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018009

Author NCC

Date and Typist SEPT. 1970

075 degrees strike, 40 degrees south dip. Specimen NC70-221. This marks end of Native Mines 1700 Adit.

#### GOLD STAR PROPERTY

#### DRILL HOLE NO. 4

- 76 Crystallithic tuff. Uniform appearance. Grey.
- 83 Felsitic crystal tuff. Severely brecciated in contrast to previous section. Specimen NC70-222 taken at 83-foot mark.
- 92 Medium-grey crystallithic tuff.
- 94 Felsitic tuff with some malachite stain.
- 114 Uniform crystallithic tuff.
- 117 Felsitic crystal tuff. Numerous fractures at 30 degrees to core surface with iron carbonate, some quartz, and minor copper stain.
- 131 Crystallithic tuff as previous. Specimen NC70-223 at 131 feet.
- 238 Medium grey crystal tuff. Grain size appreciably smaller than previous section.
- 319 Crystallithic tuff. Crude banding at 80 degrees to core surface.
- 320 Bleaching of felsitic bleaching of crystallithic tuff. Gradational contacts with non-altered variety. Specimen NC70-224 at 319 feet.
- 339 Crystallithic tuff. Some bleaching along bedding planes.
- 344 Bleached variety of crystallithic tuff.
- 352 Basic dyke, chilled contacts, finely disseminated pyrite in shear planes.
- 359 Crystallithic tuff.
- 386 Basic dyke, chilled contacts, some inclusions of crystallithic tuff. Specimen NC70-225 at 377 foot mark.
- 389 Crystallithic tuff.
- 395 Bleached crystallithic tuff.

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509 Crystallithic tuff. Occasional bands of bleached material. Crude banding at 60 degrees to core surface.

516 Basic dyke.

594 Crystallithic tuff.

597 Basic dyke.

598 Crystallithic tuff.

598 marks end of Hole 4.

#### DRILL HOLE NO. 1

Initial section of Hole 1 consists of crystallithic tuff. Banding at 70 degrees to core surface. Quartz lenses give impression of banding. Also impression of being welded. Specimen NC70-226 at 130 feet. Some malachite stain on fractures to this point.

147 Crystallithic tuff as previous.

142 Basic dyke.

172 Crystallithic tuff.

275 Dark grey crystal tuff. Some lithic fragments but mainly uniform appearance.

No welded appearance to this point. Specimen NC70-227 at 275 feet.

291 Basic dyke. Banding at 40 degrees to core surface.

344 Volcanic sandstone, light grey, thinly bedded at 40 degrees to core surface.

Specimen NC70-228 at 306 feet.

450 Crystallithic tuff. Uniform light grey colour. Lithic fragments are one-quarter to one-half inch. Stretched. Some indication of banding locally and welding at 40 degrees to core surface.

487 Light grey-green volcanic sandstone following crystallithic tuff section.

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- 494 Crystal tuff.
- 511 Light grey volcanic sandstone gradational into crystal tuff at an angle of 40 degrees to core.
- 571 Crystal tuff gradational into volcanic sandstone. Short sections approximately 2 feet long then back into crystal tuff. Crude banding at 40 degrees to core surface.
- 572 Purple crystallithic tuff.
- 596 Sericite schist. Light grey, some purple lithic fragments to one-quarter inch. Specimen NC70-229 at ~~584~~ feet.
- 600 Crystallithic tuff.
- 605 Sericite schist.
- 655 Crystallithic tuff. Uniform appearance. Relatively non-metamorphosed. No directional fabric seen in core. Specimen NC70-230 at 635 feet.

#### DRILL HOLE 2

- 55 To 55 feet crystallithic tuff, some malachite stain on fractures.
  - 58 Basic dyke. Shearing at 40 degrees to core surface.
  - 86 Volcanic sandstone. Schistose at 50 degrees to core. Malachite stain in cleavage planes.
  - 113 Crystal tuff, medium grained. Some lithic fragments to one-quarter inch. Bornite stringers with quartz at 100 foot mark.
  - 140 Fine-grained light green volcanic sandstone. Stringers of chlorite. Some quartz at 131 feet. Contact with crystal tuff at 70 degrees to core surface.
  - 152 Crystal tuff.
  - 250 Crystallithic tuff. Uniform appearance. Little sign of shearing or metamorphism flattening of fragments, etc. Average size of lithic fragment one-half inch or less.
- 250 feet marks end of Hole 2.

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DRILL HOLE NO. 3

- 18 Crystal tuff, medium grey colour.
- 60 Basic dyke. Chilled contact. Specimen NC70-231 at 37 feet.
- 66 Medium green crystal tuff. May be coarser grained variety of dyke. Check thin-section. Specimen NC70-232 at 63 feet. Gradational contact of this rock type with finer grained dyke rock.
- 89 Fine-grained basic dyke. Some evidence of crystal fragments. Similar to previous section. Again gradational contact at bottom of section.
- 91 Green crystal tuff. May be phase of dyke.
- 95 Basic dyke.
- 96 Green crystal tuff.
- 99 Basic dyke.
- 102 Light green crystal tuff. Gradational contacts at upper end sharp contact, at lower end at 40 degrees to core surface.
- 103 Basic dyke.
- 105 Crystal tuff.
- 106 Basic dyke with inclusion of previous rock type, crystal tuff. One-inch rounded.
- 108 Silicified, bleached crystal tuff.
- 114 Sheared basic dyke. Numerous carbonate stringers at 40 degrees to core surface.
- 118 Bleached sericitized altered crystal tuff. Crude banding at 40 degrees to core surface. Gradational contacts with non-altered variety.
- 158 Crystallithic tuff. Crude banding at 30 degrees to core surface due to alignment stretching of lithic fragments due to dynamic metamorphism.

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- 167 Sericite schist. Alteration of crystallithic tuff.
- 182 Light green basic dyke. Numerous carbonate stringers.
- 232 Silicified brecciated crystallithic tuff bleached to buff or white colour.  
Specimen NC70-233 at 215 feet.
- 270 Brecciated, silicified zone. Much lost core in this section.
- 301 Grey, brecciated crystal tuff. Numerous secondary quartz. Much lost core  
in this section.
- 326 Light grey sericite schist. Schistosity at 45 degrees to core surface.  
Specimen NC70-234 at 305 feet.
- 336 Light grey crystallithic tuff.
- 366 Sericite schist. Schistosity at 30 to 40 degrees to core surface. Abundant quartz  
lenses. This rock is mainly an alteration of previous crystallithic tuff. Two-foot  
section of quartz at 363 feet. No sulphide mineral noted.  
366 feet marks end of Hole No. 4. -- correction end of drill hole 3.  
Outstanding feature of ~~chalc~~ chalcopyrite, bornite mineralization in core is  
the association between black dykes and mineralization. Copper mineralization  
occurs adjacent to and within the black dykes suggesting that perhaps the dykes  
acted as channelways for mineralizing solutions or mineralization preceded the  
emplacement of black dykes and was remobilized by them. Amount of mineralization  
seen in the core is very small. First part of drill hole 1, first 150 feet best assays  
would run perhaps .1 to .2. Most of it running trace. Same holds true for drill  
hole No. 2. Drill hole No. 3 was drilled across the major creek fault to the west  
of the camp of the upper camp and encountered a long section of brecciated material  
which also features some alteration of the rhyolitic tuffs and breccias inasmuch as

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they resemble felsites in the original clastic texture is obscured. Drill hole No. 4 contains some bornite-chalcopyrite mineralization about the 350 foot mark, here again in and adjacent to the black andesite dykes which are schistose. In all some 1,860 feet of drilling was completed to September 7th.