# APPENDIX A1. NORTH RANGE

## Contact Ni-Cu-Co Mineralization

Coleman deposit
Craig mine
East Rim nickel mine
Fecunis Lake deposit
Thayer-Lindsley deposit
Hardy mine
Levack deposit
McCreedy East deposit
McCreedy West deposit
Strathcona mine
Victor deposit
Whistle deposit

## Epidote Zone - Transitional Contact Mineralization

Fraser deposit

## Footwall-Contact Transitional Mineralization

Morrison deposit, Rob's zone (~180 m orthogonal depth below SIC)

# APPENDIX A1. NORTH RANGE

## Footwall Undivided Mineralization

Barnett deposit
Fraser deposit
McCreedy West deposit
Victor Deep deposit

## Footwall Low-Sulphide, High-PGE Mineralization

McCreedy West deposit, PM zone
Morrison deposit (deep zone, ~630 m orthogonal depth below SIC)
West Wisner showing, southwest and south zones

## Footwall High-Sulphide Vein Mineralization

Broken Hammer deposit
McCreedy East deposit, E-153 zone
McCreedy West deposit
Morrison deposit (400–425 m orthogonal depth below SIC)
Strathcona mine

## Footwall Hybrid Mineralization

Podolsky deposit

# APPENDIX A1. NORTH RANGE

## Offset Ni-Cu Mineralization

Nickel offset mine
Pike Lake
Trill offset showing

## Disseminated Mineralization in Sudbury Igneous Complex

Levack deposit area
McCreedy East deposit area

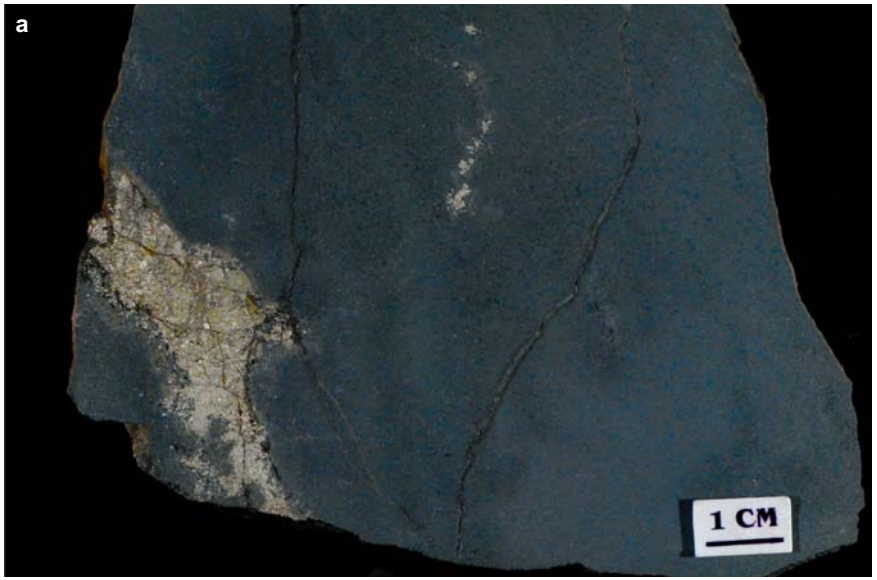


**Figure NR1.1a. Blue Lake-Victor deposit.** Vein and disseminated sulphide, 10% pyrrhotite-chalcopyrite-magnetite in fine-grained mafic rock. Sample 02-AV-888.

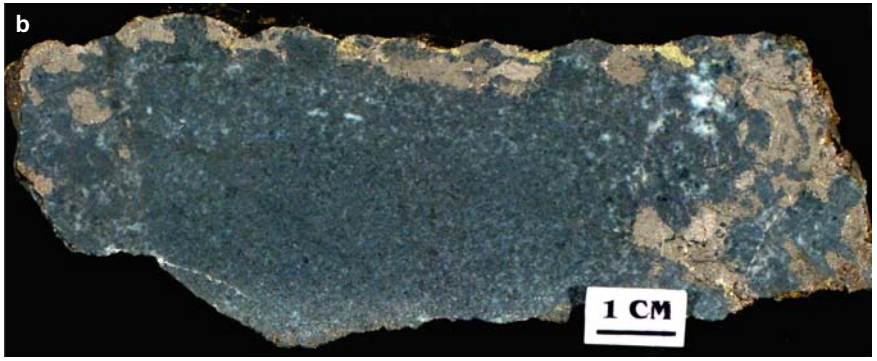


**Figure NR1.2b. Coleman deposit.** Disseminated and sulphide veins of pyrrhotite with minor chalcopyrite. Sample 01-AV-199 (collected by Watkinson).

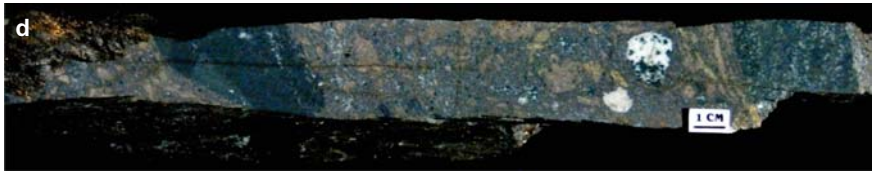


**Figure NR1.2d. Coleman deposit.** Semi-massive pyrrhotite-chalcopyrite with minor magnetite and bornite in gabbro with some felsic clasts. Sample 01-AV-203 (collected by Watkinson).

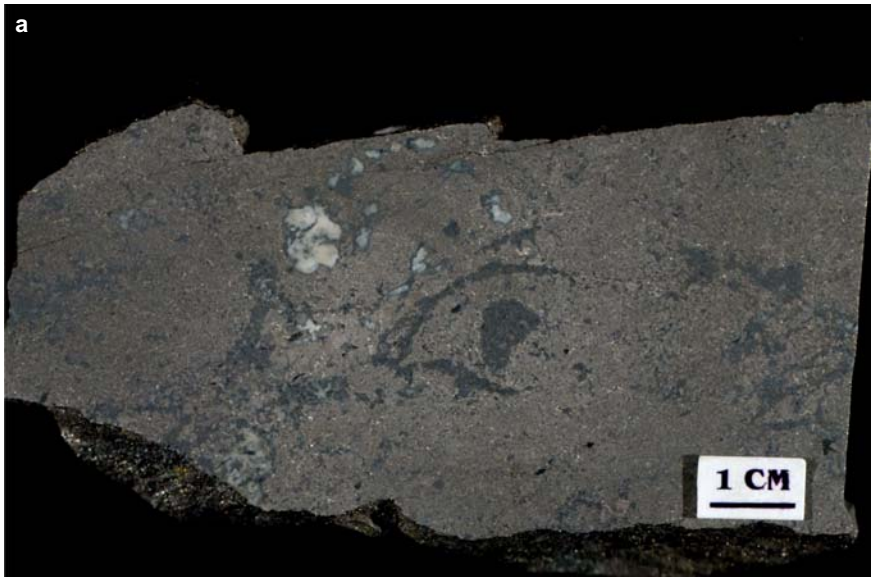


**Figure NR1.2a. Coleman deposit.** Massive pyrrhotite with minor pyrite. Sample 01-AV-198 (collected by Watkinson).


**Figure NR1.2c. Coleman deposit,** stope 3220. Semi-massive pyrrhotite with minor chalcopyrite. Sample 01-AV-202 (collected by Watkinson).

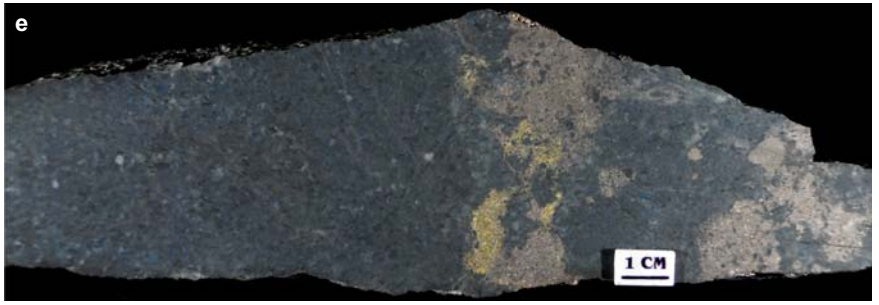


**Figure NR1.2e. Coleman deposit.** Veins of massive pyrrhotite with minor chalcopyrite in gabbro. Sample 01-AV-204 (collected by Watkinson).

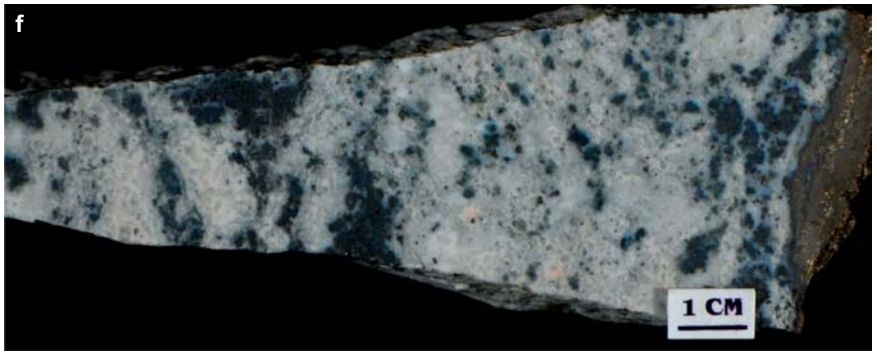


**Figure NR1.2f. Coleman deposit.** Veins of massive pyrrhotite with minor chalcopyrite in Levack Gneiss Complex tonalite gneiss. Sample 01-AV-205 (collected by Watkinson).

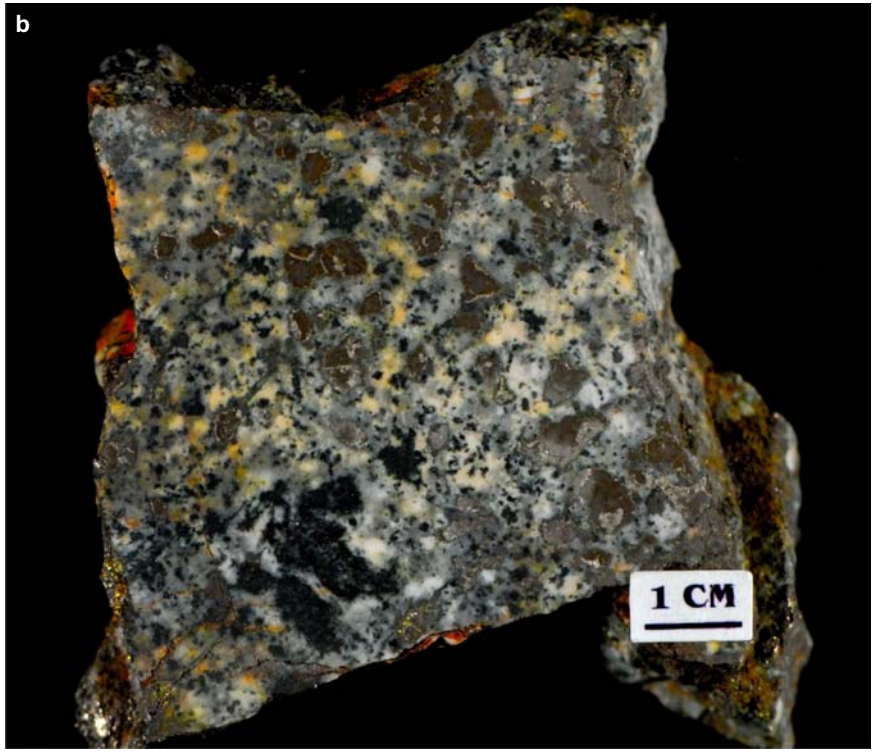


**Figure NR1.3b. Craig mine.** 25% blebby to disseminated pyrrhotite in footwall breccia (late granite breccia). Sample 99-AV-06c, 49 ramp, 10 zone.

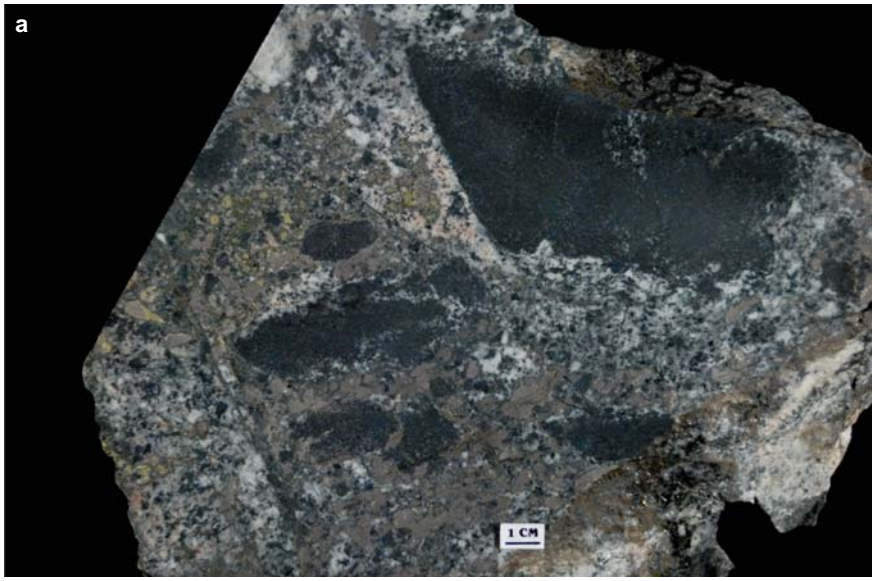


**Figure NR1.3a. Craig mine.** Blebby to semi-massive pyrrhotite-chalcopyrite-pyrite in Levack Gneiss Complex. Sample 01-AV-187.

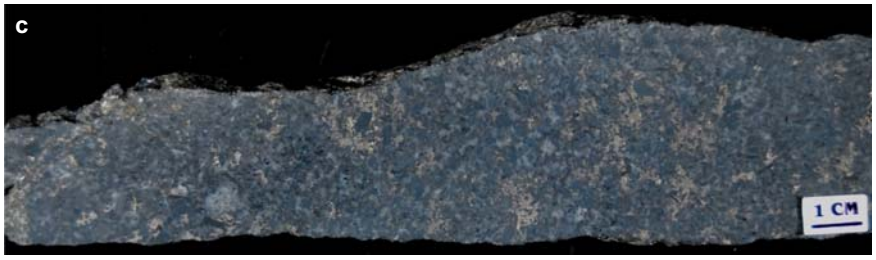


**Figure NR1.3c. Craig mine.** 20% disseminated to blebby pyrrhotite with minor chalcopyrite in felsic norite. Sample 99-AV-07, 49 ramp, 10 zone.


**Figure NR1.3d. Craig mine.** 15% disseminated to blebby pyrrhotite with minor chalcopyrite in mafic norite. Sample 99-AV-08, 4710 zone, zero level.

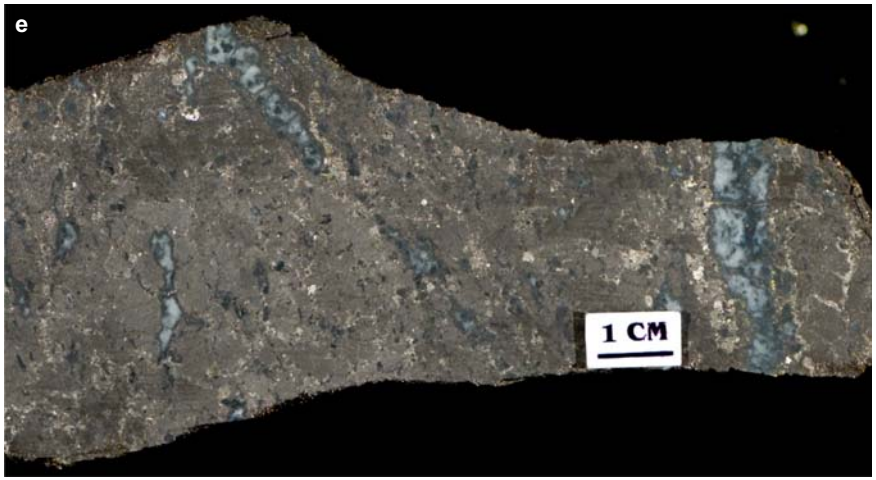


**Figure NR1.3e. Craig mine.** Massive pyrrhotite, interstitial pentlandite, minor chalcopyrite, and clasts of footwall breccia. Sample 99-AV-09, 4710 zone lower 10.

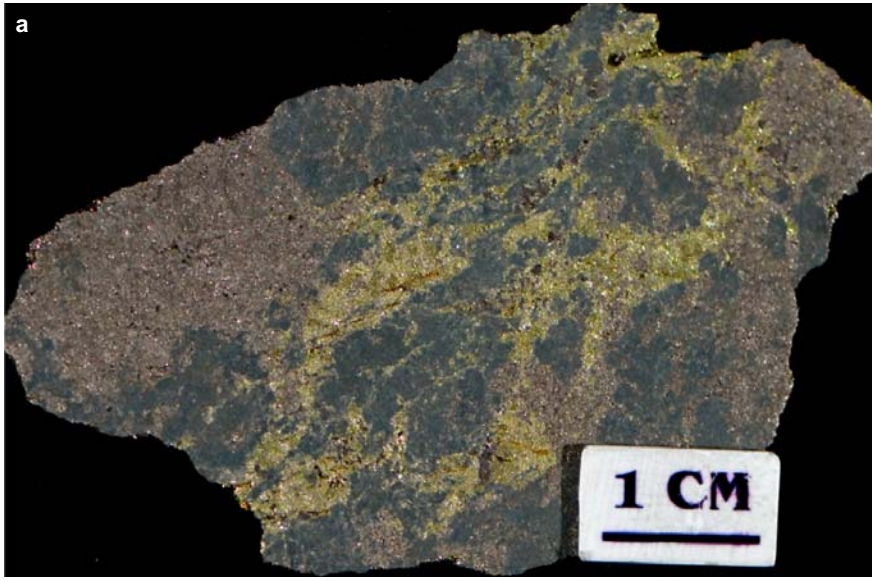


**Figure NR1.4a. East Rim nickel mine.** Pyrrhotite-chalcopyrite with disseminated stringers and magnetite within altered quartz diorite. Sample 98-AV-93A, collected in 1954 from the north vein -2 level.

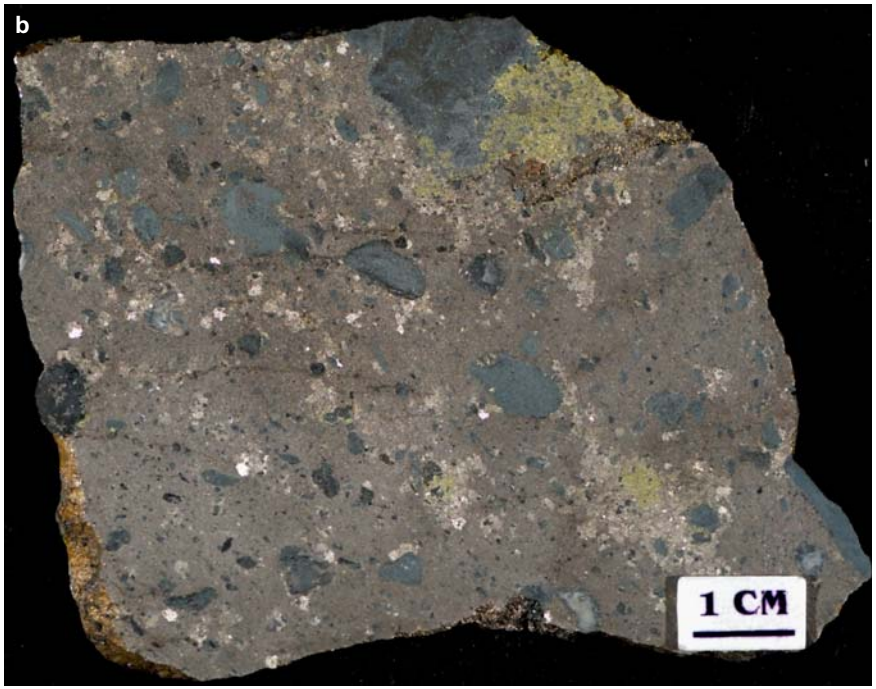


**Figure NR1.4b. East Rim nickel mine.** Massive pyrrhotite with interstitial pentlandite, minor chalcopyrite and rounded mafic clasts (~1 cm). Sample 98-AV-94, collected in 1955 from the 3.2.5 stope.


**Figure NR1.5a. Fecunis Lake deposit.** Massive pyrrhotite with volumetrically lesser chalcopyrite and 5-10% disseminated magnetite. Sample 98-AV-91.

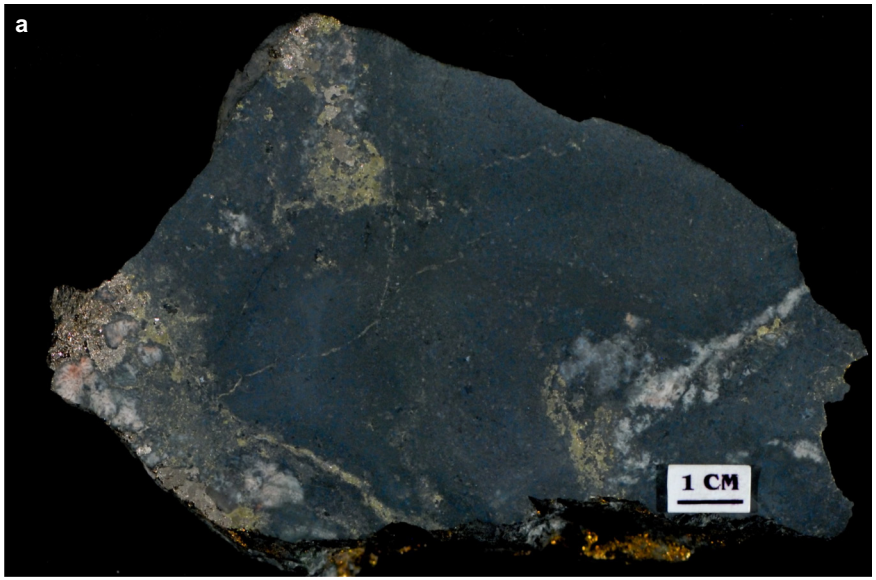


**Figure NR1.6a. Thayer-Lindsley deposit.** Blebby, veinlets, and disseminated pentlandite-chalcopyrite in chlorite-serpentine-altered fine-grained ultramafic rock. Sample 01-AV-224.

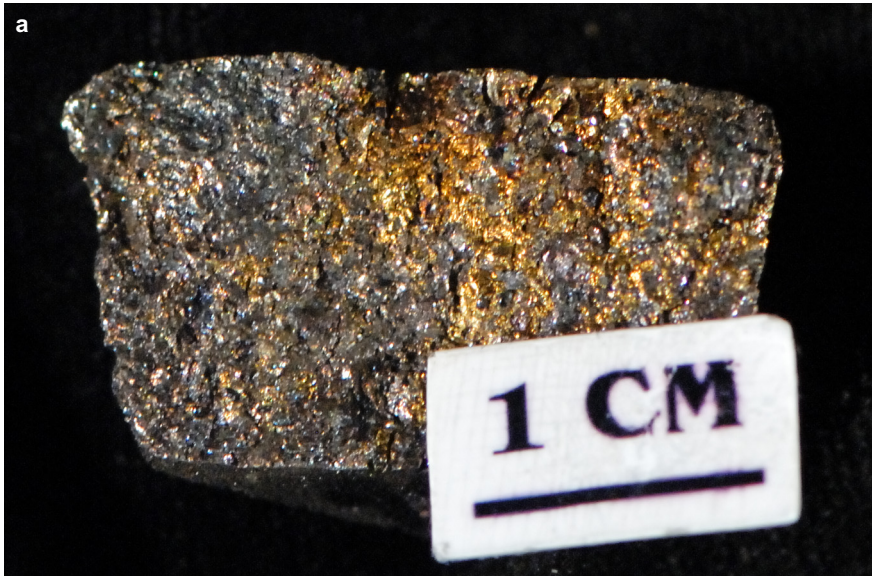


**Figure NR1.7a. Hardy mine.** Massive pyrrhotite with blebby chalcopyrite and disseminated magnetite. Sample 98-AV-92.

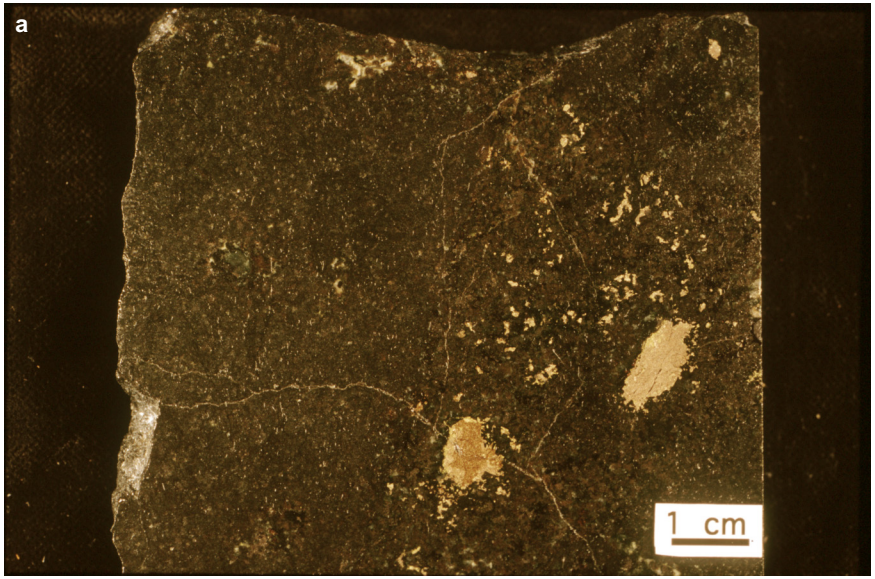


**Figure NR1.8a. Levack deposit.** Typical ore with 5% blebby pyrrhotite with chalcopyrite rims, and interstitial pyrrhotite in a medium-grained gabbro within the inclusion-rich sublayer. Sample L-1, Inco collection, #2 East orebody.

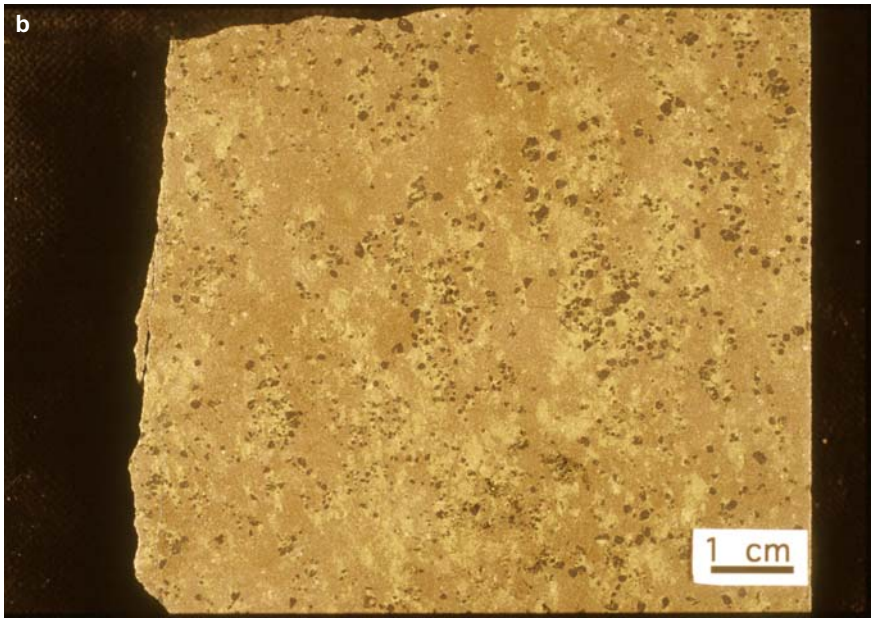


**Figure NR1.8b. Levack deposit.** Representative massive pyrrhotite-chalcopyrite-magnetite. Sample L-11, Inco collection, #3 orebody.


**Figure NR1.8c. Levack deposit.** Typical ore with 10% blebby to disseminated pyrrhotite within felsic norite. Sample L-13, Inco collection, #4 orebody.

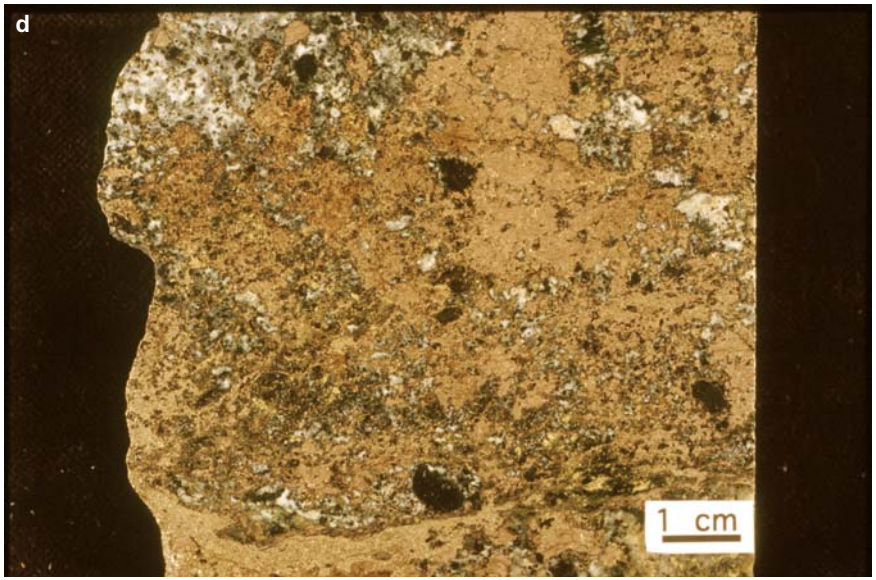


**Figure NR1.8d. Levack deposit.** Representative semi-massive to interstitial pyrrhotite with minor chalcopyrite within granite breccia. Sample L-15, Inco collection, #4 orebody.

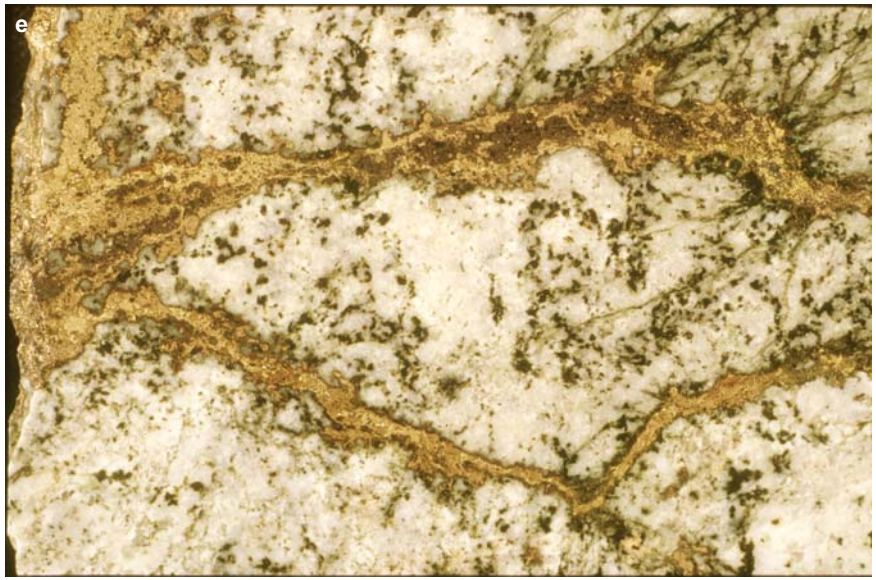


**Figure NR1.8e. Levack deposit.** Pyrrhotite-magnetite-chalcopyrite stringers-within Levack Gneiss Complex tonalite gneiss. Sample L-16, Inco collection.

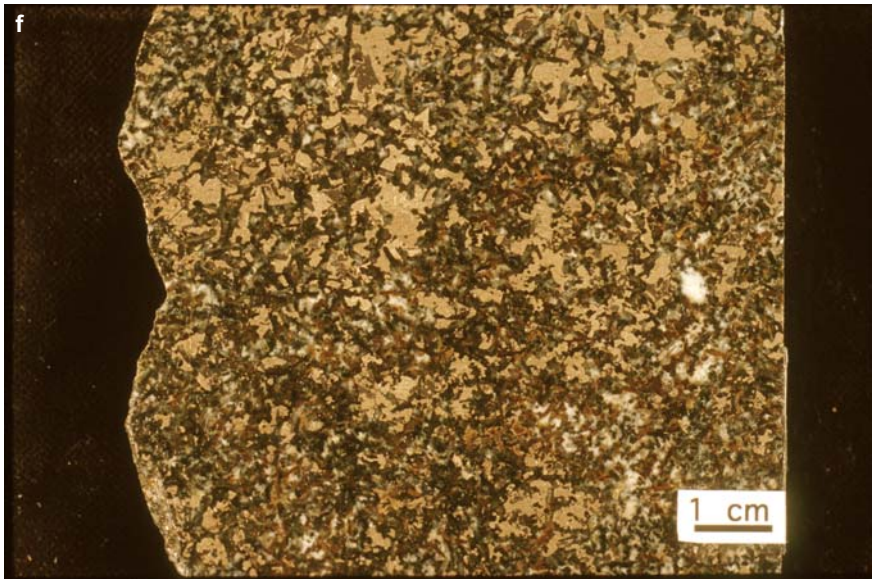


**Figure NR1.8f. Levack deposit.** Typical ore with 35% interstitial pyrrhotite-magnetite-chalcopyrite-pyrite in leucocratic gabbro. Sample L-2, Inco collection, #1 East orebody.

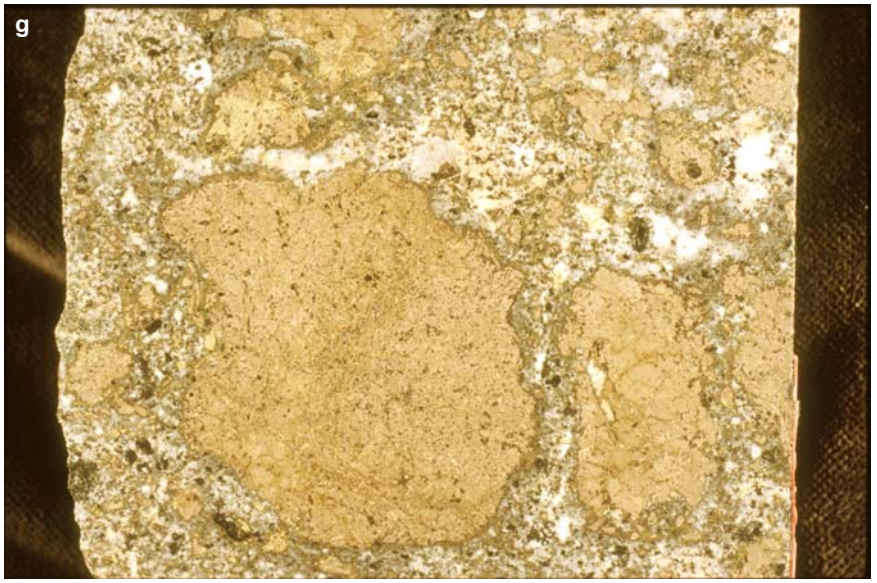


**Figure NR1.8g. Levack deposit.** Typical ore with 10% sulphide pyrrhotite in coarse-grained diorite, typical granite breccia, dull S-bleb fragments. Sample L-3, Inco collection, #2 East orebody.

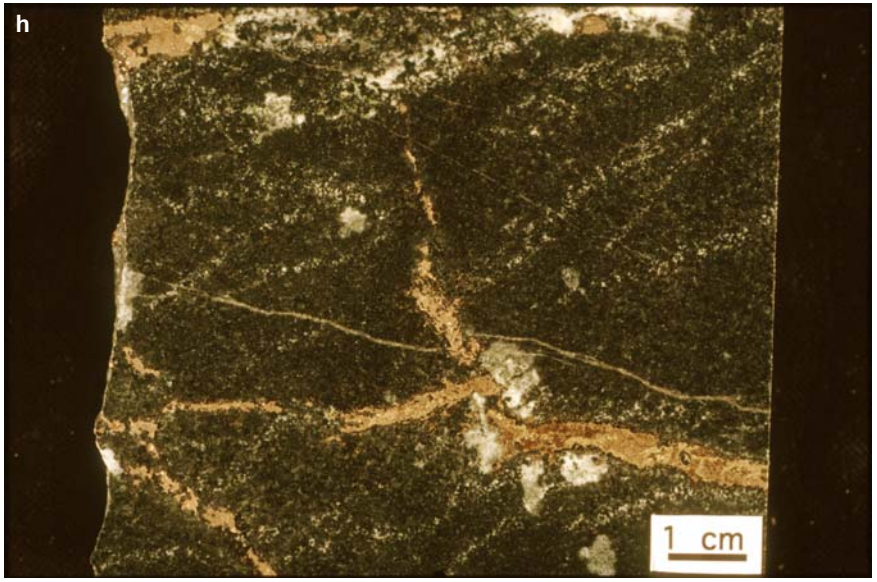


**Figure NR1.8h. Levack deposit.** Representative pyrrhotite-millerite vein in mafic gneiss. Footwall cross-cut by veins. Sample L-6, Inco collection, #4 orebody.

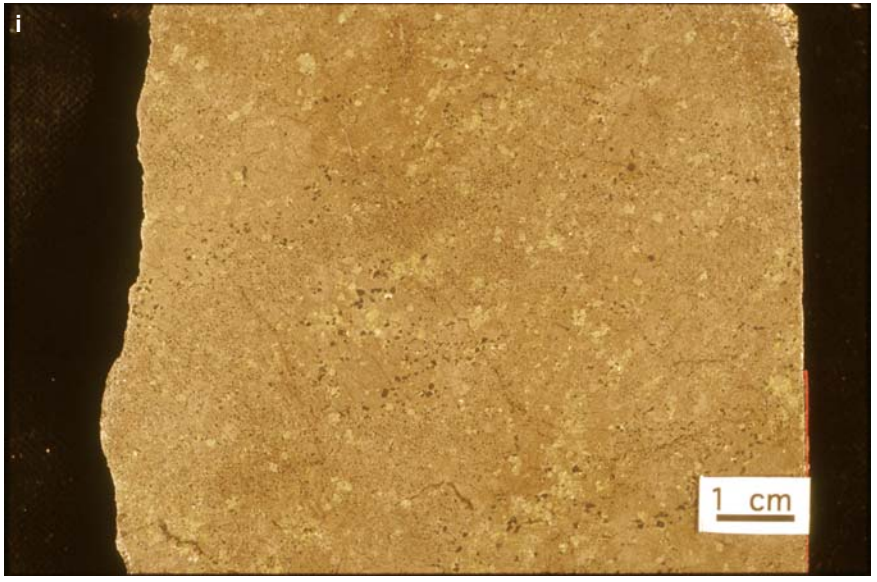


**Figure NR1.8i. Levack deposit.** Representative massive pyrrhotite with late pyrite. Sample L-7, Inco collection.

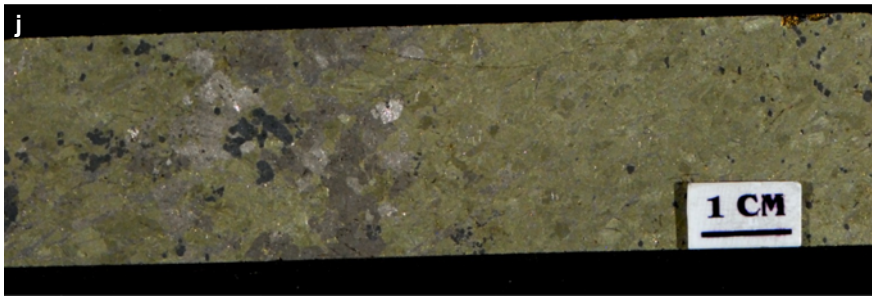


**Figure NR1.8j. Levack deposit.** Massive chalcopyrite, pyrrhotite-pentlandite with 10% blebby to disseminated magnetite. Sample 05AV-06Lev, bore hole FNX6045-4153.7 ft depth, 1350 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

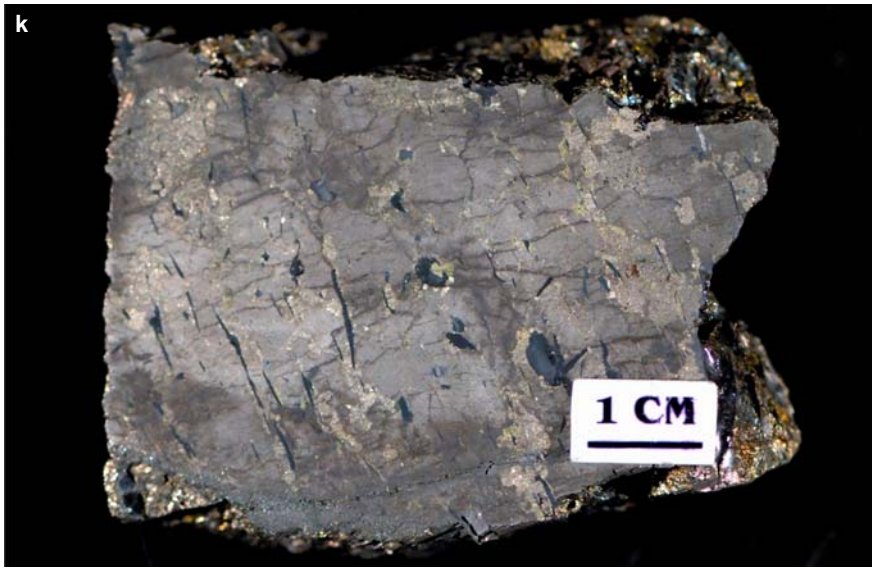


**Figure NR1.8k. Levack deposit.** Massive pyrrhotite-pentlandite with minor chalcopyrite. Sample LVCK1976-1, Lot 3, R.4, S.J. Owen.

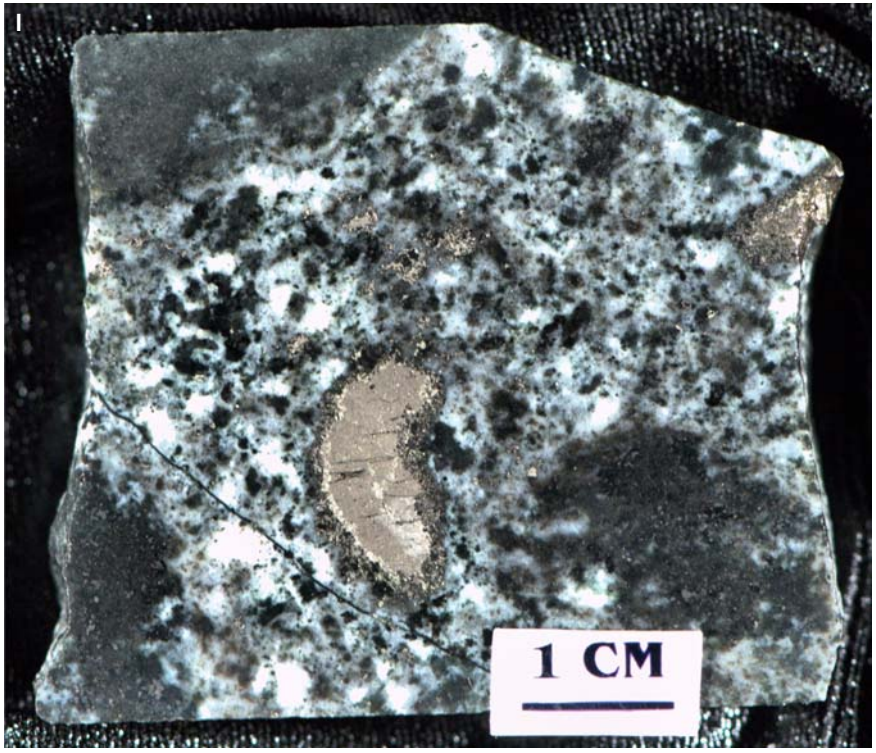


**Figure NR1.8l. Levack deposit.** Disseminated to blebby pyrrhotite-bornite in granite breccia. Sample 98-AV-24, Inco collection, bore hole 93603-1010 ft.

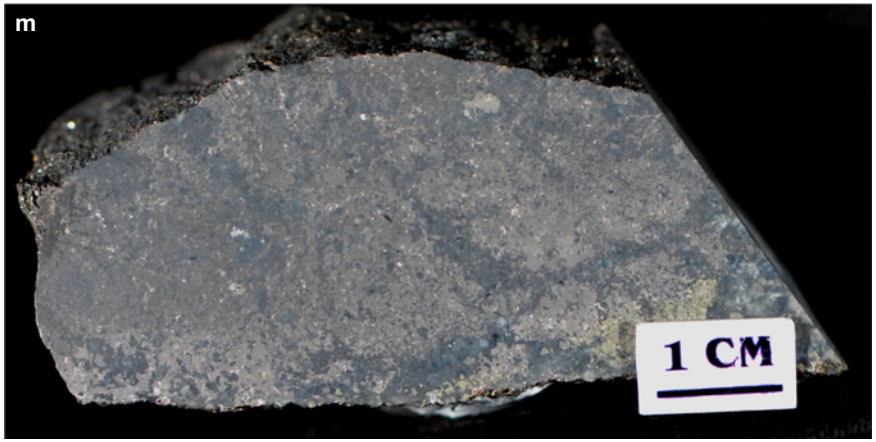


**Figure NR1.8m. Levack deposit.** Massive pyrrhotite with minor chalcopyrite and small (1 cm) granite breccia inclusions. Sample EI-70-11, collected by Roger Eckstrand from the 2650 level, #4 orebody.

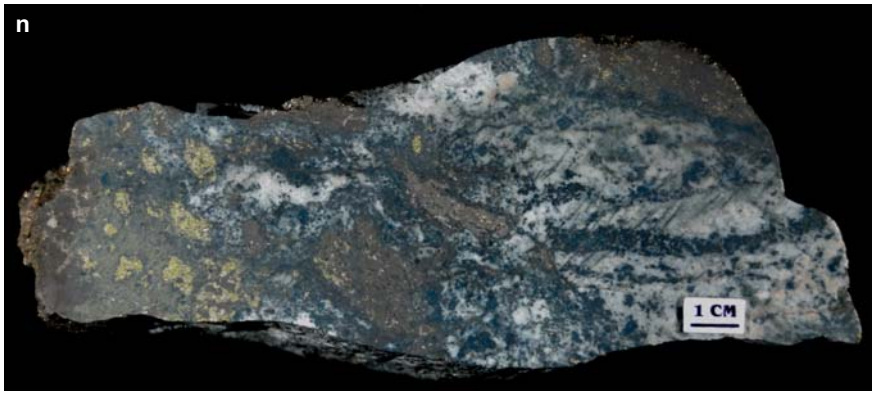


**Figure NR1.8n. Levack deposit.** Vein of massive pyrrhotite with minor chalcopyrite-pentlandite cross-cutting granite breccia and massive pyrrhotite-pentlandite. Sample EI-70-12A, collected by Roger Eckstrand from the 2650 level, #4 orebody.

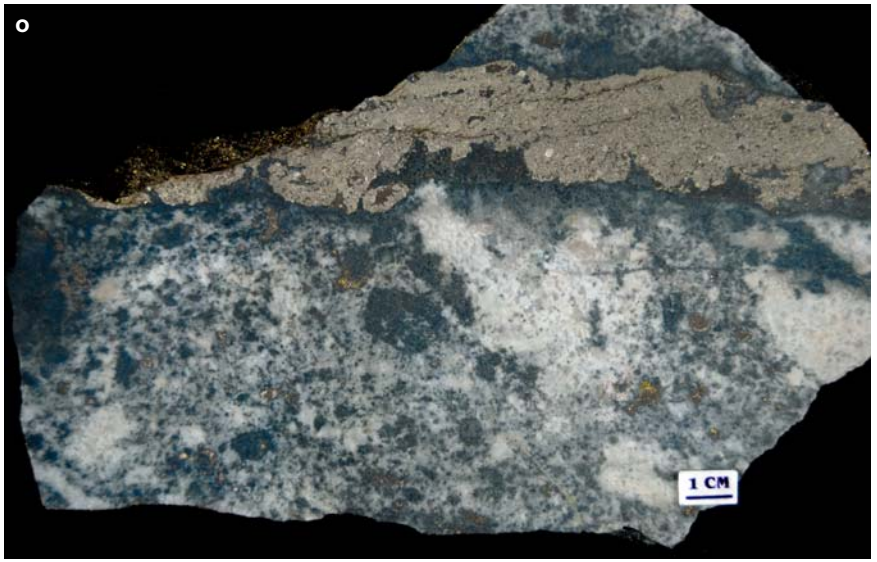


**Figure NR1.8o. Levack deposit.** Pyrrhotite with minor chalcopyrite-pyrite in granite breccia. Sample EI-70-12B, collected by Roger Eckstrand from the 2650 level, #4 orebody.


**Figure NR1.9a. McCreedy East deposit.** 25% blebby to disseminated sulphide pyrrhotite-pentlandite and disseminated chalcopyrite in mafic clast in granite breccia (3.44% Ni, 0.46% Cu). Sample 98-AV-10, bore hole 85525-4028 ft.

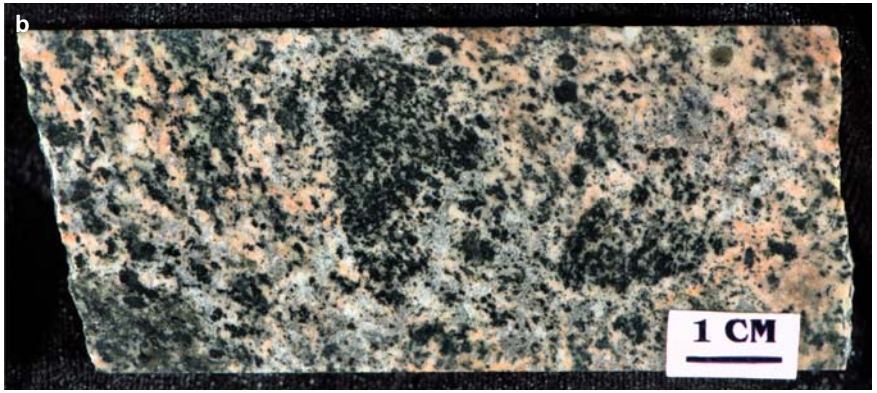


**Figure NR1.9b. McCreedy East deposit.** 1% disseminated sulphide in granite breccia. Sample 98-AV-07, bore hole 85525-3258 ft.

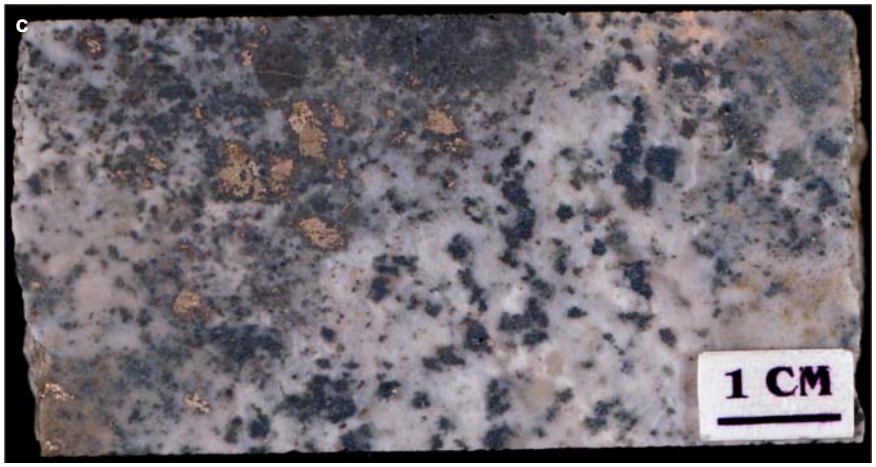


**Figure NR1.9c. McCreedy East deposit.** 5% disseminated to blebby pyrite in granite breccia. Sample 98-AV-08, bore hole 85525-3978 ft.

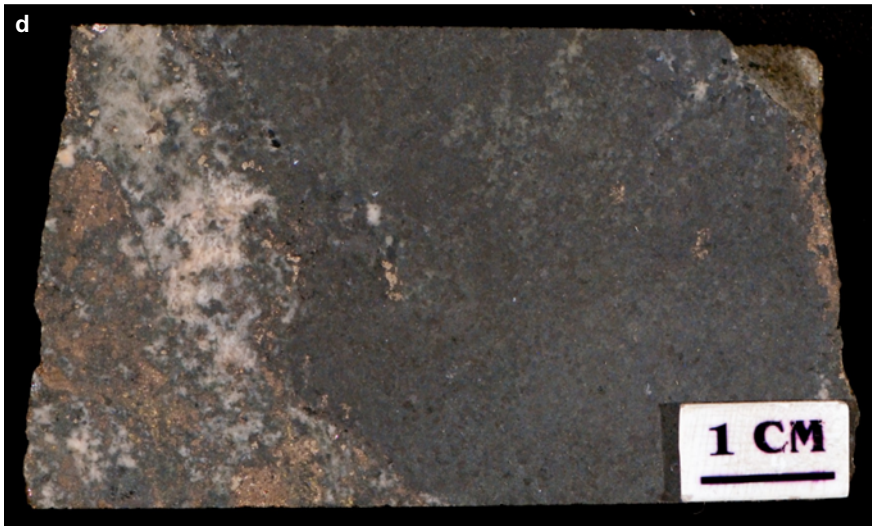


**Figure NR1.9d. McCreedy East deposit.** 5% disseminated pyrrhotite-chalcopyrite associated with mafic clasts in granite breccia. Sample 98-AV-09, bore hole 85525-4008 ft.


**Figure NR1.9e. McCreedy East deposit.** 25% blebby to disseminated pyrrhotite-pentlandite and disseminated chalcopyrite in mafic clast in granite breccia (3.44% Ni, 0.46% Cu). Sample 98-AV-10, bore hole 85525-4028 ft.


**Figure NR1.9f. McCreedy East deposit.** 2% disseminated pyrrhotite within inclusion-bearing sublayer or mafic norite. Sample 98-AV-13, bore hole 85524-4208 ft.

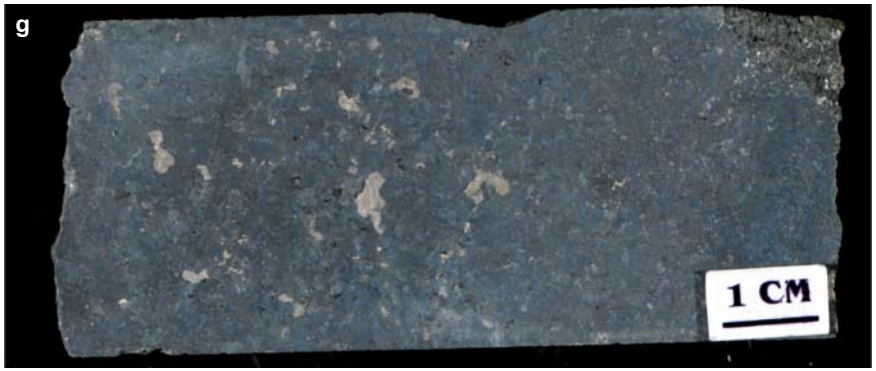


**Figure NR1.9g. McCreedy East deposit.** 5% blebby pyrrhotite-chalcopyrite within ultramafic inclusion in sublayer. Sample 98-AV-14, bore hole 85524-4338 ft.

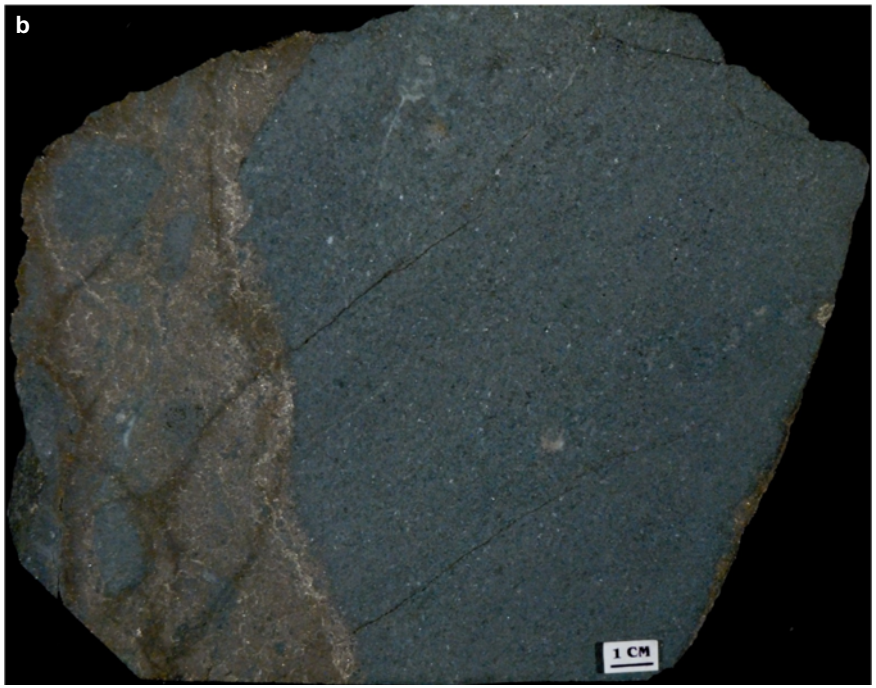


**Figure NR1.10b. McCreedy West deposit.** Vein of massive pyrrhotite-magnetite within medium-grained gabbro. Sample 01-AV-201, collected by Watkinson.


**Figure NR1.10a. McCreedy West deposit.** Blebby to semi-massive pyrrhotite with minor magnetite-chalcopyrite in Levack Gneiss Complex. Sample 01-AV-197, collected by Watkinson from 7850 stope.

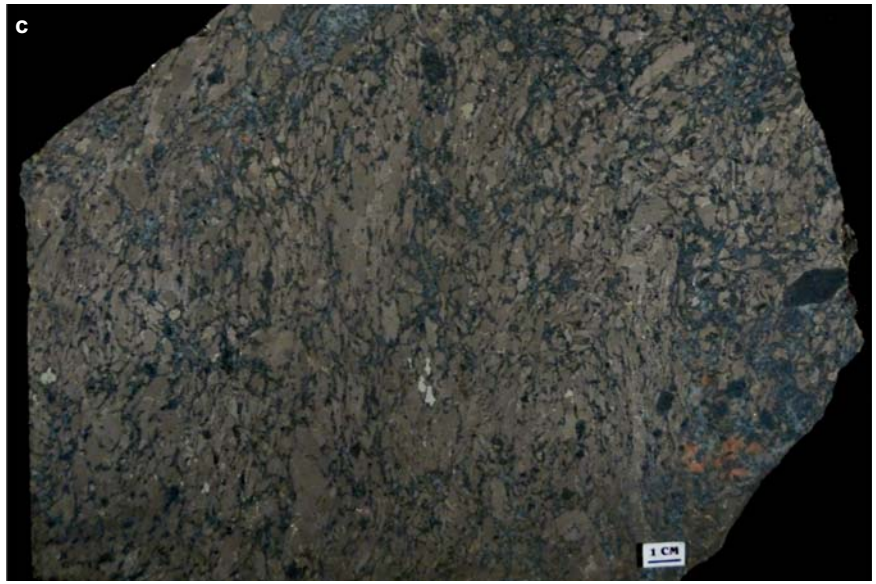


**Figure NR1.10c. McCreedy West deposit.** Semi-massive pyrrhotite-rich ore with minor pyrite-chalcopyrite in partially melted Footwall Breccia. Note interesting textures between melt and sulphide. Sample 01-AV-220, collected by Watkinson.

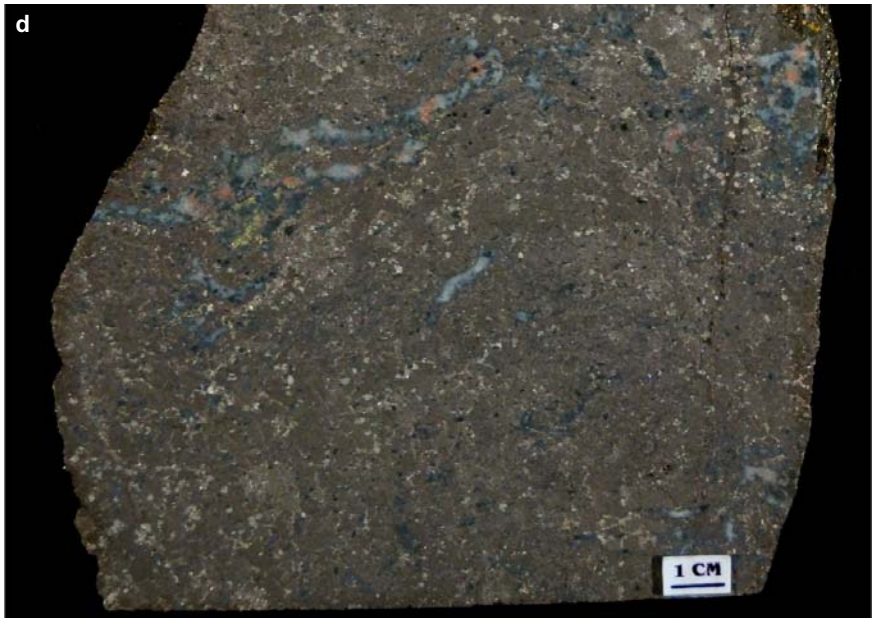


**Figure NR1.10d. McCreedy West deposit.** Massive coarse pyrrhotite with minor chalcopyrite, magnetite and 2 mm blebs of pyrite throughout. Sample 01-AV-219, collected by Watkinson from 7850 stope.

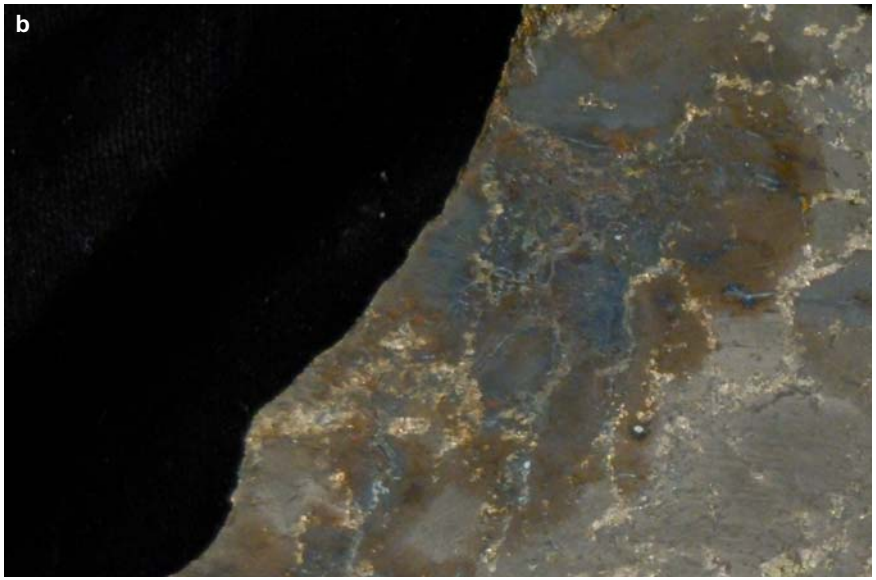


**Figure NR1.11b. Strathcona mine.** Massive pyrrhotite with chalcopyrite stringers. Sample EI-87-430, collected by Roger Eckstrand from the 4000 level.

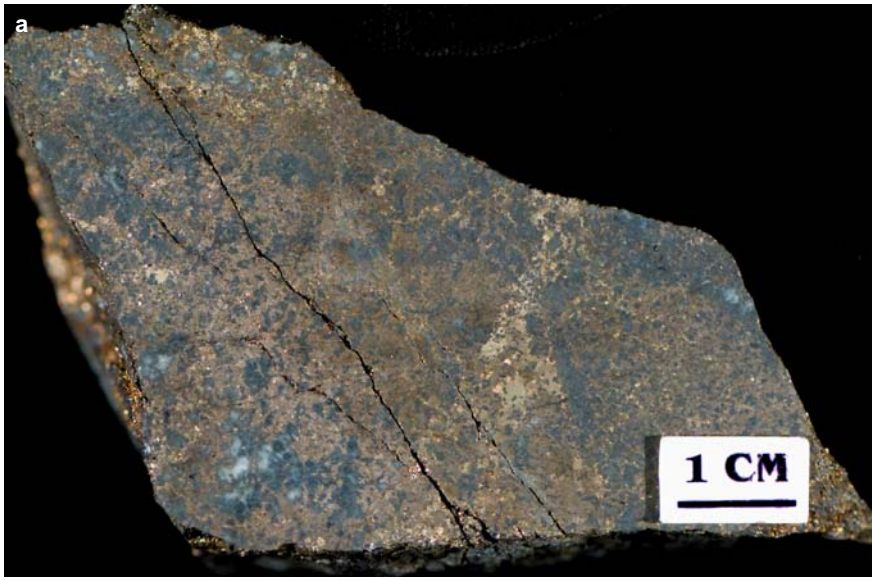


**Figure NR1.11a. Strathcona mine.** Vein of semi-massive pyrrhotite with disseminated chalcopyrite within quartz diorite. Sample EI-87-429, collected by Roger Eckstrand from the 4000 level.


**Figure NR1.11c. Strathcona mine.** Massive pyrrhotite-chalcopyrite. Sample EI-87-431, collected by Roger Eckstrand from the 4000 level.

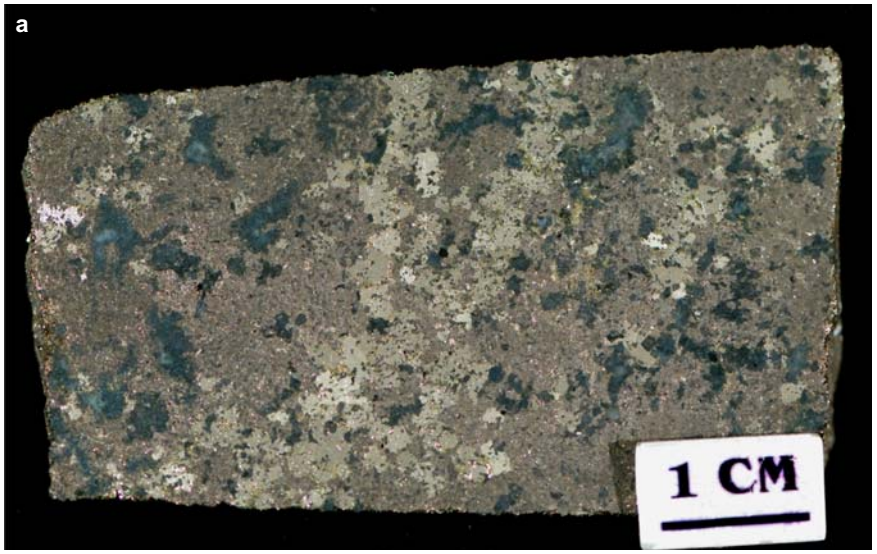


**Figure NR1.12a. Victor deposit.** Massive pyrrhotite with blebby chalcopyrite stringers. Sample 98-AV-02, bore hole 99118-1039 ft, 42 N orebody.

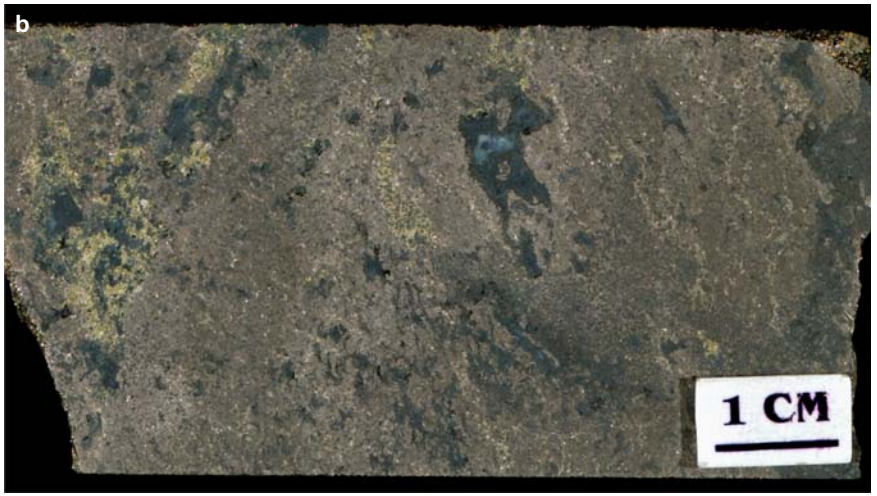


**Figure NR1.12b. Victor deposit.** Massive pyrrhotite with blebby chalcopyrite stringers (0.42% Cu, 2.68% Ni, 0.08% Co). Sample 98-AV-04, bore hole 99118-1046 ft, 42 N orebody.

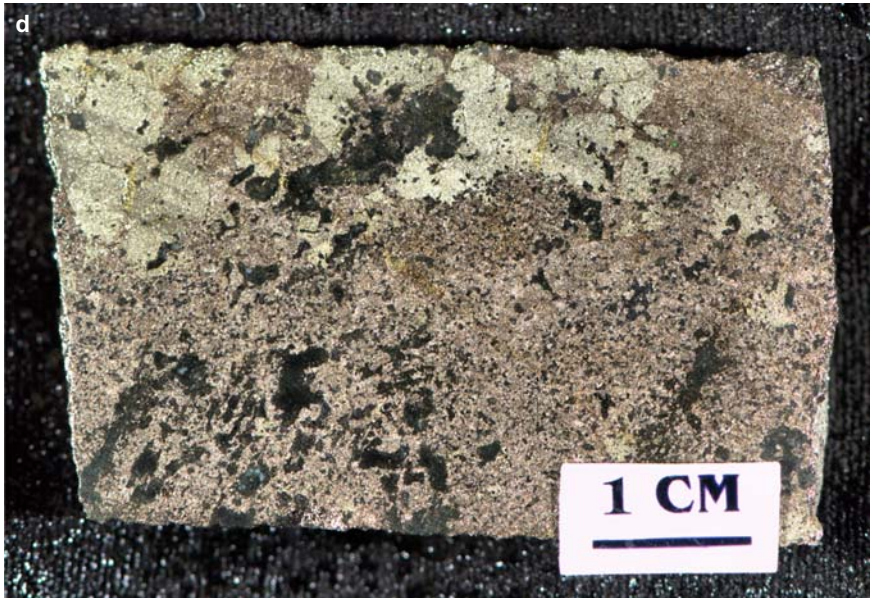


**Figure NR1.12d. Victor deposit.** Massive pyrrhotite with blebby pyrite and disseminated chalcopyrite (1.03% Cu, 2.65% Ni, 0.09% Co, specific gravity 3.94). Sample 98-AV-06, bore hole 99104-1038 ft, 42 N orebody.

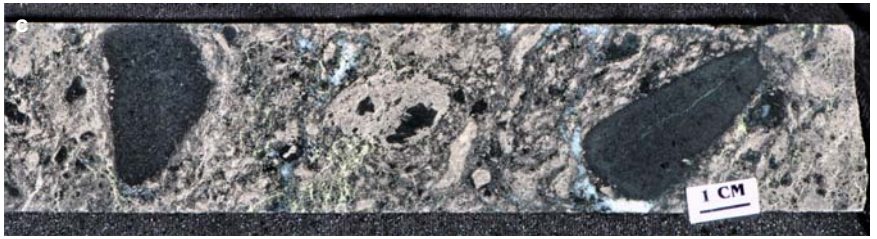


**Figure NR1.12c. Victor deposit.** Semi-massive blebby pyrrhotite with diffuse chalcopyrite stringers within granite breccia. Note large (~4 cm) Levack Gneiss clasts. (2.76% Ni, 0.66% Cu, 0.08% Co). Sample 98-AV-05, bore hole 99104-1053 ft, 42 N orebody.

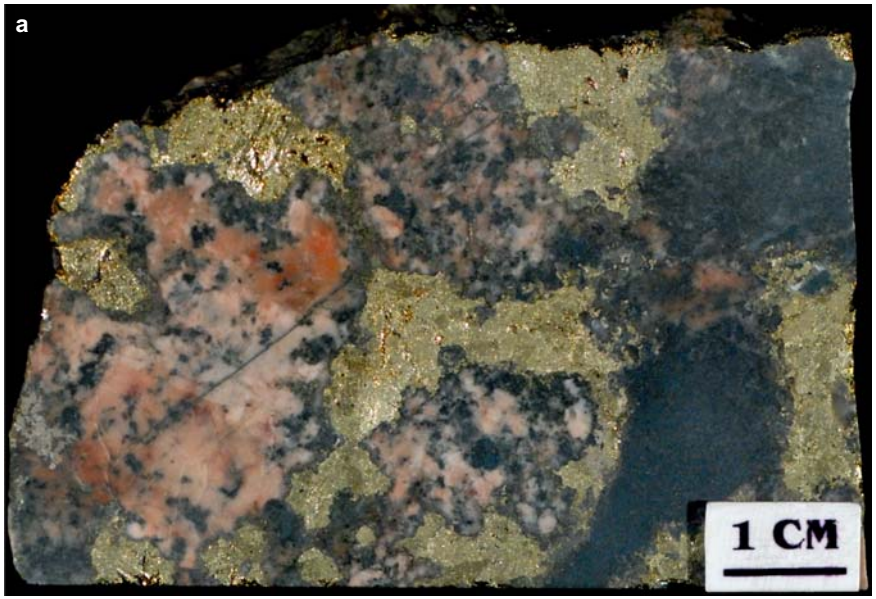


**Figure NR1.13a. Whistle deposit**. 35% large blebby chalcopyrite in Footwall Breccia. Representative of the minor known quantities of Cu-rich sulphide that are present in the footwall at Whistle. Sample 00AV-315.

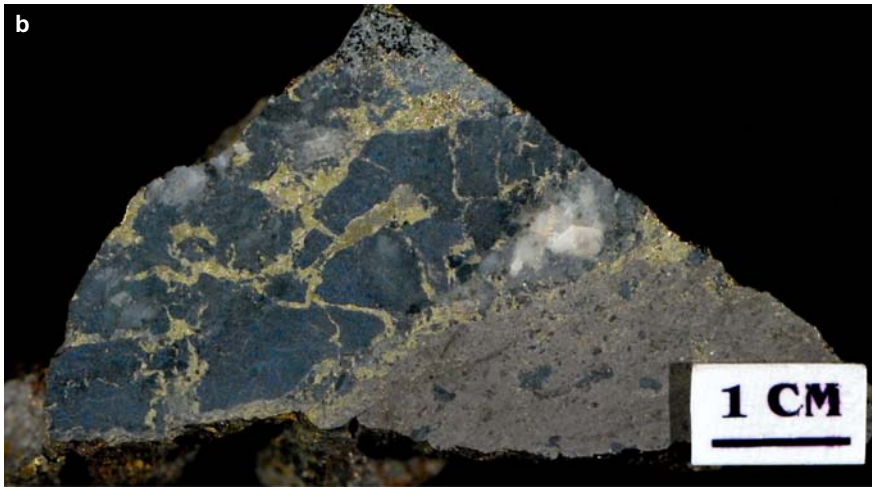


**Figure NR1.13b. Whistle deposit.** Massive pyrrhotite with chalcopyrite veinlets in altered melanoritic inclusion. Representative of the minor known quantities of Cu-rich sulphide that are present in the footwall at Whistle; this sample comes from a patch of Footwall Breccia which contains altered melanoritic inclusions. Sample 00AV-316.

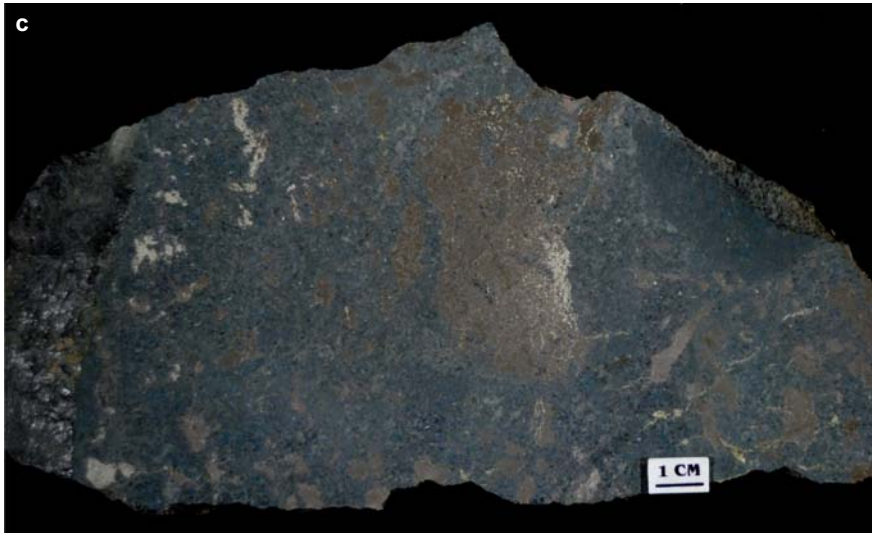


**Figure NR1.13c. Whistle deposit.** 25% blebby pyrrhotite with minor pentlandite-chalcopyrite within igneous-textured Sublayer norite with diabase and norite-melanorite inclusions. Sample 00AV-317.


**Figure NR1.13d. Whistle deposit.** 35% blebby pyrrhotite within igneous-textured Sublayer norite with diabase and norite-melanorite inclusions. Sample 00AV-318.


**Figure NR1.13e. Whistle deposit.** Blebby to disseminated pyrrhotite-chalcopyrite within melanorite/olivine (?) melanorite. Sample 00AV-319.

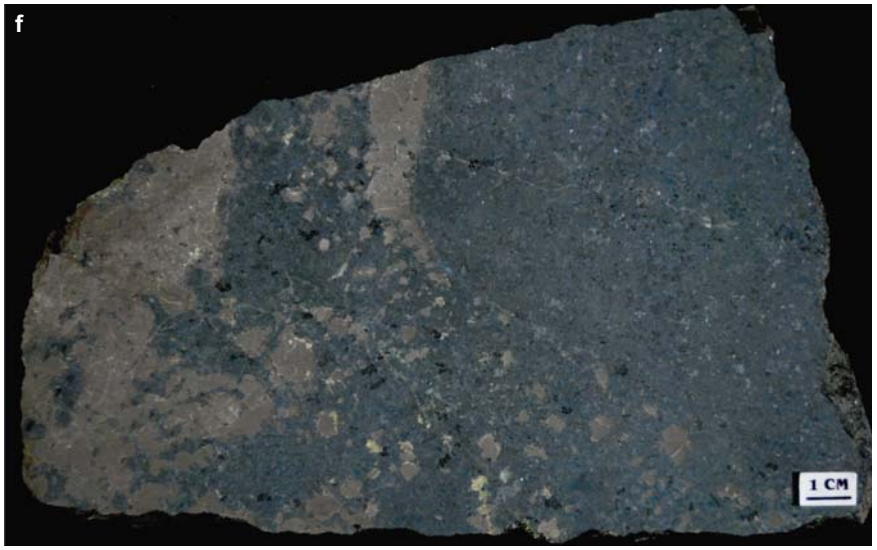


**Figure NR1.13f. Whistle deposit.** Blebby to semi-massive pyrrhotite with minor chalcopyrite within Melanorite inclusion in the Sublayer. note that the Sublayer matrix has a sub-ophitic texture in some places. Inclusion is sulphide-poor, but matrix is sulphide-rich. Sample 00AV-320.


**Figure NR1.13g. Whistle deposit.** 35% disseminated to blebby pyrrhotite-chalcopyrite within olivine melanorite. Sample 00AV-321.


**Figure NR1.13h. Whistle deposit.** 25% disseminated to semi-massive chalcopyrite-pyrrhotite within melanorite inclusion in mineralized Sublayer norite. Sample 00AV-322.

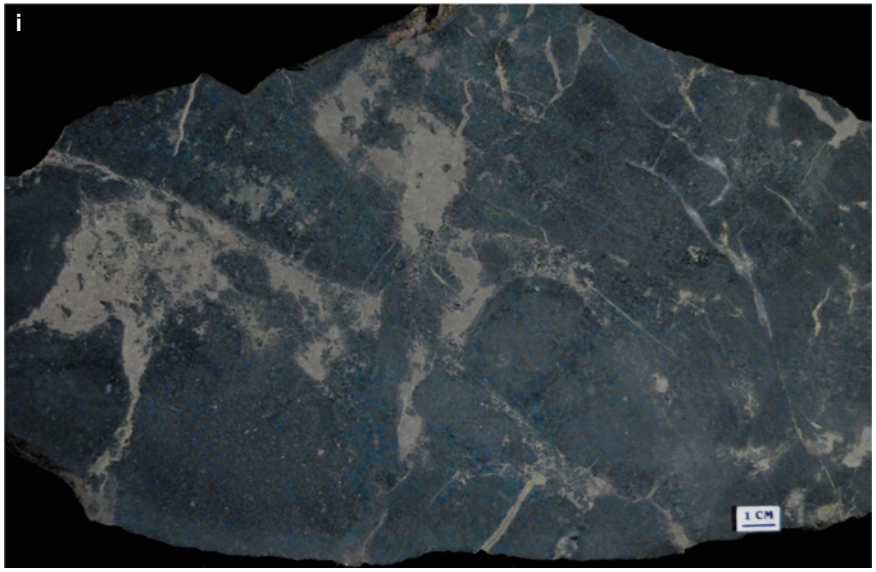


**Figure NR1.13i. Whistle deposit.** Vein to semi-massive sulphide pyrrhotite-chalcopyrite-pyrite in ultramafic Levack Gneiss Complex. Sample 01-AV-185, collected by Watkinson.

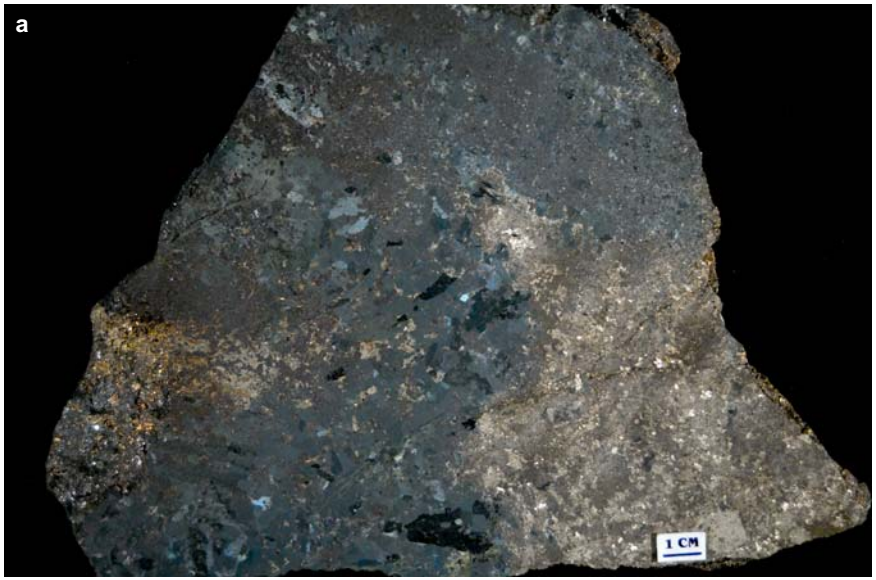


**Figure NR2.1a. Fraser deposit.** Massive pyrrhotite-pentlandite with disseminated magnetite in contact with semi-massive magnetite in coarse-grained amphibole with blebby pyrrhotite-pentlandite. Sample 06AV-14, collected by Watkinson from the epidote zone.

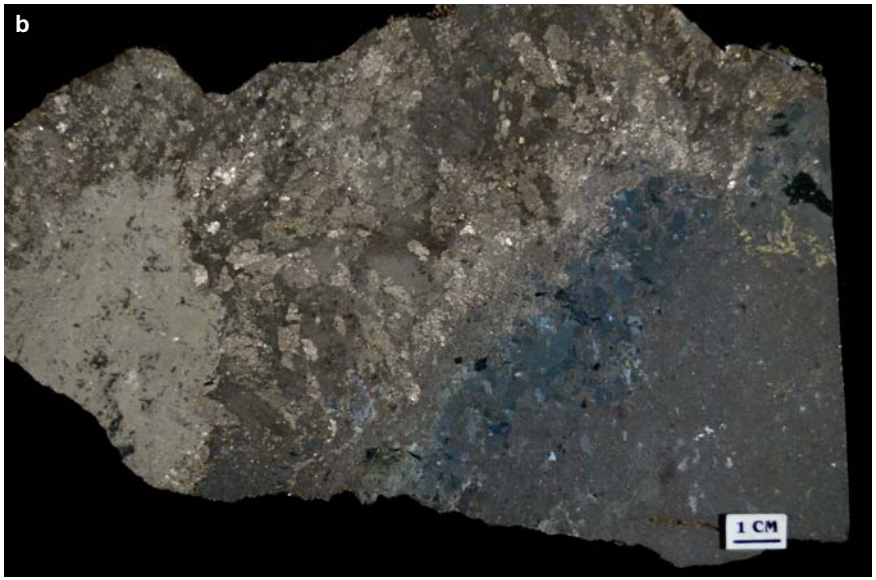


**Figure NR2.1b. Fraser deposit.** Massive pentlandite-magnetite-pyrrhotite-pyrite-chalcopyrite. Sample 01-AV-189, collected by Watkinson from the epidote zone.

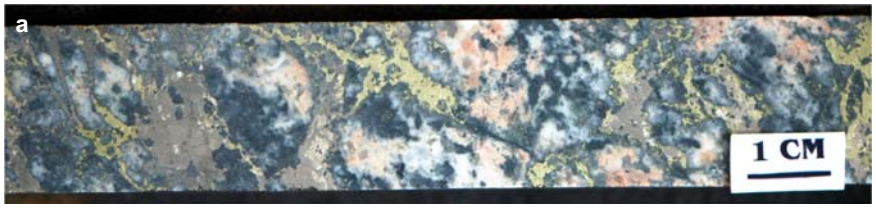


**Figure NR3.1a. Morrison deposit, Rob's zone.** Chalcopyrite (20%) and pyrrhotite (20%) stringers within Levack Gneiss Complex, 1% magnetite. Sample 08AV-06, bore hole FNX7131, 234.2-235.5 ft depth, 540 ft orthogonal distance from the Sudbury Igneous Complex.


**Figure NR3.1b. Morrison deposit, Rob's zone.** Massive pyrrhotite-pentlandite-chalcopyrite-magnetite within gabbroic Levack Gneiss Complex. Sample 08AV-07, bore hole FNX7131, 212.7-214.1 ft depth, 540 ft orthogonal distance from the Sudbury Igneous Complex.

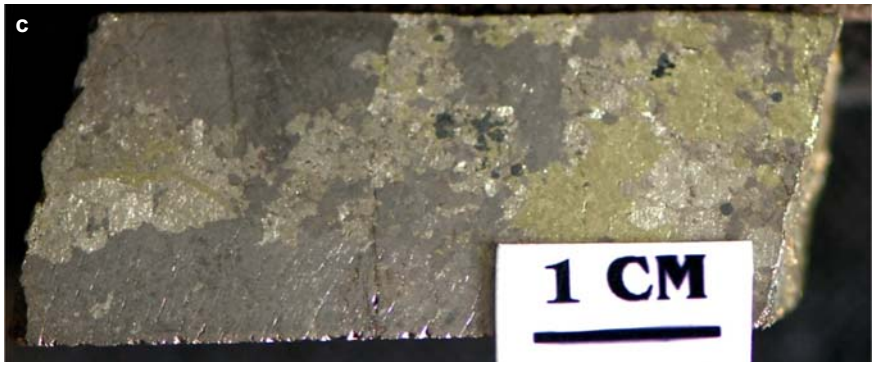


**Figure NR3.1c. Morrison deposit, Rob's zone.** Massive pyrrhotite-pentlandite-chalcopyrite and disseminated magnetite. Sample 08AV-08, bore hole FNX7131, 274.5-276.7 ft depth, 590 ft orthogonal distance from the Sudbury Igneous Complex.

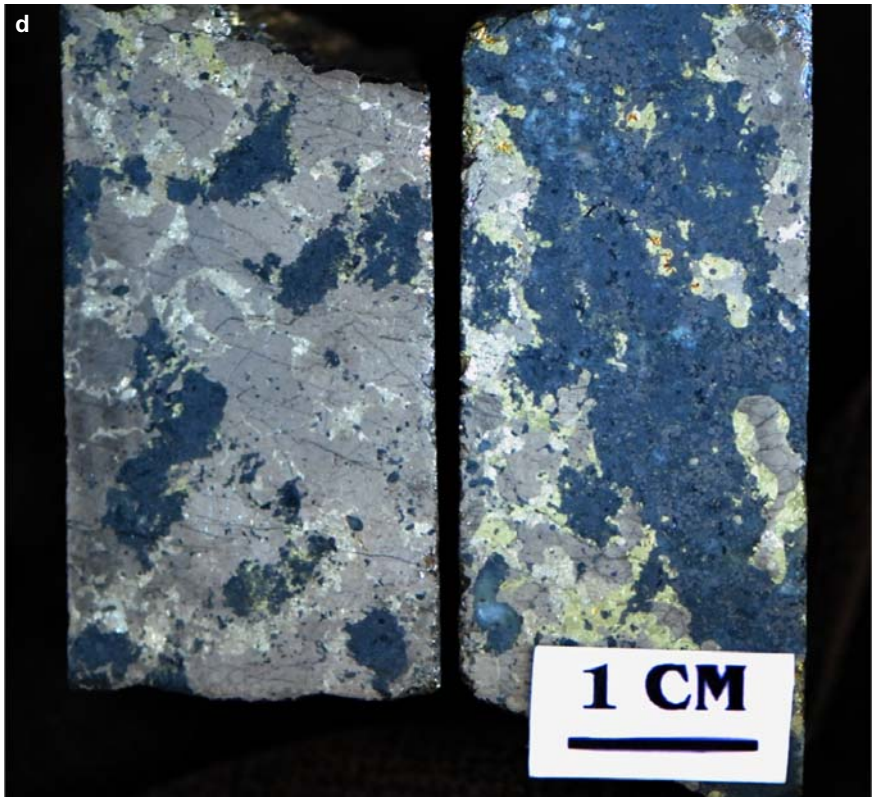


**Figure NR3.1d. Morrison deposit, Rob's zone.** Massive pyrrhotite-chalcopyrite. Sample 08AV-10, bore hole FNX7131, 290.7-291.8 ft depth, 590 ft orthogonal distance from the Sudbury Igneous Complex.

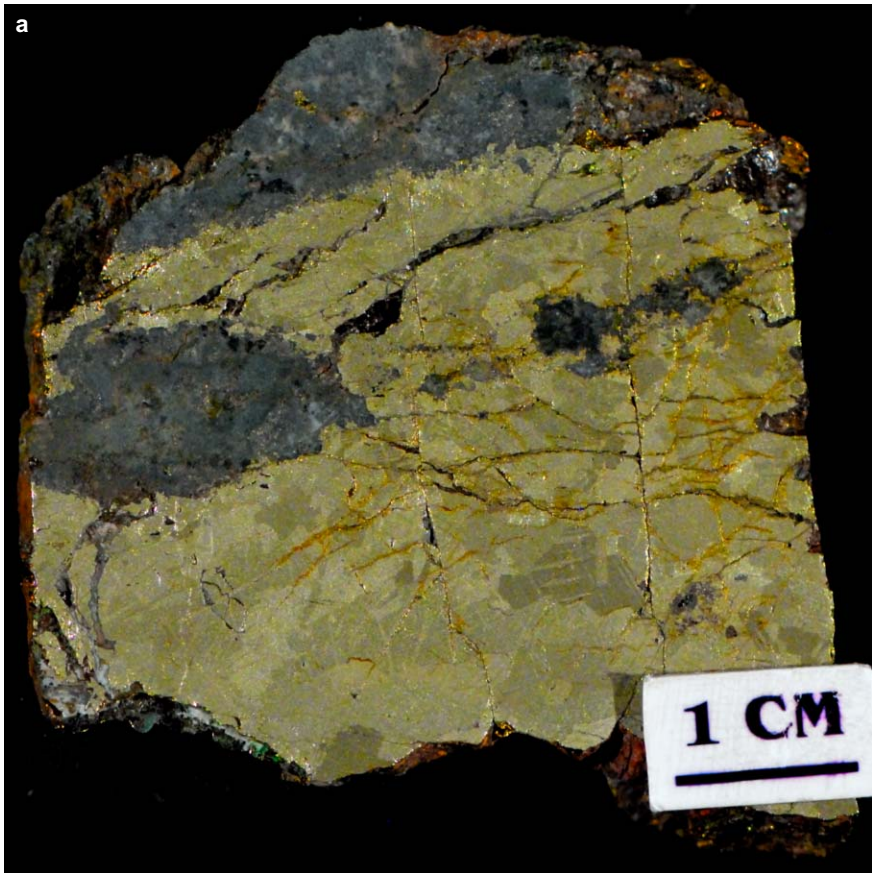


**Figure NR4.1a. Barnett deposit.** Veins of chalcopyrite cross-cutting tonalite gneiss, Levack Gneiss Complex. Sample CLA-93-264C, collected by Ken Card.

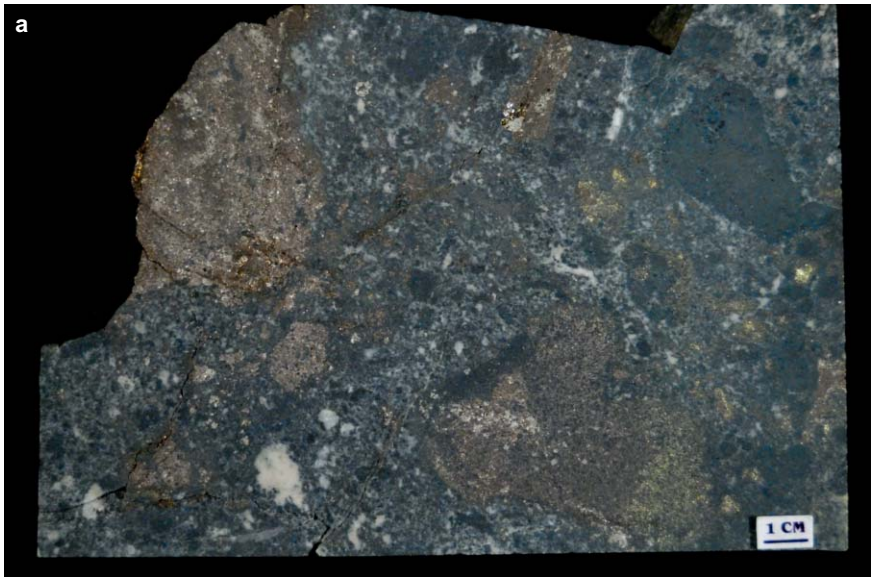


**Figure NR4.2a. Fraser deposit.** Blebby to massive, coarse-grained pyrrhotite with minor chalcopyrite and finely disseminated magnetite within mafic Sudbury Breccia. Note some clasts have pale green chlorite alteration. Sample 01-AV-194, collected by Watkinson.

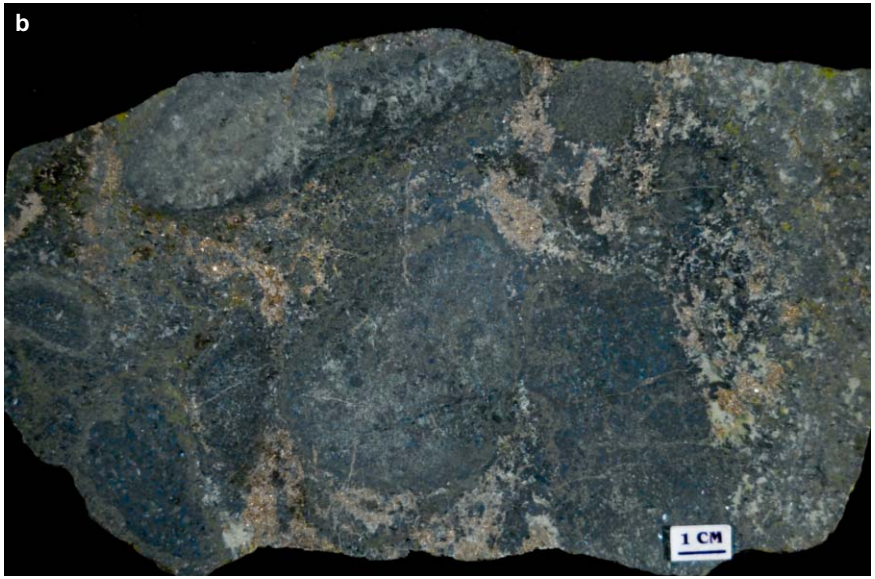


**Figure NR4.2b. Fraser deposit.** 35% disseminated to blebby pentlandite-marcasite-pyrite within highly altered breccia of mafic to ultramafic fragments. Sample 01-AV-208, collected by Watkinson.

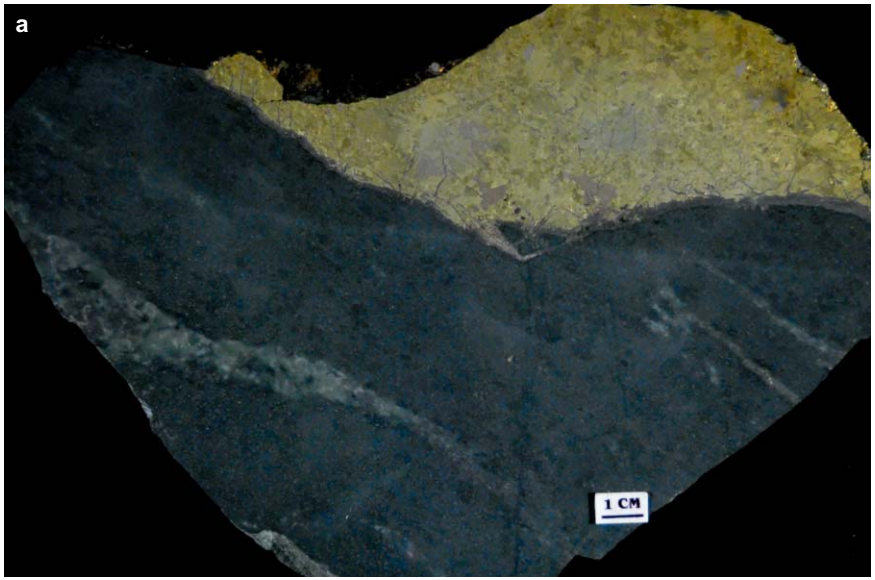


**Figure NR4.3a. McCreedy West deposit.** Vein of massive chalcopyrite with blebby pyrrhotite cross-cutting Levack Gneiss Complex. Note 2-4 mm magnetite selvage along the contact between the vein and Levack Gneiss Complex. Sample 06AV-09, collected by Watkinson.

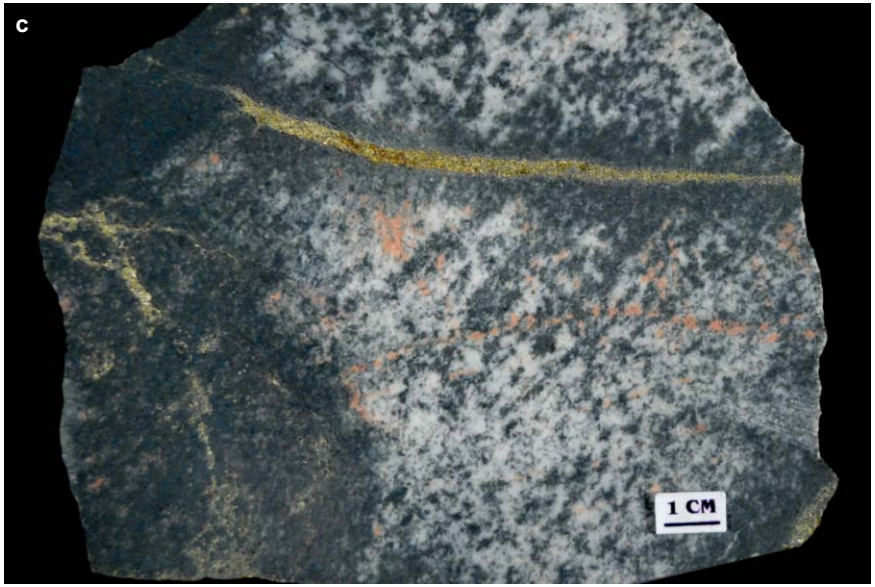


**Figure NR4.3c. McCreedy West deposit.** Vein of massive chalcopyrite cross-cutting Levack Gneiss Complex. Sample 06AV-12, collected by Watkinson.

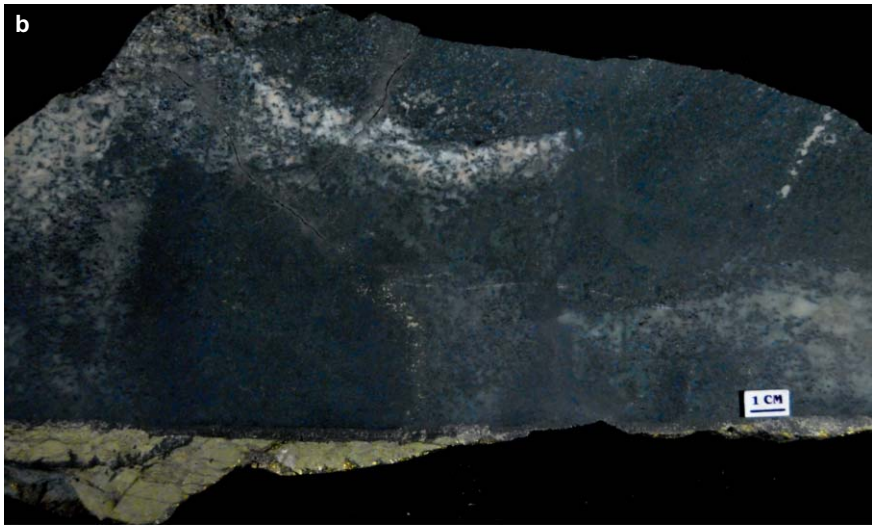


**Figure NR4.3b. McCreedy West deposit.** Vein of massive chalcopyrite with blebby pyrrhotite cross-cutting Levack Gneiss Complex, which includes disseminated chalcopyrite. Note 4 mm magnetite alteration selvage along the contact between the vein and Levack Gneiss Complex. Sample 06AV-11, collected by Watkinson.

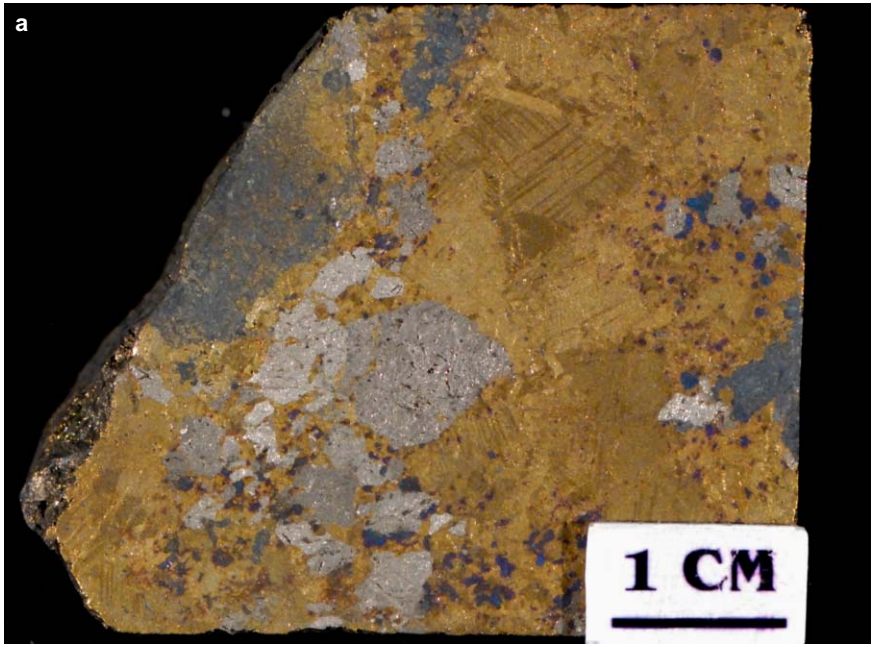


**Figure NR4.4a. Victor Deep deposit.** Massive marcasite with blebby pentlandite and disseminated chalcopyrite. Sample 98-AV-42, bore hole 99167, 3686 ft.

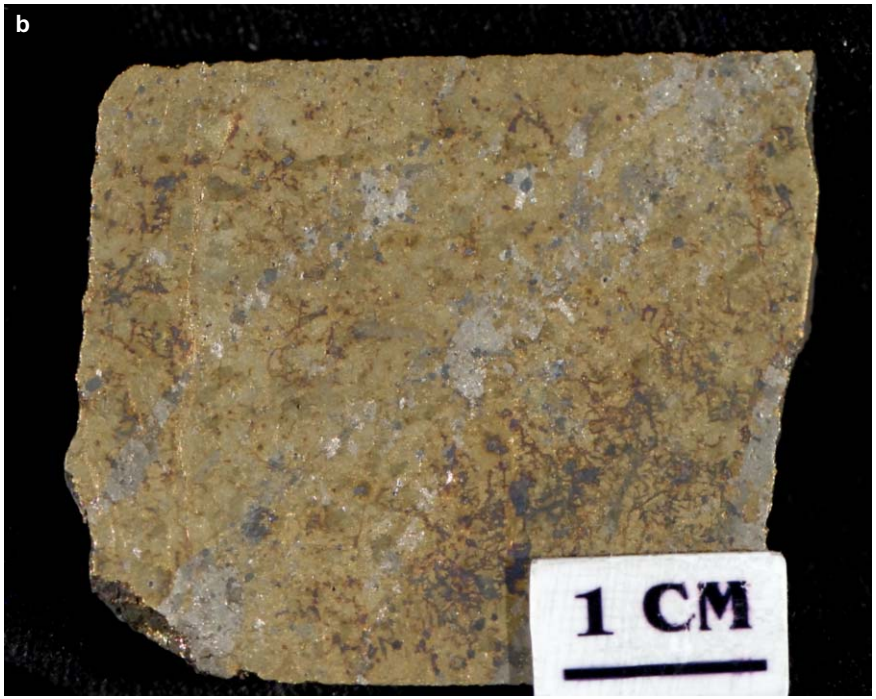


**Figure NR4.4b. Victor Deep deposit.** Massive marcasite-pyrrhotite-chalcopyrite. Sample 98-AV-43, bore hole 99160, 3594 ft.


**Figure NR4.4c. Victor Deep deposit.** Massive marcasite-pyrrhotite with chalcopyrite stringers. Sample 98-AV-44, bore hole 99167, 3692 ft.


**Figure NR5.1a. McCreedy West deposit, PM zone.** Chalcopyrite stringers present along the contact between Levack Gneiss lithic fragments and the Sudbury Breccia. Some finer stringers are also present away from the contact between both lithologies. Sample 05AV-21, stope 1571, PM zone.

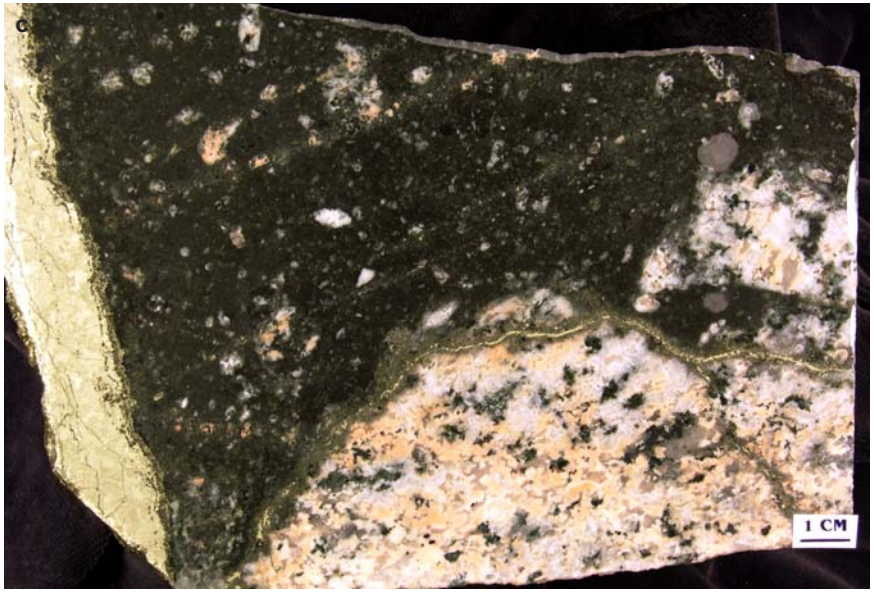


**Figure NR5.1c. McCreedy West deposit, PM zone.** Stringer and disseminations of chalcopyrite in Sudbury Breccia. Sample 05AV-24, stope 1571, PM zone.

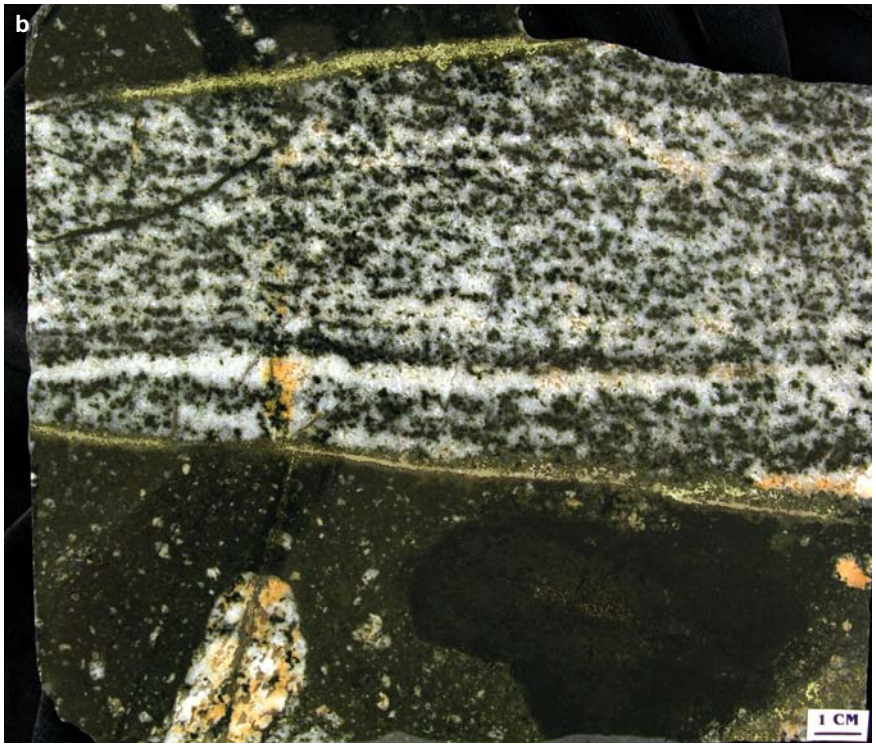


**Figure NR5.1b. McCreedy West deposit, PM zone.** Sulphides Levack Gneiss Complex clast in Sudbury Breccia. Sample 05AV-22, stope 1571, PM zone.

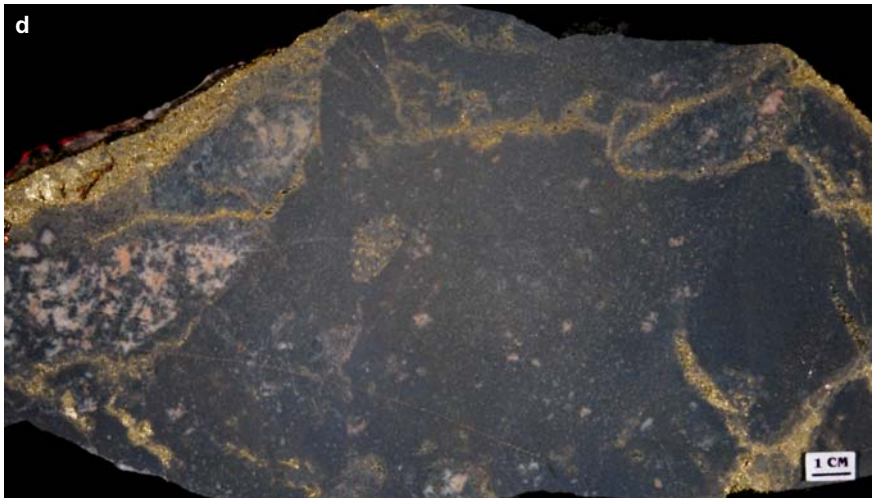


**Figure NR5.1d. McCreedy West deposit, PM zone.** Sudbury Breccia chalcopyrite in veins and millerite stringers. Sample 05AV-23, stope 1571, PM zone.

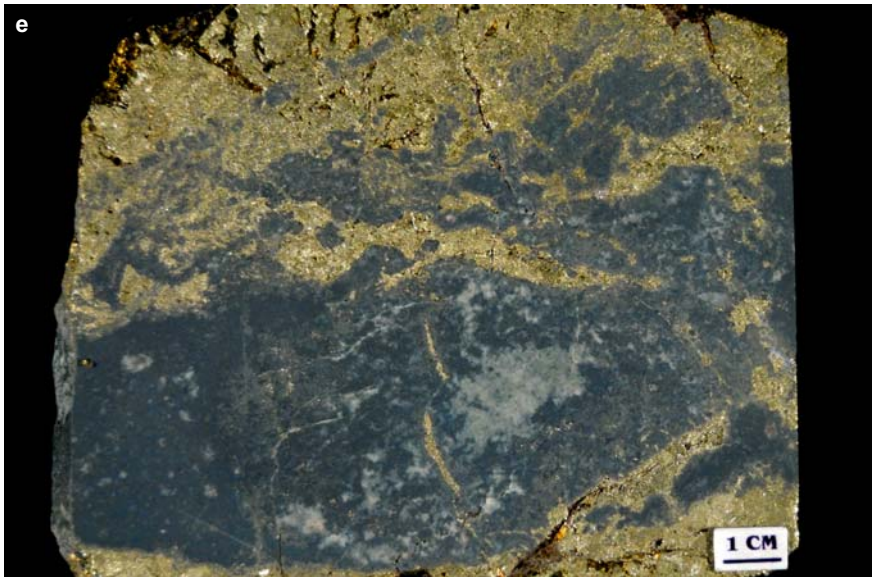


**Figure NR5.1e. McCreedy West deposit, PM zone.** Chalcopyrite veins with some coarse millerite within Sudbury Breccia. Note alteration around veins. Sample 05AV-25, stope 1571, PM zone.


**Figure NR5.1g. McCreedy West deposit, PM zone.** Coarse-grained massive chalcopyrite-millerite aggregates.. Sample 05AV-29, stope 1571, PM zone.

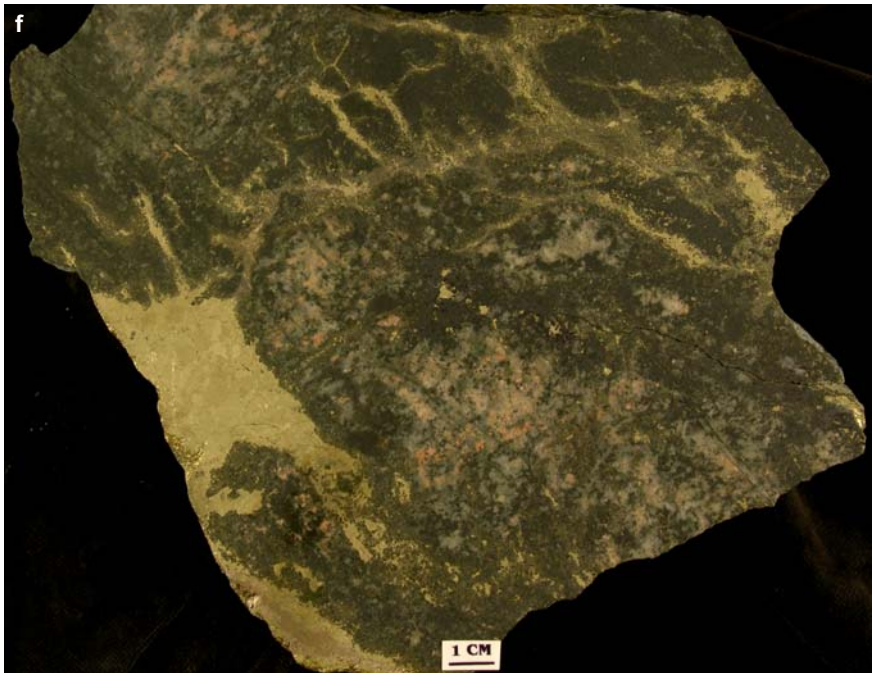


**Figure NR5.1f. McCreedy West deposit, PM zone.** Veins of massive coarse chalcopyrite with some coarse millerite within Sudbury Breccia. Note alteration around vein. Sample 05AV-26, stope 1571, PM zone.

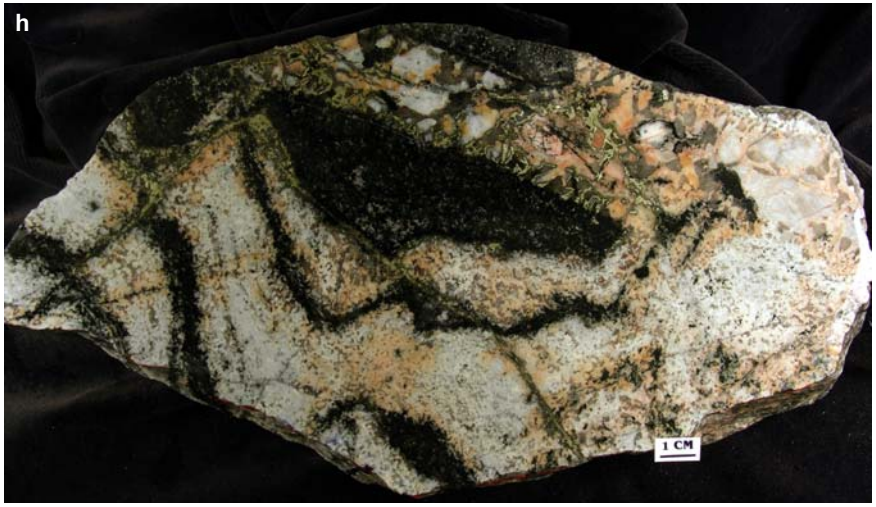


**Figure NR5.1h. McCreedy West deposit, PM zone.** Chalcopyrite veinlets along Levack Gneiss Complex clasts in Sudbury Breccia. Sample 05AV-27, stope 1571, PM zone.

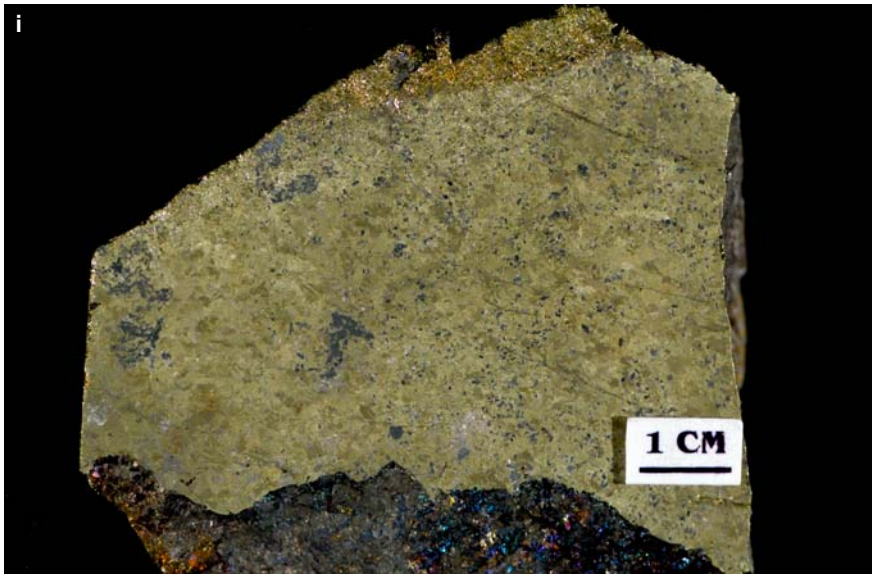


**Figure NR5.1i. McCreedy West deposit, PM zone.** Massive chalcopyrite-bornite. Sample 05AV-30, stope 1571, PM zone.

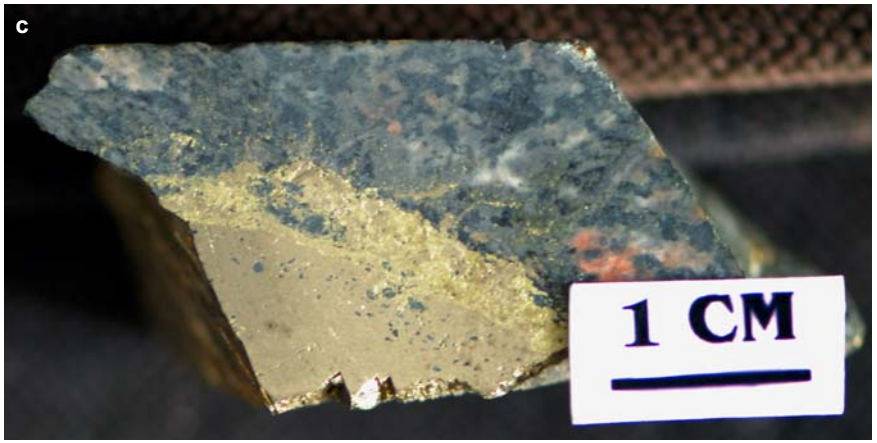


**Figure NR5.2c. Morrison deposit.** Millerite-chalcopyrite pod surrounded by a halo of chalcopyrite in Levack Gneiss Complex. Sample 08AV-04, bore hole FNX7150, 1827-1828 ft depth, 2120 ft orthogonal distance from the Sudbury Igneous Complex.

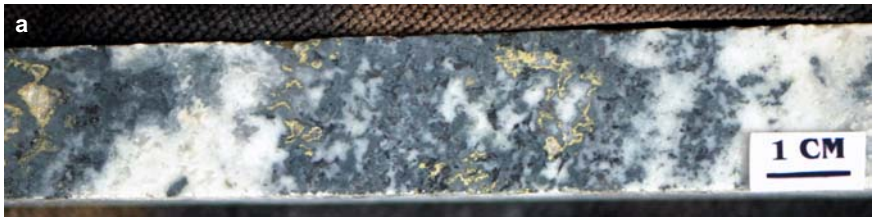


**Figure NR5.2a. Morrison deposit.** 5% disseminated and delicate-textured chalcopyrite along grain boundaries of felsic gneiss. Sample 08AV-01, bore hole FNX7150, 1779.4-1779.9 ft depth, 2060 ft orthogonal distance from the Sudbury Igneous Complex.

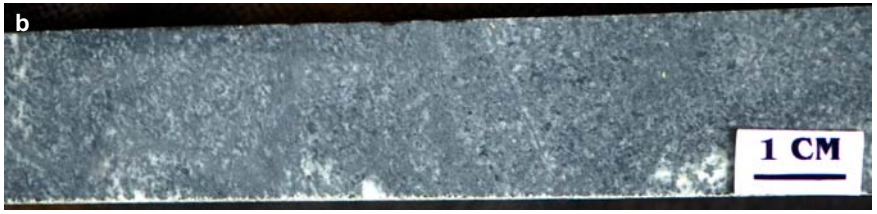


**Figure NR5.2b. Morrison deposit.** Chalcopyrite-pyrrhotite-magnetite between mafic and felsic gneiss. Sample 08AV-02, bore hole FNX7150, 1781.9-1784.7 ft depth.

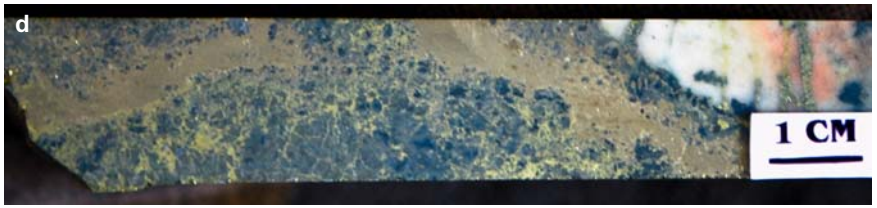


**Figure NR5.2d. Morrison deposit.** Millerite vein with a halo of chalcopyrite stringers in Levack Gneiss Complex. Sample 08AV-05, bore hole FNX7150, 1847.4-1848.5 ft depth, 2120 ft orthogonal distance from the Sudbury Igneous Complex.

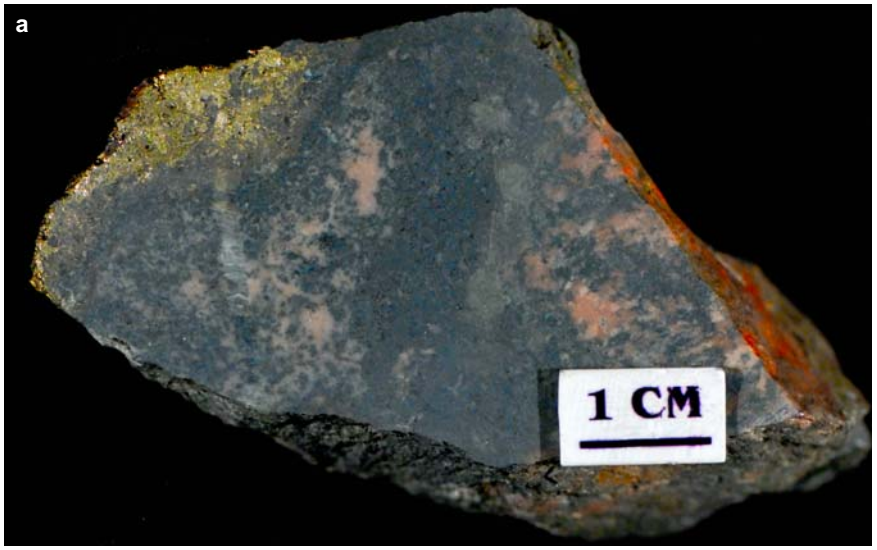


**Figure NR5.3a. Wisner West showing.** Vein of massive chalcopyrite in Sudbury Breccia. Note epidote and K-feldapar alteration assemblages.. Sample 06AV-52, lower zone.

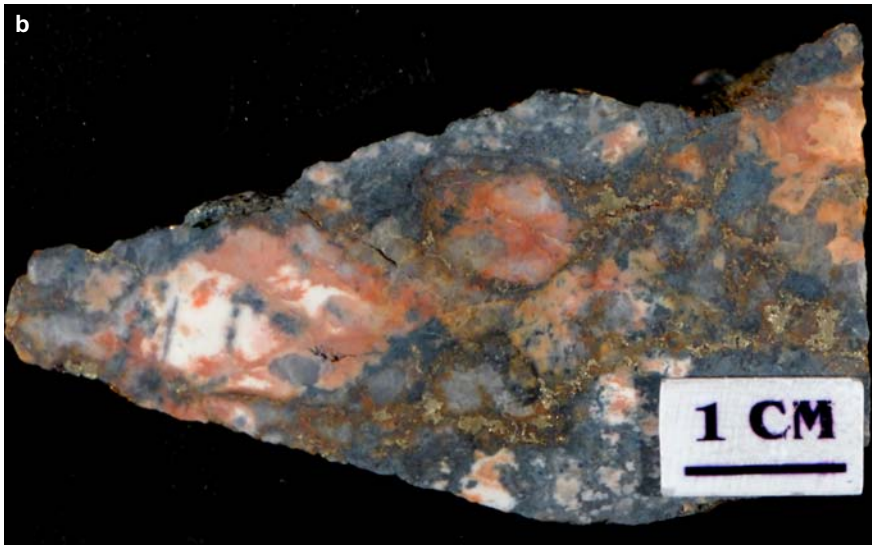


**Figure NR5.3b. Wisner West showing.** Chalcopyrite in Sudbury Breccia. Note epidote alteration. Sample 06AV-53, lower zone.

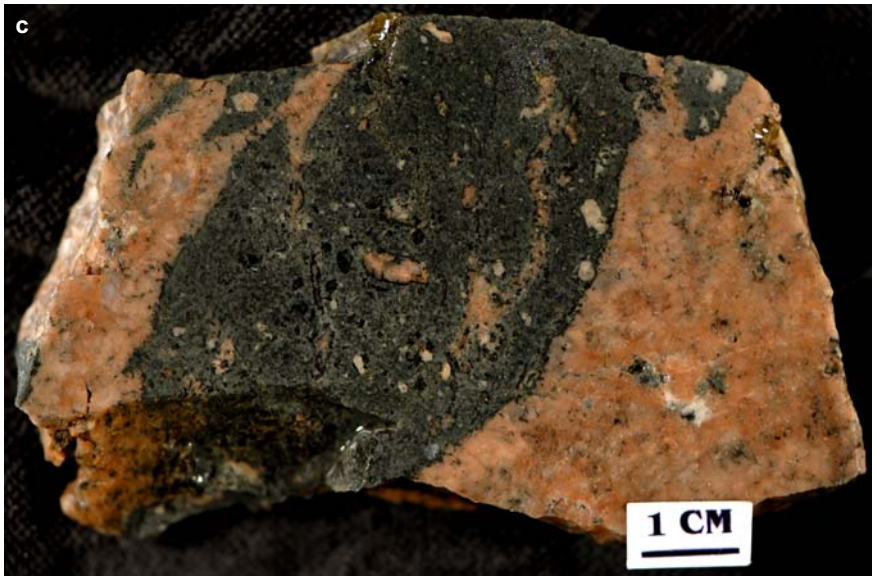


**Figure NR5.3c. Wisner West showing.** Disseminated chalcopyrite in Sudbury Breccia. Note epidote alteration. Sample 06AV-54, lower zone.

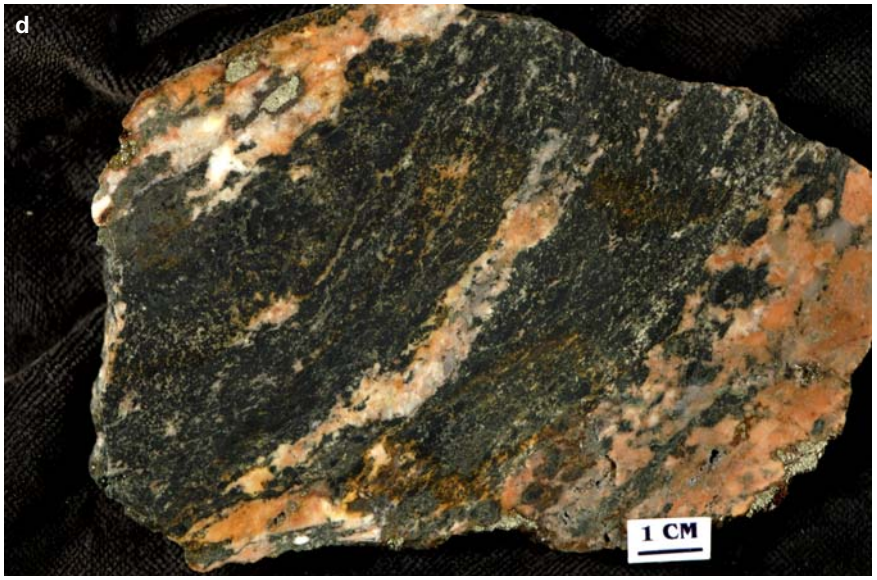


**Figure NR5.3d. Wisner West showing.** Chalcopyrite blebs and veins in Sudbury Breccia (highest PGMs in upper trench-veinlet 27 TPM). Note minor epidote alteration. Sample 06AV-56, upper trench.

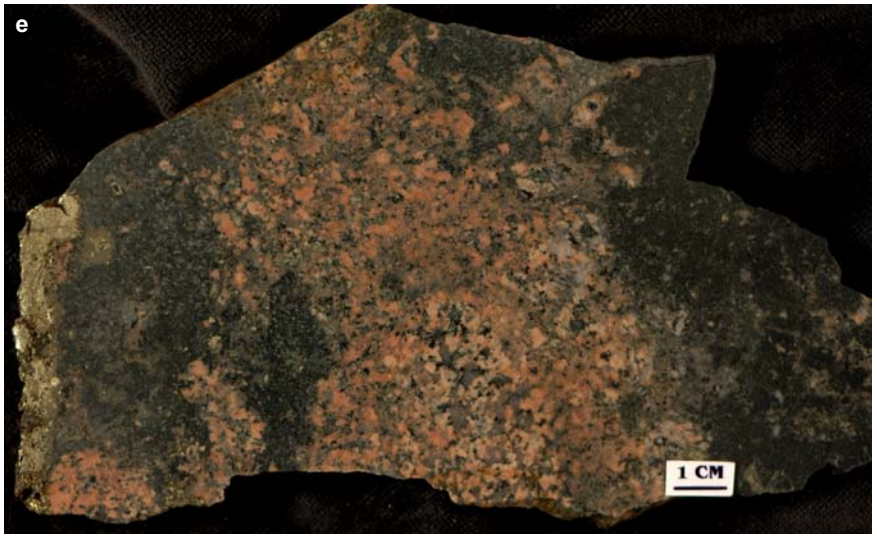


**Figure NR5.3e. Wisner West showing.** Chalcopyrite veins and disseminations in in Sudbury Breccia. Note small alteration halo around vein (PGMs in Sudbury breccia (coarse pile)). Sample 06AV-57, lower zone.


**Figure NR5.3f. Southwest showing, western Wisner Township.** Disseminated to blebby chalcopyrite and massive chalcopyrite vein cross-cutting Sudbury Breccia. Note pale green epidote alteration spatially associated to mineralization. Sample 05AV-42.

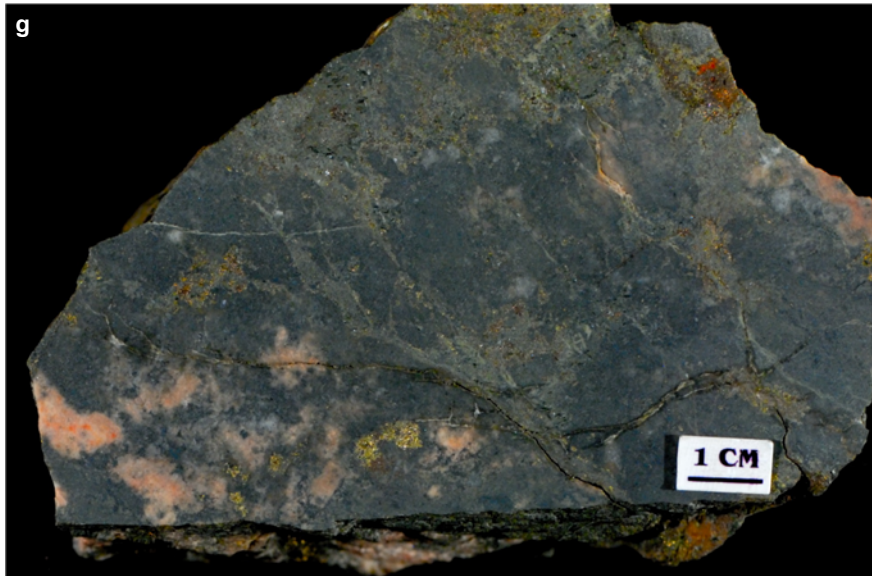


**Figure NR5.3g. Southwest showing, western Wisner Township** Disseminations, blebs, and stringers of stringers of chalcopyrite and minor pyrrhotite within Sudbury Breccia. Note pale green epidote alteration halos adjacent to chalcopyrite stringers. Sample 05AV-4.

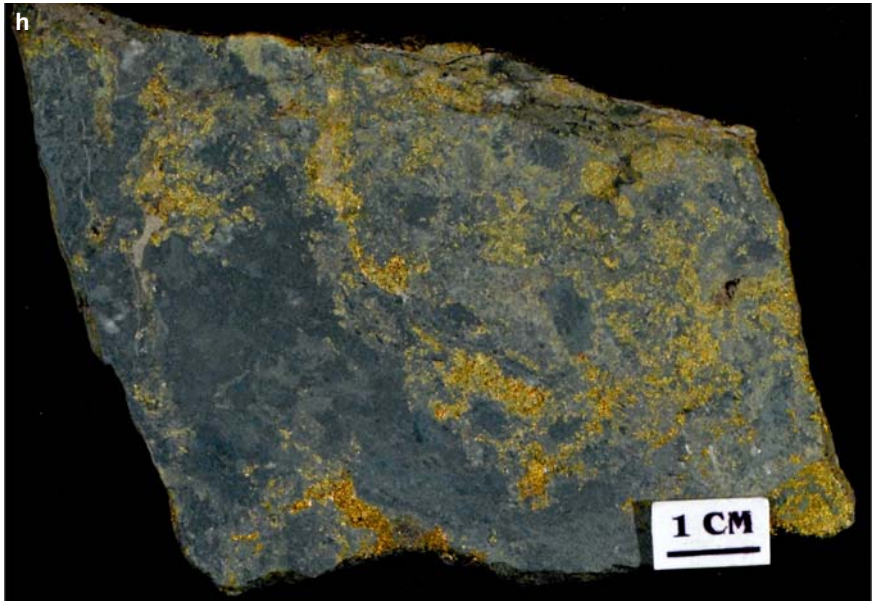


**Figure NR5.3h. Southwest showing, western Wisner Township.** Interstitial, blebby, and stringer chalcopyrite-pyrrhotite within sheared rock with chlorite-epidote alteration assemblages. Note chlorite or epidote alteration. Sample 06AV-22.

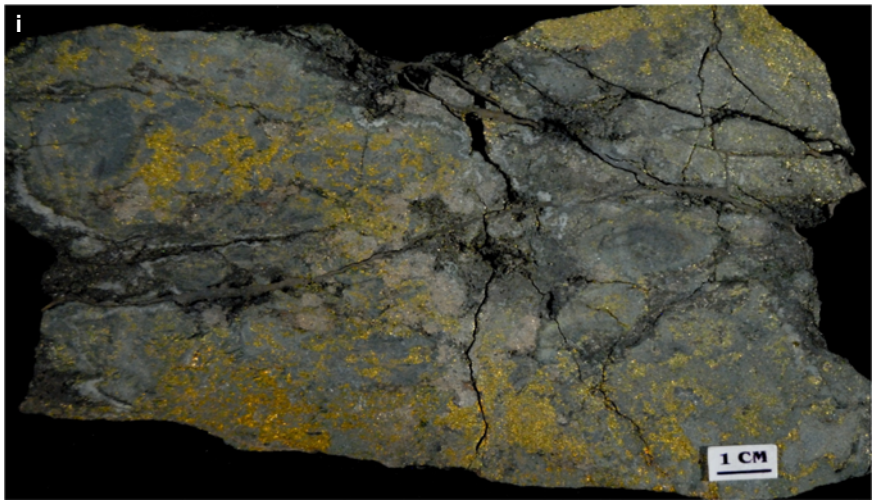


**Figure NR5.3i. Southwest showing, western Wisner Township.** Interstitial chalcopyrite-pyrrhotite within sheared rock. Note chalcopyrite spatially associated with chlorite alteration. Sample 06AV-21.

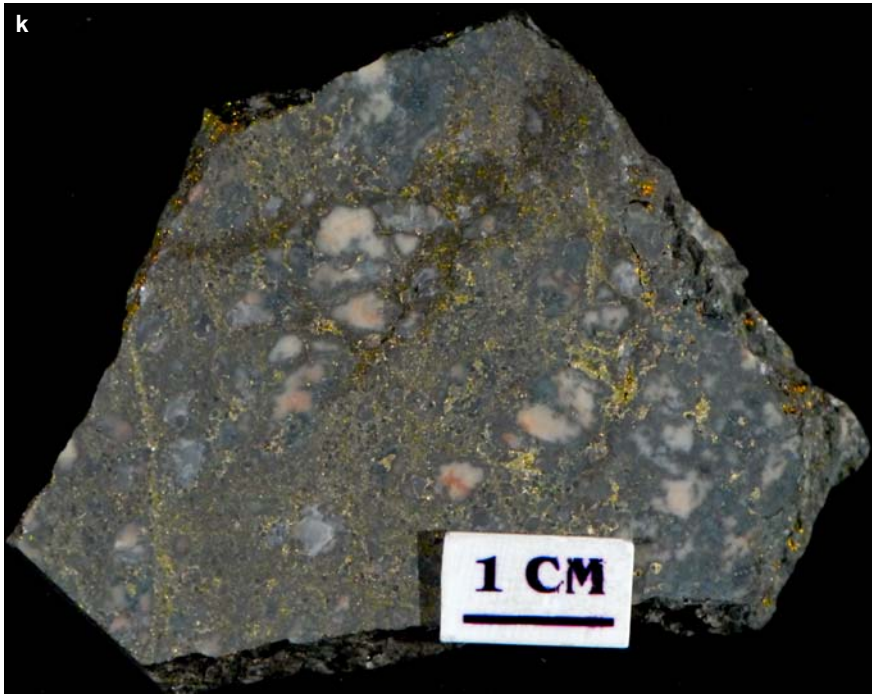


**Figure NR5.3k. South zone, western Wisner Township.** Interstitial chalcopyrite within Sudbury Breccia. Sample 06AV-24.

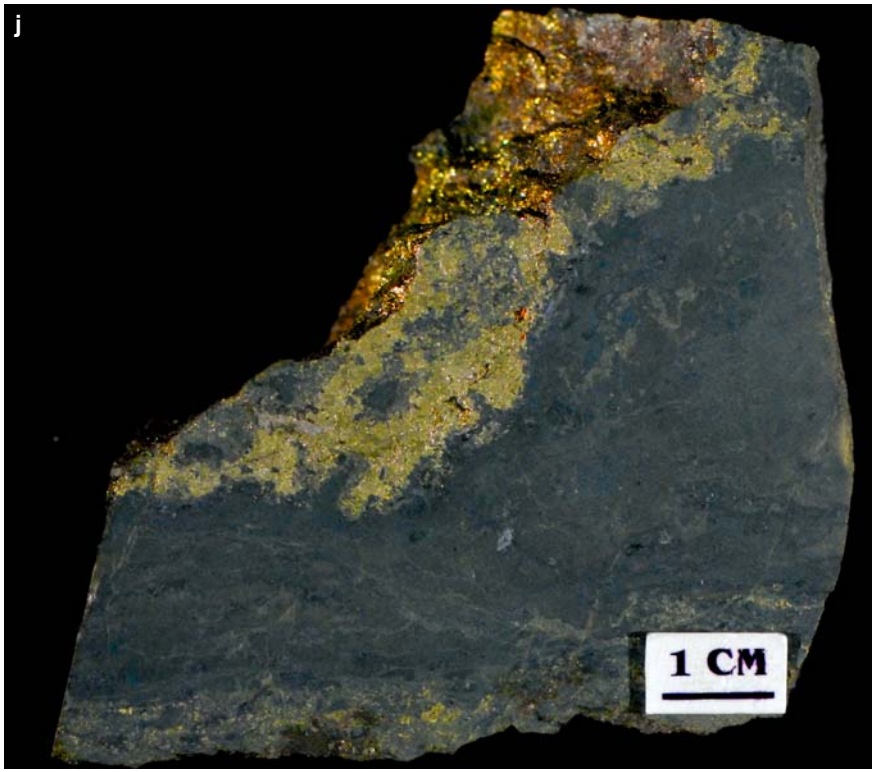


**Figure NR5.3j. South zone, western Wisner Township.** Vein of massive chalcopyrite cross-cutting moderately sheared rock with epidote-chlorite alteration assemblages. Sample 06AV-20, south zone.


**Figure NR6.1a. Broken Hammer deposit.** Semi-massive chalcopyrite with minor disseminated blebs of magnetite. Sample 05AV-36.

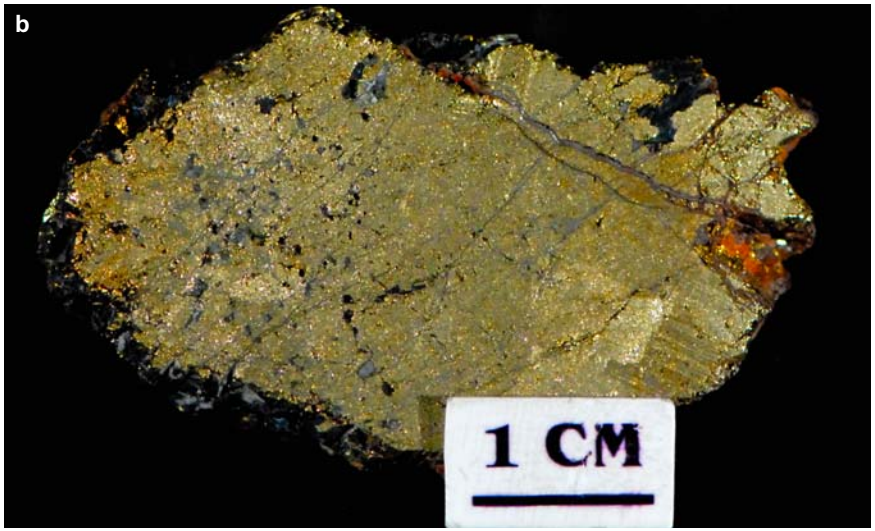


**Figure NR6.1b. Broken Hammer deposit.** Massive chalcopyrite with minor disseminated magnetite cut by millimetre-scale secondary alteration veinlets. Sample 05AV-39.

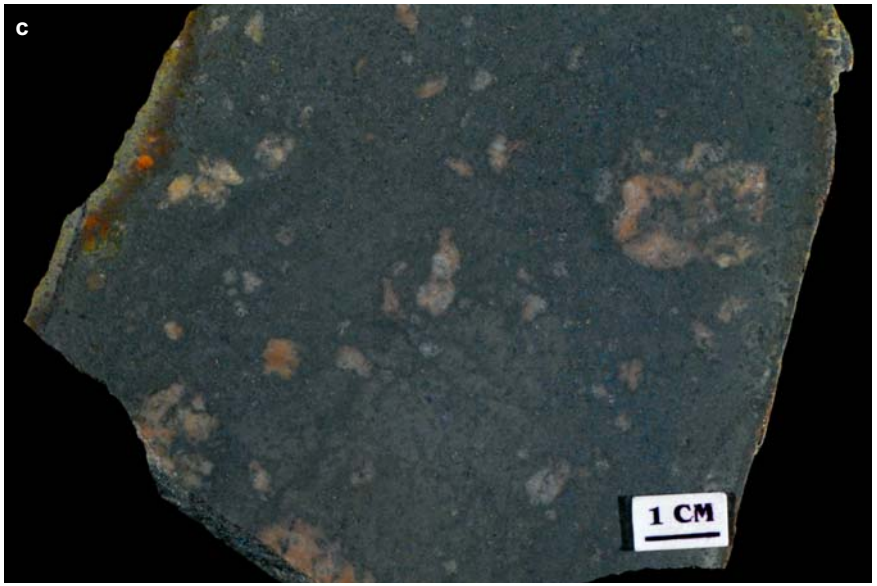


**Figure NR6.1c. Broken Hammer deposit.** Finely disseminated chalcopyrite within Sudbury Breccia. Note pale green chlorite alteration. Sample 05AV-40.


**Figure NR6.1d. Broken Hammer deposit.** Massive epidote- chalcopyrite vein cutting Sudbury Breccia hosted in quartz monzonite. Sample 06AV-30, drill hole Wis-030A, 38.6 m.


**Figure NR6.1e. Broken Hammer deposit.** Disseminated chalcopyrite in Sudbury Breccia hosted in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-32, drill hole Wis-030A, 42.1 m.

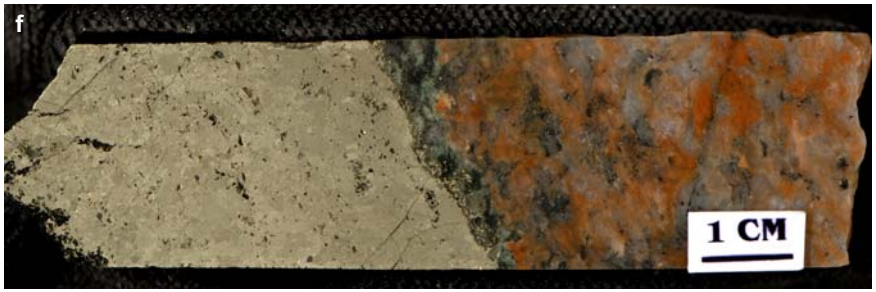


**Figure NR6.1f. Broken Hammer deposit.** Massive chalcopyrite vein in Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-33, drill hole Wis-030A, 47.07-47.45 m.

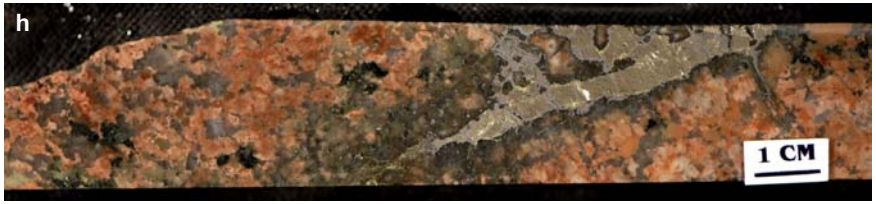


**Figure NR6.1h. Broken Hammer deposit.** Massive millerite-chalcopyrite vein cross-cutting Sudbury Breccia in quartz monzonite. Note that chalcopyrite is at the margins of the vein and there is greyish green epidote alteration. Sample 06AV-36, drill hole Wis-036, 25.3-25.4 m.


**Figure NR6.1j. Broken Hammer deposit.** Finely disseminated sulphide (<1%) in Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-40, drill hole Wis-013, 134.2 m.


**Figure NR6.1l. Broken Hammer deposit.** Finely disseminated sulphide (<1%) in Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-43, drill hole Wis-067A, 216.7 m.


**Figure NR6.1g. Broken Hammer deposit.** Disseminated chalcopyrite (<3%) in Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-34, drill hole Wis-030A 49.1-49.2 m.


**Figure NR6.1i. Broken Hammer deposit.** Semi-massive chalcopyrite vein and stringers cross-cutting Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-37, drill hole Wis-036, 25.4-25.5 m.

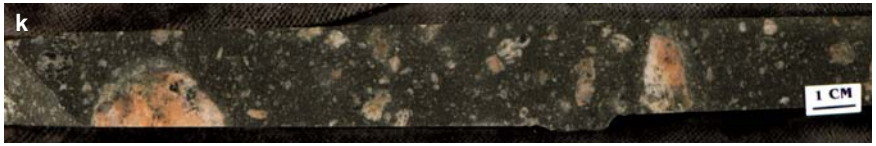


**Figure NR6.1k. Broken Hammer deposit.** Finely disseminated sulphide (<1%) in Sudbury Breccia in quartz monzonite. Note pale greyish green epidote alteration. Sample 06AV-42, drill hole Wis-052 127.1-.4 m.


**Figure NR6.1m. Broken Hammer deposit.** Finely disseminated pyrite (<5%) in epidotized Sudbury Breccia in quartz monzonite. Sample 06AV-44, drill hole Wis-067A, 366.1 m.


**Figure NR6.1n. Broken Hammer deposit.** Massive chalcopyrite vein with minor disseminated magnetite and minor silicified veins. Sample 06-MPB-R14, Big Boy vein.


**Figure NR6.1o. Broken Hammer deposit.** Semi-massive sulphide chalcopyrite vein in Levack Gneiss Complex. Sample 06-MPB-R15.

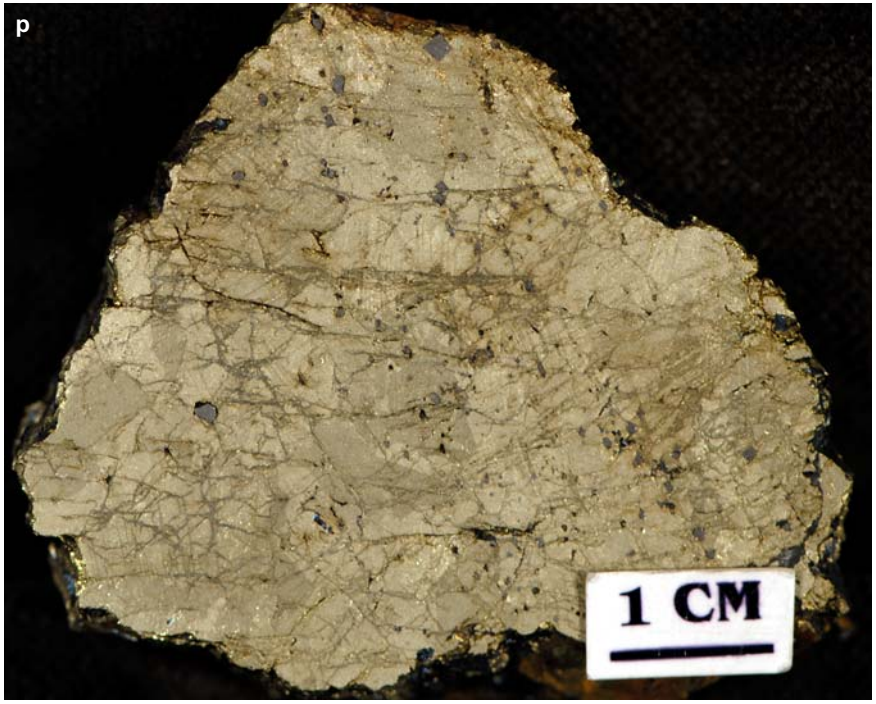


**Figure NR6.1p. Broken Hammer deposit.** Massive chalcopyrite vein with minor magnetite blebs. Sample 06-MPB-R16.

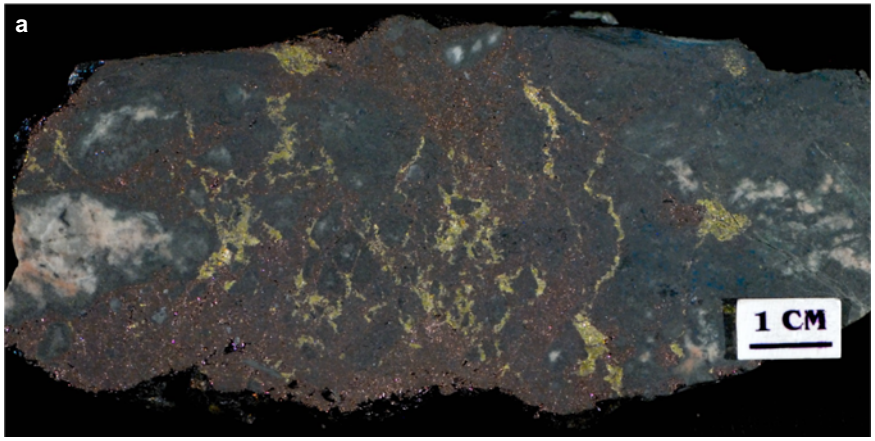


**Figure NR6.2a. McCreedy East deposit.** Semi-massive bornite with stingers of chalcopyrite within Sudbury Breccia. Note alteration around stringers. Sample 06AV-06, collected by Watkinson.

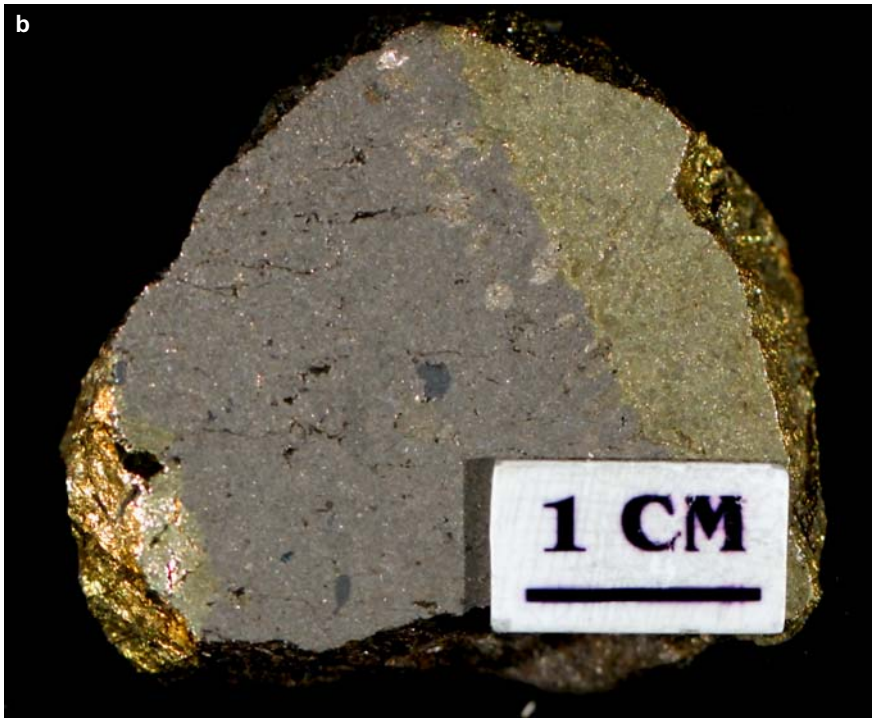


**Figure NR6.2b. McCreedy East deposit.** Massive banded pyrrhotite-chalcopyrite vein. Sample 98-AV-28, 4403 level, west sill cut, 153 zone.


**Figure NR6.2d. McCreedy East deposit.** Massive banded chalcopyrite-millerite vein. Sample 98-AV-30, 4404 level, west panel sill cut, 153 zone.

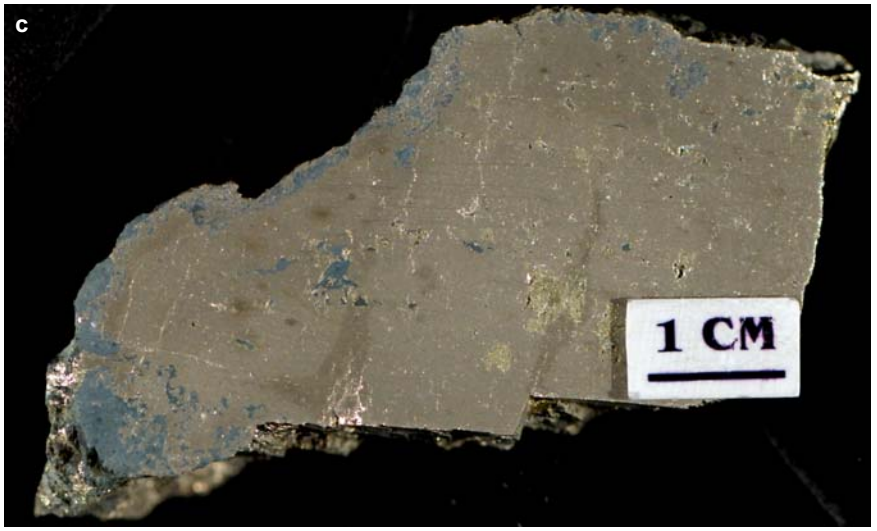


**Figure NR6.2c. McCreedy East deposit.** Massive millerite with blebby stingers of chalcopyrite. Sample 98-AV-29, 4403 level, east sill cut, 153 zone.

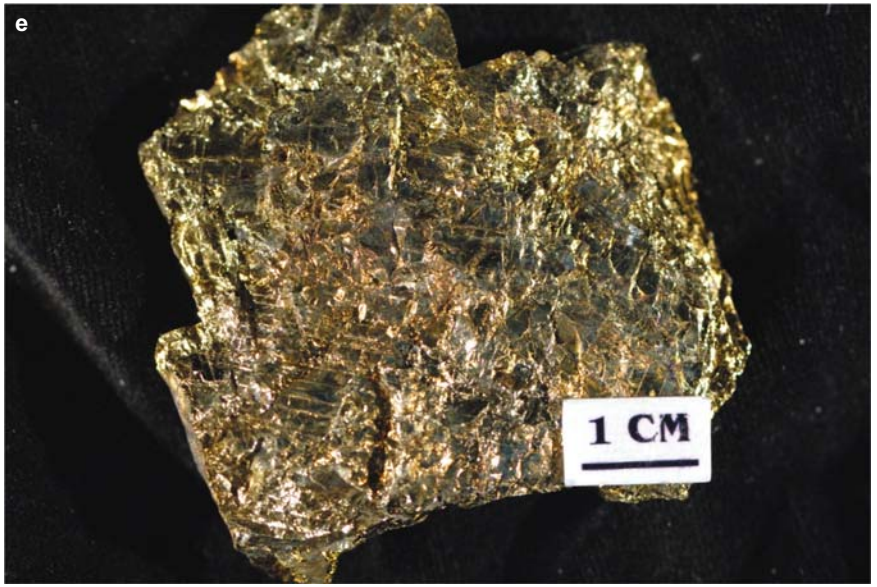


**Figure NR6.2e. McCreedy East deposit.** Massive sulphide chalcopyrite with disseminated blebs of magnetite. Sample 98-AV-31, 4404 level, west panel sill cut, 153 zone.

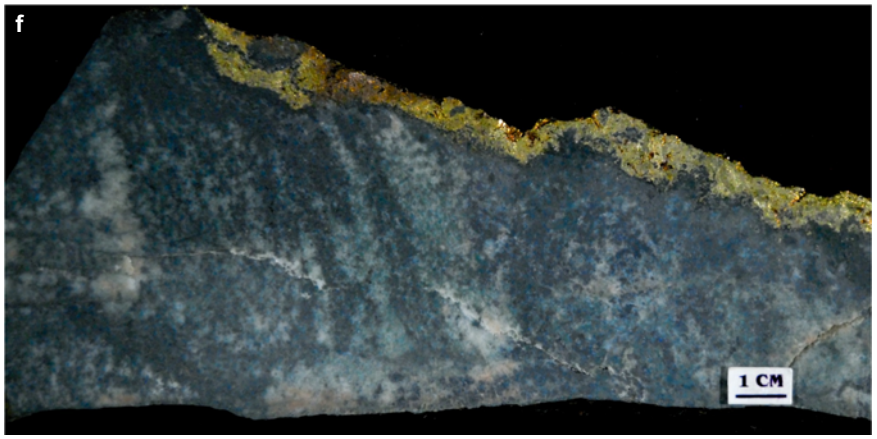


**Figure NR6.2f. McCreedy East deposit.** Massive chalcopyrite with minor pyrrhotite in Levack Gneiss Complex. Sample 01-AV-209, collected by Watkinson.

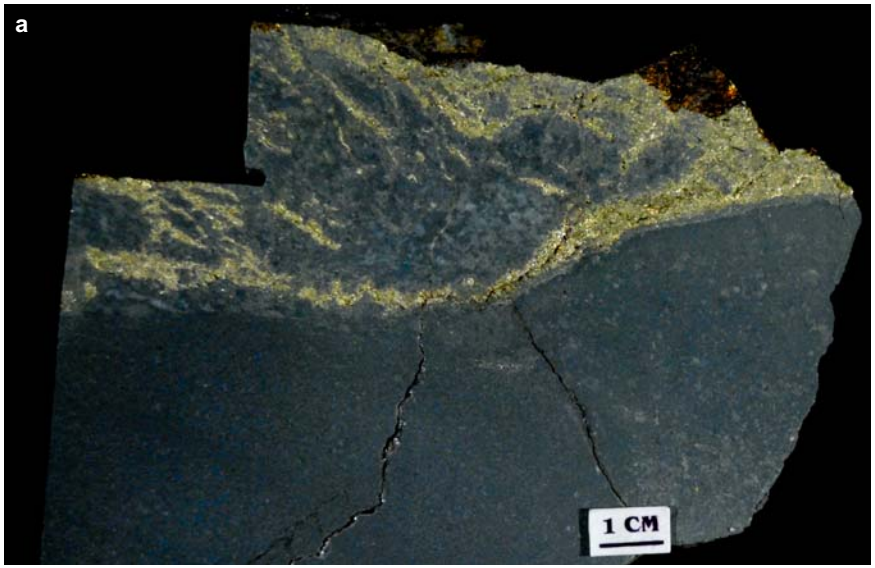


**Figure NR6.3a. McCreedy West deposit.** Semi-massive chalcopyrite vein in Levack Gneiss fragment adjacent to fine-grained mafic rock. Note alteration halo around vein. Sample 01-AV-191, collected by Watkinson.

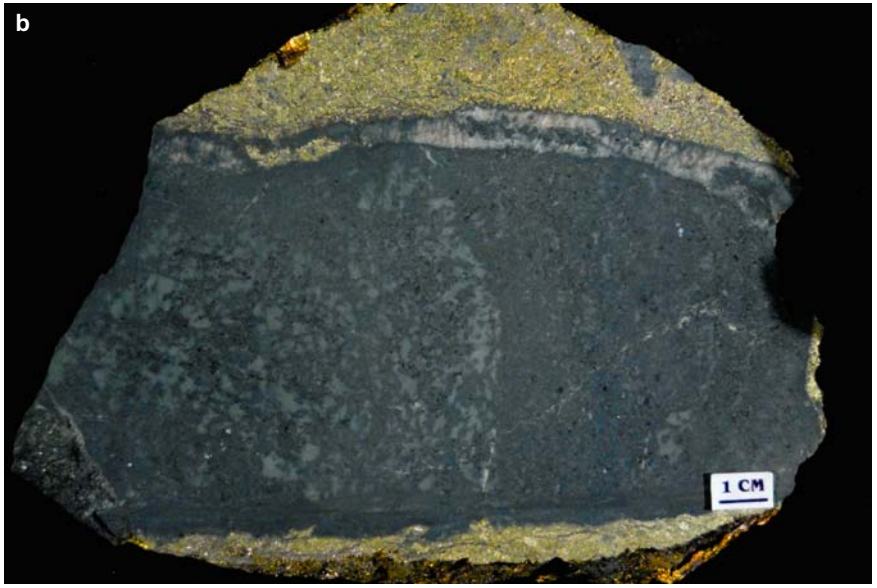


**Figure NR6.3b. McCreedy West deposit.** Massive veins of chalcopyrite with minor pentlandite cross-cutting Sudbury Breccia. Note largest vein has a magnetite alteration halo and there is epidote alteration. Sample 01-AV-193, collected by Watkinson.

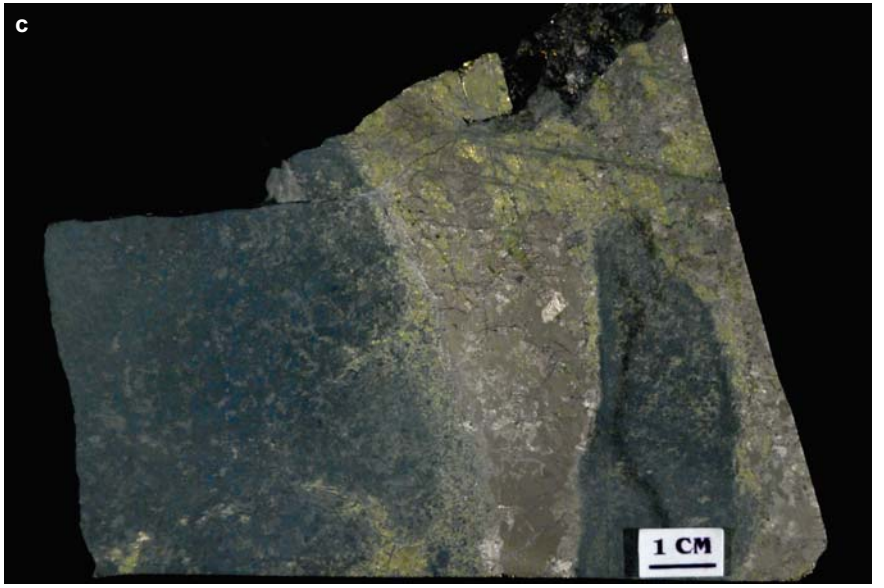


**Figure NR6.3c. McCreedy West deposit.** Massive chalcopyrite-millerite adjacent to chlorite-serpentine-altered fine-grained ultramafic rock. Sample 01-AV-221, collected by Watkinson.

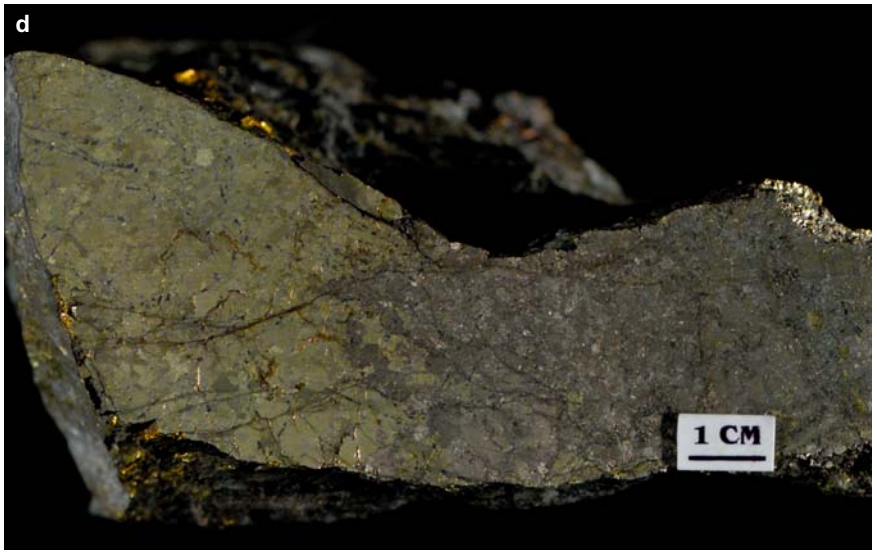


**Figure NR6.3d. McCreedy West deposit.** Massive chalcopyrite-millerite adjacent to chlorite-serpentine-altered fine-grained ultramafic rock. Sample 01-AV-222, collected by Watkinson.

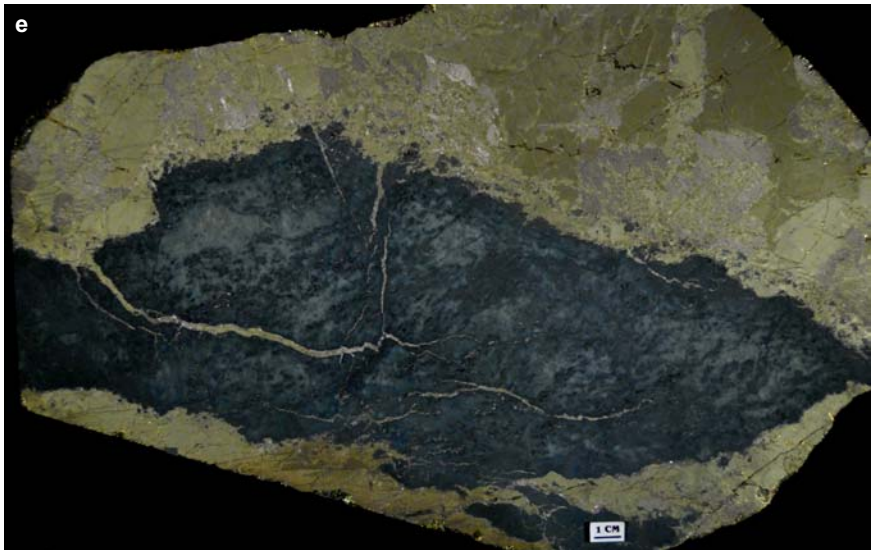


**Figure NR6.3e. McCreedy West deposit.** Massive chalcopyrite-magnetite surrounding altered leucocratic gneiss with magnetite along the contact and as a front of about 1 cm from the contact. Note there is also less than 5 cm pyrrhotite-pentlandite(?) replaced by chalcopyrite. Sample 01-AV-223, collected by Watkinson.

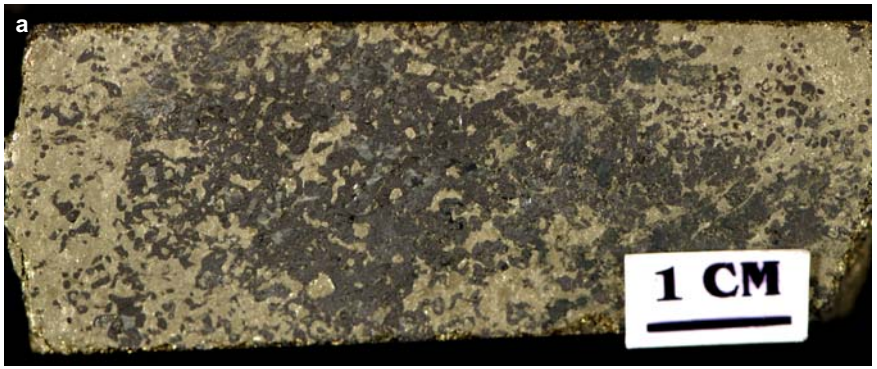


**Figure NR6.4a. Morrison deposit.** Centre of high PGE vein. Massive sulphide chalcopyrite with partial replacement of silicate material and massive magnetite. Chalcopyrite cross-cuts lithic fragments along fractures. Sample 06AV-58, bore hole FNX7023, 1160.3-1160.7 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.


**Figure NR6.4b. Morrison deposit.** Mafic clast-rich portion near the centre of high PGE vein. Massive chalcopyrite with nonmagnetic mafic clasts (1-2 cm); limited replacement of mafic clasts by chalcopyrite. Sample 06AV-59, bore hole FNX7023, 1178.7-1179.1 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.


**Figure NR6.4c. Morrison deposit.** Clast-poor section near the centre of high PGE vein. Massive chalcopyrite-cubanite with 5-10% blebby magnetite (0.5 cm). Sample 06AV-60, bore hole FNX7023, 1179.1-1179.5 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.

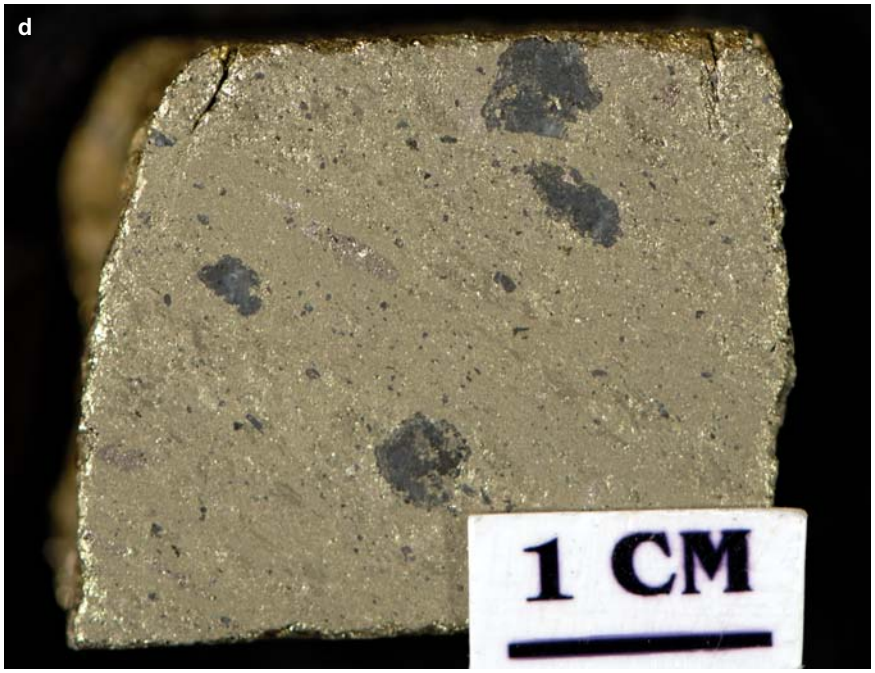


**Figure NR6.4d. Morrison deposit.** Upper margin of high PGE vein. Massive chalcopyrite with less than 5% subrounded nonmagnetic mafic clasts. Sample 06AV-61, bore hole FNX7023, 1188-1188.4 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.

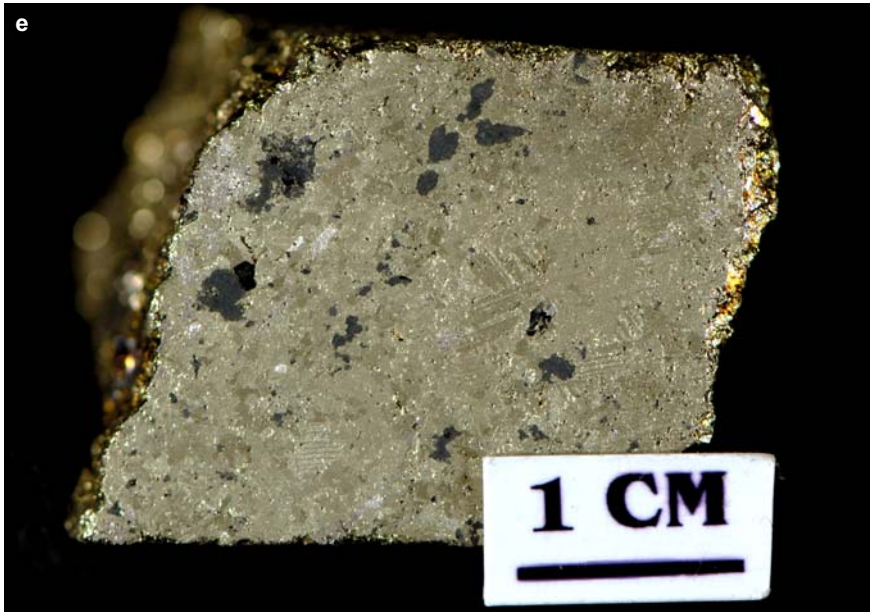


**Figure NR6.4e. Morrison deposit.** Lower margin of high PGE vein. Massive chalcopyrite-cubanite-pyrrhotite with 10-15% nonmagnetic mafic clasts. Sample 06AV-63, bore hole FNX7023, 1191.6-1192.1 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.

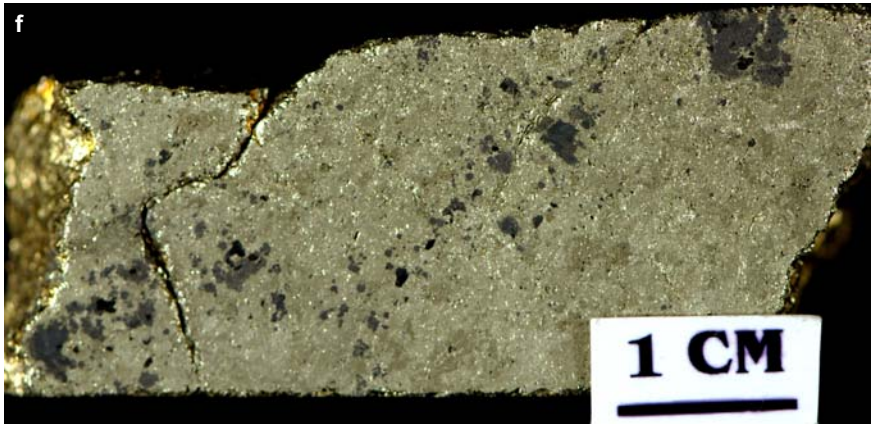


**Figure NR6.4f. Morrison deposit.** Centre of high PGE vein. Massive chalcopyrite with 10% blebby magnetite (1-0.5 cm). Sample 06AV-62, bore hole FNX7023, 1189-1189.4 ft depth, 1300 ft orthogonal distance from the Sudbury Igneous Complex.

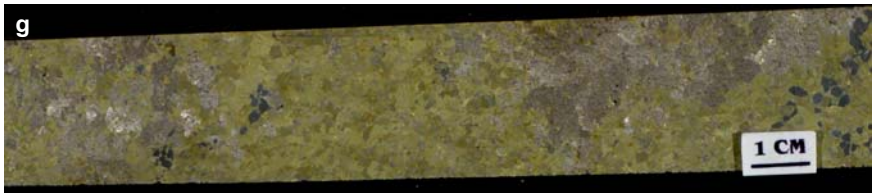


**Figure NR6.4g. Morrison deposit.** Massive chalcopyrite, pyrrhotite-pentlandite (50% chalcopyrite, 45% pyrrhotite, 5% pentlandite) (29.4% Cu, 2.4% Ni, 34.2 g/t TPM/2.9', 6" sample). Sample 05AV-07, bore hole FNX6045, 4232.9 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

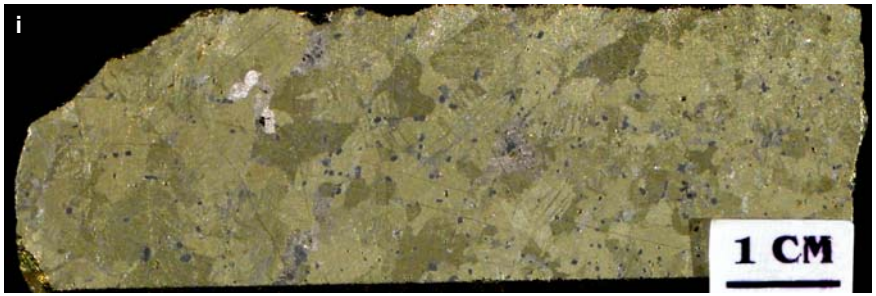


**Figure NR6.4i. Morrison deposit.** Massive chalcopyrite, pentlandite-pyrrhotite with 5-10% finely disseminated magnetite (29.8% Cu, 1.4% Ni, 39.3 g/t TPM). Sample 05AV-09, bore hole FNX6045, 4240.2 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

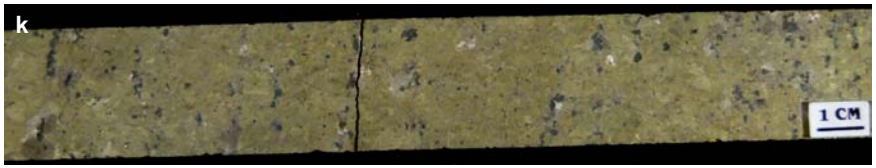


**Figure NR6.4k. Morrison deposit.** Massive chalcopyrite-cubanite with 10-15% pyrrhotite-pentlandite and 5-10% finely disseminated magnetite (27.7% Cu, 3% Ni, 38.1 g/t TPM/3.8ft). Sample 05AV-11, bore hole FNX6045, 4243.5 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

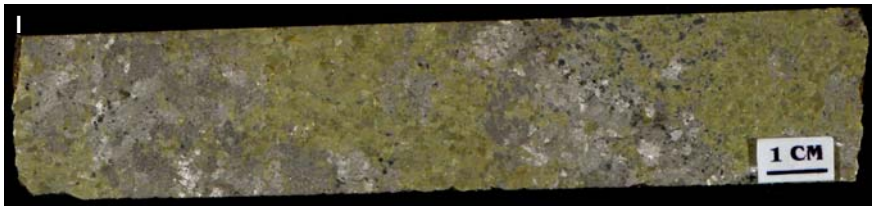


**Figure NR6.4l. Morrison deposit.** Massive chalcopyrite-pyrrhotite-pentlandite-magnetite (40% chalcopyrite, 35% pyrrhotite, 20% pentlandite eyes, 5% magnetite) (26.5% Cu, 4.2% Ni, 27.6 g/t TPM/3.3 ft). Sample 05AV-12, bore hole FNX6045, 4249.8 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

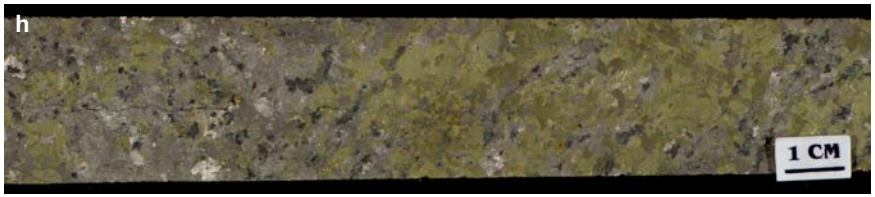


**Figure NR6.4h. Morrison deposit.** Massive chalcopyrite-cubanite, pyrrhotite-pentlandite (35% chalcopyrite-cubanite, 60% pyrrhotite-pentlandite, 5% mafics). Sample 05AV-08, bore hole FNX6045, 4237.9 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

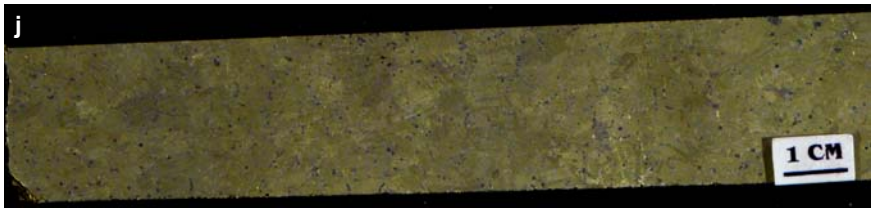


**Figure NR6.4j. Morrison deposit.** Massive chalcopyrite-cubanite, pyrrhotite-pentlandite with finely disseminated magnetite (27.7% Cu, 3% Ni, 38.1 g/t TPM/3.8 ft). Sample 05AV-10, bore hole FNX6045, 4241.5 ft depth, 1390 ft orthogonal distance from the Sudbury Igneous Complex, 10 zone.

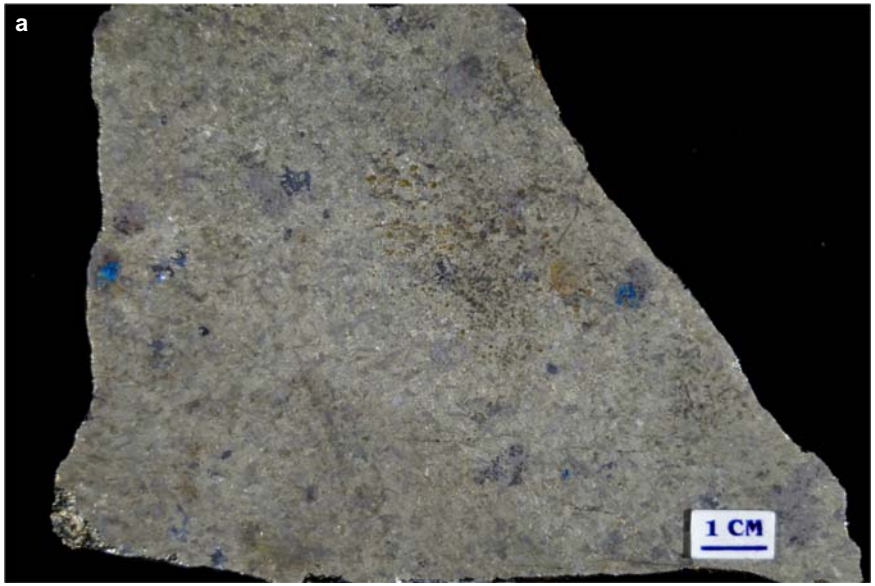


**Figure NR6.5a. Strathcona mine.** Massive chalcopyrite with minor pyrrhotite. Sample EI-87-427, collected by Roger Eckstrand from the 2300 level.

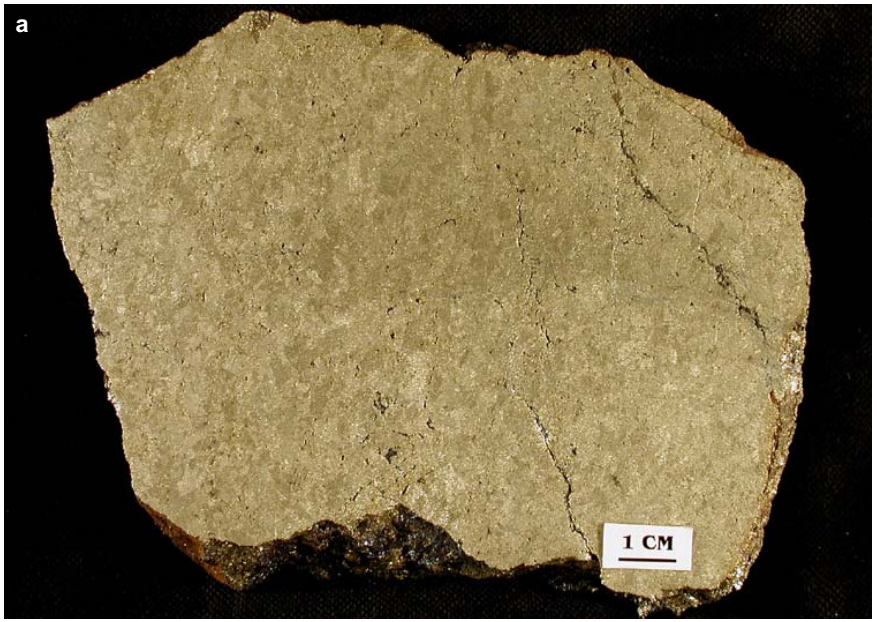


**Figure NR7.1a. Podolsky deposit.** Massive chalcopyrite-bornite-pyrrhotite. Sample 02-AV-625, North zone.

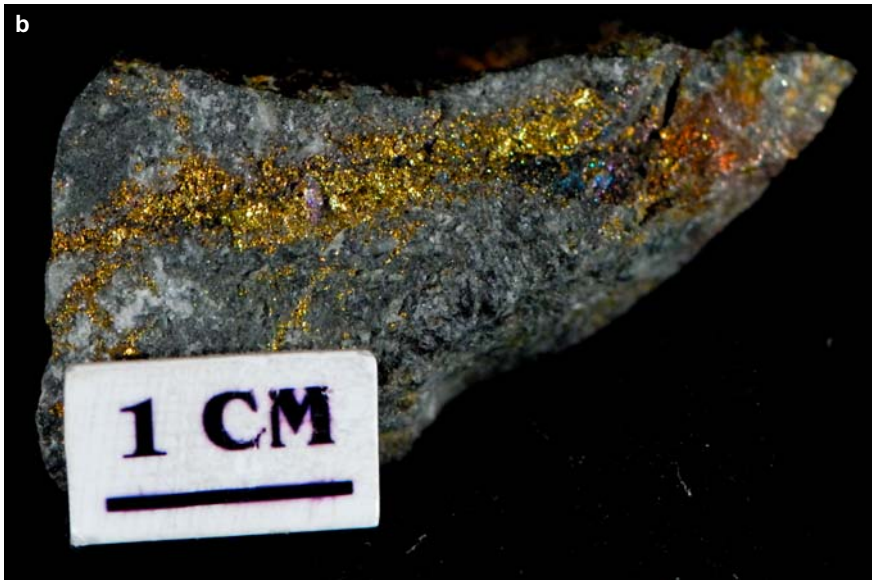


**Figure NR7.1b. Podolsky deposit.** Chalcopyrite in chloritized Au-rich quartz diorite xenolith. Sample 02-AV-626, North zone.


**Figure NR7.1c. Podolsky deposit.** Massive chalcopyrite vein. Sample 02-AV-627, North zone.


**Figure NR7.1d. Podolsky deposit.** Massive vein chalcopyrite with minor magnetite. Sample 02-AV-628, North zone.

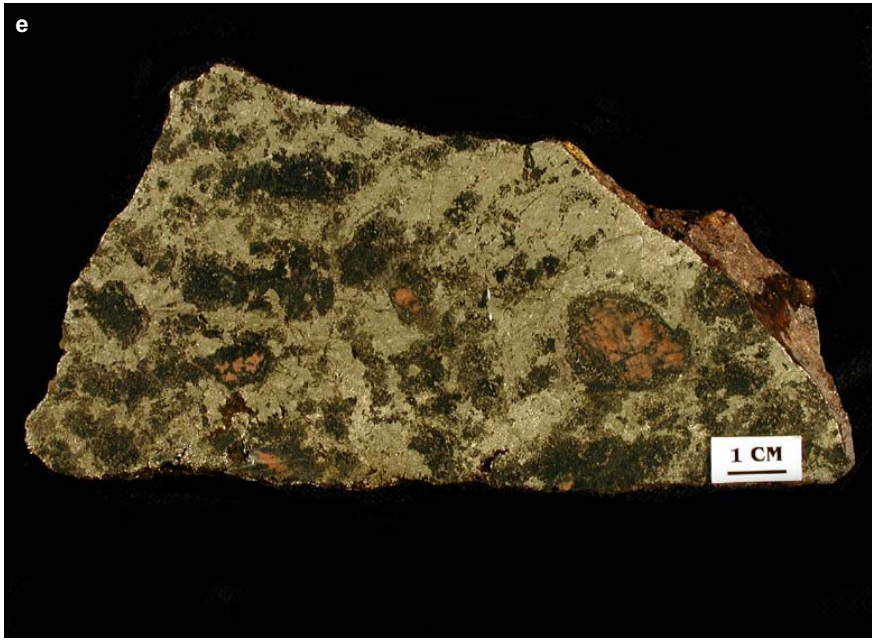


**Figure NR7.1e. Podolsky deposit.** Semi-massive chalcopyrite with minor pyrrhotite-pentlandite. Sample 02-AV-640, North zone.


**Figure NR7.1f. Podolsky deposit.** Massive chalcopyrite-bornite with late pyrite cubes and chalcopyrite vein. Sample 02-AV-641, North zone.

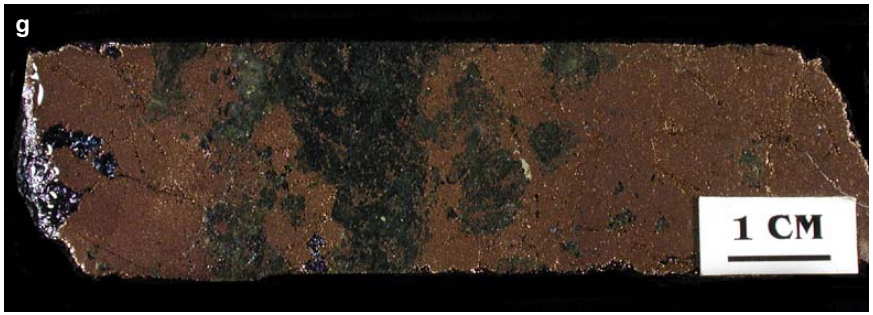


**Figure NR7.1g. Podolsky deposit.** Bornite-chalcopyrite at the periphery of the 2000 Zone, which is located in the offset at 2000 ft vertical depth below surface proximal to the Whistle pit. Sample 02-AV-642, North zone.

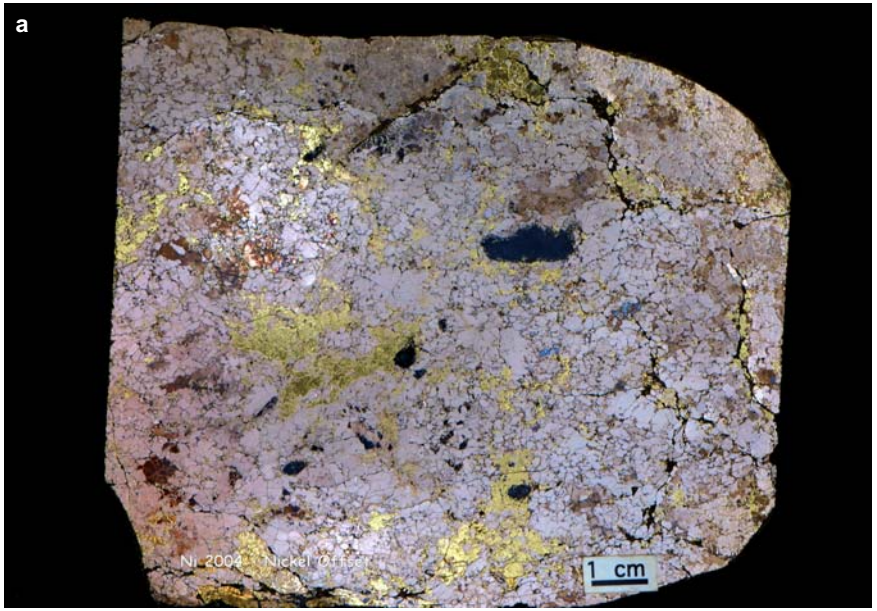


**Figure NR8.1a. Nickel Offset mine.** Massive pyrrhotite-pentlandite-chalcopyrite. Sample NIOF2004, collected by Ringsleben in 1963.

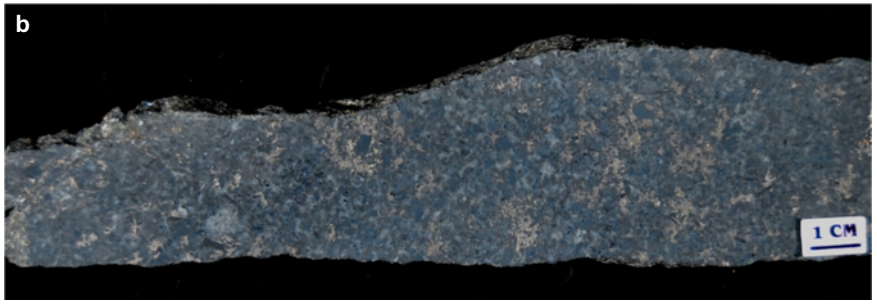


**Figure NR8.2b. Pike Lake.** Disseminated to blebby pyrrhotite. Sample 99-AV-107, collected by Everett Makela.

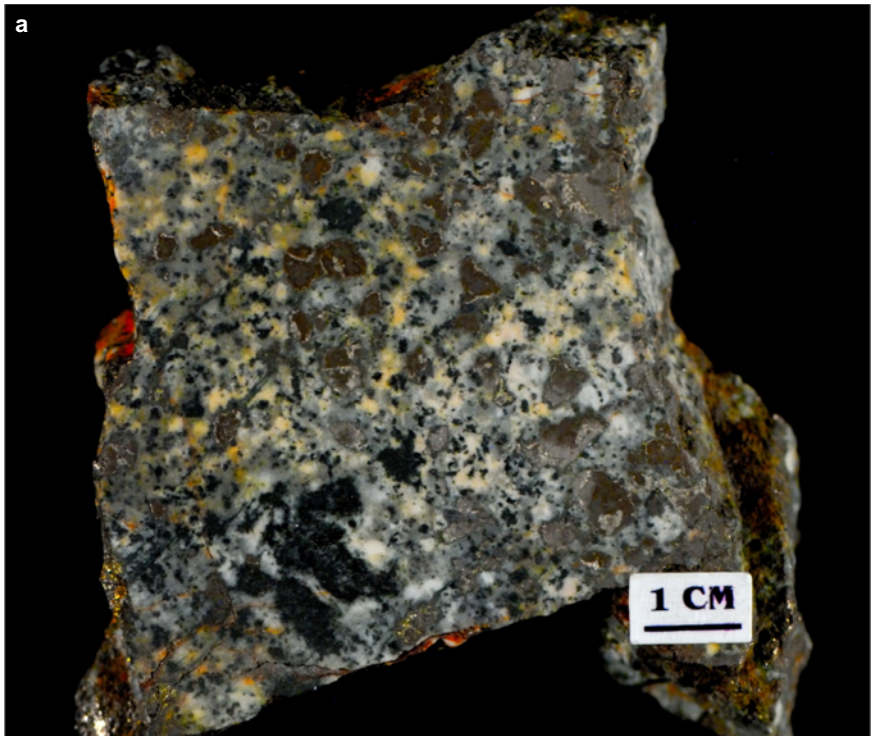


**Figure NR8.2a. Pike Lake.** Disseminated barren pyrrhotite. Sample 99-AV-106, collected by Everett Makela.

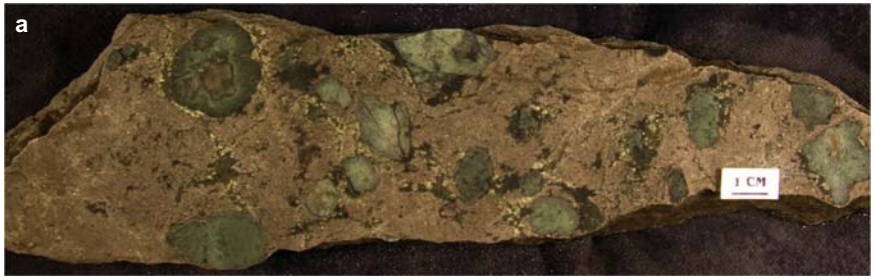


**Figure NR8.3a. Trill offset showing.** Semi-massive pyrrhotite-pentlandite-chalcopyrite with 2-3 cm megacrysts of feldspar; chalcopyrite forms rims on megacrysts and surrounds felsic inclusions. Sample 05AV-01, collected in 2005 by Wallbridge from NAD 27 zone.

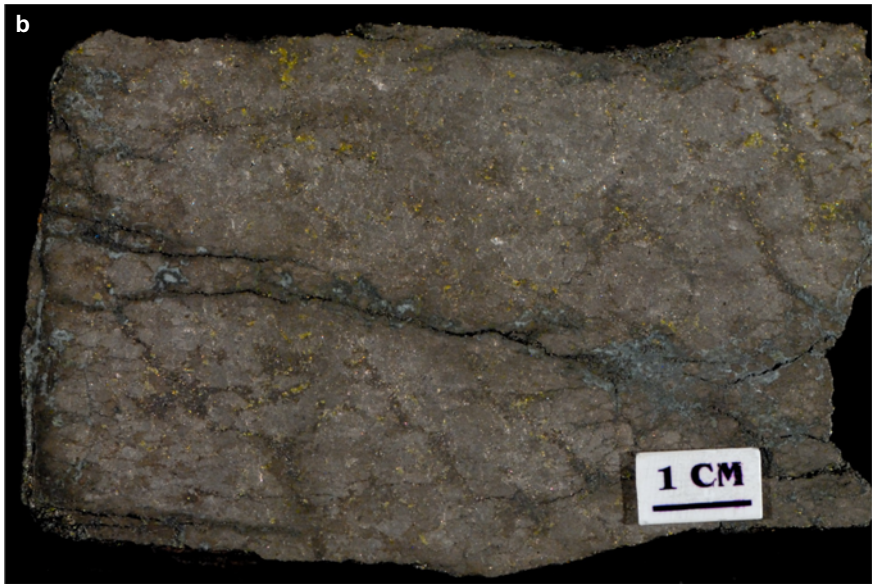


**Figure NR8.3b. Trill offset showing.** Massive coarse pyrrhotite with minor chalcopyrite blebs dispersed within pyrrhotite. Sample 05AV-34.

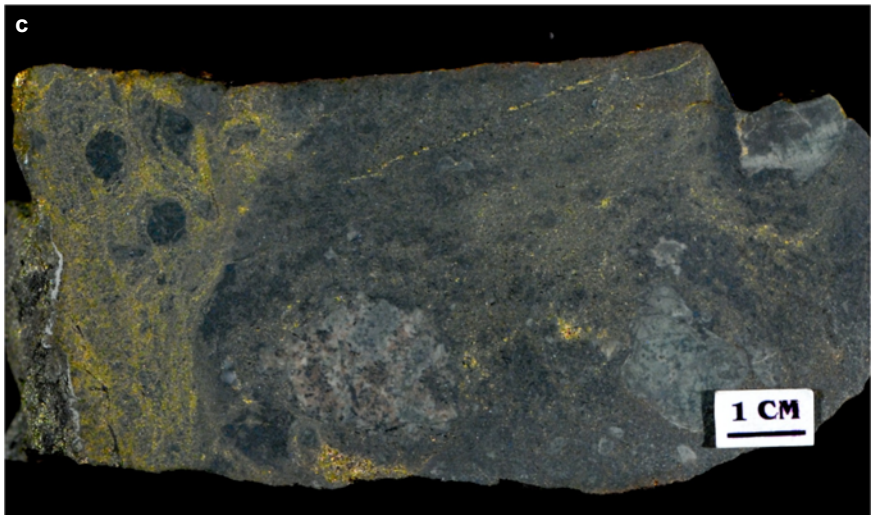


**Figure NR8.3c. Trill offset showing.** Thin veinlets of chalcopyrite within quartz diorite that contains feldspar clasts. Sample 05AV-35.

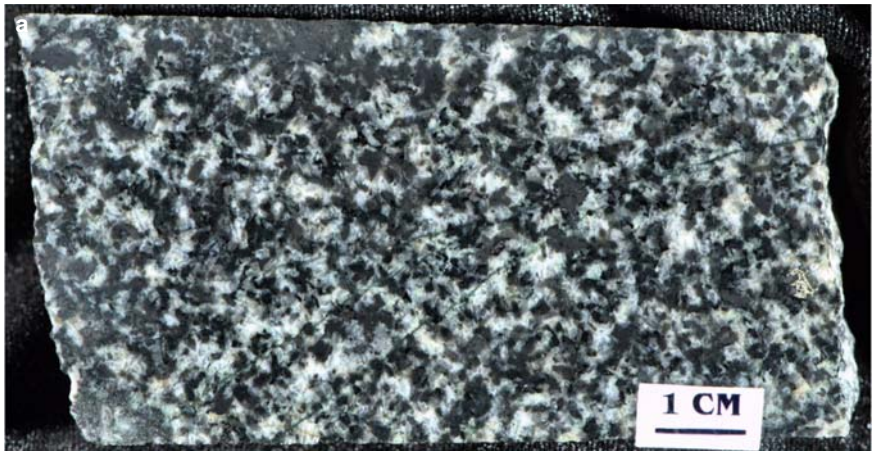


**Figure NR9.1a. Levack deposit area.** 1% disseminated pyrrhotite in felsic norite. Sample 98-AV-15, bore hole 93601, 359 ft.

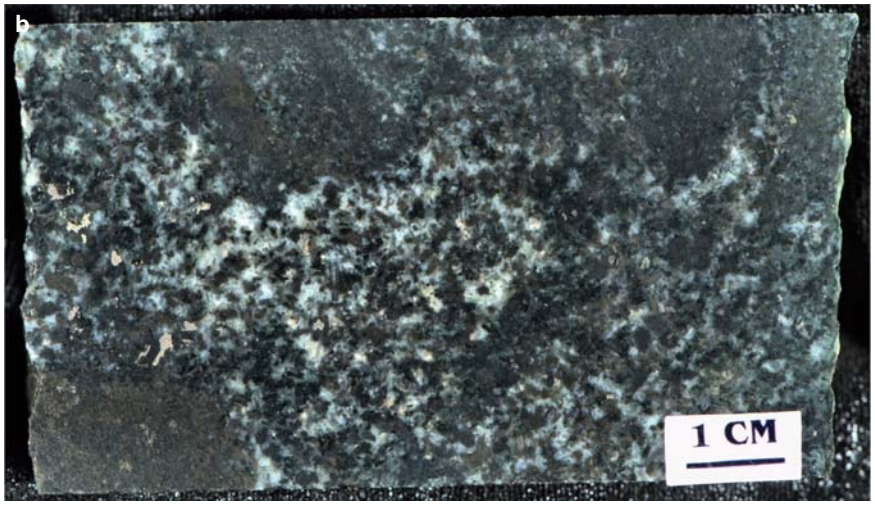


**Figure NR9.1b. Levack deposit area.** 1% disseminated pyrrhotite in felsic norite. Sample 98-AV-16, bore hole 93601, 869 ft.

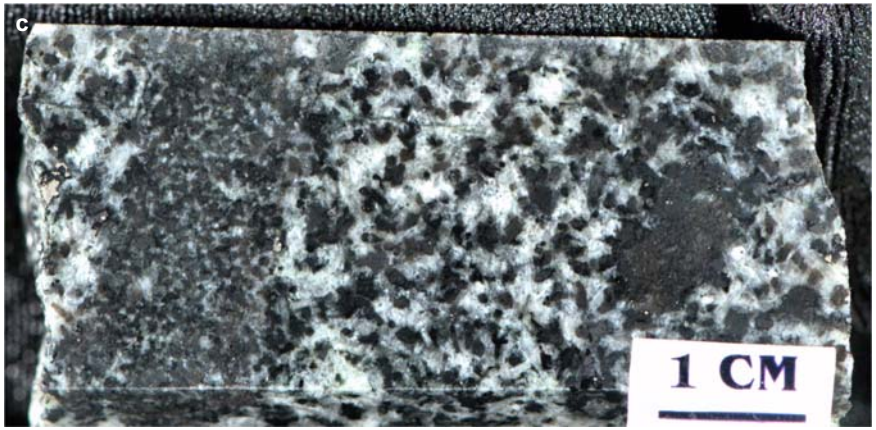


**Figure NR9.1c. Levack deposit area.** 3% disseminated pyrrhotite in felsic norite. Sample 98-AV-21, bore hole 93603, 559 ft.

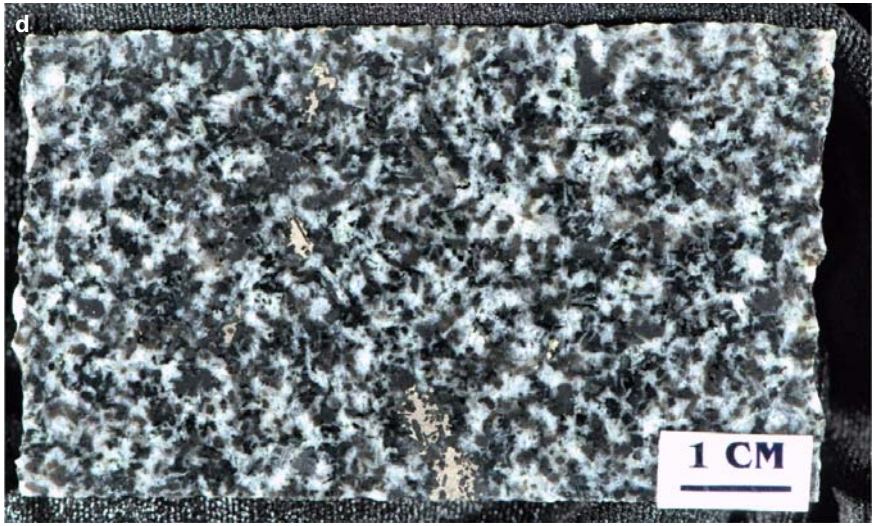


**Figure NR9.1d. Levack deposit area.** 5% disseminated pyrrhotite in felsic norite. Sample 98-AV-22, bore hole 93603, 659 ft.

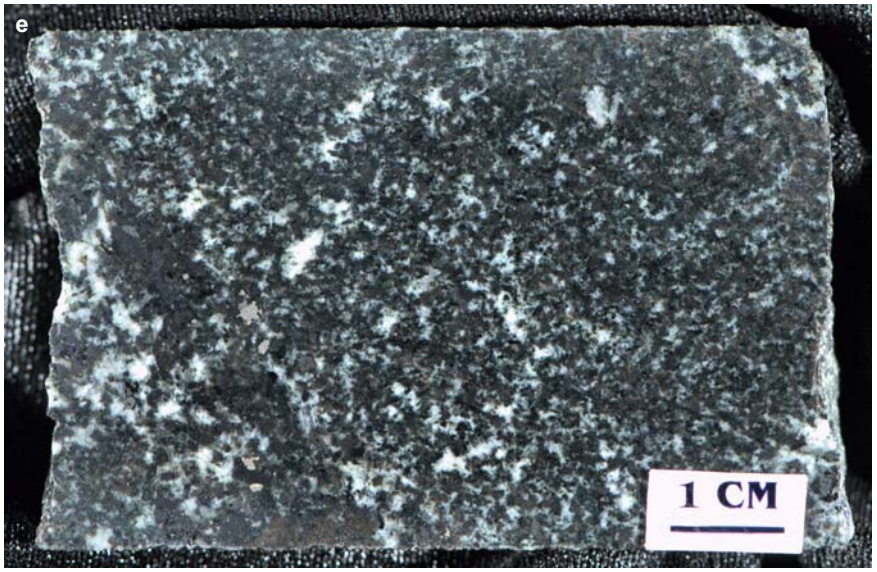


**Figure NR9.1e. Levack deposit area.** 7% disseminated pyrrhotite in felsic norite. Sample 98-AV-23, bore hole 93603, 880 ft.

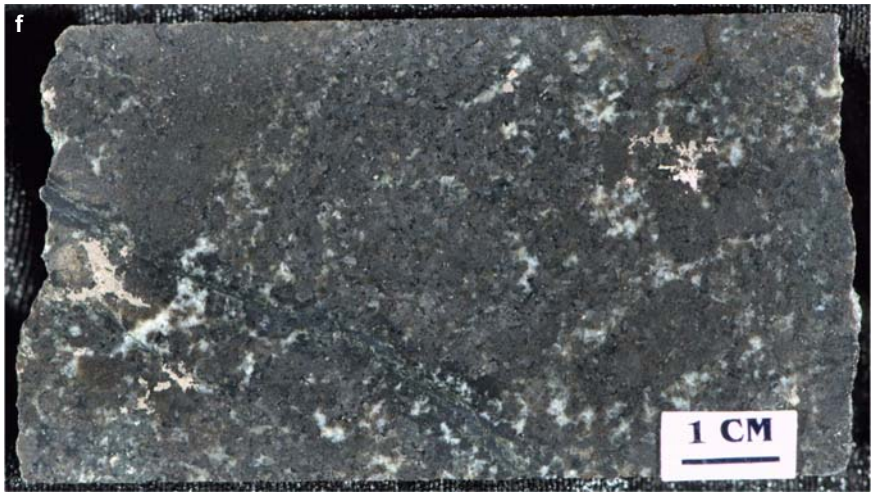


**Figure NR9.1f. Levack deposit area.** 2% disseminated pyrrhotite-pentlandite in mafic norite. Sample 98-AV-17, bore hole 93601, 1209 ft.

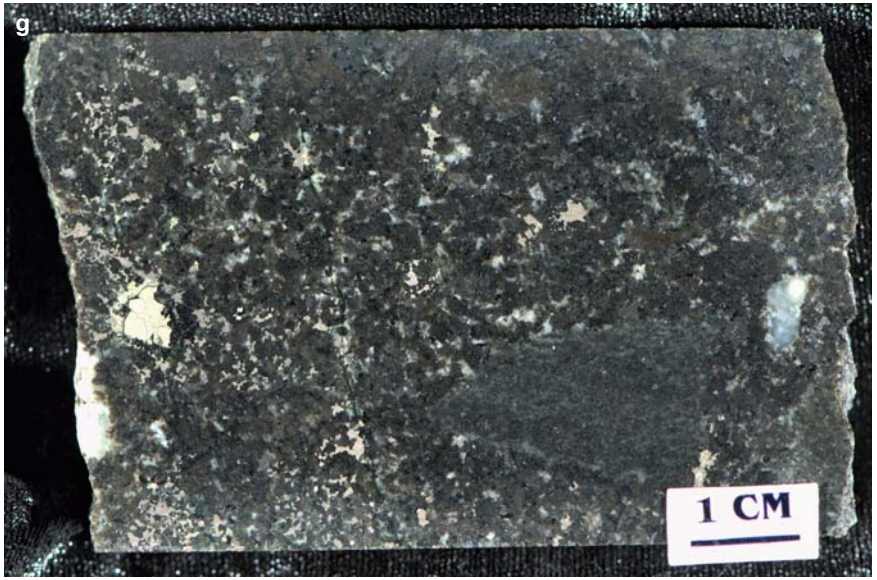


**Figure NR9.1g. Levack deposit.** 5% disseminated to blebby pyrrhotite-chalcopyrite-pentlandite in mafic norite. Sample 98-AV-18, bore hole 93601, 1279 ft.

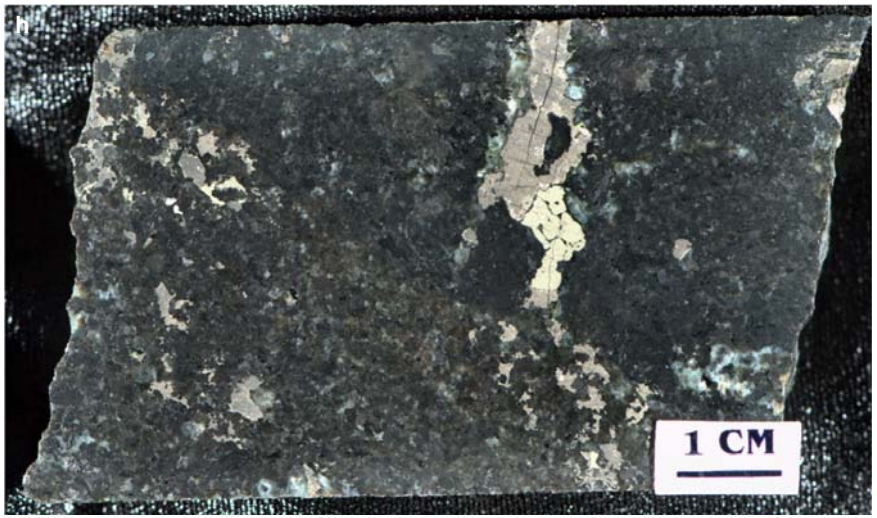


**Figure NR9.1h. Levack deposit.** 7% disseminated to blebby pyrrhotite-chalcopyrite in mafic norite. Sample 98-AV-19, bore hole 93601, 1329 ft


**Figure NR9.2a. McCreedy East deposit area.** 7% disseminated to blebby pyrrhotite within mafic norite. Sample 98-AV-11, bore hole 85524, 3508 ft.

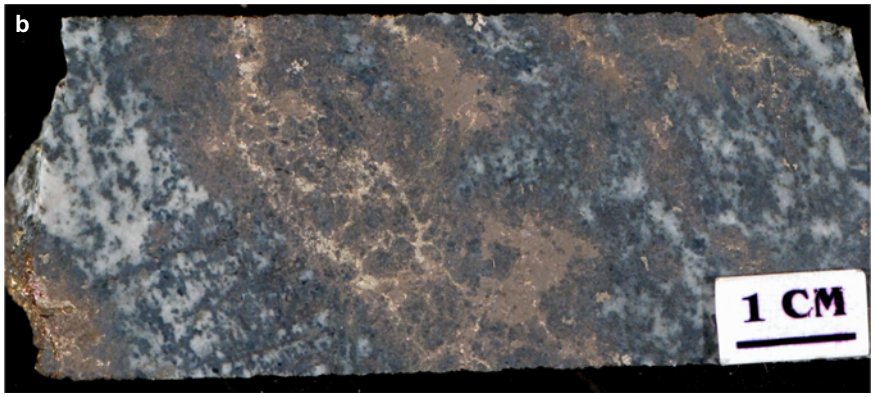


**Figure NR9.2b. McCreedy East deposit area.** 20% blebby to disseminated pyrrhotite in mafic norite. Sample 98-AV-12, bore hole 85524, 3738 ft.