# Drill log

Location 45, 6+10 W

Inclination 45° W

Total depth 30'

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 3.5 | Overburden. |
| 3.5 | 30 | Biotite (-hornblende) gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 3.5 | 5 | 45° | 030°/85°E |
| 5 | 10.5 | 20° | 070°/90° |
| 10.5 | 19.5 | 35° | 040°/90° |
| 19.5 | 28 | 20° | 070°/90° |
| 28 | 30 | 30° | 050°/90° |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| (*) 3.5 | 30 | Calcite replacement, with diopside alteration. ~3% disseminated pyrrhotite. Deformation of foliation is concentrated in sections showing least alteration. |
| | | 5.5-7, 7.5-8.5: very little alteration. Few thin calcite-pyrrhotite veinlets. |
| | | 19.5-28: very little alteration. Veinlets of calcite-pyrrhotite and quartz-pyrite up to 2" thick. |

# Drill log

Location 45, 6+20 W.

Inclination 45° W.

Total depth 113'.

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 14 | Overburden. |
| 14 | 77.5 | Biotite (-hornblende) gneiss. |
| 77.5 | 112 | Hornblende-biotite gneiss. |
| 112 | 113 | Lost core. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 14 | 35 | 35° | 040°/90° |
| 35 | 39 | 20° | 070°/90° |
| 39 | 52 | 35° | 040°/90° |
| 52 | 56 | 45° | 030°/85°E |
| 56 | 65 | 60° | 030°/70°E |
| 65 | 76 | 40° | 035°/85°E |
| 76 | 84 | 60° | 030°/70°E |
| 84 | 112 | 40° | 035°/85°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| (*) 14 | 71.5 | Calcite replacement, with diopside alteration. ~1% pyrrhotite (disseminated and stringers). Deformation of foliation is concentrated in sections showing least alteration.<br>14-19: very little alteration. Few thin calcite-pyrrhotite veinlets.<br>35-39: very little alteration. Veinlets up to 1" thick of calcite-pyrrhotite, with diopside along contacts.<br>41.5-42.5: brecciation and calcite-pyrrhotite veinlets up to ½" thick.<br>44-44.5: silicified, with 0.2% disseminated chalcopyrite.<br>45-45.5, 47.5-48, 48.5-49: very little alteration.<br>57.5, 58.5-59, 62-63, 64.5, 65.5: silicified in layers ≥ 2" thick. |
| 71.5 | 112 | Partial calcite replacement, with diopside alteration. ~0.5% pyrrhotite (disseminated and stringers). Foliation well defined.<br>93.5: silicified in layer 3" thick. |

# Drill log

Location 45, 7+10W.
Inclination 45°W.
Total depth 130'.

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 9 | Overburden. |
| 9 | 117.5 | Hornblende-biotite gneiss. |
| 117.5 | 130 | Biotite-hornblende gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 9 | 45 | 40° | 035°/65°E |
| 45 | 47 | 25° | 060°/90° |
| 47 | 130 | 40° | 035°/85°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 9 | 130 | Slight calcite replacement. |

(+) 9-34: silicified, ~5% pyrite (disseminated and stringers parallel to foliation)
19-21: very little alteration.
23-26: very little alteration.
26: pyrrhotite veinlet $\frac{1}{4}$" thick.

(*) 45-49.5: silicified, ~5% pyrite (disseminated and stringers parallel to foliation).

(*) 59.5-62: silicified, ~5% pyrite (disseminated and stringers parallel to foliation).

78.3: lens of garnet-quartz-calcite-pyrrhotite.

(*) 92-95, 96-100: silicified, ~5% pyrite (disseminated and stringers).

# Drill log

Location 45, 13+60W.

Inclination 45°W.

Total depth 94'.

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 12 | Overburden |
| 12 | 94 | Biotite gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 12 | 94 | 65° | 020°/70°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 12 | 94 | Discontinuous calcite replacement parallel to foliation.<br>Diopside alteration.<br>~0.1% pyrrhotite (disseminated and stringers).<br>14-16.5: very little alteration.<br>(*) 29-33: 2% pyrite (stringers parallel to foliation).<br>39: minor pyrite in stringers parallel to foliation.<br>61.8: concordant quartz veinlet ½" thick. Chlorite along contact.<br>71.5: silicified, with minor pyrite.<br>87.2-88.2: ~1% pyrite, associated with feldspar porphyroblasts.<br>Minor garnet. |

# Drill log

Location 125, 9 W.

Inclination 45° W.

Total depth 119'

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 12 | Overburden. |
| 12 | 82.5 | Biotite (hornblende) gneiss. |
| 82.5 | 119 | Hornblende-biotite gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 12 | 49.5 | 40° | 035°/85°E |
| 49.5 | 47 | 20° | 070°/90° |
| 47 | 50 | 40° | 035°/85°E |
| 50 | 55 | 20° | 070°/90° |
| 55 | 76 | 30° | 050°/90° |
| 76 | 119 | 45° | 030°/85°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| (¥) 12 | 102 | Calcite replacement, with diopside alteration.<br>~2% pyrrhotite (disseminated and stringers).<br>14-15.5: very little alteration.<br>20.5: quartz veinlet 0.1" thick.<br>51-52: very little alteration.<br>53.5: discordant calcite-pyrrhotite veinlet 1" thick.<br>83.5-87.5: very little alteration; mottled texture.<br>86.5: small blebs of pyrite.<br>89.7: ½" pyrite parallel to layering. |
| 102 | 119 | Partial calcite replacement, with diopside alteration.<br>~0.1% disseminated pyrrhotite. |

# Drill log

Location 125, 9W.

Inclination 45° W.

Total depth 123'.

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 5 | Overburden. |
| 5 | 123 | Hornblende-biotite gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 5 | 28 | 35° | 040°/90° |
| 28 | 90 | 45° | 030°/85°E |
| 90 | 97 | 60° | 030°/70°E |
| 97 | 123 | 45° | 030°/85°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 5 | 24.5 | Partial calcite replacement, with diopside alteration.<br>~0.1% disseminated pyrrhotite.<br>17, 18, 20, 24: silicified in layers ≥ 1" thick. |
| (*)24.5 | 82 | Calcite replacement, with diopside alteration.<br>~1% disseminated pyrrhotite.<br>48-49: quartz-calcite-pyrite stringers up to ½" thick.<br>74.5: Calcite-tourmaline veinlet. |
| 82 | 95 | Discontinuous calcite replacement, with diopside alteration.<br>Very little alteration in layers up to 6" thick.<br>~0.1% disseminated pyrrhotite. |
| 95 | 123 | Partial calcite replacement, with diopside alteration.<br>~0.1% disseminated pyrrhotite.<br>113.5: quartz vein 2" thick. |

Tentative revisions of logs by K. O. Stang (Line 125)

| Location | Inclination | Total depth |
|---|---|---|
| 125, 10W | 45°W | 122 |

**Rock type**

| from | to | observations |
|---|---|---|
| 0 | 7 | Overburden. |
| 7 | 65 | Biotite-hornblende gneiss. (*) |
| 65 | 122 | Biotite gneiss. |

**Alteration and mineralization**

| from | to | observations |
|---|---|---|
| 7 | 49 | Mineralized alteration zone. ~2% sulphide. Stringers and dissemination of calcite-pyrrhotite. Diopside common. 42: Quartz veining and silicification, with pyrite. |
| * 49 | 51 | Mineralized alteration zone (pyrrhotite-pyrite-calcite-quartz). ~10% sulphide. Sulphides occur as stringers. |
| (*) 51 | 75 | Mineralized alteration zone. ~2% sulphide. 54-65: garnetiferous. |
| 75 | 122 | Mineralized alteration zone. Minor sulphide. 103-116: small masses of calcite-quartz-sulphide-garnet. |

[Note: This log is based on re-examination of core.]

[continued]

Tentative revisions of logs by K.O. Stangl (core not scan) (Line 125, continued)

| Location | Inclination | Total depth | Rock type: from | to | observations | Alteration and mineralization: from | to | observations |
|---|---|---|---|---|---|---|---|---|
| 125, 11W | 45°W | 103 | 11 | 54 | Biotite gneiss | 11 | 103 | Mineralized alteration zone. Minor sulphide. Diopside common. 51: ½" pyrrhotite-pyrite in quartz vein. |
| | | | 54 | 103 | Hornblende-biotite gneiss | | | |
| 125, 12W | 53°W | 112 | 6.5 | 112 | Hornblende-biotite gneiss | 6.5 | 112 | Mineralized alteration zone. Minor sulphide. Diopside common. 43-112: garnetiferous. |
| 125, 13W | 45°W | 101 | 15 | 51 | Hornblende-biotite gneiss | 15 | 101 | Mineralized alteration zone. Minor sulphide. 98: calcite veinlets with pyrite-pyrrhotite-minor chalcopyrite. |
| | | | 51 | 101 | Biotite-hornblende gneiss | | | |
| 125, 14W | 45°W | 99 | 16.5 | 24 | Biotite-hornblende gneiss. | 16.5 | 99 | Mineralized alteration zone. Minor sulphide. 16.5-27, 42-53, 63-67, 77-83: garnetiferous. |
| | | | 24 | 99 | Hornblende-biotite gneiss | | | |
| 125, 15W | 45°W | 95 | 10 | 47 | Hornblende-biotite gneiss | 10 | 95 | Mineralized alteration zone. Minor sulphide. 43: garnetiferous. 5% sulphide (disseminated and stringers). 77: sillimanite needles. 83: garnetiferous. |
| | | | 47 | 95 | Biotite gneiss | | | |
| 125, 16W | 45°W | 98 | 12 | 98 | Biotite gneiss | 12 | 39 | Mineralized alteration zone. Minor sulphide. |
| | | | | | | (*) 39 | 82 | Mineralized alteration zone. ~2% sulphide. → 72: slickensided graphite (minor chalcopyrite) on fault surface. |
| | | | | | | 82 | 98 | Mineralized alteration zone. Minor sulphides. |

# Drill log

Location 125, 16+80W.

Inclination 45°W.

Total depth 94'

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 11 | Overburden. |
| 11 | 27 | Biotite gneiss. |
| 27 | 61.5 | Granitic gneiss. Alternating mafic and felsic layers, fraction of an inch to several inches thick. Feldspar augens. |
| 61.5 | 94 | Biotite-hornblende gneiss.<br>64.5-65: granitic gneiss.<br>72.5-73: granitic gneiss. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 11 | 61.5 | 70° | 015°/65°E |
| 61.5 | 94 | 50° | 030°/80°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 11 | 94 | Partial calcite replacement.<br>~0.1% pyrrhotite (disseminated and stringers).<br>21-21.5: calcite replacement, with diopside alteration.<br>38: thin concordant lenses of quartz in concordant calcite veinlet 1" thick.<br>77-94: irregular silicification; foliation indistinct.<br>89: ¼" massive pyrrhotite. |

# Drill log

Location 125, 17+50 W.
Inclination 45° W.
Total depth 99'.

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 8 | Overburden. |
| 8 | 31.5 | Biotite-hornblende gneiss. |
| 31.5 | 49 | Granitic gneiss. Alternating mafic and felsic layers, a fraction of an inch to 1 ft. thick. Feldspar augens. |
| 49 | 85 | Biotite-hornblende gneiss. Granitic gneiss @ 54-55.5, 58, 59.5-60, 72, 75-77, 82-83. |
| 85 | 99 | Granitic gneiss Alternating mafic and felsic (colourless to pink) layers, a fraction of an inch to several inches thick. Feldspar augens. |

## Foliation

| from | to | core angle | approximate attitude |
|---|---|---|---|
| 8 | 21 | 45° | 030°/85°E |
| 21 | 24.5 | 30° | 050°/90° |
| 24.5 | 33 | 45° | 030°/85°E |
| 33 | 61.5 | 70° | 015°/65°E |
| 61.5 | 82 | 50° | 030°/80°E |
| 82 | 84 | 40° | 035°/85°E |
| 84 | 99 | 55° | 030°/75°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 8 | 99 | Partial calcite replacement.<br>~0.1 pyrrhotite (disseminated and stringers).<br>8-31: irregular silicification.<br>29.5-31: silicified; ~1% pyrite, concentrated along fractures.<br>51-52.5: very little alteration.<br>53: concordant calcite-pyrrhotite 2" thick.<br>60-61.5: very little alteration. |

# Drill log

Location 85, 9+40W.

Inclination 45°W.

Total depth 102'

## Rock type

| from | to | observations |
|---|---|---|
| 0 | 5 | Overburden. |
| 5 | 102 | Biotite-hornblende gneiss<br>→ 40-41: fractured and slickensided. |

## Foliation

| from | to | Core angle | approximate attitude |
|---|---|---|---|
| 5 | 20 | 45° | 030°/85°E |
| 20 | 48 | 55° | 030°/75°E |
| 48 | 56 | 30° | 050°/90° |
| 56 | 62.5 | 40° | 035°/85°E |
| 62.5 | 102 | 55° | 030°/75°E |

## Alteration and mineralization

| from | to | observations |
|---|---|---|
| 5 | 102 | Discontinuous calcite replacement parallel to foliation. Diopside alteration. ~0.2% pyrrhotite (disseminated and stringers), associated mainly with calcite replacement. Garnetiferous @ 5-9, 17-18, 27-27.3, 30-31, 44-44.5, 52-54.5, 61.5-62.<br>14.5: ½" concordant quartz-pyrrhotite veinlet.<br>19.5: ¼" concordant quartz-pyrrhotite veinlet.<br>27.3-28.5: unaltered-dark, massive.<br>46.5: ¼" concordant quartz-pyrrhotite veinlet.<br>56: 2" discordant quartz veinlet; disseminated clusters of dark mineral.<br>59.5: 1" quartz veinlet.<br>66.7-67: quartz-pyrite stringers.<br>84.5-85: foliation deformed. Concordant quartz-pyrrhotite stringers fraction of an inch thick.<br>86.5-88.5, 94.7-95.1: concordant quartz-pyrrhotite-pyrite veinlets up to ½" thick. |

Tentative revisions of logs by K.O. Stangl (core not seen) (Line 85)

| Location | Inclination | Total depth | Rock type | | | Alteration and mineralization | | |
|---|---|---|---|---|---|---|---|---|
| | | | from | to | observations | from | to | observations |
| 85, 0W | 90° | 101 | 4 | 101 | Crystalline limestone. Micaceous (phlogopite-biotite) layers with minor folds. | 4 | 101 | Mineralized alteration zone. Minor sulphide. Diopside common.<br>42: 1" calcite vein with disseminated chalcopyrite, bornite, and galena.<br>51: <1% tourmaline (black, striated).<br>69: quartz veinlets with diopside along contacts. |
| 85, 3W | 90° | 97 | 12 | 72 | Crystalline limestone. Micaceous layers. | 12 | 97 | Mineralized alteration zone. Minor sulphide. Diopside common. Veinlets of coarse-grained calcite.<br>61: ¼" calcite-pyrrhotite veinlet. |
| | | | 72 | 80 | Biotite gneiss. | | | |
| | | | 80 | 97 | Crystalline limestone. Micaceous layers. | | | |
| 85, 4W | 90° | 98 | 5.5 | 88 | Biotite gneiss. | 5.5 | 98 | Mineralized alteration zone. Minor sulphide. Veinlets of calcite-pyrite-pyrrhotite common. Diopside common, particularly along veinlet contacts.<br>11: minor chalcopyrite-bornite in calcite veinlets.<br>18: minor garnet in veinlets.<br>51: minor chalcopyrite.<br>58: ¼" calcite veinlet. |
| | | | 88 | 98 | Crystalline limestone. | | | |
| 85, 5W | 90° | 94 | 5.5 | 94 | Crystalline limestone. Micaceous layers. | 5.5 | 94 | Mineralized alteration zone. Minor sulphide. Diopside common. Veinlets of calcite-pyrite-pyrrhotite<br>20: ¼" pyrrhotite stringer.<br>61: 1" calcite-quartz-diopside-minor sulphide veinlet.<br>66-78: silicified. (67: ½" calcite-pyrite veinlet)<br>82: ½" quartz-diopside veinlet. |
| 85, 6W | 55°W | 98 | 9 | 98 | Crystalline limestone. Micaceous layers. | 9 | 98 | Mineralized alteration zone. Minor sulphide. Diopside common.<br>28: garnetiferous. |
| 85, 7W | 45°W | 97 | 22 | 72 | Crystalline limestone. Micaceous layers. | 22 | 97 | Mineralized alteration zone. Minor sulphide. Diopside common. Calcite veinlets.<br>31: garnetiferous. [ctd.] |
| | | | 72 | 97 | Biotite(-hornblende) gneiss. | | | |

Tentative revisions of logs by K.O. Stangl (core not seen) (Line 85 continued)

| Location | Inclination | Total depth | Rock type: from | Rock type: to | Rock type: observations | Alteration and mineralization: from | Alteration and mineralization: to | Alteration and mineralization: observations |
|---|---|---|---|---|---|---|---|---|
| 85, 8W | 45°W | 98 | 4 | 50 | Biotite(-hornblende) gneiss. | 4 | 98 | Calcite replacement zone. Minor sulphide. Diopside common. Calcite veinlets.<br>22.5: ¼" quartz veinlet.<br>(*) 21-41: silicified.<br>(*) 47-51: silicified, with 3% disseminated pyrite-pyrrhotite.<br>75: <1% tourmaline. |
| | | | 50 | 98 | Hornblende-biotite gneiss. | | | |
| 85, 9W | 45°W | 102 | 4 | 42 | Hornblende-biotite gneiss. | 4 | 27 | Mineralized alteration zone. Minor sulphide. Calcite veinlets, with diopside along veinlet contacts.<br>12: sillimanite needles.<br>17: minor chalcopyrite.<br>25: ½" pyrrhotite in calcite veinlet. |
| | | | 42 | 102 | Biotite-hornblende gneiss. | (*) 27 | 95 | Mineralized alteration zone. ~2% sulphide. Diopside common.<br>35-42: garnetiferous. (40-42: 5% sulphide).<br>55-58: quartz veinlets.<br>* 67: 4" pyrrhotite-pyrite-calcite.<br>70: ¼" pyrrhotite.<br>71: garnetiferous.<br>74: calcite veinlets.<br>84: pyrite veinlet.<br>85: 1" calcite-pyrrhotite-pyrite veinlet, with diopside along contacts. |
| | | | | | | 95 | 102 | Mineralized alteration zone. Minor sulphide. Calcite veinlets, with diopside along contacts.<br>100-102: garnetiferous. |
| 85, 10W | 45°W | 99 | 15.5 | 61 | Biotite-hornblende gneiss.<br>59: minor folding. | 15.5 | 99 | Mineralized alteration zone. Minor sulphide. Diopside common. Calcite veinlets.<br>24: quartz-pyrrhotite lenses.<br>(*) 41-49: pyrrhotite stringers.<br>(*) 68-88: quartz-diopside-sulphide lenses; foliation contorted. |
| | | | 61 | 99 | Biotite gneiss. | | | |
| 85, 11W | 45°W | 99 | 8 | 99 | Hornblende-biotite gneiss. | 8 | 99 | Mineralized alteration zone. Minor sulphide. Calcite veinlets.<br>8-62: garnet-diopside-pyrrhotite aggregates. |
| 85, 12W | 45°W | 97 | 4.5 | 75 | Hornblende-biotite gneiss. | 4.5 | 97 | Mineralized alteration zone. Minor sulphides. Calcite veinlets. |
| | | | 75 | 97 | Biotite-hornblende gneiss. | | | |

Tentative revisions of logs by K.O. Stangl (core not seen) (Line 85 continued)

| Location | Inclination | Total depth | Rock type from | Rock type to | Rock type observations | Alteration and mineralization from | Alteration and mineralization to | Alteration and mineralization observations |
|---|---|---|---|---|---|---|---|---|
| 85, 13W | 45°W | 84 | 8 | 67 | Biotite–hornblende gneiss. | 8 | 84 | Mineralized alteration zone. Minor sulphide. Calcite veinlets. Diopside common. |
| | | | 67 | 84 | Hornblende–biotite gneiss. 69: minor folds. | | | 67–84: garnetiferous. |
| 85, 14W | 50°W | 100 | 13 | 75 | Hornblende–biotite gneiss. | 13 | 100 | Mineralized alteration zone. Minor sulphide. Veinlets of calcite–pyrite–pyrrhotite, with diopside along contacts. |
| | | | 75 | 100 | Biotite gneiss. | | | 13–75: garnet in veinlets and micaceous layers. |
| 85, 15W | 45°W | 99 | 4 | 99 | Biotite gneiss. | 4 | 44 | Mineralized alteration zone. Minor sulphide. Calcite veinlets. Diopside common. Quartz lenses. |
| | | | | | | (*) 44 | 99 | Mineralized alteration zone. ~2% sulphide. Quartz–garnet–pyrrhotite lenses. 72–91: pink calcite replacement. |
| 85, 15+55W | 45°W | 64 | 9.5 | 64 | Biotite gneiss. | (*) 9.5 | 57 | Mineralized alteration zone. ~2% sulphide. 9.5–19: pink calcite replacement. 28–36: garnetiferous. 49–54: garnetiferous. |
| | | | | | | * 54 | 64 | Mineralized alteration zone. ~10% sulphide. Garnetiferous. Sulphides (pyrrhotite–pyrite) occur in stringers. 54.5: minor chalcopyrite. → 58: slickensided graphite. 64: minor chalcopyrite. |

[continued]

Tentative revisions of logs by K.O. Stangl (core not seen) (Line 85 continued)

| Location | Inclination | Total depth | Rock type | | | Alteration and mineralization | | |
|---|---|---|---|---|---|---|---|---|
| | | | from | to | observations | from | to | observations |
| 85, 15+80W | 48°W | 114 | 14 | 62 | Biotite gneiss. | (*) 14 | 33.5 | Mineralized alteration zone, ~2% sulphide. Quartz-calcite-pyrrhotite-diopside lenses.<br>23: minor sillimanite. |
| | | | 62 | 100 | Granitic gneiss. Feldspar augens. Compositional layering: light quartz-feldspar, dark biotite. | * 33.5 | 43.5 | Mineralized alteration zone. ~10% sulphide. Garnet ferous. |
| | | | 100 | 114 | Biotite-hornblende gneiss. Sections of granitic gneiss. | (*) 43.5 | 62 | Mineralized alteration zone. ~2% sulphide. Sulphides occur in stringers. Chlorite alteration. Calcite replacement. |
| | | | | | | 62 | 114 | Mineralized alteration zone; minor sulphides, minor calcite replacement.<br>111: garnetiferous. |
| 85, 16+50W | 45°W | 70 | 6.5 | 32 | Biotite-hornblende gneiss. | 6.5 | 70 | Mineralized alteration zone: minor sulphide, minor calcite replacement.<br>38: calcite veinlets. |
| | | | 32 | 51.5 | Granitic gneiss. Feldspar augens, compositional layering. | | | |
| | | | 51.5 | 70 | Biotite-hornblende gneiss. | | | |