerite as disseminations. Locally heavy | 480 | 5 | 1 | 65 |
| | sphalerite in the siliceous matrix occasionally found | 485 | 5 | 3 | 0,30,60 |
| | between slightly rotated fragments. Fine grained | 490 | 5 | 0 | |
| | disseminated pyrite and pyrrhotite throughout. | 495 | 5 | 1 | 20 |
| | | 500 | 5 | 1 | 80 |
| | | 505 | 5 | 1 | 20 |
| | 401' Galena bearing fracture cuts a sphalerite | 510 | 5 | 0 | |
| | bearing fracture. | 515 | 5 | 1 | 40 |
| | | 520 | 5 | 1 | 15 |
| | Alteration 387½-435'. Fine grained, hard, pinkish non- | 525 | 5 | 7 | 15 |
| | metallic mineral pervasive; may be garnet. The same | 530 | 5 | 3 | 10,40,50 |
| | mineral also occupies veinlets. | | | | |
| | 424.5' Chalcopyrite in hairline fracture. | | | | |
| 435-462' | Breccia as 227-333' above. Fragments resemble the fine | | | | |
| | grained "crackle brecciated" intrusive or crystal tuff | | | | |
| | of section 378½-435'. Matrix seems a little less | | | | |
| | siliceous than 227-333'. | | | | |
| | Alteration and mineralization 435-462'. Similar to | | | | |
| | 378½-435', 227-333'. Very few mineralized fractures. | | | | |
| | Sphalerite and pyrrhotite are dominant sulphides. | | | | |
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CATARACT - EAST ZONE

HOLE No.

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Hole No. Sheet No. 9 of 17 Lat.

Section Date Begun Bearing

Date Finished Elev. Collar

Total Depth

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Claim

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|----------------|---|------------|----------------------------------|-------------|-------------|
| DEPTH | DESCRIPTION | SAMPLE No. | X KA KA KAKA KANA KANAKA KANO | M.S. No. | C.A. |
| 5-462' (contd) | Mineralization typically disseminated. | | | | |
| | 444' Sphalerite veinlet cuts a fragment also mineral | - | | | |
| | ized with sphalerite and pyrrhotite. | | | | |
| 462-630' | Tuff to lapilli tuff. Most of fragments in the 2-3 mm | | | | |
| | size range. Fragments range up to several cm. Again | 530-535 | 5 |] | 15 |
| | basement fragments are plentiful as in the hanging wall | 540 | 5 | 2 | 50 |
| | of the breccia zone (0-227'). | 545 | 5 | 3 | 30,50,80 |
| | | 550 | 5 | 3 | 40,50 |
| | 462-606' Mineralization. Seams or fracture fillings | 555 | 5 | 3 | 25,40,50 |
| | consisting of pyrite, pyrrhotite, and | 560 | 5 | 7 | 0,10,25,50 |
| | sphalerite. Sphalerite content is lower | 565 | 5 | 5 | 0,10,15,80 |
| | than in the breccias above. Disseminated | 570 | 5 | 3 | 0,15,90 |
| | sphalerite throughout. | 575 | 5 | 2 | 0,10 |
| | | 580 | 5 | 5 | 40,45,60,80 |
| | | 585 | 5 | 2 | 20,40 |
| | | 590 | 5 | 1 | 50 |
| | 500-501' Fault gouge. No core angle obtainable. | 595 | 5 | 1 | 55 |
| | | 595-600 | 5 | 1 | 55 |
| | | 600-610 | 10 | 6 | 10,15,50,80 |
| | 514' Fault @ 15°. Minor slickenside development. | 620 | 10 | 9 | 15,30,45 |
| | A few calcite fractures. | 630 | 9.5 | 10 | 15,25,40 |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8301

Total Depth

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 Hole No.
 Sheet No.
 10 of 17_{Lat}.

 Section
 Dep.

 Date Begun
 Bearing

 Date Finished
 Elev. Collar

Logged By

Claim

Core Size

| | | | | Recovery | | |
|-----------------|----------|--|------------|--------------------------|-------------|--------------|
| DEPTH | | DESCRIPTION | SAMPLE No. | WXXXXXXXX OFXXXXXXXXX | M.S. No. | C.A. M.S. |
| 62-630' (contd) | | | 640 | 9.5 | 8 | 15,25,40 |
| | | | 650 | 10 | 3 | 50,60 |
| | 519-520' | Abundant quartzite clasts. | 660 | 10 | 7 | 0,30,40,50 |
| | | | 660-670 | 10 | 3 | 35,40,80 |
| | 462-6061 | Alteration. Abundant fine grained, pinkish, | | | | |
| | | hard, non-metallic mineral as 387.5-462' | | | | |
| | | throughout. This mineral is suspected to be | | | | |
| | | garnet. Local quartz veining. Quartz veins | | | | |
| | | are very scarce on the surface in the East | | | | |
| | | Zone area. | | | | |
| | 546' | Quartz vein with fine grained galena. Garnet | (?) | | | |
| | | occurs in the vein borders. | | | | |
| | 558' | Sphalerite in calcite - epidote pod | | | | |
| | 572' | Sugary textured quartz vein. Sphalerite | | | | |
| | | occurs in vein edges. | | | | |
| | 579' | 4 cm wide magnetite seam containing | | | | |
| | | disseminated chalcopyrite. | | | | |
| | 580' | Sugary textured quartz vein containing | 670-680 | 10 | 0 | |
| | | sphalerite. | 690 | 10 | 3 | 20,25,30 |
| | 606-630' | Mineralization. Sphalerite common in quartz | 700 | 10 | 0 | |
| . – | | veins usually associated with pyrrhotite. | 710 | 10 | 0 | |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

Recovery

DDH 8301

| DIP TEST | | | | | |
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| | Angle | | | | |
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| Hole No | Sheet No. 11 of 17 | Lat | Total Depth | |
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| Section | | Dep | Logged By | |
| Date Begun | | Bearing | Claim | |
| Data Finished | | Flor. Collec | Cons Sins | |

| DEPTH | | DESCRIPTION | SAMPLE No. | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. No. | C.A. | |
|-----------------|-----------|---|------------|--|-------------|------------|------|
| 32-630' (contd) | | Quartz veins appear to become more numerous | 720 | 10 | 1 | 50 | |
| | | with depth. As was noted, quartz veins are | 730 | 10 | 4 | 20,25,40 | |
| | | very rarely seen on the surface in the East | 740 | 10 | 8 | 30,40,60,6 | 5,80 |
| | | Zone area. In the section 606-630' about | 750 | 10 | 6 | 0,40,60,80 |) |
| | | 15 quartz veins (typically approx. 2 mm | 760 | 10 | 5 | 10,20,40,8 | 30 |
| | | thick) were noted. No galena was noted in | 770 | 10 | 6 | 15,40,90 | |
| | | the veins. | 780 | 10 | 3 | 30,45,80 | |
| | | | 790 | 10 | 5 | 20,25,30,6 | 50 |
| | | | 800 | 10 | 0 | | |
| | | | 820 | 10 | 4 | 10,50,55,9 | 00 |
| | 606-630' | Alteration. Quartz veining and chlorite | 830 | 10 | 2 | 15,40 | |
| | | veining. | 840 | 10 | 5 | 15,25,45,7 | '0 |
| | | | 850 | 9.5 | 0 | | |
| | | | 860 | 10 | 1 | 90 | |
| | 606' | Pyrite, chlorite, epidote veinlet. | 870 | 10 | 2 | 40 | |
| | | | 870-880 | 10 | 1 | 65 | |
| | 606-645' | Abundant disseminated garnet as 462-606'. | | | | | |
| | 632' | Fragments appear to have a fabric @ 40°. | | | | | |
| | 638' | Pyrite chlorite veinlet. | | | | | |
| 30-740' | Lapilli t | uff. Fragment size dominate in the range 1 cm | | | | | |
| | to 2 cm. | Fragments consist of tuff, Scuzzy quartz | | | | | |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8301

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| Footage | Reading | Corrected | Hole No. Sheet No. 12 Of 17 | Lat | Total Depth |
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| DEPTH | | DESCRIPTION | SAMPLE No. | OF SAMPLE | | |
|----------------|------------|---|------------|-----------|---|---|
| 0-740' (contd) | diorite ar | nd miscellaneous basement material such as | | | | |
| | schist and | quartzite. The largest fragments in the | | | | |
| | section ar | re 20 cm. | | | | |
| | 630-664' | Mineralization similar to 606-630'. Minor | | | | |
| | | disseminated sphalerite. The drill core | | | | |
| | | is still moderately magnetic, due to | | | | |
| | | pyrrhotite. | | | | |
| | 630-664' | Alteration. Quartz veins and rate sericitic | | | | |
| | | fractures occasionally noted. Chloritizatio | n | | - | |
| | | of fragments. | | | | |
| | 651' | 3 mm wide quartz vein with sericitic | | | | |
| | | envelope contains pyrite. | | | | |
| | 664-7381 | Few sphalerite bearing fractures. Minor | | | | 1 |
| | | disseminated sphalerite. Pyrrhotite | | | | |
| | | >>sphalerite. Total sulphide overall about | | | | |
| | | 1%. Traces of galena and chalcopyrite. | | | | |
| | 688-691' | Heavy disseminated sphalerite. | | | | |
| | 695' | Chloritized metamorphic clast contains | | | | |
| | | deformed quartz vein. This is interesting | | | - | |
| | | since in the "schist belt" west of the East | | | | |
| | | Zone boudins of quartz occur. Such quartz | | | | |

PROPERTY

CATARACT - EAST ZONE

HOLE No. DDH 830]

| | DIL 1531 | | | | | |
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| Footage | Reading | Corrected | Hole No Sheet | No. 13 of 17 _{Lat.} | Total Depth | |
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| | | | Date Finished. | Elev. Collar | Core Size | |
| | | <u> </u> | | | | |

| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | |
|----------------|-------------|--|------------|--------------------|------|--|
| 0-740' (contd) | | is geochemically anomalous for gold locally. | | | | |
| | 705' | 40 cm clast that has been bleached | | | | |
| | 713' | Magnetite in pyritic veinlet. | | | | |
| | 719' | Heavy sphalerite in 2 cm wide vein. This | | | | |
| | | vein is cut by quartz-pyrite veinlet 2 mm | | | | |
| | | in thickness. | | | | |
| | 664-740' | Alteration. Dark fragments in the pyro- | | | | |
| | | clastics are chloritized. Chlorite appears | | | | |
| | | to be the dominant alteration. Also | | | | |
| | | abundant hard pinkish, non-metallic mineral | | | | |
| - | | suspected to be garnet. Very few quartz | | | | |
| | | veins. | | | | |
| | 719-740' | Abundant sphalerite in this section of | | | | |
| | | abundant hairline fractures. Many different | | | | |
| | | strikes and dips apparent in unbroken core. | | | | |
| 740-808' | Dark lithic | tuff to lapilli tuff. Fragments seem to be | | | | |
| | mostly of l | ocal volcanic material but a few fragments | | | | |
| | of basement | material, e.g. Scuzzy are also present. | | | | |
| | 740-789.5' | Mineralization. Disseminated sphalerite | | | | |
| | | and sphalerite in fractures. No chalcopyrit | е | | | |
| | | or galena noted. Pyrrhotite throughout. | | | | |

PROPERTY CATARACT - EAST ZONE HOLE No. DDH 8301

| DIP TEST | | | | | | | | | |
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| Hole No. Sheet No. 14 of 17 | 7 Lat | Total Depth |
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| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | · · · · · · · · · · · · · · · · · · · | | |
|----------------|--|------------|--------------------|---------------------------------------|------|--|
| 7-808' (contd) | While sphalerite is present throughout, the | | | | | |
| | Zn content is very low. Pyrrhotite frequently | У | | | | |
| | occurs in fractures and is also disseminated. | | | | | |
| | 740-808' Alteration. Weak chloritization. Minor | | | | | |
| | quartz veining. Fine grained "garnet" as | | | | | |
| | above. | | | | | |
| | 792-808' Lapilli tuff. Fragments typically 0.5 cm to | | | | | |
| | 3 cm. Fragments are generally tuff. Minor | | | | | |
| | metamorphic fragment component. No Scuzzy | | | | | |
| | noted. | | | | | |
| | 810' Magnetite veinlet @ 70°. | | | | | |
| | 810.5' Magnetite,pyrite,sphalerite-chlorite seam | | | | | |
| | 0 8 mm at 90° . | | | | | |
| | 819' Possible layering @ 45°. | | | | | |
| 808-1,197' | Dark to medium coloured tuff - lapilli tuff. Weakly to | | | | | |
| | moderately magnetic. Fragments of quartz and | | * | | | |
| | metamorphics present. | | | | | |
| | 808-821' Weak bleaching occasionally along veins. | | | | | |
| | Chlorite alteration. Sphalerite occurs as | | | | | |
| | dissemination and in veinlets. More than 2% | | | | | |
| | sphalerite locally; 2% pyrrhotite. | | | | | |

CATARACT - EAST ZONE

HOLE No.

DDH 8301

| DIP TEST | | | | | | | | | | |
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| Hole NoSheet No. 15 of 17 | Lot | Total Depth |
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| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| | | | | | Recovery | | | | | |
|-------------------|-------------|---|------------|----------------------------|-------------|--------------|----|--|--|--|
| DEPTH | | DESCRIPTION | SAMPLE No. | SAK AZ KARKE SAK KOSTEK | M.S. No. | C.A. M.S. | | | | |
| ^08-1197' (contd) | 821-826.5! | Weakly altered, low sphalerite. | | | | | | | | |
| | 834' | 2 mm wide quartz veinlet containing sphaler | ite, | | | | | | | |
| | | pyrite and pyrrhotite cuts a sericitic | | | | | | | | |
| | | fracture containing pyrite. | | | | | | | | |
| | 845-1197' | Mineralization. Sphalerite, pyrite, | | | | | | | | |
| | | pyrrhotite and chlorite occur in veinlets. | 880-890 | 10 | 3 | 35,50 | | | | |
| | 953,962,967 | ' Hard, black silicate mineral with | 900 | 10 | 4 | 0,10,35 | 40 | | | |
| | | prismatic crystals may be tourmaline. | 910 | 10 | 1 | 45 | | | | |
| | | | 920 | 10 | 1 | 30 | | | | |
| | | | 930 | 10 | 2 | 40,80 | | | | |
| | | | 940 | 10 | 3 | 20,75 | | | | |
| | • | | 950 | 10 | 2 | 40 | | | | |
| | 963-9891 | Faulting indicated by shearing @10° and | 960 | 10 | 3 | 60 | | | | |
| | | slickensides. Calcite veinlets are common | 970 | 10 | 7 | 20 | | | | |
| | | @ 0,15,25,30. ½" of gouge at 974 @ 60°. | 980 | 10_ | 2 | 10,20 | | | | |
| | | | 990 | 10 | 1 | 60 | | | | |
| | | | 1000 | 10 | 1 | 20 | | | | |
| | | | 1000-1010 | 10 | 3 | 15,50 | | | | |
| | | | 1020 | 10 | 4 | 35,50,60 |) | | | |
| | 1009' | 3 mm sphalerite - pyrite veinlets @ 60°. | 1030 | 10 | 3 | 10,45,60 | | | | |
| | | | 1040 | 10 | 2 | 55,75 | | | | |

CATARACT - EAST ZONE

HOLE No.

DDH 8301

| DIP TEST | | | | | | | | |
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| Hole No Sheet No. 16 of 1 | 7 Lat | Total Depth |
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| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| | | | Recovery | | | | | |
|--------------------|-------------|---|------------|--------------------------|------------|--------------|-----|--|
| DEPTH | | DESCRIPTION | SAMPLE No. | WXXXXXXXX OEXSXXXXPXX | M.S. No | C.A. M.S. | | |
| ີ່ 8-1197' (contd) | | | 1050 | 10 | 5 | 10,15,35 | ,40 | |
| | 1082' | 1-2cm wide vein of sphalerite, pyrite and | 1060 | 10 | 5 | 10,20,30 | ,50 | |
| | | pyrrhotite @ 55°. | 1070 | 10 | 0 | | | |
| | | | 1080 | 10 | 3 | 15,35 | | |
| | 1090-1145 ' | Sphalerite appears to pick up again | 1080-1090 | 10 | 3 | 35,55,75 | | |
| | | relative to 845-1090. Veins contain the | | | | | | |
| | | usual pyrite, pyrrhotite, sphalerite | | | | | | |
| | | association. | | | | | | |
| | 1154-1181 | Alteration. Greenish alteration may be | 1090-1100 | 10 | 5 | 25,35,40 | ,50 | |
| | | sericite. This section is also relativel | y 1110 | 10 | 4 | 30,40,50 | | |
| | | well mineralized with sphalerite - | 1120 | 10 | 1 | 45 | | |
| | | disseminated and fracture fillings. | 1130 | 10 | 7 | 20,25 | | |
| | | | 1140 | 10 | 7 | 30,34,50 | ,75 | |
| | | | 1150 | 9 | 4 | 20,30 | | |
| | | | 1160 | 10 | 2 | 10,50 | | |
| | 1145-1146' | Fault. Gouge and intense shearing | 1170 | 10 | 2 | 40 | | |
| | | and slickensides @ 10°, 40°. | 1180 | 10 | 0 | | | |
| | | | 1190 | 9.5 | 1 | 15 | | |
| | | | 1200 | 10 | 0 | | | |
| | | | 1210 | 10 | 1 | 10 | | |
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| PROPERTY CATARACT - EAST ZONE | | | - EAST ZUNE | | HOLE | No. | DH 8301 | | |
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| | | | | Bearing | | | im | | |
| | | | Date Finished E | lev. Collar | | | re Size | | |
| DEDTIL | | | DESCRIPTION | SAMPLE NO | Recovery XXIRIX XXIRIX | M.S. | C.A. | 1 | |
| DEPTH | | | DESCRIPTION | | 1 | No. | M.S. | | |
| <u>'97-1223'</u> | | | grey crystal tuff with 2 short sections | 1210-1223 | 13 | 2 | 20,25 | | - |
| | | - | to tuff. High percentage feldspar. | END | | | ļ | | ļ |
| | | | ts are 0.5 to 2 mm. Possible layering | | | | | | |
| | | 3% pyrit | | | | | | ļ | ļ |
| | 1185' | <u>_</u> | fragments of metamorphic rock. | | | · · · · · · · · · · · · · · · · · · · | ļ | | |
| 223' | END C | F HOLE | | | | | | | |
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PROPERTY CATARACT - EAST ZONE

HOLE No. DDH 8302

| | DIP TEST | | | |
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Hole No. DDH 8302 Sheet No. 1 of 10
Section DDH 8302 Section Date Begun Coring Aug 3/83
Date Finished Coring Aug 7/83

Lat. Total Depth 560'

Dep. Logged By RB, TL

Bearing 167, -45° Claim Cataract 3 M.C.

Elev. Collar 1320m approx. Core Size NQ with water only

| Conversion | Factor 1 foot = 0.305m | | Recovery | | | |
|------------|--|------------|--|------------|-------------|--|
| DEPTH | DESCRIPTION | SAMPLE No. | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. No | C.A. | |
| 0 - 38' | Tuff to lapilli. Abundant fragments of basement | 0-10 | 7.5 | 3 | 30,50 | |
| | material including Scuzzy quartz diorite, schists and | 15 | 5 | 0 | | |
| | quartzite. Scuzzy clasts in the 2-6 cm size range | 20 | 5 | 1 | 40 | |
| | common. Abundant quartz fragments, possibly due to | 25 | 5 | 1 | 50 | |
| | the fragmentation of Scuzzy. Assimilated Scuzzy forms | 30 | 5 | 2 | 55,60 | |
| | a major part of the rock. Scuzzy is a medium to coarse | 35 | 5 | 4 | 55,60,65 | |
| | grained porphyritic intrusive characterized by large | 40 | 4.5 | 5 | 10,40 | |
| | quartz eyes and prominent biotite books. | 45 | 5 | 6 | 40,50,70,80 | |
| | | 50 | 5 | 2 | 50,70 | |
| | | 55 | 5 | 6 | 40,50,75 | |
| | | 60 | 5 | 0 | | |
| | Mineralization 0-38' | 65 | 5 | 5 | 20,60,80 | |
| | Sphalerite, galena, pyrrhotite and chalcopyrite occur in | 70 | 5 | 2 | 50 | |
| | fractures. Minor dissemimated base metal sulphides | 75 | 5 | 1 | 10 | |
| | between fractures. Pyrrhotite disseminated. | 80 | 5 | 0 | | |
| | | 85 | 5 | 3 | 65,80 | |
| | | 90 | 4.5 | 0 | | |
| | | 95 | 5 | 1 | 60 | |
| | Alteration 0-38'. Sericite developed along mineralized | 100 | 5 | 1 | 60 | |
| | fractures occasionally, e.g. 11'. Fine grained garnet as | 105 | 5 | 3 | 20,60 | |
| | seen throughout much of 8301 absent. | | | | | |

CATARACT - EAST ZONE

| | DIP TEST | | | | | | | |
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| Hole NoSheet No. 2 of 10 | Lat | Total Depth |
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| Date Finished | Elev. Collar | Core Size |

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| DEPTH | | DESCRIPTION | SAMPLE No. | XXXXXXXI QR XXXXXXX | M.S. | C.A. M.S. | | | |
| 38-140' | Lithic tu | ff with occasional fragments>4mm (<5%). Bulk | | | | | | | |
| | of fragme | nts < 3mm. | | | | | | | |
| | 56-78' | Locally abundant lapilli containing concentric | | | | | | | |
| | | rings. Light grey - Possible accretionary | | | | | | | |
| | | lapilli. | | | | | | | |
| | 38-140' | Alteration. Fine grained pinkish hard | | | | | | | |
| | | disseminated non-metallic mineral; may be | | | | | | | |
| | | garnet and is the dominant alteration. This | | | | | | | |
| | | mineral was widespread in DDH 8301. Good | | | | | | | |
| | | examples at 39, 84-88½'. Also minor fluorite | | | | | | | |
| | | in fractures,e.g. 67-68'. Minor sericite | | | | | | | |
| | | also in fractures. Local bleaching. | | | | | | | |
| | 38-140' | Mineralization. Sphalerite, pyrrhotite, galer | a. | | | | | | |
| | | Chalcopyrite and pyrite in veins and | 105-110 | 5 | 3 | 20,60,70 | | | |
| | | fractures. Sphalerite and pyrrhotite are the | 115 | 5 | 2 | 10,90 | | | |
| | | principal sulphides. Locally galena may be | 120 | 5 | 1 | 70 | | | |
| | | more abundant than sphalerite. | 125 | 4.5 | 0 | | | | |
| | | | 130 | 5 | 0 | | | | |
| | | | 135 | 5 | J | 60 | | | |
| | 50-55 ' | Numerous hairline fractures containing galena, | 140 | 4.5 | 1 | 70 | | | |
| | | sphalerite and chalcopyrite | 145 | 5 | 1 | 20 | | | |

PROPERTY

CATARACT - EAST ZONE

| | DIP TEST | | |
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| DEPTH | | DESCRIPTION | SAMPLE No. | WXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. | C.A. | | | |
| 38-140' (cont'd) | 88-140' | Clasts of Scuzzy and other basement | 150 | 5 | 1 | 80 | | | |
| | | fragments particularly abundant. | 155 | 5 | 0 | | | | |
| | | | 160 | 4.5 | 0 | | | | |
| | | | 165 | 5 | 0 | | | | |
| | 108' | 1.5 cm thick seam of essentially massive | 170 | 5 | 0 | | | | |
| | | sphalerite @ 70°. | 175 | 5 | 3 | 20,25 | | | |
| | | | 180 | 5 | 2 | 15 | | | |
| | 111.5' | Galena in 2 mm wide quartz veinlet with | 185 | 5 | 1 | 15 | | | |
| | | pink mineral in the borders. | 190 | 5 | 1 | 60 | | | |
| | | | 195 | 5 | 1 | 15 | | | |
| | 120-121' | Fluorite veinlet 2 mm. | 200 | 5 | 2 | 15,75 | | | |
| | | | 205 | 5 | 1 | 75 | | | |
| | 134.5' | l cm wide sphalerite fracture. Minor | 210 | 5 | 3 | 55,75 | | | |
| | | associated chalcopyrite. | 210-215 | 5 | 4 | 20,25,70 | | | |
| | | | 220 | 5 | 1 | 75 | | | |
| | 129-136' | Calcite veinlets common. | 225 | 5 | 2 | 50,75 | | | |
| | | | 230 | 5 | 8 | 0,25,35,70,80 | | | |
| 140-207' | Lapilli t | uff. Dominant fragment size >4mm. The | 235 | 5 | 8 | 15,25,35,55,65,80 | | | |
| | largest S | cuzzy fragment is 19 cm; 2cm - 4 cm is the | 240 | 5 | 3 | 30,75 | | | |
| | dominant S | Scuzzy fragment size. Generally abundant | 245 | 5 | 1 | 60 | | | |
| | basement | fragments. | 250 | 5 | 3 | 20,30,70 | | | |

PROPERTY

CATARACT - EAST ZONE

DDH 8302 HOLE No.

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| DEPTH | | DESCRIPTION | SAMPLE No. | KHT G KK EKPAKNEREKEN | M.S. | C.A. M.S. |
| | | | 255 | 5 | 2 | 30,50 |
| 10-207' (contd) | 140-207' | Alteration. Minor calcite veining. Sericite | 260 | 5 | 6 | 15,35,60,70,80 |
| | | occasionally noted along fractures, e.g. 144' | 265 | 5 | 4 | 20,25,55,75 |
| | | Considerable fine grained pink mineral | 270 | 5 | 4 | 20,25,35,90 |
| | | suspected to be garnet. | 275 | 5 | 4 | 10,50,60 |
| | | | 280 | 5 | 3 | 10,35,60 |
| | | | 285 | 5 | 3 | 35,70,90 |
| | | | 290 | 5 | 2 | 20,40 |
| | 140-207 | Weakly developed fracture controlled | 295 | 5 | 11 | 30,50,70,75,80,90 |
| | | sphalerite but considerable fine grained | 300 | 5 | J | 70 |
| | | disseminated sphalerite. Traces of galena, | 305 | 5 | 5 | 0,25,30,80 |
| | | sphalerite pyrrhotite. Low overall sulphide | 310 | 5 | 2 | 25,90 |
| | | content. The sphalerite content appears to | 310-315 | 5 | 4 | 20,45,80 |
| | | increase from about 190' to the end of the | | · · · · · · · · · · · · · · · · · · · | | |
| | | section. | | | | |
| | 201.5' | Fault @ 30°. One foot of gouge and sheared | 315-320 | 4 | 4 | 25,30 |
| | | rock. | 325 | 10 | 3 | 40,60,70 |
| | | | 330 | 5 | 6 | 25,40,50,70 |
| | 206' | Very heavy sphalerite with associated | 335 | 5 | 5 | 0,45,50,60 |
| | | pyrrhotite in quartz vein. Bleaching | 340 | 5 | >10 | 40,50 |
| | | adjacent to this structure. | 345 | 5 | 1 | 50 |

PROPERTY

CATARACT - EAST ZONE

DDH 8302 HOLE No.

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| Date Finished | Elev. Collar | Core Size |

| | | | Recovery | | | |
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| DEPTH | DESCRIPTION | SAMPLE No. | WXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. | C.A. | |
| | | 350 | 5 | 2 | 20,50 | |
| .07- 301' | Generally, matrix supported breccia as 227-333' in | 355 | 5 | 1 | 30 | |
| | DDH 8301. Fragments are typically monolithological, | 360 | 5 | 1 | 65 | |
| | rounded and angular and range in size from 0.5 cm to 8 c | m, 365 | 5 | 2 | 20,30 | |
| | but generally lapilli tuff size. Basement fragments | 370 | 5 | 0 | | |
| | such as found in abundance in the hanging wall are very | 375 | 5 | 0 | | |
| | scarce. The ground mass of the breccia is light coloure | 375-380 | 5 | 2 | 45,80 | |
| | and looks to be siliceous and sericitic. The fragments | 380-390 | 10 | 5 | 30,40,55 | |
| | are well mineralized with sphalerite and pyrrhotite. | 390-400 | 10 | 2 | 10,30 | |
| | Heavy biotite and quartz in fragments. A few short | 410 | 10 | 5 | 20,55,60,80 | |
| | sections of fine grained rocks of uncertain origin, e.g. | 420 | 10 | ז | 20 | |
| | 262-281 and 286-301'. | 430 | 10 | 3 | 0,50,70 | |
| | 214' Fault @ 45°. One foot of gouge and sheared | 440 | 10 | 2 | 35,45 | |
| | rock. | 450 | 10 | 2 | 80 | |
| | | 460 | 10 | 3 | 20,30,80 | |
| | | | | | | |
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PROPERTY

CATARACT - EAST ZONE

HOLE No. DDH 8302

| | DIP TEST | | | |
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| Footage | Reading | Corrected | Hole No. Sheet No. 6 of 10 | Lat |
| | | | Section | Dep |
| | | | Date Begun | Bearing |
| | | | Date Finished | Elev. Collar |
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| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | |
|------------------|----------|--|------------|--------------------|------|---|
| 207-301' (contd) | 207-262' | Mineralization. Heavily mineralized with | | | | |
| | | pyrrhotite, sphalerite; minor pyrite, galena | | | | |
| | | and chalcopyrite. Mineralization occurs both | | | | |
| | | in fragments and in the ground mass. Base | | | | |
| | | metals as well as pyrrhotite occur in discrete | 2 | | | |
| | | fractures which cut the fragments and the | | | | |
| | | ground mass, e.g. 221'. The sphalerite is | | | | |
| | | very dark. | | | | |
| | 207-262' | Alteration. Bleaching appears to be the | | | | |
| | | dominant alteration. Also abundant fine | | | | |
| | | grained pinkish, hard mineral seen throughout | | | | |
| | _ | much of DDH 8301. This appears to be garnet. | | | | |
| | 229.5' | Two veinlets @ 1 cm of massive sphalerite | | | | _ |
| | | @ 70°. | | | | |
| | 260' | A few fragments of quartzite | | | | |
| | 262-281' | Fine grained tuff or intrusive medium to | | | | |
| | | light grey. No basement fragments apparent. | | | | |
| | | | | | | |
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PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8302

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| Hole No. Sheet No. 7 of 10 | Lat | Total Depth |
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| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DESCRIPTION | SAMPLE No | WIDTH OF SAMPLE | | | | |
|--|---|--|--|---|--|--|
| 262-281' Mineralization. Disseminated sphalerite, | | | | | | |
| pyrrhotite, pyrite, chalcopyrite and galer | na. | | | | | |
| The same sulphides also occupy fractures. | | | | | | |
| 281-286' Breccia as 207-262'. | | | | | | |
| 286-301' Medium grey fine grained tuff or intrusive | e. | | | | | |
| Pyrrhotite, sphalerite, galena, chalcopyr | ite | | | | | |
| and pyrite occur in fractures. Very litt | le | | | | | |
| disseminated sulphide. | | | | | | |
| | | | | | | |
| Light grey fine grained, possible tuff. Mineralized | | | | | | |
| as 286-301'. | | | | | | |
| | | | | | | |
| Dark fine grained massive. Tuff? Mineralized as 286 | 5-301'. | | | | | |
| | | | | | | |
| Fine grained dark, almost black, massive, containing | | | | | | |
| 1 mm phenocrysts of feldspar. Andesite or fine grain | ned | | | | <u></u> | |
| diorite? Local "crackle breccia" development with | | | | | | |
| abundant quartz and sericite between the fragments. | | | | | | |
| Also heavy pyrrhotite and base metal sulphides | | | | | | |
| principally sphalerite, e.g. 335-340, 345-349. Littl | е | | | | | |
| disseminated sulphide in this section. | | | · | | | |
| | 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galer The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive Pyrrhotite, sphalerite, galena, chalcopyr and pyrite occur in fractures. Very littidisseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286 Fine grained dark, almost black, massive, containing 1 mm phenocrysts of feldspar. Andesite or fine grain diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little | 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galena. The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive. Pyrrhotite, sphalerite, galena, chalcopyrite and pyrite occur in fractures. Very little disseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286-301'. Fine grained dark, almost black, massive, containing 1 mm phenocrysts of feldspar. Andesite or fine grained diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little | DESCRIPTION 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galena. The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive. Pyrrhotite, sphalerite, galena, chalcopyrite and pyrite occur in fractures. Very little disseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286-301'. Fine grained dark, almost black, massive, containing 1 mm phenocrysts of feldspar. Andesite or fine grained diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little | DESCRIPTION 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galena. The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive. Pyrrhotite, sphalerite, galena, chalcopyrite and pyrite occur in fractures. Very little disseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286-301'. Fine grained dark, almost black, massive, containing l mm phenocrysts of feldspar. Andesite or fine grained diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little | DESCRIPTION 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galena. The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive. Pyrrhotite, sphalerite, galena, chalcopyrite and pyrite occur in fractures. Very little disseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286-301'. Fine grained dark, almost black, massive, containing 1 mm phenocrysts of feldspar. Andesite or fine grained diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little | DESCRIPTION 262-281' Mineralization. Disseminated sphalerite, pyrrhotite, pyrite, chalcopyrite and galena. The same sulphides also occupy fractures. 281-286' Breccia as 207-262'. 286-301' Medium grey fine grained tuff or intrusive. Pyrrhotite, sphalerite, galena, chalcopyrite and pyrite occur in fractures. Very little disseminated sulphide. Light grey fine grained, possible tuff. Mineralized as 286-301'. Dark fine grained massive. Tuff? Mineralized as 286-301'. Fine grained dark, almost black, massive, containing 1 mm phenocrysts of feldspar. Andesite or fine grained diorite? Local "crackle breccia" development with abundant quartz and sericite between the fragments. Also heavy pyrrhotite and base metal sulphides principally sphalerite, e.g. 335-340, 345-349. Little |

PROPERTY

CATARACT - EAST ZONE

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| Hole No. Sheet No. 8 of 10 | Lat | Total Depth |
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| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | | DESCRIPTION | | WIDTH OF SAMPLE | | |
|------------------|-------------|---|---|--------------------|--|--|
| 329-428' (contd) | 366-3931 | Minor green epidote in fractures. | | | | |
| | 378' | l cm wide calcite veinlet @ 20°. | | | | |
| | 383-3861 | Zone of intense crackle brecciation and | | | | |
| | | heavy silica flooding. Sharp breccia contac | | | | |
| | | @ 60°. | | | | |
| | 389-395' | Crackle breccia. Dark fragments in silica | | | | |
| | | and sericite matrix. Heavy fine grained | | | | |
| | | disseminated garnet. Fragments have not | | | | |
| | | moved far. | | | | |
| | 400-422' | Crackle breccia as above. Angular fragments | | | | |
| | | set in quartz and sericite. Fragments | | | | |
| | | obviously have not moved far. Lots of | | | | |
| | | pyrrhotite in the matrix but generally | | | | |
| | | sphalerite. | | | | |
| | 420-424' | Very heavy sphalerite as disseminations; | | | | |
| | | heavy sphalerite in fracture at 424'. | | | | |
| | | | | | | |
| 428-476' | Breccia com | ntaining abundant black clasts of the lithology | (| | | |
| | found in se | ection 329-428' mixed with finer black clasts, | | | | |
| | quartz clas | sts and metamorphic clasts. There are also | | | | |
| | fragments o | of light grey tuff but no Scuzzy. Pyrrhotite | | | | |

PROPERTY

CATARACT - EAST ZONE

| | DIP TEST | | | |
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| DEPTH | | DESCRIPTION | SAMPLE No. | AMBAM Of Sambre | M.S. | C.A. M.S. | |
|------------------|------------|---|------------|--------------------|------|--------------|----------|
| 428-476' (contd) | is much m | ore abundant than sphalerite. Sphalerite is | | | | | |
| | locally f | airly abundant. | | _ | | | |
| | 428-4301 | Quartz vein 2-3 mm thick cuts breccia. Minor | 460-470 | 10 | 2 | 70 | |
| | | sphalerite in the breccia. | 470-480 | 10 | 2 | 70 | |
| | | | 480-490 | 10 | 2 | 30,65 | |
| | | | 490-500 | 10 | 1 | 70 | |
| | 451' | Pink garnet form selvages relative to | 510 | 10 | 2 | 65,70 | <u> </u> |
| | | pyrrhotite - sphalerite fracture. | 520 | 10 | 1 | 55 | |
| | | | 530 | 10 | 2 | 30,50 | |
| | | | 540 | 10 | 5 | 0,25,70 | ,75 |
| | 471½-476' | Calcite veinlets. | 550 | 7.5 | 2 | 50 | |
| | 474' | Calcite veinlet cuts sphalerite fracture. | 560 | 10 | 3 | 20,40 | |
| 76-560' | Lapilli tu | uff containing abundant fragments of Scuzzy. | | | | | |
| | Scuzzy fra | gments appear to be getting fewer with depth, | | | | | |
| | so by 514 | Scuzzy is scarce. The principal lapilli are | | | | | |
| | dark fragm | ments typically 2-6 cm in diameter. Fragments | | | | | |
| | of schist | also noted. | | | | | |
| | 476-506' | Alteration. Pervasive development of fine | | | | | |
| | | grained pink mineral. Hard to knife. This | | | | | |
| | | material is similar to suspected garnet seen | | | | | |

PROPERTY

CATARACT - EAST ZONE

| DIP TEST | | | | | | |
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| Hole No. Sheet No. 10 of 10 | Lot | Total Depth |
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| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | | |
|------------------|-------------|---|------------|--------------------|------|--|--|
| 475-560' (contd) | | elsewhere in the drill target. Also | | | | | |
| | | Chloritization. | | | | | |
| | 476-506' | Very sparse base metal mineralization. | | | | | |
| | | General traces of sphalerite. About ½% iron | | | | | |
| | | sulphides. | | | | | |
| | 500' | Heavy sphalerite and pyrite in fracture | | | | | |
| | | @ 65°. | | | | | |
| | 506-560' | Alteration. Fine grained pink mineral as | | | | | |
| | | 476-506'. Minor quartz veining, sericite | | | | | |
| | | and chlorite. Minor fluorite in calcite | | | | | |
| | | veins. | | | | | |
| | 514-545' | Scarce clasts of Scuzzy quartz diorite. | | | | | |
| | 527' | Very heavy sphalerite in fracture. | | | | | |
| | 533-545' | A major fault occurs in this interval. | | | | | |
| | | Abundant gouge, shearing and slickenside | | | | | |
| | | development. Slickensided surfaces @ 20° | | | | | |
| | | and 0°. This is the most noticeable fault | | | | | |
| - | | zone so far intersected. | | | ···· | | |
| | 533' | Very heavy sphalerite in quartz vein. | | | | | |
| | | Sericitic vein border. | | | | | |
| 560' | END OF HOLE | | | | | | |

Coring Date Finished day shift Aug. 9/83 Elev. Collar

CATARACT **PROPERTY**

HOLE No.

DDH 8303

| DIP TEST | | | | | | |
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Hole No. DDH 8303 Sheet No. 1 of 4 Section Dep. Coring Date Begun night shift Aug. 7/83 Bearing 085°, -45°

Dep.....

Total Depth 234 Logged By R. Bruaset, T. Lee Claim Cataract 3 M.C. Core Size NO with water

| DEPTH (feet | DESCRIPTION | SAMPLE No. | Recovery | M.S. No. | C.A./M.S. |
|-------------|--|------------|----------|----------|-------------|
| -55' | Dark tuff to lapilli tuff. High percentage Scuzzy | 0-10 | 7 | 3 | 15,30,50 |
| | fragments. Weakly magnetic. | 10-20 | 10 | 5 | 20,30,35,60 |
| | 0-55' Alteration. Chlorite along fractures, sericite and | 30 | 8.5 | 7 | 10,15,30,50 |
| | epidote also present. | 40 | 10 | 1 | 50 |
| | 0-55' Mineralization. Sphalerite-galena-pyrrhotite- | 50 | 10 | 3 | 15,30,70 |
| | pyrite-chalcopyrite veinlets and occasionally the | 60 | 10 | 9 | 15,20 |
| | above in quartz Veins. Also disseminated sulphides | , 70 | 10 | 5 | 0,30,50 |
| | vein mineralization ≫disseminations. Galena seems | 80 | 10 | 4 | 5,40,45 |
| | to be more abundant in the top of this hole than | 90 | 10 | 4 | 35,60,65 |
| | in the tops of 8301, 8302. | 100 | 10 | 4 | 55,70 |
| | 20' Heavy galena and sphalerite in 1 mm to 1 cm wide | 110 | 10 | 4 | 10,23,30,50 |
| | veinlets. | 120 | 10 | 2 | 25,35 |
| | 41-56' Fine grained disseminated garnet. | 130 | 9.5 | 3 | 10,20,50 |
| | 46' Minor epidote in sphalerite bearing fracture. | 140 | 10 | 1 | 10 |
| 5-112' | Tuff as 38-140 in DDH 8302 with scarce Scuzzy clasts. | 150 | 10 | 6 | 25,40 |
| | About 15% lapilli size fragments. Gradational contact | 160 | 10 | 5 | 40,65,75 |
| | with the tuff to lapilli tuff above. | 170 | 10 | 5 | 20,25,30,40 |
| | 55-112' Alteration. Weak bleaching in short sections | 180 | 10 | 6 | 20,30.55 |
| | generally associated with mineralized fractures. | 190 | 10 | 3 | 20,30, |
| | Dissem. garnet throughout. | 199 | 9 | 3 | 20,30,60 |
| | <u> </u> | 201 | 2 | 2 | 0,30 |

PROPERTY CATARACT

| DIP TEST | | | | | | | |
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| Hole No. DDH 8303 Sheet No. 2 of 4 | Lat | Total Depth 234 ' |
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| Section | Dep | Logged By |
| Date Begun | Bearing . | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | DESCRIPTION | SAMPLE No. | Recovery | M.S.No. | C.A./M.S. |
|---|--|------------|----------|---------|-------------|
| 55-112' (cont'd) | 55-112' Mineralization. Galena-sphalerite-pyrrhotite- | 201-210 | 9 | 2 | 0,30 |
| | pyrite-chalcopyrite veinlets. The bulk of the | 220 | 10 | 7 | 10,25,45,60 |
| | sulphides is structurally controlled. Weakly | 234 | 13.5 | 14 | 25,30,80 |
| | magnetic. | | | | |
| | 75-109' Round lapilli size clasts exhibit concentric | | | | |
| | layering. Possible accretionary lapilli (see | | | | |
| - Angles | DDH8301 & 8302 for occurrences of the same type | | | | |
| | of lapilli.) | | | | |
| | 106-107' Faulting @70°. Calcite veinlets, slickensides | | | | |
| | minor gouge. | | | | |
| 112-234' | Lapilli tuff. Fragments typically 1cm to 6cm, | | | | |
| | occasionally up to 40 cm, e.q. 135'. The largest | | | | |
| | clasts are Scuzzy. Abundant Scuzzy throughout. | | | | |
| | Clasts of quartzite and schist also recognized. No | | | | |
| | accretionary lapilli. Upper contract gradational | | | | |
| | over about 1 foot. Faint foliation due to biotite | | | | |
| | 055 ⁰ . | | | | |
| 4-10-10-10-10-10-10-10-10-10-10-10-10-10- | | | | | |
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CATARACT DDH 8303 **PROPERTY** HOLE No. DIP TEST Angle Hole No.....Sheet No...3 of 4 Footage Reading Corrected Total Depth ... Logged By..... Dep..... Date Begun Claim Bearing Date Finished Elev. Collar Core Size Recovery **XXXXXX** DEPTH DESCRIPTION SAMPLE No. OUEX SCANNIALIXE 112-234' (cont'd) 117-118' Faulting. Gouge, slickensides and generally intense shearing. Slickensided surfaces have core angles as 0°.30°. Also heavy calcite veining. 145-234' Mineralization becoming stronger as base metal fractures become wider and more numerous. It appears that galena remains relatively abundant to depths greater than in either of the previous holes. 112-234' Alteration. Alteration is generally weak. Fine grained garnet is pervasive. Chloritization and sericitization locally noted in mineralized fractures. Also minor calcite veining, e.g. $168\frac{1}{2}$ ', 171', 198'. Epidote locally present. e.g. 134-135. Minor quartz veining. 135' Heavy galena and chalcopyrite in quartz vein with associated epidote and chlorite.

| PROPERTY | CATARACT | HOLE No. | DDH 8303 |
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| FROFERIT | | HOLL NO. | |

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| Hole NoSheet No. 40f 4 | Lot | Total Depth |
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| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | |
|------------------|--------------|--|------------|--------------------|--|-------------|
| 112-234' (contd) | 146,154,167' | Layering 0 50°, 60° | | | | |
| | 195' | Galena veinlet cuts quartz-calcite veins. | | | | |
| | 199-201' | Very heavy sphalerite and galena in 5 mm | | | | |
| | | seam more or less parallel to core axis. | | | | |
| | 213' | Quartz vein containing sphalerite cuts | | | | |
| | | a sphalerite bearing seam. | | | | |
| | 210-234' | Limonitic fractures. | l | | | |
| | 232-234' | Fault @ 35°.Sericitic gouge and slickensid | es. | | | |
| | This hole wa | s abandoned at 234' due to encounter with | | | | |
| | a sub-terran | ean stream. There was no water return and | | | | |
| | the rods wer | e whipping badly. The rushing of the water | | | | |
| | could clearl | y be heard at the drill collar. Attempts | | | | |
| | to block the | water flow failed. In the absence of | | | | |
| | BQ equipment | we were unable to try to deepen the hole | | | | |
| | using the NQ | equipment as casing and drilling out the | | | | |
| | NQ bit. The | hole was pegged and probably could be | | | | |
| | deepened if | required. It is notable that holes 8301 an | d | | | |
| | 8302 had bot | h been making water up to this point but | | | | |
| | for some une | xplained reason stopped making water upon | | | | |
| | DDH 8303 enc | ountering the subterranean stream. (it is | | | | |

unknown at what point the other holes started to make water) END OF HOLE

PROPERTY

CATARACT

HOLE No.

DDH 8304

| DIP TEST | | | | | |
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Hole No. DDH 8304 Sheet No. 1 Of 10 Lat. Section DDH 8304 section Dep..... Bearing 056, -50° Date Begun Coring on Aug 16/83 Date Finished Coring on Aug 21/83

Elev. Collar

Total Depth 558.51 Logged By T. Lee, R.Bruaset Cataract #3

Core Size NQ

| DEPTH | DESCRIPTION | Interval SXMRKEXXXX | Recovery WYD*M OUTX SKAWN POLYE | M.S. | C.A. |
|-------|--|------------------------|---------------------------------------|------|-------------|
| 0-21' | Medium grey lithic tuff. Fragments are derived from | 0-11 | 6 | 1 | 60 |
| | basement material largely including Scuzzy (minor), | 11-13 | 2 | 8 | 10,40,50 |
| | quartzite and schist and Tertiary volcanic material. | 13-20 | 7 | 5 | 0,15,45,50 |
| | Dominant fragment size 2 mm or less. Scuzzy fragments | 20-25 | 5 | 4 | 15,35,40 |
| | up to 3 cm noted,e.g. 6'. At the lower contact, the | 25-30 | 4.5 | 2 | 60,80 |
| | tuff grades into pyroclastics containing abundant Scuzzy | 30-35 | 4.5 | 1 | 40 |
| | No accretionary lapilli seen. | 35-40 | 5 | 0 | |
| | | 40-45 | 5 | 2 | 15 |
| | , | 45-50 | 5 | 1 | 15 |
| | | 50-55 | 5 | 3 | 0,20,50 |
| | 0-21 Alteration. Sericitic fractures, e.g. 18-21'. | 55-60 | 5 | 2 | 0,15 |
| | Local bleaching. The degree of sericite develop- | 60-65 | 5 | 3 | 0,15,65 |
| | ment appears to increase with the amount of | 65-70 | 5 | 4 | 0,30 |
| | sulphide mineralization. Abundant fine grained | 70-75 | 5 | 1 | 20 |
| | garnet present throughout. Quartz veins are | 75-80 | 5 | 0 | |
| | occasionally noted and these may contain galena. | 80-85 | 5 | 2 | 40,45 |
| | | 85-90 | 5 | 2 | 5,60 |
| | | 90-95 | 5 | 5 | 20,25,40,65 |
| | | 95-98 | 3 | 3 | 10,25,40 |
| | | 98-105 | 7 | 3 | 10,30,40 |
| | | 105-110 | 5 | 0 | |

| PROPERTY | CATARACT | HOLE No. | DDH 8304 |
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| | DIP TEST | | | | |
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| DEPTH | | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | | |
|---------------|---------|---|------------|--------------------|------------|---|---|
| 0-21' (contd) | 0-21 | Mineralization. Galena, sphalerite, pyrrhotite | | | | | |
| | | in veins. Also disseminations of the above. | | | | | |
| | | Cross cutting relationships of galena, in | | | | | |
| | | quartz veins suggest a late period of mineral- | | | | | |
| | | ization. | | | ļ <u>.</u> | | |
| | 11-31 | Very heavy sphalerite in a fracture parallel | | | | | |
| | | to the core axis. Apparent reactivation of | | | | | ļ |
| | | this fracture with subsequent galena | | | | | |
| | | introduction. | | | | | |
| | | | | | | | |
| 21-53' | Lapilli | tuff containing abundant Scuzzy fragments up to | | | | | |
| | 3-4 cm. | High degree of assimilation of Scuzzy. | | | | | |
| | 21-53 | Alteration.Sericitic fractures locally well | | | | | |
| | | developed, e.g. 22-23', 36', typically with | | | | | |
| | | associated sphalerite. Also abundant fine | | | | ļ | |
| | | grained disseminated garnet. | | | | | |
| | 21-53 | Mineralization. Very weakly mineralized. | | | | | |
| | 29-36 | Very broken core but no direct evidence of | | | | | |
| | | faulting such as gouge and slickensides. | | | | | |
| | | Drillers encountered lost circulation here | | | | | |
| | | which required cementing. | | | | | |

PROPERTY CATARACT

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| Hole No. Sheet No. 3 of 10 | Lat | Total Depth |
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| DEPTH | DESCRIPTION | SAMPLE No. | Recover ************************************ | M.S. | C.A. | |
|----------------|---|------------|---|-----------------|-------|---|
| | DESCRIPTION | SAMPLE No. | QR SAMPLE | 11.5. | M.S. | |
| 21-53 (cont'd) | 41' One half cm wide fault zone @ 20°. Galena, | | | | | |
| | sphalerite, pyrrhotite veinlet is offset by | | | | | |
| | this fault. | | | | | |
| | 71' Veinlet containing garnet and chalcopyrite. | | | | | |
| 53-143' | Lithic tuff. Minor Scuzzy fragments. Very weakly | | | | | |
| | magnetic relative to the pencil magnet. Weak mineral- | | | | | |
| | ization. Sphalerite, pyrrhotite, galena and | | | | | |
| | chalcopyrite occur together in fractures and the same | | | | | |
| | minerals occur in disseminated form. | | | | | |
| | 64-115' Abundant disseminated garnet. | | | | | |
| | 96-106' Occasional accretionary lapilli. | | | | | |
| | 106-112' Abundant accretionary lapilli. | | | | | |
| | 112-123' Occasional accretionary lapilli. | | | - - | | |
| | 123-143' Abundant accretionary lapilli. | | | | | |
| | 90-98' Relatively heavy sphalerite, galena, pyrite, | | | | | |
| | pyrrhotite in veinlets and as disseminations. | | | | | |
| | 106' Abundant garnet in 8 cm section. | 110-115 | 5 | 1 | 45 | _ |
| | | 120 | 5 | 2 | 30,45 | |
| | 123' Layering @ 40° | 125 | 5 | 1 | 45 | |
| | | 130 | 5 | 1 | 70 | |

PROPERTY CATARACT

HOLE No.

DDH 8304

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| Date Finished | Elev. Collar | | Core Size |

Recovery C.A. DEPTH SAMPLE No. M.S. DESCRIPTION M.S. 53-143' (contd) 127' Quartz veinlet with pyrite only. 135 0 140 0 /3 - 558.51 Lapilli tuff containing abundant Scuzzy clasts. Other 145 30 clasts included are quartzite and schist. High quartz 150 0 component is presumeable due to assimilation of Scuzzy. 155 5 0 Weakly magnetic. 160 35 30 165 170 20 175 0 180 Mineralization. Very sparsely mineralized with 185 5 0 sphalerite, galena, chalcopyrite. Pyrite and 0,20 5 190 pyrrhotite, estimated ½%. Minor arsenopyrite noted 0 195 215-253'; disseminations and in fractures. 200 0 25 205 2 210 5 30 Alteration. Principal alteration is fine grained 210-215 3 10.15 disseminated garnet occurring in fractures as well as disseminations. Epidote is locally associated with this material.

PROPERTY

CATARACT

HOLE No.

DDH 8304

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| DEPTH | DESCRIPTION | | SAMPLE No. | WIDTH OF SAMPLE | | |
|-------------------|-------------|---|------------|--------------------|--|---|
| 143-558.5 (contd) | 165,166' | Two bands a few cm thick containing | | | | |
| | | accretionary lapilli. Core angle 40°. A | | | | |
| | | quartz veinlet cuts the lapilli. | | | | |
| | 168-170' | Layering @ 30° | | | | |
| | 183' | Quartz veinlet with sericitic border. | | | | |
| | 185.9-190 | Heavy sphalerite, galena, chalcopyrite, and | | | | |
| | _ | pyrrhotite in veinlets. | | | | |
| | 188-196' | Layering @ 35° | | | | |
| | 189' | Galena in 2 mm quartz veinlet. | | | | |
| | 225' | Arsenopyrite veinlet @ 50° | | | | • |
| | 196-198, | 199-204, 209-210' Calcite-quartz-fluorite | | | | |
| | | veins @ 50° fairly common. Minor gouge | | | | |
| | | development 196-198. | | | | |
| ! | 215' | Minor arsenopyrite in fracture. | | | | |
| | 217' | Minor disseminated arsenopyrite. | | | | |
| | 237-238' | Heavy garnet and chlorite in shear zone. | | | | |
| | | Minor associated arsenopyrite. | | | | |
| | 243' | Strong layering @ 50°. | | | | |
| | 252 ' | Disseminated arsenopyrite in sections of | | | | |
| | | bleaching. | | | | |
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PROPERTY CATARACT

HOLE No. DDH 8304

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Recovery WHATH BYWYKE NO C.A. DEPTH DESCRIPTION SAMPLE No. M.S. M.S. 143-558.5 (contd) 253' Minor arsenopyrite in fracture; also associated garnet. 263-264, 277' Minor disseminated arsenopyrite. 275' Slickensides @80°-90° 2 cm wide shear zone. 2991 Sphalerite in garnet-chlorite-epidote veinlet @ 80° 324-558.5 Generally very low sulphide content. Pyrite 215-220 5 40,70 and pyrrhotite probably 1/10%. Overall, 225 5 0 locally much higher. 230 5 40.50 30,40,60 235 5 3 379-402' Tuff to lapilli tuff. 50 240 5 245 5 0 415-4461 1-2% pyrite and pyrrhotite; dissemination 5 15 250 mostly. 5 255 70 50 260 5 1 454-558.5' Weak to moderate magnetism. 20,60 265 5 2 15 270 5 3281 7m wide vein @ 75° containing unidentified 45,65 275 2 dark green mineral. Too hard for chlorite. 280 0 5 45 285 290 5 0

PROPERTY CATARACT

HOLE No. DDH 8304

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| Hole No Sheet No. 7 of 10 | Lat | Total Depth |
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Recovery

| | | | | Recovery | | | |
|-------------------|-------------|---|------------|--------------|------|--------------|-------|
| DEPTH | | DESCRIPTION | SAMPLE No. | OFX96NVXPLXE | M.S. | C.A. M.S. | |
| 143-558.5 (contd) | 346-347' Qt | uartz calcite veinlets @ 30° | 295 | 5 | 0 | | |
| | | | 300 | 5 | 11 | 80 | |
| | 360.5-361.5 | Heavy sphalerite, pyrite, galena in altered | 305 | 5 | 2 | 20,55 | |
| ····· | zo | one 4 cm wide @ 25° | 310 | 5 | 1. | 35 | |
| | | | 315 | 5 | 0 | | |
| | 384-385' He | eavy sphalerite in altered zone @ 20°. | 315-320 | 5 | 0 | | |
| | 404.5-405.5 | Heavy sphalerite, pyrrhotite, pyrite, galena | | | | | |
| | 9 | 60°. | | | | | |
| | 412-413' Da | ark fine grained lithology containing | | | | | |
| | at | oundant plagioclase laths @ 1 mm. Sharp | | | | | |
| | cc | ontacts. This may be a dyke equivalent of | | | | | |
| | th | ne crackle brecciated units in DDH 8301 & 830 | 2. | | | | |
| | 420' He | eavy sphalerite, pyrrhotite in 2 mm veinlet | | | | | |
| | 0 | 20°. | | | | | |
| | 430,441' Po | ossible layering @ 45° | | | | | |
| | 460-461' Sh | nearing 0 50°. | | | · | | |
| | 478.5-481 2 | mm wide veinlet semi-parallel to core contai | ņs | | | | |
| | he | eavy sphalerite, pyrrhotite and galena. This | | | | | |
| | | ein is cut by a late quartz vein. | | | | | |
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| Hole No. Sheet No. 8 of 10 | Lot | Total Depth |
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Recovery

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| DEPTH | | DESCRIPTION | SAMPLE No. | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | M.S. | C.A. M.S. | |
| 143-558.5'(contd) | 509' | Base metal veinlet @ 25° cut by late | 320-325 | 5 | 1 | 35 | |
| | | quartz veinlet @ 55° | 330 | 5 | 0 | | |
| | | | 335 | 5 | 2 | 50,70 | |
| | 505-558' | Calcite-fluorite-quartz veinlets up to 3 | 340 | 5 | 0 | | |
| | | per foot. Core angles usually from 50-70° | 345 | 5 | 0 | | |
| | | Some weak breccia development locally. | 350_ | 5 | 1 | 20 | |
| | | | 355 | 5 | 1 | 65 | |
| | | | 360 | 5 | 2 | 30,40 | <u> </u> |
| | | | 365 | 5 | 0 | | NOTE |
| | | | 370 | 5 | 0 | | Samp16 |
| | | | 375 | 5 | 0 | | inter |
| | | | 380 | 5 | 0 | | vary |
| | | | 385 | 5 | 1 | 20 | consic erably |
| | | | 390 | 5 | 2 | 20,30 | 1 |
| | | | 395 | 5 | 0 | | |
| | | | 400 | 5 | 1 | 40 | |
| | | | 405 | 5 | 3 | 20,30,60 | |
| | | | 410 | 5 | 1 | 40 | |
| | | | 415 | 5 | 0 | | |
| | | | 420 | 5 | 3 | 10,120 | |
| | | | 420-425 | 5 | 1 | 20 | |

PROPERTY CATARACT

HOLE No. DDH 8304

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Recovery XXXXXXXX C.A. DEPTH DESCRIPTION SAMPLE No. M.S. M.S. 143-558.5'(contd) 534-535, 538-543, 552-558' Abundant veins. 425-430 75 435 0 440 5 0 1 5 0,35 445 450 5 10 NOTE: 526-527 Dark fine grained rock containing 1 mm 455 10 Sample feldspar phenocrysts. Upper contact sharp 460 0 75 nterva @ 75° lower @ 55°. Contains minor 465 2 25,35 5 highly disseminated pyrite and sphalerite. Possible 470 5 25,65 variab dyke. 475 5 30 480 5 10 485 5 10,55 490 5 0 529' Sphalerite-pyrite veinlet cut by calcite 495 5 20,75 veinlet. 500 5 0 505 0 539' Sphalerite-galena veinlet 3 mm wide @ 30° 510 5 25 is cut and offset by quartz-calcite filled 515 5 25,35 fracture. 520 15 5 525 5 0 5431 5 cm wide fault gouge @ 80° 530 5 25,55

| İ | PROPERTY | CATAK | 701 | | | HOLE | No | DDH 8304 | | |
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| DEPTH | | | DESCRIPTION | | SAMPLE No. | XHXXHXK BYAMAN AG | M.S. | C.A. M.S. | | |
| 558.5' | | END OF HO | LE | | 530-535 | 5 | 2 | 5,20 | - | |
| | | | | | 540 | 5 | 1 | 30 | | |
| | | | | | 545 | 5 | 1 | 35 | | |
| | | | | | 550 | 5 | 0 | | | |
| | | | | | 555 | 5 | 1 | 20 | | |
| | | | | | 555-558. | 3.5 | 0 | | 1 | |
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| Footage | | ngle Corrected | Hole No. DDH 8305 Sheet No. 1 of 8 | 305 Sheet No. 1 of 8 Lat | | | | Total Depth 348' (106.1m) | | |
| ersion - 1 f | foot = 0. | 305 m | Section | Bearing | , 232° | -45° 5 m | | Logged By Cat | | |
| DEPTH | | | DESCRIPTION | SA | AMPLE No. | WIDTH OF SAMPLE | | | | |
| | | SUMMARY | | | | | | | | |
| 18' | 0ver | burden. | | | | | | | | |
| 38' | Medi | um coloured | | | | | | | | |
| | pres | ent include | quartzite and plutonics (Scuzzy). | | | | | | | |
| | Spha | lerite and g | alena with traces of chalcopyrite oc | cur | | | | | | |
| | in f | ractures and | as disseminations. Associates | | | | | | | |
| | incl | ude pyrite a | nd pyrrhotite. Garnet widespread. | | | | | | | |
| 120' | Gene | erally medium | coloured, also light to dark. This | 5 | | | | | | |
| | sect | ion lacks th | e pyroclastic character (distinct | | | | | | | |
| | rock | fragments) | of the section above. No Scuzzy cla | ests | | | | | | |

Co 38 present. It appears that dark patches in the rock are relics of the pre-alteration lithology. Finer grained material between patches appears to consist largely of fine grained quartz and sericite. Similar to 227' to 333' in 8301. Base metal mineralization as above. Garnet present. 120 - 173' Medium coloured lapilli tuff. Distinct fragments in this section include some of basement lithology. Mineralization as above. The frequency of mineralized fractures is noticeably lower than the sections above

although the base metal contents have not changed

appreciably. Garnet present.

PROPERTY

CATARACT

HOLE No.

DDH 8305

| | DIP TEST | | | | | |
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| | An | gle | | 8305 2 of 8 | | |
| Footage | Reading | Corrected | Hole No | Sheet No. | Lat | Total Depth |
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| DEPTH | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | |
|--------------|---|------------|--------------------|------|------|
| 173 - 179.5' | Dark lapilli tuff. The composition of the matrix | | | | |
| | and fragments appears similar. A few accidental clasts | | | | |
| | noted. Garnet present. | | | | |
| 179.5 - 183' | Whitish lapilli tuff to tuff. Accidental clasts derived | l | | | |
| | from Scuzzy noted. Garnet present. | | | | |
| 183 - 191' | Dark lapilli tuff as 173-179.5'. | | | | |
| 191 - 248' | Medium to dark tuff to lapilli tuff. Fragments are | | | | |
| | diverse in composition and indistinct. Scuzzy fragments | } | | | |
| | are present. Garnet present. | | | | |
| 248 - 348' | Dark lapilli tuff including tuff. High accidental clas | | | | |
| | component derived from schist and quartzite. Weaker | | | | |
| | base metal mineralization than in the sections above. | | | | |
| | Garnet present. | | | | |
|) OF HOLE | | | | | |
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PROPERTY

CATARACT - EAST ZONE

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| | | | ngle | DDH 8305 3 of 8 | | | | 24 | 01 /100 | J\ | | |
| - | Footage | Reading | Corrected | Hole No. DDH 8305 Sheet No. 3 of 8 L | | | | otal Depth34 | | - | | |
| | | | | | earing | | | | | | | |
| | | | | Date Finished | - | | | | | | | |
| | | | | | Interval | | | ore Size Note: Order not imply r | r of lis relative | ting does abundanc | | |
| | DEPTH | | | DESCRIPTION | SWAMPLEXME | W WATH Dramakare | M.S. No. | C.A. M.S. | | Sample Numbe∵ | | |
| | | NOTE: | <u>-</u> | | 18-25' | 6 | _ 1 | 45 | | 9100R | | |
| | | (1) ' | 'M.S. No." | 25-30 | 5 | 1 | 5 | | 01 | | | |
| | | (| vein or fr | acture) containing one or more of | 30-35 | 5 | 0 | | | 02 | | |
| | <u>.</u> | 9 | phalerite, | galena, chalcopyrite. Structures with | 35-40 | 5 | 4 | 45,30 | | 03 | | |
| | | С | nly pyrite | and/or pyrrhotite are not included. | 40-45 | 5 | 2 | 35,10 | | 04 | | |
| | (2) "C.A. M.S." | | | = core angle of M.S. | 45-50 | 5 | 5 | 50,35,0 | | 05 | | |
| 0 - | 18' | 8' OVERBURDEN (talus). | | | | 4.5 | 5 | 5,70,35 | | 06 | | |
| 18 - | 18 - 38' | Mediu | m coloured | lapilli tuff with various lithic | 55-60 | 5 | 5 | 45,35,55 | | 07 | | |
| | | fragn | ents consi | sting of abundant quartzite and | 60-65 | 5 | 7 | 50,30,70 | | 08 | | |
| | -1-L | occas | ional dark | fine grained fragments with or without | 65-70 | 5 | 7 | 15,30, | | 09 | | |
| | | disse | minated ga | rnet-sphalerite-pyrrhotite-pyrite. Parts | 70-75 | 5 | 10 | 15,30,40 | , 60 | 10 | | |
| - | | are w | eakly blea | ched. This section is weakly mineralized | 75-80 | 5 | 8 | 10,40,50 | ,60 | 11 | | |
| _ | | with sphalerite in veinlets and disseminations. | | | | 5 | 5 | 10,15,60 | | 12 | | |
| | | 30 ' F | ragment of | Scuzzy intrusive. | 85-90 | 5 | 8 | 0,10,15 | ,35,60 | 13 | | |
| 38 - | 120' | Gener | ally mediu | m coloured (variable light to dark). | 90-95 | 5 | 7 | 0,15,45 | ,70 | 14 | | |
| | | Dark, | fine to m | edium grained fragments or patches with | 95-100 | 4.5 | 0 | | | 15 | | |
| | | or wi | thout diss | eminated garnet-sphalerite-pyrite- | 100-105 | 5 | 1 | 15 | | 16 | | |
| _ | | pyrrh | otite are m | 105-110 | 5 | 4 | 0,30,50 | | 17 | | | |
| | | 61-120' is mainly lighter coloured in places with a | | | | 5 | 2 | 0,50 | | 18 | | |
| | | mottl | ed, white | and greenish, appearance. This interval | 115-120 | 5 | 6 | 0,10,50 | | 19 | | |
| | | is po | ssibly an | altered dark fine grained rock. There is | 120-125 | 5 | 8 | 10,40,75 | | 9120R | | |

PROPERTY

CATARACT - EAST ZONE

| Г | | DIP TEST | | | | | | | | |
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| | Angle | | | Hole No. DDH 8305 Sheet No. 4 of 8 | | | | | | |
| - | Footage | Reading | Corrected | Hole NoSheet No | Lat | | | tal Depth | | |
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| | | | | Date / maried | Elev. Collar. | | | re Size Order of T | | |
| | | | | | Interval | MEGINA | not M.S. | imply relativ | <u>sabundance</u> | |
| | DEPTH | | | DESCRIPTION | SAMPLE NXX | QE SAMPLE | No. | M.S. | Number | |
| 38 - | 120' (cont | 'd) a | gradual cha | nge between these two subintervals. The | 125-130 | 5 | 3 | 10,30,50 | 9121R | |
| _ | | 38 | -61' interv | al is similar to intervals in other hole | s 130-135 | 5 | 0 | | 22 | |
| | | wi | th dark fin | e grained fragments or patches. | 135-140 | 5 | 0 | | 23 | |
| | | Ma | gnetism is | strong in dark fragments, weak else- | 140-145 | 5 | ן | 30 | 24 | |
| | | wh | nere. F | ragments relatively rich in pyrrhotite | 145-150 | 5 | 1 | 45 | 25 | |
| | | ar | e also rela | tively rich in sphalerite. No Scuzzy | 150-155 | 5 | 0 | | 26 | |
| | fragments noted. This interval also controls of short sections (a few feet) in which d | | agments not | ed. This interval also contains a coupl | e 155 -1 60 | 5 | 0 | | 27 | |
| | | | ions (a few feet) in which distinct | 160-165 | 5 | 3 | 55,30,40 | 28 | | |
| | | fr | agments are | present. Abundant garnet is present in | 165-170 | 5 | 0 | | 29 | |
| | | di | sseminated | form and the colour of the garnet varies | 170-175 | 5 | 3 | 30,60 | 30 | |
| | | fr | om pinkish | to black. Moderate mineralization in th | e 175-180 | 5 | 0 | | 31 | |
| | | fo | rm of sphal | erite, pyrite, galena, chalcopyrite and | 180-185 | 5 | 1 | 15 | 32 | |
| <u> </u> | | ру | rrhotite. | Sphalerite is dominant. Sulphides as | 185-190 | 5 | 0 | | 33 | |
| | | ve | ins and dis | seminations. Mineralization sometimes | 190-195 | 5 | 2 | 10,65 | 34 | |
| | | as | sociated wi | th quartz, garnet/or chlorite. | 195-200 | 5 | 2 | 45,0 | 35 | |
| | | 43 | -45' Dark a | nd fine to medium grained section with | 200-205 | 5 | 4 | 15,30,50 | 36 | |
| | | | garnet | Lacks the lightcoloured alteration | 205-210 | 5 | 7 | 20,35,40 | 37 | |
| | | | typica | l in the section 38-120'. Mineralized | 210-215 | 5 | 2 | 20 | 38 | |
| | | | as abo | ve. | 215-220 | 5 | 5 | 10,25 | 39 | |
| | | 81 | -83' 4 mm w | ide sphalerite-pyrite-galena-garnet- | 220-225 | 5 | 0 | | 40 | |
| | | | chlori | te veinlet @10°. | 225-230 | 5 | 0 | | 9141R | |
| | | t | | | | | | | | |

PROPERTY

CATARACT - EAST ZONE

HOLE No. DDH 8305

| | DIP TEST | | | | | |
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| е | Ang | | | | | |
| Corrected | Reading | Footage | | | | |
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| | | | | | | |
| | | | | | | |
| | | Angle | | | | |

| Hole No. DDH 8305 Sheet No. 5 of 8 | Lot | Total Depth. |
|------------------------------------|---------|--------------|
| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| | | |

Elev. Collar Core Note: Order of Tisting does Recovery not imply relative abundance Interval KYTRIKK Sample M.S. C.A. M.S. SAMRLE NO. **DEPTH** DESCRIPTION OFXSANIBLE Number No. Medium coloured lapilli tuff. Colour variable due to 230-235 120 - 173' 9142R various lithic fragment types. Fragments in the section 235-240 10,15 43 tend to be more distinct than in the section 38-120' are 240-245 5 30 44 generally distinct. Abundant fine grained light to 245-250 5 3 30,20,40 45 medium coloured fragments, many with foliation. Lesser 250-255 5 15 46 dark, fine grained fragments. Dark fragments increase 255-260 5 0 47 approaching the lower contact to the point where it is 260-265 5 20 48 the matrix. Occasional quartz veinlets. Weak chlorite 265-270 10 5 1 49 alteration, bleaching and silicification in places. 270-275 5 10 50 Moderate to abundant dark garnets with the highest 275-280 0 51 concentrations in the dark fragments. The dark fragment\$ 280-285 5 0 52 also have more pyrrhotite. Weak to moderate mineraliza-285-290 5 0 53 tion as sphalerite-pyrite ± chlorite/sericite 290-295 5 0 54 pyrrhotite-chalcopyrite-galena veinlets and 295-300 50 5 55 disseminations. 300-305 5 0 56 139-140' Fault gouge and shear at 15° . 305-310 0 57 143' Pink (hard, H 6) mineral along edge of quartz vein. 310-315 4.5 0 58 Maybe rhodenite? 315-320 5 0 59 146' 4 mm wide crushed rock shear zone at 65°. 320-325 5 0 60 155' Veinlet at 20° with unknown mineral (tabular, 325-330 0 61 colourless, H=4 zeolite or barite?) as in other 333-335 4.5 9162R 0 holes, plus calcite.

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8305

| DI | P TEST | | | | | | | | |
|---|---|-------------|---|--|-------------------------|-------------|----------------------------|-----------------------------------|--|
| | Angle Hole No. DDH 8305 Sheet No. 6 of 8 Lat. | | | | | | | | |
| Footage | Reading | Corrected | | .at | | | al Depth | | |
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| | | | • | • | | | Claim | | |
| | | | | lev. Collor Interval | Core Recovery | | te: Order o t imply rel | f listing does ative abundance | |
| DEPTH | | DESCRIPTION | | *XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | XXXIDXM QEX SAXMENSE | M.S. No. | C.A. M.S. | Sample Number | |
| 20-173' (Cont'd) 164' sphalerite veinlet at 30° cut by quartz veinlet | | | 335-340 | 5 | 0 | | 9163R | | |
| at 40°. | | | | 340-348 | 8 | 0 | - | 9164R | |
| - 179.5' | Dark (| (almost l | olack) lapilli tuff. Fine to medium | | | | | | |
| | graine | ed matrix | x and lapilli fragments. Fragments and | | | | | | |
| | matrix | appear | to be similar in composition and | | | | | | |
| | textur | re. | | | | | | | |
| | Also s | ome mind | or foreign fragments including a few | | | | | | |
| | Scuzzy | / intrus | intrusive fragments. Abundant pinkish to | | | | | | |
| | black | dissemin | nated garnet. Weak mineralization. | | | | | | |
| 179.5 - 183' | Whitis | h lapil | li tuff to tuff. Fragments and matrix | | | | | | |
| | both 1 | ight co | loured. Also two Scuzzy intrusvie frag- | | | | | | |
| | ments | and some | e probable Scuzzy derived quartz fragment | s | | | | | |
| | Minor | mafics. | Weak mineralization. | | | - | | | |
| : - 191 ' | Simila | r to 173 | 3-179.5' interval except it appears to be | : | | | | | |
| | more f | ragmenta | al and has less garnet. | | | | | | |
| 191 - 248' | Medium | to darl | tuff to lapilli tuff. Fragments are | | | | | | |
| | divers | se in con | mposition and indistinct. Minor Scuzzy | | | | | | |
| | intrus | ive comp | ponent. Some dark fragments with garnet- | | | | | | |
| | pyrite | ± spha | lerite. Most of the lapilli size | | | | | | |
| | fragme | nts occi | ur at the start of the interval. Some | | | | | | |
| | bleach | ning occu | urs with veining and chlorite/ occurs | | | | | | |
| | l | | | | l1 | | <u> </u> | | |

PROPERTY CATARACT - EAST ZONE

| | DIP TEST | | | | | |
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| le | Ang | | | | | |
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| | | Angle | | | | |

| Hole NoDDH 8305 Sheet No. 7 of 8 | Lot | Total Depth |
|----------------------------------|--------------|-------------|
| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar | Core Size |

| DEPTH | DESCRIPTION | | WIDTH OF SAMPLE | | | |
|-------------------|--|---|--------------------|------|--|--|
| 191-248' (Cont'd) | along some of the fractures. Some disseminated | | | | | |
| | garnet generally more abundant in the dark fragments. | | | | | |
| | Weak to moderate mineralization as sphalerite pyrite- | | | | | |
| | pyrrhotite veinlets and disseminations. | | | | | |
| | 195' Slickenside at 5°. | | | | | |
| | 205-210' Relatively abundant sphalerite. | | | | | |
| | Associated pyrrhotite and pyrite. | | | | | |
| | 214' 2 mm wide veinlet of pyrite-chlorite/ - arseno- | | | | | |
| | pyrite-pyrrhotite sphalerite at 30°. | | | | | |
| | 225' Minor slickenside and gouge at 30° . | | | | | |
| | 226' ½ cm veinlet of unknown mineral (colourless - | | | | | |
| | white, tabular, H=4. Zeolite or barite?) at 45°. | | | ···· | | |
| | 233' 5 cm quartz-calcite pod. | | ····· | | | |
| | 244-245' 7 cm wide zone of breccia and veining. | | | | | |
| | Mineralized throughout but more intense mineraliza | - | | | | |
| | tion in the veins. Veining @30°. | | | | | |
| 248 - 348' | Dark lapilli tuff lesser tuff. High metamorphic | | | | | |
| | fragment component including schist and quartzite. Low | | | - | | |
| | volcanic component. Minor Scuzzy component. Lapilli | | | | | |
| | are generally distinct. Matrix is dark. Weak to | | | | | |
| | moderate magnetism. Occasional white calcite-quartz | | | | | |

PROPERTY

CATARACT - EAST ZONE

| DIP TEST | | | | | |
|----------|---------|-----------|------------------------------------|--------------|---------------------------|
| | An | gle | מיינים מיינים | | 2401 (106 1~) |
| Footage | Reading | Corrected | Hole No. DDH 8305 Sheet No. 8 of 8 | Lot | Total Depth 348' (106.1m) |
| | | | Section | Dep | Logged By |
| | | | Date Begun | Bearing | Claim |
| | | | Date Finished | Elev. Collar | Core Size |
| | | | | | |

| DEPTH | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | | |
|-------|---|------------|--------------------|---|--|--|
| | veinlet and some sections where it is abundant. | | | | | |
| | Minor disseminated garnet. Weak mineralization in the | | | | | |
| | form of pyrrhotite > pyrite-chlorite-quartz > sphalerite- | | | | | |
| | chalcopyrite veinlets and disseminations. | | | - | | |
| | 254-255' About one dozen calcite-quartz veinlets at | | | | | |
| | 20-30°. | | | | | |
| | 260' Thin fault gouge at 40°. | | | | | |
| | 281' Slickensideson fracture with calcite at 25°. | | | | | |
| | 306-307' Abundant calcite and unknown mineral (white, | | | | | |
| | very soft, greasy feel in veinlets at 40-50° and | | | | | |
| | irregular veinlets. Possible shear zone. | | | | | |
| | 314-316.5' Two slickenside surfaces at 20° and some | | | | | |
| | calcite veinlets. | | | | | |
| | 333' Unknown mineral (white, tabular, H=4. Zeolite | | | | | |
| | or barite?) + calcite and crushed rock at 45°. | | | | | |
| | 346' Slickensided fracture. Pyrite slickensided. | | | | | |
| | 335-348' No base metal sulphides. Traces of | | | | | |
| | pyrrhotite. | | | | | |
| 348' | END OF HOLE | | | | | |
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PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8306

| DIP TEST | | | | | | | |
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| Reading | Corrected | | | | | | |
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Section DDH 8306 Date Begun August 26/83 Date Finished August 29/83

Lat... Dep. Bearing Elev. Collar. Core

361 feet Total Depth. Logged By TL, RB Claim Cataract #3 Core Size NQ

Interval Recovery

| | | Interval | Recovery | | | |
|---------|---|-----------------------|--|-------------|--------------|--------------------|
| DEPTH | DESCRIPTION | XXXXXXX XXXXXX | KAKAKAK X X AR IKAKAK XAK | M.S. No. | C.A. M.S. | Sample Number |
| | NOTE: | 27-35 | 7 | 5 | 10,0,60 | 9165R |
| | (1) "N.S. No." = number of mineralized structures which | 35-40 | 5 | 1 | 40 | 66 |
| | are the number of veins or fractures containing one | 40-45 | 5 | 2 | 30,0 | 67 |
| | or more of: sphalerite, galena, chalcopyrite. | 45-50 | 5 | 3 | 15,20 | 68 |
| | Fractures or veins containing only pyrite and/or | 50-55 | 5 | 1 | 80 | 69 |
| | pyrrhotite are not included. Cataract base metal | 55-60 | 5 | 2 | 50,60 | 70 |
| | sulphide structures usually contain pyrite and/or | 60-65 | 5 | 1 | 35 | 71 |
| | pyrrhotite. | 65-70 | 5 | 2 | 60 | 72 |
| | (2) "C.A. M.S." = core angle of M.S. | 70-75 | 5 | 00 | | 73 |
| | | 75-80 | 5 | 0 | | 74 |
| 0 - 27' | OVERBURDEN. | 80-85 | 4.5 | 0 | | 75 |
| | | 85-90 | 5 | 0 | | 76 |
| | | 90-95 | 5 | 1 | 45 | 77 |
| / - 341 | Lapilli tuff to tuff. Lapilli are composed mainly of | 95-100 | 5 | 1 | 10 | 78 |
| | basement fragments such as schist and quartzite. Minor | 100-105 | 5 | 2 | 10,0 | 79 |
| | disseminated garnet. Base metals occur as sphalerite- | 105-110 | 5 | 0 | | 80 |
| | pyrite- galena- chalcopyrite veinlets and as | 110-115 | 5 | 1 | 35 | 81 |
| | disseminations. | 115-120 | 5 | 7 | 25 | 82 |
| | | 120-125 | 5 | 1 | 30 | 83 |
| | | 125-130 | 5 | 1 | 10 | 84 |
| | | 130-135 | 5 | 7 | 40 | 9185R |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8306

| DIP TEST | | | | | | | |
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| Footage | Reading | Corrected | | | | | |
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| Hole No | Lat | Total Depth 361 feet |
|---------------|---------------|----------------------|
| Section | Dep | Logged By |
| Date Begun | Bearing | Claim |
| Date Finished | Elev. Collar. | Core Size |

| | | Intonval | Core Recovery | | | |
|-------------|---|----------------|------------------|-------------|-------|-------------------|
| DEPTH | DESCRIPTION | XX XXXX XX XXX | WY XXXX KIXEX | M.S. No. | C.A. | Sample Numbe |
| 96.5 - 130' | Dark breccia fragments set in a lighter sericitic | 240-245 | 5 | 2 | 15,80 | 9207 |
| | ground mass. Garnet, pyrrhotite, pyrite, sphalerite | 245-250 | 5 | 0 | | 08 |
| <u> </u> | and chalcopyrite occur in the fragments as well as in | 250-255 | 5 | 2 | 40,65 | 09 |
| | the ground mass. This section is strikingly similar | 255-260 | 5 | 3 | 60,45 | 10 |
| | to 34-56' in this hole. Weak sulphide mineralization. | 260-265 | 5 | | 30 | 11 |
| | A Scuzzy clast is noted at 103'. | 265-270 | 5 | 0 | | 12 |
| 77756449 | | 270-275 | 5 | 0 | | 13 |
| | | 275-280 | 4.5 | 0_ | | 14 |
| 130 - 153' | Dark andesitic lapilli tuff or breccia. Fragments | 280-285 | 4.5 | 0 | | 15 |
| | and matrix appear to be of the same composition. This | 285-290 | _5 | 1 | 40 | 16 |
| | section is similar to 56-96.5' in this hole but less | 290-295 | 5 | 2 | 45 | 17_ |
| | altered. Minor disseminated garnet. Weak sericite | 295-300 | 5 | 0 | | 18 |
| | development. Very weak bare metal sulphide mineraliz- | 300-305 | 5 | 0 | | 19 |
| | ation. No Scuzzy clasts. | 305-310 | 5 | 0 | | 20 |
| | | 310-315 | 5 | 1 | | 21 |
| | | 315-320 | 5 | 1 | 10 | 22 |
| | | 320-325 | 5 | 0 | | 23 |
| 153 163' | Breccia as 34-56' in this hole. Garnet present | 325-330 | 5 | 0 | | 24 |
| | throughout. Weak base metal mineralization. | 330-335 | 5 | 0 | | , - ' |
| | | 335-340 | 5 | 0 | | 9225 |
| | | 340-345 | 5 | 0 | |) |

PROPERTY

CATARACT - EAST ZONE

HOLE No.

DDH 8306

| | DIP TEST | | | |
|---------|----------|-----------|--|------|
| | An | gle | DDH 8306 3 65 E | |
| Footage | Reading | Corrected | DDH 8306 2 of 5 Hole NoSheet No Lat | Tota |
| | | | Section Dep | Log |
| | | | Date Begun Bearing | Cla |
| | | | Date Finished Elev. Collar Core | Cor |
| | | L | Interval Recovery | |

Total Depth 361 feet
Logged By.....

| DEPTH | DESCRIPTION | SWAXWHAY X | XXXXXXXX XXXXXXXXX | M.S. No. | C.A. M.S. | Sample Number |
|------------|---|------------|-----------------------|-------------|--------------|------------------|
| 34 - 56' | Dark monolithological breccia similar to 227-333 in | 135-140 | 5 | 1 | 50 | 9186R |
| | DDH 8301. Fragments are composed of a fine grained | 140-145 | 5 | 1 | 25 | 87 |
| | lithology set in a lighter sericiticground mass. | 145-150 | 5 | 0 | | 88 |
| | The fragments contain garnet, sphalerite, pyrrhotite, | 150-155 | 5 | 1 | 45 | 89 |
| | galena and chalcopyrite. Basement fragments of | 155-160 | 5 | 5 | 15,50 | 90 |
| | Scuzzy absent. | 160-165 | 5 | 3 | 20,50 | 91 |
| | | 165-170 | 5 | 0 | | 92 |
| 56 - 96.5' | Dark, almost black, fine grained andesitic | 170-175 | 5 | 0 | | 93 |
| | flow. The fragments in the section 34-56' maybe | 175-180 | 5 | 1 | 40 | 94 |
| | altered and mineralized equivalents of this unit. | 180-185 | 5 | 1 | 25 | 95 |
| | Occasionally present are 1-3 mm plagioclase laths. | 185-190 | 5 | 1 | 45 | 96 |
| | This lithology is similar to certain portions of the | 190-195 | 5 | 0 | | 97 |
| | breccia zone intersected in DDH 8301 and 8302. | 195-200 | 5 | 0 | | 98 |
| | Specifically, the material is similar to 378-435 in | 200-205 | 5 | 3 | 30,10,45 | 9199R |
| | DDH 8301 but crackle brecciation is not developed | 205-210 | 5 | 1 | 25 | 9200R |
| | in the present interval. | 210-215 | 5 | 7 | 30 | וס |
| | | 215-220 | 5 | 5 | 20,40,85 | 02 |
| | | 220-225 | 5 | 0 | | 03 |
| ~ | | 225-230 | 5 | 3 | 15,50,25 | 04 |
| | 56-62' Abundant disseminated garnet. | 230-235 | 5 | 3 | 45,15 | 05 |
| | | 235-240 | 5 | 0 | | 9206R |

| • | PROPERTY | | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | DDH 8306 | |
|----------------|-----------------|--|---|---------------|---|--------------|--------------|----------------|
| | DIP TEST Angle | | | | | | | |
| Footage | Reading | Corrected | Hole NoSheet No40f 5 | Lat | | . T o | otal Depth | |
| | | | Section | Dep. | | Lo | gged By | |
| | | | Date Begun | - | | | aim | •• |
| | | | Date Finished | Elev. Collar | Core | Co | ore Size | |
| | | | | Interval | Recovery | | | |
| DEPTH | | | DESCRIPTION | *XXXXXXXXXXXX | CALL XXXVIXIXE | M.S. No. | C.A. M.S. | Sampl Numbe |
| 163 - 182' | Dark | Dark lapilli tuff containing basement fragments of | | | 5 | 0 | | 39226 |
| | Scuz | zy and met | tamorphics. Minor disseminated garnet. | 350-355 | 5 | ן | 45 | 33220 |
| | Weak | base meta | sulphide mineralization. | 355-361 | 6 | 1 | 50 | 9227 |
| 182 - 199' | Dark | fine grai | ined andesite or dacite. Local breccia | tion | | | | |
| | ĺ | | -56' and 96.5-130' and 153-163' in this | | | | | |
| , | 1 | | ement fragments. Abundant garnet. Ver | | | | | |
| | į. | | al sulphide mineralization. | | | | | |
| | | | | | | | | |
| | 186 | - 187 She | earing @ 15° | | | | | |
| 99 - 361' | Dark | lapilli t | uff to tuff. Abundant basement fragme | nts | | | | |
| | | | and quartzite. Lesser Scuzzy fragment | | | | | |
| | 1 | Weak chlorite development. | | | | | | |
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PROPERTY CATARACT - EAST ZONE

| | DIP TEST | | | | | | | |
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| | Angle | | | | | | | |
| Footage | Reading | Corrected | | | | | | |
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| Hole No. | Sheet No. 5 Of 5 | Lat | Total Depth |
|---------------|------------------|--------------|-------------|
| Section | | Dep | Logged By |
| Date Begun | | Bearing | Claim |
| Date Finished | | Elev. Collar | Core Size |

| DEPTH | DESCRIPTION | SAMPLE No. | WIDTH OF SAMPLE | | | |
|------------------|---|------------|--------------------|---|----------|--|
| 199-361' (contd) | Bleaching occasionally along veins and fractures. Minor | | | | | |
| | garnet. Weak base metal sulphide mineralization. This | | | | | |
| | section is similar to 163-182' in this hole. | | | | | |
| | 199-211' lighter section apparently due to bleaching. | | | | | |
| | 201' Quartz-sphalerite veinlet at 10° offsets a | | | | | |
| | sphalerite veinlet at 35° by 5 cm. | | | | | |
| | 228' Sphalerite -pink mineral>galena veinlet with | | | | | |
| | 5 cm bleached envelope offset by 1 cm. | | | | | |
| | 264' 2 mm wide gouge at 40°. | | | | | |
| | 275-287' Occasional calcite plus unknown white mineral | | | l | <u> </u> | |
| | in veinlets. 276' 276' minor gouge at 15° . | | | | | |
| | 278-281' broken core. 287' unknown white mineral | | | | | |
| | (hardness 4) + calcite veinlet at 30° . | | | | | |
| | 287.5' 3mm wide pinkish veining at 30° . | | | | | |
| | 289-291' Abundant alteration, bleaching and chlorite. | | | | | |
| | 357' l cm wide calcite veinlet at 35°. | | | | | |
| 361' | END OF HOLE | | | | | |
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| | | | | | <u> </u> | |