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EXAMINATION OF DIAMOND DRILL CORES AT CARIBOO-BELL COPPER MINES LTD. CARIBOO MINING DIVISION BRITISH COLUMBIA

Diamond drill cores at the Cariboo-Bell property were examined by the writer in the periods June 29 - July 7 and July 14 - July 27, 1973, inclusive, on behalf of Bacon and Crowhurst Ltd.

The purpose of the examination was to attempt to relate, more closely than had been done, the copper sulphide mineralization to a geologic column with particular reference to possible further exploration.

In 1966-67, the property had been drilled along east-west section lines from Section N 12350 to N 16000. The cores re-examined by the writer were from Sections N 16000, 2,996 ft.; N 15000, 614 ft.; N 14,400, 2,100 ft.; and 13,800, 3,421 ft.; a total footage of 9,131 ft.

A map showing the surface geology of the working area, at 1 inch equals 1000 feet, accompanies a report by A. Sutherland-Brown in the Annual Report of the Minister of Mines and Petroleum Resources, 1966, pp 126-131. A geological map at 1 inch equals 500 feet and diamond drill hole sections at 1 inch equals 100 feet, prepared in 1967 for Cariboo-Bell Copper Mines Ltd., were made available to the writer.

The rock types distinguished in the accompanying logs

follow as closely as possible those defined in the Annual Report, 1966, and the names are retained. On the basis of contacts in the core, the "monzonite porphyry 2" is here moved up the column to post-syenodiorite. Also, some porphyries, altered to highly altered, which are in the main border phases of the monzonite porphyry 1 and the syenodiorite were logged separately as "syenite porphyry" and "syenite blastoporphyry" because, for a time, their relationships were obscure. A "diorite porphyry and andesite" were logged separately though they are phases of the same rock; the age is post syenodiorite certainly and probably post-monzonite porphyry 3.

The following descriptions are abridged in part from Annual Report, 1966:

Monzonite porphyry 1: Typically a foliated, crowded porphyry with prominent plagioelase laths in an aphanitic matrix of grey, brown or pink. It may look granite-textured. Normally the augite is fresh but it may be partly altered to chlorite or hornblende. The playioclase occurs in laths up to 5 mm long; it is nearly completely sericitized. Biotite is absent. Magnetite is partly in large grains.

Syenodiorite: Fine to fine medium grained (0.5-2mm), granite-textured; normally dark grey but may be pinkish. Occasional large mafic phenocrysts. May have fair foliation or a lathy intersertal texture. Potash feldspar generally interstitial. Fresh pyroxene may be mantled by hornblende or biotite; all three may occur in one specimen; biotite is more common than hornblende.

Crackle Breccia: This breccia is shown on Sutherland-Brown's map in the monzonite porphyry 1 and bordering more or less closely the intrusive syenodiorite. In the drill cores, it is seen to extend into the syenodiorite to varying distances. The writer interprets it as a crackle breccia formed during the intrusion of the syenodiorite and involving border phases of that rock as well as the monzonite porphyry 1. It was the locus of the very extensive potassic alteration which can be seen, in less altered sections, to fade outwards from the fractures in both rock types. Brecciation and potassic alteration appear to have been penecontemporaneous for discrete xenoliths of the red, potassic rock, are found with sharp contacts in the syenodiorite and some of these were themselves syenodiorite fragments. Occasional fragments of mafelsic rock occur in the breccia but these are uncommon and may, for that matter, represent basic segregations in the monzonite and syenodiorite. Because of the extensive potassic alteration, the rock is pink to red in color with a texture varying from a coarse (up to 5 cm) breccia to an aphanitic red rock which may or may not have penocrysts of white feldspar and relicts of the original rock.

Monzonite porphyry 2: A crowded porphyry and not necessarily an obvious porphyry. Normally grey,

with a fine intersertal texture. Occasional large (3 x 2mm) plagioclase phenocrysts are characteristic. Augite may be fresh or partly altered to biotite, or more rarely to prehnite, chlorite and epidote. Potash feldspar is chiefly in the matrix. Zeolites occur.

Monzonite porphyry 3: This is a minor dyke phase, similar to monzonite porphyry 1 but contains fewer phenocrysts in a finely aphanitic, chocolate colored matrix. A pink rock, otherwise similar, has been logged among the syenite porphyries; this, then, may be the youngest rock involved in the potassic alteration.

Diorite porphyry: Dark grey to greenish, with white to watery-looking small feldspar phenocrysts and hornblende in a fine grained to aphanitic matrix. Fine grained intersections were logged as 'andesite'.

Lamprophyre: This is a panidiomorphic grey rock with prominent euhedral augites. The rocks logged as 'gabbro' and 'basalt' probably are finer grained phases and so are included with it in the legend.

Sulphide mineralization is sparsely disseminated and occurs predominantly as isolated grains, often associated with the ferromagnesian minerals. Only rarely are the sulphides in

recognizable fractures. Magnetite, an accessory mineral in the monzonites and syenodiorite, occurs also as stringers and veinlets and these often carry chalcopyrite; quartz as fracture filling, with or without sulphides, is rare. Pyrite is noticeable at the east and west ends of the sections but appears to be absent in the central parts. Of the secondary copper minerals, covellite was recognized once, chrysocolla in several places and malachite commonly in the mineralized sections.

The mineralization is not associated with the crackle breccia in particular but occurs in it, in the monzonite porphyry 1, in the altered syenodiorite near the contact with monzonite porphyry 1 and in monzonite porphyry 2. There is no suggestion, in the core or sections, of the presence of an impounding structure; the monzonite porphyry 1, the breccia, and the border phases of the syenodiorite, appear to have acted as a structural unit in which the fracturing was finely dispersed. The monzonite porphyry 2, on the other hand, does how a much more intensive mileralization by chalcopyrite in several of the narrow intersections in the drill holes.

There is evidence in the cores that the syenodiorite, barren save at the monzonite porphyry 1 contact, broadens southward from the surface contact. If the mass broadens generally with depth, the mineral possibilities below the present drilling depth are limited.

The significance of the apparent increased mineralization in monzonite porphyry 2 is not known at present.

Victoria, B.C.
August 6, 1973

N. D. McKechnie, P. Eng.

LEGEND

Lamprophyre; Basalt, Gabbro.

Diorite porphyry, Andesite.

Monzonite porphyry 3.

Monzonite porphyry 2.

Crackle breccia.

Syenodiorite.

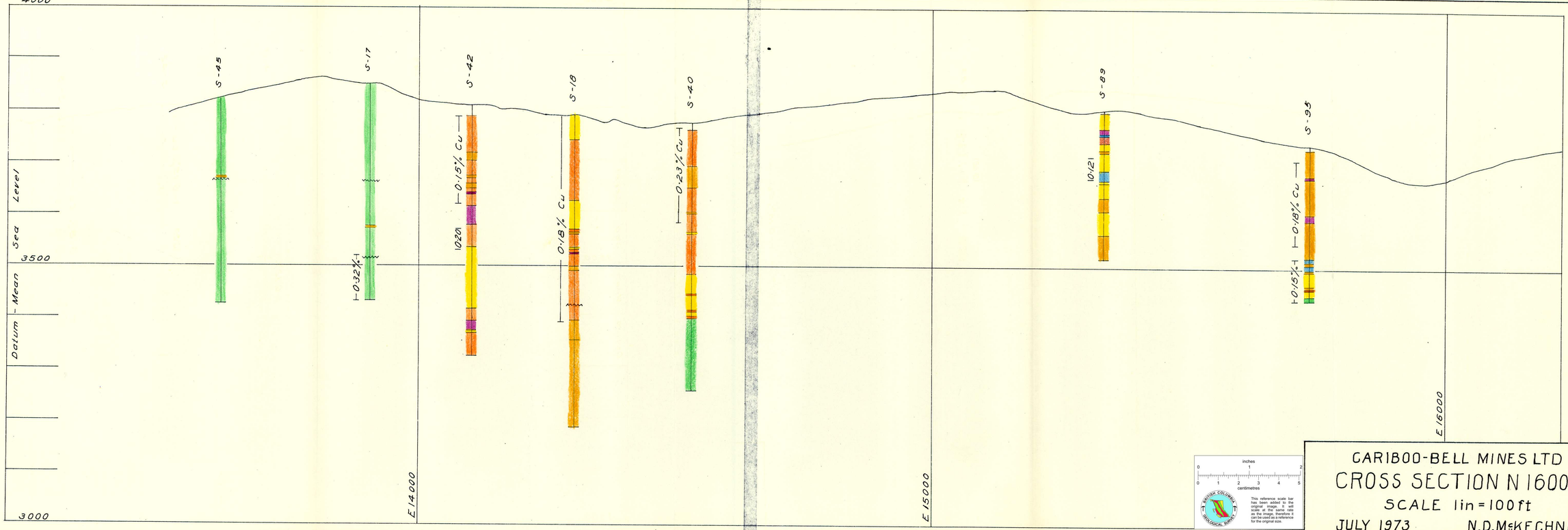
Monzonite porphyry 1.

Syenite porphyry and blastoporphyry

SECTION N 16000

DIAMOND DRILL HOLE NOS.:

S-45, S-17, S-42, S-18, S-40, S-89, S-95



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BRITISH COLUMBIA GEOLOGICAL SURVEY

CARIBOO-BELL MINES LTD

CROSS SECTION N 16000

SCALE 1in = 100ft

JULY 1973 N.D.McKECHNIE

Cariboo Bell

D.D.H. S-45 July 24, 1973

5.0	Casing
151.0	Syenodiorite; fine to fine med. gd.; equigranular save for few local porphyritic textures; augite, biotite, hornblende; occasional deuteric K-alterations. Weathered core 62.4-62.8. Occasional minor epidote, also probably deuteric. Slickenside parallel to core at 139.0.
151.8	Syenite porphyry: feldspar and hornblende phenos of 2 mm max. (hornblende) in finely granular red matrix; few altered augites.
156.5	Sand and lost core.
395.0	Syenodiorite: as above, sand 160.5-161.0. Broken and pebbled core with mud, sand and crushed core 174.0-185.0. Broken core and sand 205.5-264.0. Pebbled core and sand 331.5-333.0. Weathered broken core 388.0-395.0. From about 200.0 grain size has been finer and there has been a tendency to porphyritic textures.

E o H

CARIBOO BELL AT BOOTJACK LAKE

D.D.H. S-17 June 29, 1973

8.6	Syenodiorite: red K-altered and epidote; medium gd. equigranular; reddish and green in color.
11.2	Syenodiorite: grey, medium gd. equigranular; magnetic; grades to preceding rock; some uneven texture may be due to weak brecciation. K-altered along fractures. Very sparse chalcop., some coated with covellite.
38.5	Syenodiorite: K-altered and epidote as above.
45.7	Syenodiorite: alteration local.
47.2	Syenodiorite: K-altered and epidote.
49.2	Syenodiorite: alteration local.
59.9	Syenodiorite: variable K-alteration and epidote. Slip-plane at low angle to core 52.8-55.0, brown limonite along it; alteration weakens toward 56.9. Slip with limonite, along core, 56.9-57.1. Core sheared and broken 58.2-59.9; carbonate strs. at 59.1, limonite 59.4-59.9.
120.0	Syenodiorite: local K-alteration; some uneven textures. Chalcopyrite in joint plane at 83.0, no sulfides in the rock. At 113.5, 0.1' buff-colored sand. Chalcopyrite and pyrite in joint plane at 105.0.
127.2	Syenodiorite: K-alteration; carbonate thread with pyrite at 130.0.
161.7	Syenodiorite: local alterations. Quartz threads with chalcop. at 136.6 and 138.8; dissem. pyrite and chalcop. at 138.6-138.8.

Cariboo Bell at Bootjack Lake

S-17 June 29, 1973

182.5	Syenodiorite: alteration markedly variable in degree.
230.1	Syenodiorite: local alterations. Carbonate thread at low angle to core 177.9-178.6. 0.1 ft. sand at 188.0.
278.3	Syenodiorite: K-alteration.
279.1	Syenite porphyry: red, aphanitic, with rounded white phenos, probably potash fedlspar.
300.0	Syenodiorite: minor local K-altn. Sheared 283.0-284.0, 286.0-288.0, 290.0-292.5, 295.5-299.0.
318.5	Syenodiorite: K-altn.
326.0	Syenodiorite: minor K-altn.
338.5	Syenodiorite: K-altn.
339.2	Sand and broken core; red and yellow oxides.
360.0	Syenodiorite: K-altn.
362.7	Syenodiorite: as above, but fractured, weathered, and with minor malachite.
365.0	Syenodiorite: strongly developed K-altn.
367.0	Broken core and sand; some weathering.
418.0	Syenodiorite: K-altn. some sand to 372.0. Broken core 374.0-374.8. Strongly developed K-altn. 381.0-404.0. Crush zone 382.5-383.5. Chalcopyrite and pyrite are very sparsely and unevenly disseminated, occuring both as small concentrations and as very fine isolated grains. They appear to favor the zones of well-developed K-altn. In the remainder of the core, chalcop. is seen as very sparsely dissem. fine grains as well as the very occasional thread in joints.

E o H

Cariboo Bell

D.D.H. S-42 July 1, 1973

20.0	Casing
91.9	Breccia: K-altered crackle breccia in monzonite porphyry 1. Pyrite and sparse chalcop; latter tends to favor red feldspar and the ferromag. there. Quartz-carb. threads 89.0-90.0.
109.9	Syenite porphyry: K-alterations increasing toward 109.9. Sparsely dissem. pyrite.
137.0	Breccia: K-altered crackle breccia in monzonite porphyry 1. Broken core 122.0-122.8. Disseminated pyrite, sparse chalcop.
142.0	Syenite porphyry: sharply diminished K-alterations at 139.9. Sparsely dissem. pyrite.
152.5	Breccia: K-altered crackle breccia. Pyrite and sparse chalcopyrite.
161.6	Syenite porphyry: marked K-alterations. Dissem. pyrite, rare chalcopyrite.
169.0	Breccia: K-altered crackle breccia. Dissem. pyrite, sparse chalcopyrite.
169.9	Basalt: dark green, fine grained, scattered grains of speccular hematite, several threads of brown to deep red oxide.
188.8	Breccia: K-altered crackle breccia. Dissem. pyrite, sparse chalcopyrite. Broken core 183.6-184.0.
196.2	Breccia: brecciation less pronounced; alterations extensive.
234.4	Lamprophyre: grey, med.gd., equigranular with white to pale green feldspars and augite with biotite(?) Fine grained toward 196.2.
276.3	Breccia: K-altered crackle breccia. Disseminated pyrite and chalcopyrite.
394.0	Monzonite porphyry 1: grey to buff, fine grained toward 276.3 so may be mon. porph. 2.

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S-42 1/7/73

417.3	Breccia: K-altered crackle breccia. Chloritized gabbroic rock 396.0-396.6. Very sparse pyrite.
436.0	Basalt: green, aphanitic matrix with grains of speccular hematite, augite and altered biotite, latter holding few grains of chalcopyrite. Magnetic.
441.0	Monzonite porphyry 1: Varying K-alterations. Pyrite and chalcopryite.
483.5	Breccia: K-altered crackle breccia. Pyrite.

E o H

Cariboo Bell

D.D.H. S-18 June 30, 1973

50.5	Monzonite porphyry 1: K-altered, some epidote; grey to light grey with diminished K-alteration 25.4-50.5. Disseminated pyrite.
167.5	Breccia: K-altered crackle breccia. Sharp textural change at 138.5. Dissem. pyrite and rare chalcopyrite. Broken core and sand 56.5 - 56.9; mud seam, 0.1' at 74.1; quartz-carb. vein with rock inclusions and pyrite 97.6 - 97.8.
223.2	Monzonite porphyry 1: K-altered, with alteration increasing toward 206.7, then diminishing to 223.2. Disseminated pyrite, rare chalcopyrite.
227.4	Breccia: K-altered crackle breccia. Sparsely dissem. pyrite, rare chalcop.
228.7	Syenite porphyry: grey.
256.7	Breccia: K-altered crackle breccia. Sparsely dissem. pyrite and chalcop. Slickensides sub-parallel to core at 229.3-229.9; broken core 229.0-235.5 with sand at 232.5 and 234.8-235.7. Chalcopyrite stringers at 240.9 and 241.6.
258.6	Monzonite porphyry 1: grey, minor K-alteration; dissem. pyrite.
267.0	Breccia: K-altered crackle breccia; dissem. pyrite. Pyrite-chalcop. thread in joint plane at 260.6.
267.4	Andesite: dark green, fine grained; 5% pyrite, minor chalcopyrite.
293.7	Breccia: K-altered crackle breccia; dissem. pyrite and minor chalcopyrite.

Cariboo Bell

S-18 30/6/73

301.4	Syenite porphyry: grey.
396.8	Breccia: K-altered crackle breccia. Crushed core 369.8-369.9. Sparse dissem. pyrite, rare chalcopyrite.
601.5	Syenite porphyry: dissem. pyrite to 399.0; light grey to buff, fine gd. (textural change at 428.6). Red feldspar becoming prominent about 536.0; breccia 591.0-592.5, 595.5-601.5. Few threads of chalcopyrite at 569.5, 575.0-576.5, 580.0.

E o H

Cariboo Bell

D.D.H. S-40 June 30/73

15.0	Casing
71.8	Crackle breccia: well developed red feldspar, etc. The textures are variable in detail, suggesting the whole is an altd. breccia made up of fragments of two or more crystalline rocks. Sparse dissem. pyrite, less chalcopyrite. Broken core and some sand 45.0-48.0.
85.5	Crackle breccia: some red feldspar altd.; dissem. pyrite. Sand at 72.5 - 72.7. Crushed and broken core with occasional lengths of sand 78.0-98.0.
126.0	Syenite porphyry; light grey and reddish; blue quartz grains: find grained. Core is mostly pebbled.
172.0	Crackle breccia: as above. Core is pebbled with occasional sand, to 140.0. Crushed, clayey core 143.0 - 146.5.
174.0	Syenite porphyry; minor red feldspar, dissem. pyrite, rare chalcopyrite.
211.0	Crackle breccia: reddish; dissem. pyrite.
215.0	Monzonite porphyry 1; some red altn. along slips.
293.0	Crackle breccia; reddish; contacts not clear in split core but there seemed to be a distinct one at 215.0.
330.5	Monzonite porphyry 1: crackle breccia 304.5-305.9. Breccia 328.8 - 329.6. Minor red altn. along fractures.
338.0	Crackle breccia; as above.
363.5	Monzonite porphyry 1; variable red altn.
367.0	Crackle breccia; quartz-carb. veinlet, no sulfides, 364.1-364.4.

Cariboo Bell

S-40 30/6/73

373.5	Monzonite porphyry 1.
376.0	Crackle breccia in monzonite porphyry 1; red.
514.0	Syenodiorite; red to grey. Mud seam 0.1' at 397.0. Altn. and grain size vary but rock is essentially same. Quartz-carb. veinlet, no sulfides, 428.7-429.0. There are occasional threads of pyrite and very sparse disseminations. Rock becomes less altered toward 514.0.

E o H

Cariboo Bell

D.D.H. S-89 July 24, 1973

4.0	Casing
	Monzonite porphyry 1: feldspar phenos, pink up to 5 mm, white to 2 mm and both showing progressive potash alterations, with altered augites up to 3 mm and green lathy feldspars up to 2 mm, and scattered grains of magnetite in a sugary matrix, red or reddish. Few large to 10 mm epidotized augites; hornblende.
46.5	Basalt: phenocrysts of augite, about 5 mm, with smaller (2-3mm) epidotized augites and biotite grains rimmed with hematite in a dark grey aphanitic matrix. There are variolitic aggregates of epidote crystals.
48.5	Syenodiorite: biotite and hornblende as well as augite; K-alteration in fabric.
62.6	Choritized crush breccia; granitic and mafelsic fragments in aphanitic light green matrix; some K-altn.; blebs and stringers of magnetite. Syenite porphyry at 53.0 - 55.0. In unbrecciated, less altered section, rock is andesite.
77.7	Monzonite porphyry 1: as above but with very few large phenocrysts. Chilled edge at 77.7.
82.8	Syenite blastoporphyry: rounded white feldspars and few small granitic inclusions in aphanitic red matrix.
119.0	Monzonite porphyry 1: as above; color changes from reddish to grey-green at 115.0.
135.5	Monzonite porphyry 2(?): grey to green; feldspar laths to 3mm; augite and minor biotite; disseminated chalcopyrite. Fine grained at both contacts.

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S-89 24/7/73

168.0	Monzonite porphyry 1: brown to grey; med. gd. porphyritic texture. Dissem. pyrite.
196.0	Syenite porphyry; red, aphanitic matrix with brownish feldspar phenos 1 mm to 3 mm. Away from 168.0, grain coarsens slightly, augites, hornblende needles and hemitite-rimmed biotite appear. Grain becomes aphanitic again towards 196.0.
240.6	Monzonite porphyry 1: bleached from 226.0.
285.5	Syenite porphyry: red, aphanitic matrix; grain coarseness slightly away from 240.6. Some lost core and mud 250-255, slickensides sub-parallel to core. Green, due to epidote, 250.0-263.0. Pyrite.

E o H

Cariboo Bell

D.D.H. S-95 July 25, 1973

10.0	Casing
60.5	Syenite blastoporphyry: red, aphanitic matrix; relicts of granitic rock. Pebbled core 17.0-27.0.
65.0	Andesite: porphyritic; very fine feldspar and augite phenos in aphanitic green matrix. Very minor biotite.
135.0	Syenite blastoporphyry: as above. Quartz stringers sub-parallel to core 68.5-69.3. Fragment about 10 mm long, oval, of expidotized monzonite porphyry 2 (biotite) at 89.0. At about 93.0 grain coarsens to the syenite ± porphyritic, of S-89. Blebs of epidote 2-3mm long occur sparingly. Mud 134.5-135.0.
146.2	Basalt: small altered augites, biotite with hematite borders and variolitic epidote in dark grey, aphanitic matrix.
218.3	Syenite blastoporphyry: as above. Sand and broken core 151.5-152.0. Mud at 177.0.
226.5	Monzonite porphyry 2 (?): see S-89. Dark grey, fine grained, crowded porphyry with scattered large (3mm) feldspar phenos. Disseminated pyrite and chalcopyrite. Chilled contact against syenite blastoporphyry.
230.0	Syenite blastoporphyry: as above.
239.7	Monzonite porphyry 2 (?): as above. Contact at 239.7 is sub-parallel to core.
242.8	Syenite blastoporphyry: as above.

Cariboo Bell

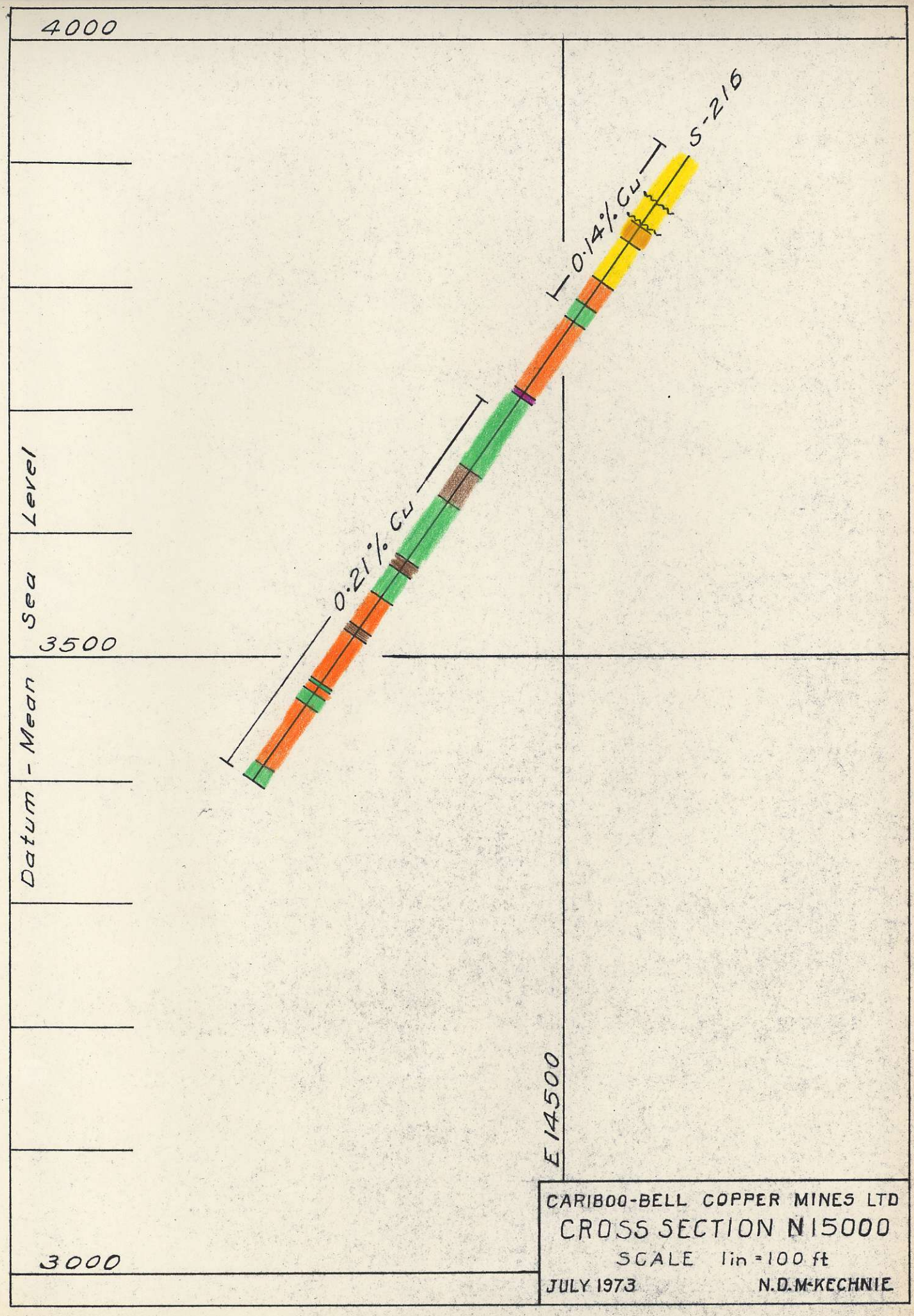
S-95 25/7/73

273.2	Monzonite porphyry 1: K-altered and epidotized; fine grained porphyritic texture with elongated feldspars giving a foliated texture; no biotite recognized. Very sparse, very fine grained chalcopyrite. Gradational contact with syenite blastoporphyry.
275.7	Syenite porphyry: long (5mm+) laths of feldspar and completely epidotized augites in a fine grained, red, crystalline matrix.
279.5	Breccia: brecciated K-altered and epidotized monzonite porphyry 1; potash is subordinate to epidote; augite and minor hornblende, but no biotite. Looks like an altered shear. Weathered broken core 277.0-278.5, with calcite stringers.
293.0	Monzonite porphyry 1: well K-altered and epidotized.
298.0	Syenodiorite: K-altered weakly; augite, hornblende and biotite; some elongated feldspars but essentially equigranular. Fine grained against monzonite porph. 1.

E o H

SECTION N 15000

DIAMOND DRILL HOLE NO. S-216



CARIBOO-BELL COPPER MINES LTD

CROSS SECTION N15000

SCALE 1in = 100 ft

JULY 1973 N.D.McKECHNIE

Cariboo Bell

D.D.H. S-216 July 1, 1973

39.0	Monzonite porphyry 1: k-alteration; dissem. pyrite and chalcop.
45.0	Sand
60.0	Monzonite porphyry 1: as above.
64.0	Sand
64.6	Monzonite porphyry 1.
80.0	Syenite porphyry: red feldspar phenos, with biotite and hornblende, in a red, aphanitic matrix.
119.0	Monzonite porphyry 1: moderate K-alteration; sparsely dissem. pyrite and chalcop.; chalcopyrite also as rare threads and small aggregates.
141.4	Breccia: K-altered crackle breccia. Sparsely dissem. grains and threads of chalcopyrite; sparse pyrite.
158.0	Syenodiorite: scattered K-alteration along fractures. Very sparse chalcop. Grain coarse toward 158.0.
228.5	Breccia: K-altered breccia with fragments of syenodiorite, basalt and monzonite porphyry. Probably a K-altered fault breccia. Basalt with glomeroporphyritic augites, few white feldspar phenos and fine, colorless amygdules, 203.0-204.4, 214.9-215.9.
229.0	Basalt: dark green, fine gd.; amygdaloidal, colorless amygdules.
260.6	Syenodiorite: weak K-alteration, reddish to grey color; med. gd., equigranular. Crushed core 232.2-235.3; lost core 235.3-236.2, 'sand' 232.7-233.4, 241.0-247.8; crushed core 247.7-249.0, 251.3-255.0, 257.7-262.0.

Cariboo Bell

S-216 1/7/73

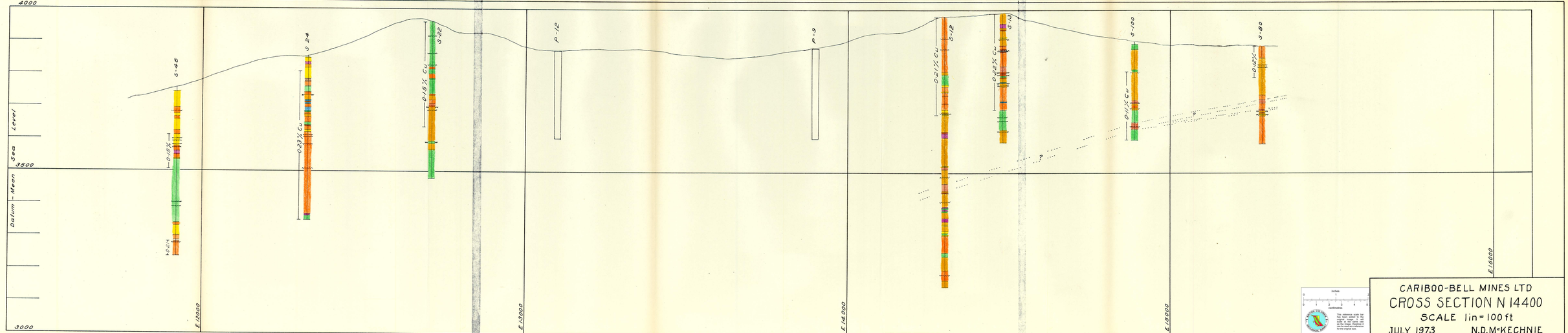
307.4	Syenodiorite: grey, locally reddish; equigranular to locally porphyritic, augite, biotite and hornblende.
336.3	Andesite: chilled edge against the syenodiorite; green, fine-grained, flecked with fine nodular and vermiform white feldspars (?).
394.0	Syenodiorite: grey to pink, equgranular; bleached 382.0-390.9. Slickenside subparallel to core at 372.0; broken core and mud 388.5-392.0. Rare chalcopyrite.
403.6	Andesite: green, fine-grained.
428.7	Syenodiorite: as above.
461.0	Breccia: K-altered crackle breccia. Sparse chalcop. as threads and grains.
466.0	Diorite porphyry: green, with phenocrysts of pyroxene and small, watery fledspars in a fine gd. matrix.
514.0	Breccia: K-altered crackle breccia in monzonite porphyry. Sparse chalcopyrite as threads.
515.3	Syenodiorite: minor K-alteration along fractures.
516.1	Magnetite: massive, with scattered grains of chalcopyrite.
524.2	Breccia: K-altered along infrequent fractures. Magnetite stringers subparallel to core 534.2-534.5.
598.0	Breccia: K-altered crackle breccia. Magnetite 550.2-550.5, 1 in. at 557.1. Porphyry of the breccia - syenodiorite (?).
614.0	Syenodiorite: dark green, fine grained, some K-altn. after 605.0. Broken core and mud 609.4-609.8. Very sparse chalcopyrite.

E o H

SECTION N 14400

DIAMOND DRILL HOLE NOS.:

S-46, S-24, S-22, S-12, S-13, S-100, S-80



CARIBOO-BELL MINES LTD

CROSS SECTION N 14400

SCALE 1in = 100 ft

JULY 1973 N.D.McKECHNIE

CARIBOO BELL July 2, 1973

D.H.H. S-46

8.0	Casing
63.8	Monzonite porphyry 1: grey, med. gd.; hornblende, magnetite, white feldspar, some epidote. Broken core and sand 29.5. Very sparse disseminated chalcopyrite. From 52.0 pink feldspar becomes prominent; increased K-alterations along fractures. Epidote prominent to 63.8.
82.8	Breccia: K-altered crackle breccia with epidote well developed. Broken core and sand 73.0-73.4; weathered slip plane subparallel to core 67.2-68.5. Very sparse disseminated pyrite.
91.7	Monzonite porphyry 1: grey to pink; minor epidote.
99.6	Breccia: K-altered crackle breccia in monzonite porphyry 1.
135.4	Monzonite porphyry 1: K-alteration and some epidote. Syenite blastoporphyry 131.7 - 132.0; prominent epidote 132.0 - 132.3.
146.7	Breccia: K-altered breccia with granitic, andesite, and porphyritic fragments. Gradational contact at 146.7.
185.0	Monzonite porphyry 1: some K-alteration and epidote. Broken core and sand 157.0-157.7, 163.0-167.0; calcite stringer at 163.0. Weathered, pitted and showing some copper stain 177.0-179.9. Crushed 179.9-180.5. Weathered 180.5-181.0. Sand at 185.0.
193.7	Breccia: K-altered crackle breccia in monzonite porphyry 1. Pebbled core and mud 186.0-186.5.
198.3	Breccia: altered fault zone; chiefly epidote and white feldspar, some pink feldspar.
208.1	Basalt (?): Very sparse, fine grained chalcopyrite. Altered, mottled texture, biotite. Sparse chalcopyrite.
221.2	Breccia: K-altered crackle breccia in monzonite porphyry 1.

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222.6	Monzonite porphyry 1: altered, mottled texture similar to "basalt(?)" above. Grades into a breccia having some biotite in the matrix, so it may be syenodiorite.
418.5	Syenodiorite: altered as above; brecciated, well epidotized but showing little red feldspar. Brecciation dies out at about 275.0; grey color by 361.5. Brecciated 287.5-291.0. Weathered, blocky core 353.0-353.5; broken core and sand 353.5-361.5; broken core some weathering 365.5-366.3; broken core and sand 367.5-368.2; K-altered fracture zone 388.5-389.5.
425.9	Breccia: K-altered crackle breccia. Very sparsely disseminated chalcop. Finely broken core at 434.0.
456.0	Monzonite porphyry 1: strongly developed K-alteration, epidote; epidotized fracture zone 439.5-441.0. Finely broken core 446.9-447.1; core pebbled and having buff color characteristic of weathered monzonite porphyry at the collar 456.0-458.0.
470.4	Breccia: K-altered crackle breccia; epidote.
472.0	Monzonite porphyry 1: buff color.
517.0	Breccia: K-altered crackle breccia; epidote. Slickensides subparallel to core and showing copper stain 477.0-478.0, 481.0-482.0. Sparse dissemination chalcop.

E o H

Cariboo Bell July 3, 1973

D.H.H. S-24

4.0	Casing
20.2	Monzonite porphyry 1: buff to greenish; figd. porphyritic ferromagnesian is augite, generally altered in whole or in part to light-green; feldspars white to reddish.
26.0	Basalt: dark green, aphanitic with small phenos of altered augite.
28.3	Syenite porphyry: white and reddish feldspar phenos in a reddish, aphanitic matrix.
39.5	Monzonite porphyry 1: fractured and locally brecciated; K-alterations pronounced; magnetite grains disseminated throughout. Sparse dissem. chalcop.; some weathering with malachite threads 39.0-47.0.
73.0	Breccia: K-altered crackle breccia in monzonite porphyry 1. Syenodiorite, with less brecciation and much less alteration 66.0-68.0. Malachite stains and some pitting.
81.0	Monzonite porphyry 3: red, aphanitic matrix at 73.0, more finely granular away from contacts. Dark red, weathered, pebbled core 73.7-74.5.
97.5.	Breccia: K-altered crackle breccia in monzonite porphyry 1. Sparsely disseminated chalcop.
115.0	Syenodiorite: K-altered, very minor brecciation, strongly magnetic. K-altered breccias 100.5-101.3, 106.0-107.4. Dissem. Chalco. Crush zone 118.0-118.5.
122.5	Breccia: crackle breccia so highly K-altered that original rock uncertain.
138.0	Syenite porphyry: red, aphanitic matrix; scattered inclusions of granitic rock but type uncertain, no biotite recognized in any of them. Definite contact at 138.0. Magnetic to weakly magnetic. Some weathering, and malachite. Sparsely dissem. chalcopyrite.
141.5	Monzonite prophyry 2: few flakes of biotite; sparsely dissem. chalcopyrite. Preceding syenite porphyry has inclusions of this rock at 138.0.
143.0	Breccia: highly K-altered crackle breccia. Quartz-Feldspar stringer, vuggy, with sparse chalcop. at 142.0.

Cariboo Bell

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145.0	Monzonite porphyry 2: grey; some K-alteration at 143.0 (or discrete fragments)
148.0	Breccia: crackle breccia, highly K-altered. Few specks of malachite, very sparse chalcop.
158.5	Monzonite porphyry 2: grey: no zeolite seen; very sparse chalcop.
172.0	Breccia: crackle breccia; highly K-altered, locally to a blastoporphyry: red.
173.2.	Syenodiorite: weakly K-altered.
182.5	Breccia: highly K-altered crackle breccia; vuggy 173.4-175.4, 179.7-182.5, vugs commonly show calcite. No chalcop., nor malachite seen.
189.4	Syenite porphyry: brown to reddish; few altered ferromagnesian blebs up to 10 mm.
290.5	Breccia: crackle breccia, highly K-altered but with relatively unaltered lengths of syenodiorite of nearly 1 ft. of core. Malachite stains at 191.0-191.5.
215.7	Syenodiorite: well K-altered but with little brecciation.
217.2	Andesite
230.0	Breccia: well K-altered crackle breccia; brecciation is weak. Scattered chrysocolla(?) blebs in more or less massive syenodiorite at 230.0; vuggy quartz 224.7-224.9. Sparsely disseminated chalcopyrite and malachite.
237.3	Monzonite porphyry 1: well K-altered.
245.2	Breccia: K-altered crackle breccia in syenodiorite.
262.5	Breccia: K-altered breccia in monzonite porphyry 1. Sparsely dissem. chalcop.; malachite stain 255.4-256.3.
293.0	Breccia: fragments of altered syenodiorite, monzonite porphyry 1 and syenite porphyry and K-altered breccia, in a matrix of secondary minerals. Sparsely dissem. chalcopyrite and malachite stain. Finely broken core and sand 271.5; sand and yellow oxide 279.5-279.8.

Cariboo Bell

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354.5	Breccia: K-altered crackle breccia in monzonite porphyry 1. Kaolinized fracture 299.3-299.7. Sparsely dissem. chalcop. and copper stain. Broken core, some sand, 347.0-349.5, 353.0-355.0.
441.6	Breccia: K-altered crackle breccia in monzonite porphyry 1(?) Broken core and sand 371.4-372.8, 366.7-367.2. Pitted and more or less kaolinized 395.0-398.5. Epidote is light but general. Scattered copper stains.
455.6	Breccia: K-Altered to porphyry with red aphanitic matrix resembling much of the rock logged as red syenite porphyry. Magnetite stringers 447.5-455.6.
487.5	Breccia: K-altered crackle breccia in syenodiorite. Sparsely dissem. chalcopyrite.
492.5	Gabbro: dark green; crushed.
514.0	Syenodiorite: K-altered; some brecciation.

E o H

Cariboo Bell

D.O.H. S-22 July 4, 1973

140.2	Syenodiorite: light grey, equigranular save for local porphyritic textures; augite, biotite, hornblende; med.gd. Core pitted, oxydized and broken 40.5-50.0; broken core 98.0-99.0; broken core with slip-planes sub-parallel to core 43.3-45.7. Red mud and sand 126.5-126.7; crushed core 131.9-132.2. Rock is more or less weathered; there are sparsely distributed malachite stains but no chalcop. was seen.
146.8	Breccia: K-altered crackle breccia in a fine grained granitic matrix, probably syenodiorite with magnetite threads.
165.2	Syenodiorite: fine gd., locally brecciated, K-altered; some malachite stain.
176.5	Breccia: K-altered crackle breccia in syenodiorite. Sparsely dissem. chalcopyrite, malachite stain, magnetite.
184.5	Syenodiorite: epidotized, augites well altered. Very sparsely dissem. chalcop. grey, locally altered to pink.
203.7	Syenodiorite: grey, locally altered to pink. Breccia: highly K-altered breccia to near-total replacement; occasional relics of granitic texture which are strongly magnetic; grains of magnetite in remainder. Very sparsely dissem. chalcop.; some malachite on slip-planes.
224.5	Syenodiorite: weakly brecciated and K-altered to 220.8 and from 223.5; numerous threads and tiny blebs of magnetite.
226.3	Breccia: K-altered crackle breccia in syenodiorite; epidote.
242.8	Syenite porphyry: white feldspar phenos, with augite and hornblende, in a red aphanitic matrix speckled with tiny blebs of calcite. Contact sharp with breccia; small inclusion of syenodiorite at 232.0.

Cariboo Bell

S-22

254.8	Breccia: K-altered crackle breccia in syenodiorite.
255.8	Andesite: dark green, fine gd; phenos of altered augite.
263.5	Breccia: as above. Core broken; pebbled, and with some sand 258.5-264.5; fragments indicate contact in the broken core, possibly about 262.0.
325.5	Syenite porphyry: some inclusions, or relicts of granitic texture; rock is fine grained to aphanitic, red. Broken core and sand 269.5-271.5, 273.0-274.0; slickenside at low angle to core 301.0. Rock is locally brecciated and cut by fine threads of magnetite and all of it is markedly magnetic. Hematite coating on several slip-planes. Fades to grey syenodiorite toward 325.5.
368.0	Syenite porphyry: texture aphanitic in matrix; change abrupt from 325.5, but contact, if any, lost in split core.
374.5	Syenodiorite: fine grained. Red, aphanitic syenite porphyry with syenodiorite inclusions 369.7-370.7. Weathered, pitted and with slip-surfaces sub-parallel to core 371.0-374.0.
393.5	Syenite porphyry: red, aphanitic matrix; rare copper stain.
482.0	Syenodiorite: fine gd.; minor K-alteration 415.0-420.0. Basalt 453.5-454.0. Magnetite-healed f.gd. breccia 463.4-464.1.

E o H

Cariboo Bell

D.D.H. S-12 July 5, 1973

168.7	Breccia: K-altered crackle breccia in monzonite porphyry 1. For appreciable lengths the porphyry is completely replaced, save for the potash feldspar, and the rock is a syenite blastoporphyry having an aphanitic matrix. Very sparse dissem. chalcopyrite; malachite in vugs and in slip-planes. Basaltic fragments 58.0-58.8. Broken and weathered core 65.5-68.5; yellow oxide in weathered core 99.3-99.8; broken and pebbled core 126.0-127.5.
179.0	Syenite porphyry: grey, fresh appearance; minor pink feldspars; hornblende and biotite. Chilled contacts at 168.7 and 179.0. Magnetic.
208.5	Syenodiorite: K-altered to red; medium gd.; augite, biotite and hornblende. Weathered broken core and sand 178.4-179.5; sand at 181.9, 182.6-182.8, 183.3, 183.8-184.2; broken and pebbled core 184.7-185.9; slip-planes subparallel to core 186.0-188.5; sand at 187.4-187.7. Fine gd. monzonite porphyry 2 (?) 197.2-197.9. Very sparse dissem. chalcopyrite; quartz stringer with chalcop., at low angle, 199.0.
214.5	Monzonite porphyry 1: epidotized. Sand at 210.7-210.9; sand and broken core 214.5-214.8.
228.0	Breccia: K-altered crackle breccia; basaltic fragments with the porphyry from 225.0. Crushed core 222.0-222.6; broken core and sand 218.0-219.2. Sparsely dissem. chalcop.
230.7	Syenite blastoporphyry: weakly brecciated.
265.8	Breccia: K-altered crackle breccia. Syenodiorite 232.3-233.2. Syenite 241.5-242.5.
267.5	Breccia: K-altered crackle breccia. Sparsely dissem. chalcop.
292.5	Monzonite porphyry 1: little epidote; dissem. magnetite. Sparsely dissem. chalcop.; quarter inch vein of red, aphanitic syenite at 292.0.

S-12

294.0	Syenodiorite: K-alteration; red; med.gd.
295.5	Crushed core and sand in K-altered crackle breccia.
298.0	Monzonite porphyry 1: epidotized; dissem. magnetite. Sparsely dissem. chalcopyrite.
324.3	Syenite blastoporphyry: chilled edge at 298.0. Has relicts of syenodiorite so the chilled edge relates to it rather than to an intrusive syenite porphyry. Mud at 317.8-318.0.
353.3	Syenite porphyry: definite contact at 324.3; med. gd., fresh appearance; hornblende with biotite; magnetic. Broken core and sand 328.4-328.7, 329.4-330.2.
356.4	Basalt: green; phenos of altered augite.
370.4	Lamprophyre: dark grey, med.gd., fresh appearance, magnetic. Chilled edgeat 370.4.
459.5	Syenite porphyry: At about 445.0 the grain becomes finer.
460.1	Andesite: dark green,aphanitic.
461.9	Syenite blastoporphyry.
470.0	Andesite: green, granular.
514.8	Syenite blastoporphyry: as above. Weathered, pitted, blocky core 488.0 - 490.0; weathered pitted, pebbled and with some sand 490,0-494.5.
536.3	Gabbro: altered augites
539.5	Syenite blastoporphyry
541.0	Gabbro: core blocky, pebbled and with some sand to 534.0.
587.8	Syenite blastoporphyry. Broken core and sand 570.9-571.7.
588.4	Basalt: core broken, mud at 588.4
592.5	Syenodiorite: grey, some pink feldspar; equigranular; augite, biotite, and hornblende. Sparsely dissem. chalcop.
594.4	Basalt: as above.
595.4	Syenodiorite: as above.
601.5	Basalt: as above
619.7	Syenite blastoporphyry: red, med. gd., biotite; weakly magnetic.

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632.0	Basalt
638.3	Syenite Blastoporphyry.
640.2	Monzonite porphyry 1: K-altered along fractures; grey, augite with hornblende.
659.0	Syenite porphyry: color red, fading to buff at about 649.0. Monzonite porphyry inclusions from about 653.0.
666.0	Monzonite porphyry 1: K-altered along fractures to 661.5
670.3	Syenodiorite: K-alteration in streaks; indistinct but definite contacts with monzonite porphyry 1.
673.5	Monzonite prophyry 1: K-alteration in fractures to 671.0.
730.5	Breccia: K-altered crackle breccia in syenodiorite.
739.0	Syenodiorite: K-altered along scattered fractures. Broken core and sand at 730.0.
741.8	Syenite porphyry: aphanitic matrix; chilled edge against syenodiorite.
743.0	Syenodiorite.
743.5	Andesite: green, few faint phenos.
780.7	Syenite porphyry: red, med.gd., color darkens at 769.5. Andesite 752.2-752.5, 753.0-753.5, 759.5-760.4.
813.5	Breccia: K-altered crackle breccia in monzonite porphyry 1. Shear, planes at low angle, 795.0-795.5. Dissem. chalcopyrite.
828.0	Syenite blastoporphyry.

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Cariboo Bell

D.D.H. S-13 July 6, 1973

32.4	Syenite blastoporphyry: some malachite stain on slip surfaces.
43.0	Lamprophyre: chilled edge against syenite blastoporphyry.
47.9	Syenite blastoporphyry: occasional malachite stains on slips.
49.0	Andesite: K-alterations along fractures.
72.9	Syenite porphyry: red aphanitic matrix grades to fine gd. at about 57.0. Chalcop. tread with magnetite at 70.3. Gabbro 55.3-56.2.
73.4	Monzonite porphyry 1: dark grey, med. gd.
99.5	Syenite blastoporphyry: K-altered crackle breccia at 74.9-77.2. Weathered broken core 78.3-79.3; 0.1 breccia with dissem. chalcop. 84.5. Syenite porphyry with dissem. chalcop. 96.6-97.4.
100.8	Gabbro.
109.9	Breccia: K-altered crackle breccia in monzonite porphyry 1.
110.9	Gabbro.
113.0	Syenite blastoporphyry: broken core, some yellow oxide and a 1/2" quarts stringer with rock fragments 112.0-113.0.
114.9	Gabbro: sand 113.0-113.7; crushed core 113.7-114.4.
116.8	Syenite blastoporphyry.
162.7	Breccia: K-altered crackle breccia in monzonite porphyry 1. Chalcopyrite sparsely disseminated and, rarely, with quartz threads. Broken core and sand 147.7-148.9.
180.5	Gabbro: epidotized augites near 180.5; broken and pebbled core 177.0-178.5.
181.8	Breccia: K-altered crackle breccia in monzonite porphyry 1.
184.0	Andesite: K-alterations along fractures.

Cariboo Bell

S-13

189.5	Breccia: K-altered crackle breccia in monzonite porphyry 1. Sparse chalcopyrite.
194.4	Syenodiorite: K-altered along a few fractures.
196.6	Breccia: K-altered crackle creccia. Syenodiorite 194-8-195.5. 1/2" stringer, magnetite on walls, epidote in centre, at 195.7.
210.3	Syenite blastoporphyry: vuggy quartz with crystals at low angle to core 196.7-197.2.
212.6	Monzonite porphyry 2: chilled edge against blastoporphyry; dissem. chalcopyrite.
224.2	Syenite blastoporphyry.
270.1	Breccia: K-altered crackle breccia in monzonite porphyry 1. Syenodiorite 232.2-233.0.
273.3	Monzonite porphyry 2: sparsely dissem. chalcopyrite.
297.3	Breccia: K-altered crackle breccia in monzonite porphyry 1 to 279.0; syenodiorite intruding the breccia from 279.0. Slickensides 292.0-293.0.
358.7	Syenodiorite: coarse grained.
392.0	Syenite porphyry: pink; augite, hornblende and biotite. Mud and pebbled core 0.4 in shear at 362.0; thin shear at 390.8; both subparallel to the core.

E o H

Cariboo Bell

D.D.H. S-100 July 6, 1973

8.0	Casing
11.0	Rounded, pebbled core.
11.6	Syenodiorite: possibly a boulder.
24.5	Syenodiorite: ferromags are augite and biotite; magnetite; feldspars are salmon pink and greenish, with edges poorly defined; fine grained toward 24.5. Sparsely dissem. chalcop.
85.0	Syenite blastoporphyry: fine gd., color grey to green to reddish according to proportion of monzonite porphyry 1 remaining. Syenodiorite 56.7-57.4. Slip-plane subparallel to core 34.0-35.0, and with malachite stain 82.0-85.0. Pyrite.
92.0	Syenodiorite: dark grey; hornblende and biotite; very sparse dissem. chalcopyrite.
93.5	Sand
181.0	Syenite porphyry: red; no inclusions nor relicts; finely brecciated from 176. Broekn and pebbled core 157.0-161.0. Pyrite stringers 128.0-129.0.
191.7	Basalt: sand at 185.9, mud at 187.8-188.0, 192.0-192.4. Quartz-carbonate stringers 191.6-192.5.
202.7	Breccia: in syenodiorite, fine grained green and buff fragments cemented by dark red, aphanitic matrix; non-magnetic; no sulfides. Fragments near two contacts are green, remainder are buff. Rare vugs filled with white mineral (zeolite?) banded parallel to vug walls.
211.0	Syenite blastoporphyry: buff-colored; some local brecciation. Relicts suggest mon. porph. 1. Broken core and sand, with slip-planes sub-parallel to core, 207.7-208.4, 208.7-210.2.

JWDan

Cariboo Bell

S-100 6/7/73

249.0	Syenodiorite: fine to med. gd. Mud and sand 216.8-218.4.
269.9	Gabbro: sand at 262.0. Coarse augite, epidote; hematite in grains.
300.0	Syenodiorite.

E o H

Cariboo Bell

D.D.H. S-80 July 7, 1973

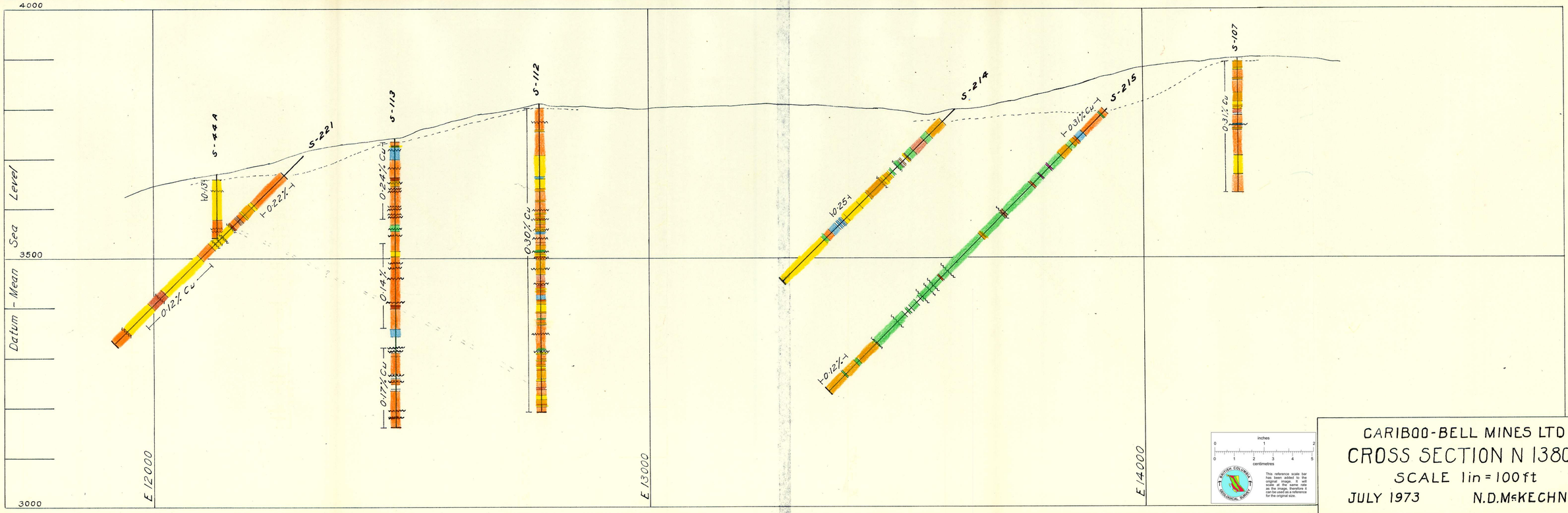
36.0	Breccia: K-altered crackle breccia in monzonite porphyry 1. Disseminated chalcopyrite in the porphyry relicts, none in the secondary K - feldspar.
150.0	Syenite porphyry: red. Syenodiorite (?) 65.5-66.5; breccia 45.8-47.8. Sand at 56.0, 63.0.
165.0	Breccia: K-altered crackle breccia, some epidote.
170.8	Gabbro: epidote; some augite altd. to hematite.
194.0	Breccia: K-altered crackle breccia. Gabbro 184.0-185.3. Gabbro: much epidote, few pink feldspars; core broken along slip-planes 195.0-196.5; sand and crushed core 197.5-198.3.
202.5	Syenite porphyry.
205.8	Gabbro: broken and pebbled core.
208.5	Syenite porphyry: red, aphanitic matrix; definite contacts; red stringer in the monzonite porphyry 1.
209.6	Monzonite porphyry 1.
300.0	Breccia: K-altered crackle breccia in monzonite porphyry 1. Sand and broken core 212.5-213.5. From 228.0 the relicts are syenodiorite; from 248.5 there are scattered angular fragments of basalt over about two feet. Pebbled core and mud 240.0-241.0; 277.0-278.5.

E o H

SECTION N 13800

DIAMOND DRILL HOLE NOS.:

S-44A, S-221, S-113, S-112, S-214, S-215, S-107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CROSS SECTION N 13800
SCALE 1in = 100ft
JULY 1973
N.D.McKECHNIE

Cariboo Bell

D.D.H. S-44A

July 14, 1973

11.5	Casing
92.0	Monzonite porphyry 2: weathered and pitted and with epidote to 13.9. Extensive K-alteration. Epidote ends abruptly at 13.9, as does most of the weathering so this section may be a boulder. From 13.9 rock is extensively altered but brecciation is not evident. Epidote along fractures. Weakly magnetic. Very sparse, very fine grained chalcopyrite. At 30-32, 1 ft. core lost. From 71.5 there is an increase in epidote, but no corresponding increase in chalcopyrite.
101.0	Breccia: K-altered crackle breccia in monzonite porphyry 1. Chrysocolla at 94.0. Porphyry here is dark green.
130.0	Breccia: K-altered crackle breccia in Monzonite porphyry 1. Broken and pebbled core 106.0-114.7. 4.0' core lost at 107.5-115.0. Broken core is weathered and shows very minor copper stain.

E o H

Cariboo Bell

D.D.H. S-221 July 14, 1973

57.0	Casing
140.8	Breccia: crackle breccia in monzonite porphyry 1 with strong to pervasive K-alteration. Texture is that of a breccia but boundaries of 'fragments' are gradational; scattered grains of magnetite. Fairly numerous pin-heads of malachite; very sparse, very fine grained pyrite. Broken pebbled core, with sand 59.5-66.5, fragments kaolinized, some iron stain. Core weathered ± kaolinized 66.5-68.8. Broken and pebbled core 91.5-97.0; broken core and more or less weathering 97.0-105.0, 114.5-115.5.
147.5	Monzonite porphyry 1: extensive K-alterations but with less evident brecciation. Sparse chalcopyrite and very sparse pyrite.
167.5	Syenite porphyry: feldspar and hornblende phenos in pink aphanitic matrix. Minor biotite. Scattered threads of magnetite; sparse pyrite.
170.1	Monzonite porphyry 1: K-alteration along fractures. Very sparse chalcopyrite and pyrite.
179.5	Breccia: crackle breccia in monzonite porphyry 1. Sparse chalcopyrite, few grains of pyrite.
185.5	Monzonite porphyry 3: feldspar laths in brown aphanitic matrix.
198.2	Breccia: crackle breccia in monzonite porphyry 1. Broken and pebbled core 188.0-189.0. Sand at 198.2.

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202.5	Diorite porphyry: dark grey to greenish. White phenos showing some ragged boundaries and altered hornblende in a greenish fine grained matrix. Feldspars up to 2 mm long. Magnetite; sparse pyrite. Locally carries numerous quartz threads.
205.5	Pebbled core and sand: core fragments mostly red; crackle breccia.
228.7	Monzonite porphyry 1: medium grained, locally brecciated; K-alterations. Crystal boundaries poorly defined and texture irregular, suggesting some re-crystallizations. Broken and pebbled core 222.5-224.0.
231.5	Broken core and sand: core is monzonite porphyry 1 but shows a more pronounced palimpsest texture and more epidote than foregoing.
258.3	Monzonite porphyry 1: as at 228.7; rare chalcopyrite. Broken core and sand 238.7-240.0, 245.2-246.7, 248.4-250.0.
290.5	Breccia: crackle breccia in monzonite porphyry 1; epidote with K-alteration. Pebbled core 258.3-270.5.
392.0	Monzonite porphyry 1: some pronounced K-alteration along fractures; tendency to palimpsest texture; alteration diminishes after 321.0. Strong epidote 348.0-349.0.
429.5	Andesite: Broken core 392.0-392.5. Red aphanitic inclusions 404.0-405.0. Sand 405.3-406.5; pebbled core 407.0-410.0. Rock texture shows closely spaced fracturing with alteration along the fractures. Scattered quarts-carb. threads.

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498.0 Monzonite porphyry 1.

537.0 Breccia: crackle breccia in monzonite porphyry 1, with K-alterations. Mud at 502.0. Core lost 3.0' at 502-507 and 3.0' at 507-512. Core broken and pebbled to 537.0.

Cariboo Bell

D.D.H. S-113 July 15, 1973

7.0	Casing
14.5	Breccia: K-altered crackle breccia in grey granitic rock; some andesitic fragments. Malachite specks.
15.0	Monzonite porphyry 1: grey, medium grained.
41.2	Monzonite porphyry 2: fine grained toward 15.0; few biotite flakes, occasional large feldspar phenos; dark grey, fine to fine medium grained. Malachite specks from about 39.0. Pebbled core 20.0-20.5.
77.7	Breccia: K-altered crackle breccia in monzonite porphyry 1. Sparsely dissem. chalcop. and malachite. Strongly epidotized 44.8-45.3; oxydized core, some crushing 57.5-59.5.
78.4	Andesite: altered augites and brownish laths scattered in dark grey aphanitic matrix.
80.2	Breccia: K-altered crackle breccia.
83.2	Andesite: altered augites in dark green, fine grained matrix; few scattered, tiny, reddish feldspars. Broken and pebbled core 81.5-82.0.
95.0	Syenite blastoporphyry: red, with feldspar phenos and augite in a finely granular matrix. Scattered poikilitic feldspar porphyroblasts. A few granitic fragments show biotite so rock may have been syenodiorite. Present rock is massive, with relicts mostly at 90.0-92.0. Crushed core 88.0-88.5.
173.5	Breccia: K-altered crackle breccia; fine grained fragments from 95.0 are monzonite porphyry 1. One inch lamprophyre at 106.0. At 117.4-118.4 is fine grained reddish porphyry with feldspar laths to 2mm, altered augite and altered biotite, and a palimpsest brecciated texture. Oxydized broken core 94.0-94.5;

core weathered and with much malachite stain 99.0-100,0; broken core and sand 100.8-101.7.

186.0 Syenodiorite: grey, with altered biotite and occasional large augites; minor porphyritic textures. Contains numerous inclusions of old K-altered blastoporphyry and the contacts of most of these with the syenodiorite are sharp or, at least, well defined. Poikilitic feldspars occur in the syenodiorite at the fragment contacts. Locally the syenodiorite may show a palimpsest texture. Sand at 103.0; sand and broken core 106.3-107.1; malachite stain 106.3-107.1; weathered core, yellow oxide, 139.5-140.0; sand at 151.0; weathered core, yellow oxide, 151.0-151.8, 153.0-154.5; sand, broken and pitted core, 156.0-157.0.

225.0 Breccia: K-altered crackle breccia; granitic fragments of differing textures.

236.0 Monzonite porphyry 1: partially K-altered to a red-mottled, med. gd., grey rock. Crushed core 182.0-182.5; broken core and sand 192.0-194.8.

333.2 Breccia: K-altered crackle breccia. The breccia contains several kinds of granitic fragments and certainly crosses some contacts, but the distinctions are obscure in hand specimen. Broken core and sand 245.0-249.0, with yellow oxides; sand at 258.0; broken core and sand 279.8-280.1; some yellow oxide 291.5-292.0; slight pitting and some copper stain 318.7-319.4; clay, oxides and sand 326.5-327.0. Very sparse, very fine grained chalcopyrite.

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339.1 Diorite porphyry: medium grained, green; small feldspar laths, few poikilitic feldspar porphyroblasts; minor K-alteration.

381.9 Breccia: K-altered crackle breccia. Large fragment of dark grey porphyry at 342.0. Sand at 366.2; pitted, calcareous filling 371.6-372.3; broken core and sand 373.8-374.6. Sparse chalcopyrite.

396.6 Monzonite porphyry 2: green to grey, medium grained; biotite with the augite; numerous red breccia inclusions at and near 381.9. At 387.0-388.0 is an inclusion of K-altered crackle breccia in clearly recognizable monzonite porphyry 1. Spec. Mon. porph. 2, of mon porph. 1. Sparsely dissem. chalcop. Broken core and sand 393.8-395.2.

428.0 Breccia: K-altered crackle breccia.

435.9 Syenite blastoporphyry: altered augites and feldspar phenos in red, aphanitic matrix; minor biotite. Foliation similar to that of monzonite porphyry 1 preserved in the alignment of feldspar laths as discrete grains. Crushed core and sand 419.8-420.2, 420.6-421.1; sand at 422.4, 425.0-425.5.

471.0 Breccia: K-altered crackle breccia. Syenodiorite (?) stringers cutting breccia 438.3-443.0. Sand 457.3-457.5; crushed core and sand 470.6-471.0.

479.0 Syenodiorite: epidotized, carbonatized; some palimpsest textures and inclusions of red breccia to 473.5 and from 477.4. Epidote 472.9-473.3. Leached and vuggy core 453.7-454.2; magnetite blebs up to 40 mm diam. 456.5-456.8.

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481.5 Syenite blastoporphyry: red, aphanitic matrix.

491.5 Breccia: K-altered crackle breccia in monzonite porphyry 1. Fault plane subparallel to core and with striations normal to core's long axis 483.0-490.7; sand 486.6-486-9. Very sparse chalcop.

501.5 Syenodiorite: altered, in places to palimpsest texture, holding so numerous fragments of red breccia as to amount in itself to a breccia. Rare quartz threads with few grains of chalcop.

504.5 Syenite blastoporphyry.

581.0 Breccia: K-altered crackle breccia in monzonite porphyry 1, intruded by syenodiorite. Latter is much altered, but by epidote, chlorite and carbonate rather than potash. Sand 510.0-511.0, 512.0-512.5; leached, vuggy granitic stringer, subparallel to the core, with chalcopyrite, 513.7-514.0; leached and broken core 516.5-518.6; crushed core 518.0-518.5, minor copper stain; leached core 522.0-522.5; grey, fresh-appearing monzonite porphyry 2 at 538.4-539.1. Core leached and bleached 540.5-549.0; slip plane with kaolin and carbonate 542.7-543.9, subparallel to core; sand 546.4-546.8, 550.0-550.3; slip planes subparallel to core 550.3-553.5; crushed core, minor sand, 559.0-560.0. Mafic inclusions 575.0-576.0. Disseminated chalcopyrite occurs very sparsely in monzonite 1 throughout the breccia.

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D.D.H. S-112 July 17, 1973

9.0	Casing
53.6	Breccia: K-altered crackle breccia in monzonite porphyry 1. Malachite as cattered grains and coatings. Sand 28.0-28.5. Pitted 31.3-32.5. Sand 36.5-37.5. Oxydized, pitted, well copper stained 37.5-40.0. Sand 44.5-45.0; pitted and well copper-stained 46.0-47.0. Sand 51.5-53.5, 1.5' core missing.
57.0	Syenite blastoporphyry:
104.7	Breccia: K-altered crackle breccia in mon. porph. 1. 0.2' andesite at 77.0. Pebbled core 69.0-70.0. Recurring copper stain. Sparsely disseminated chalcop. in the mon. porph. 1. 0.1' copper-stained mud at 93.0. Bleached and pitted 93.5-94.0.
147.0	Monzonite porphyry 1: grey to faintly pink; fine to med. gd., augite looks fresh; some weak foliation. One large (5mm) mag.
150.2	Monzonite porphyry 2: red, med. gd.; large magnetite concentrations (3mm) at one place; laths show weak foliation; minor biotite. Indefinite contacts.
168.5	Monzonite porphyry 1: grey. Andesite 159.5-160.1.
175.1	Syenite porphyry: monzonite becomes fine grained toward 168.5. Malachite stain along few hairline fractures.
194.0	Breccia: K-altered crackle breccia in mon. porph. 1. Malachite stain prevalent, very sparse fresh chalcop. magnetite in stockworks of veinlets.
196.0	Syenite blastoporphyry:

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219.6	Breccia: K-altered crackle breccia in mon. porph. 1. Scattered malachite stain. Weathered and pebbled core 210.5-211.3. Weathered and pitted, chalcopyrite with magnetite blebs 212.4-212.9. Core much weathered, pitted, broken and with crushed core and sand 214.5-219.0. Copper stain.
220.2	Monzonite porphyry 1: very dark grey.
225.1	Breccia: K-altered crackle breccia in monzonite porph. 1. Well weathered 221.3-225.0 with sparse malachite; magnetite in grains and threads.
229.5	Syenite blastoporphyry: minor monzonite porph. 1; sparse copper stain. 227-231, 3 ft. core missing.
234.2	Breccia: K-altered crackle breccia in monz. porph. 1. Core lost 2.5 ft. at 231.0-234.0.
235.8	Monzonite porphyry 3(?): dark brown, aphanitic matrix; pale brown and white feldspar phenos.
242.2	Syenite blastoporphyry: blebs of altd. mafic mineral. Scattered malachite. Well weathered, pitted and with malachite stain, some sand, 240.0-241.2.
248.5	Breccia: K-altered crackle breccia in mon. porph. 1. Weathered pitted and vuggy to 245.8.
256.8	Syenite blastoporphyry: aphanitic matrix at 248.5, def. contact. Remainder med.gd., red. Sheared and osydized 252.7-254.1; sand at 253.3-253.9, malachite stain. Weathered, pitted 254.9-255.6.
260.3	Monzonite porphyry 2: disseminated chalcop. Contact breccia to 257.8. Reddish toward 260.3.

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278.5 Breccia: K-altered crackle breccia in mon. porph. 1. Malachite stain. Sparse chalcop. toward 278.5.

283.4 Breccia: fragments of mon. porph. 1 and red felsitic frags. in mon. porph. 2. Latter is dark grey, med. gd., close porphyry with a very few large white phenos. Dissem. chalcop. Crushed core and sand 268.0-274.0.

294.0 Syenite porphyry: red, med.gd.; white feldspar and augite phenos up to 2 mm in a red to buff matrix. Malachite specks. Scattered magnetite threads. Very sparse f.gd. pyrite.

298.2 Syenodiorite: equigranular, med. gd., dark grey with minor pink. Dissem. pyrite, very sparse chalcop. Rusty sand 296.0-296.3, crushed core 296.0-296.6.

301.5 Syenite blastoporphyry:

306.0 Monzonite porphyry 1: K-altered at intervals. Dissem. pyrite, very sparsely dissem. chalcopyrite.

312.9 Breccia: K-altered crackel breccia in mon. porph. 1. Sparse dissem. pyrite and chalcop. Crushed core and sand 308.2-308.6.

342.6 Syenite blastoporphyry: weathered mon. porph. 1 relicts with sparse pyrite and chalcopyrite 316.0-317.3, 317.8-318.7; rusty sand at 323.0; weathered with yellow oxide 327.0-327.4; sand at 328.5; sand and broken core 330.0-331.5, 332.0-333.0, 337.0-340.0.

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355.6	Diorite porphyry: dark grey, med. grained; porph. texture not strongly evident and this rock has been logged as andesite where it has been fine gd. to aphanitic. Chilled contact against the syenite porphyry.
363.4	Breccia: K-altered crackle breccia in mon. porph. 1; very sparse chalcop. and pyrite; malachite stain. Weathered, with yellow oxide 355.8-358.0. Sand and broken core 360.5-361.5.
364.4	Diorite porphyry: fine gd.
369.8	Breccia: K-altered crackle breccia in mon. porph. 1. Sp. chalcop.
371.0	Syenite Porphyry: chilled edge at 371.0(?).
372.4	Breccia: K-altered crackle breccia in mon. porph. 1. Sp. chalcop.
375.0	Syenite blastoporphyry.
375.7	Breccia: K-altered crackle breccia in mon. porph. 1.
376.0	Monzonite porphyry 2: dark grey; dissem. chalcop.
383.0	Breccia: trachyte porph. in mon. porph. 1; sp. chalcop.
393.5	Syenite blastoporphyry: Mon. porph. 2, with sparse chalcop. 385.6-385.9, contacts at $\pm$ 20° to core.
395.3	Monzonite porphyry 1: light grey to white, some foliation, texture uneven. Weathered 394.0-395.0.
416.5	Breccia: K-altered crackle breccia in mon. porph. 1. Very sparse chalcopyrite in mon. porph. 1.
417.8	Syenodiorite: dark grey, equigranular, few laths; sp. pyrite.

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430.0	Breccia: K-altered crackle breccia in mon. porph. 1. Weathered 424.0-426.0. Sand at 428.0 (end of run).
432.0	Breccia: K-altered crackle breccia in a dark grey, fine gd. porph. with dissem. chalcop. in the increased proportion usually associated with mon. porph. 2.
438.0	Syenite blastoporphyry: well fractured, minor local relicts.
491.8	Breccia: K-altered crackle breccia in mon. porph. 1. Very sparse, very f.gd. chalcop. Few andesitic frags. at 450.0-451.0. Sand 461.2-461.6; weathered 462.1-462.6; sand 462.9-463.4, 465.5. Broken core and sand 467.0-489.0.
493.8	Syenodiorite: grey to pinkish, equigranular.
494.5	Broekn core and sand.
495.5	Altd. rock, similar to some of the mon. porph. 1 in the breccia; white feldspar with a partial K-altn., with ragged grains and small masses of magnetite. Sparse chalcop. and bornite with some of the magnetite. Some magnetite grains in shape of pyronene
497.0	Monzonite porph. 2: grey, med. gd., few large white phenos; sparse dissem. chalcop.
500.0	Syenite blastoporphyry: sand and broken core 497.2-498.7.
502.3	Breccia: K-altered crackle breccia in mon. porph. 1. Very sparse pyrite. Crushed core and sand 501.7-503.2; pebbled core 504.5.
511.7	Monzonite porphyry 1: pinkish, some lsight foliation; superficially equigranular.

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513.3	Breccia: angular and ragged masses of magnetite in feldsparathic white and pink matrix with carbonate. Sparse pyrite in matrix, chalcop. in magnetite.
514.5	Monzonite porphyry 1: with minor K-alteration.
514.9	Breccia: as above.
523.4	Breccia: K-altered crackle breccia in mon. porph. 1. Very sparse chalcop.; magnetite; some epidote; sp. f.gd. chalcop. 520.4-521.9.
526.3	Monzonite porphyry 1
527.1	Breccia: white feldsparathic matrix,magnetite; some epidote; pitted.
531.6	Syenite blastoporphyry: aphanitic matrix.
532.1	Breccia: K-altered crackel breccia in mon. porph. 1.
532.5	Monzonite porphyry 1.
533.7	Breccia: K-altered crackle breccia in mon. porph. 1.
534.7	Syenite blastoporphyry.
553.1	Monzonite porphyry 1: md. gd., light grey to pink; magnetite grains; sparse chalcop. 2" magnetite str. at 30^{o} to core at 535.8.
556.8	Breccia: white feldsparathic matrix with mon. porph. 1. Syenite blastoporph.; magnetite; sparse chalcop.
568.5	Monzonite porphyry 1.
573.5	Diorite porphyry.
585.0	Monzonite porphyry 1: sand and broken core 569.0-570.0. Occasional minor brecciation; very sp. chalcop.

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594.5	Breccia: K-altered crackle breccia in mon. porph. 1; matrix highly feldsparathic 585.0-592.0; this section is vuggy and shows weak copper stain.
604.5	Monzonite porphyry 1: pinkish. Well developed epidote and magnetite replacing augite 595.0-598.0. Bleached 602.2-604.5.
605.0	Syenite blastoporphy: aphanitic matrix; relicts of mon. porph. 1.
604.5	Breccia: K-altered crackle breccia. Mon. porph. 1; core broken and pebbled. Sand at 604.5.
605.5	Monzonite porphyry 1: grey, foliation due to lathy feldspars.
618.0	Breccia: K-altered crackle breccia in mon. porph. 1. Some bleaching and weathering. Very sparse very f. gd. chalcop.

E o H

Cariboo Bell

D.D.H. S-214 July 18, 1973

35.0	Casing
74.0	Syenite porphyry: pale buff to pink, fresh appearance; few altered augite phenos as large as 10 mm; minor biotite; magnetite as grains; crowded porphyry.
88.6	Monzonite porphyry 3: white lathy feldspars in brown aphanitic matrix; much more loosely packed than in the syenite porphyry. Local foliations by parallel laths up to 7 mm, other sections massive. Augites are altd; magnetite and epidote common as grains.
118.7	Syenite porphyry: as above.
133.7	Syenodiorite: dark grey, fine to fine medium gd.; augite and biotite; equigranular. Rusty augites.
135.3	Andesite: dark green, fine gd.
138.1	Syenodiorite: as above.
139.2	Monzonite porphyry 3: dark red, phanitic matrix.
140.5	Monzonite porphyry 1: grey, crowded porphyry; feldspar laths elongated; rusty augites.
148.0	Lost core.
149.5	Monzonite porphyry 3.
154.0	Lost core.
155.0	Monzonite porphyry 3.
166.5	Syenodiorite: fine gd., equigranular; minor biotite; some chlorite; few rusty augites. Mud at 164.5. Monzonite porphyry 3 164.5-166.0

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175.0	Lost core.
182.0	Syenodiorite: light grey, f.gd. Lost core 1.5' at 175.0-177.0, 4.5' at 177.0-182.0.
184.5	Lost core.
187.5	Monzonite porphyry 1: elongated feldspars. Pebbled core to 187.0.
195.9	Syenite porphyry: red, med. gd., fresh-looking augite, very minor hornblende; no biotite recognized; matrix is fine gd. rather thin aphanitic and is uniformly pink.
203.0	Monzonite porphyry 1: green, fine gd., more or less palimpsest texture. This box, 187-227, is badly broken and pebbled core with from 1/4 to 1/2 of it lost in every run.
242.5	Syenite porphyry: some bleaching. Slickenside sub-parallel to core 205.0-207.0. Vuggy, some weathering 211.0-213.5. Bleached to grey 219.4-221.2 and to pale buff 221.2-247.0.
247.0	Syenite porphyry: core pebbled, it is almost wholly syenite porph. to near 247.0. Core is oxydized to brown oxide and shows appreciable malachite.
272.0	Monzonite porphyry 1: brecciated and slightly oxydized to 251.0; extensive K-alterations to pink feldspar, but no biotite seen. Alteration diminishes from about 261.0.

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309.0 Monzonite porphyry 1: with K-alterations well developed so as to present a pseudo-brecciated appearance. The red areas uniformly have ragged outlines and contain relicts of the grey porphyry. Rusty weathering and minor malachite 281.0-284.0; sparse malachite occurs in remainder but no fresh sulfide was seen. Sand and broken core 286.0-287.0. As K-alteration increases, producing a good pseudo-breccia texture, dissem. chalcop. appears in the ferromag. outside the red areas.

Toward 309.0 the K-altn. increases to form nearly uniform red rock in which the porphyry shows only as a few relicts and as a palimpsest texture. This bears a resemblence to the intrusive (chilled contacts, etc.) rock logged as 'syenite porphyry'. Some confusion undoubtedly has occured.

316.8 Monzonite porphyry 1: red, finely granular, as described above. Shade and texture vary; there has been some fine brecciation.

319.5 Monzonite porphyry 2(?): Markedly fine gd. toward 316.8 so it is intrusive into mon. porph. 1. Color dark grey, non-crowded porphyritic texture. White feldspar enhedral phenos, 1 mm to 2mm, and white feldspar rounded to ovid phenos, 3mm, in a finely cryst. matrix. Ferromag. are chiefly augite, $\pm$ 1 mm, with scarce hornblendes. Some augites have ragged edges. Faint K-altn. along few fractures. Carbonate-healed breccia 318.5-319.5.

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325.0	Lost core.
328.5	Monzonite porphyry: as above.
332.0	Lost core.
350.0	Monzonite porphyry: increasingly reddish. Brecciated toward 350.0.
364.5	Breccia: partial replacement of mon. porph. 1 by K-altn. probably in a crackle breccia.
372.0	Syenodiorite: chilled edge against altd. mon. porph. 1.
491.0	Monzonite porphyry 1: K-altn. intense along fractures and amounts to near-total replacement in what appears to have been crackle zones. K-altn. diminishes from about 390.0.At 405 a 6-inch piece of brecciated porphyry shows progressive inward replacement of the fragments; fragments are rimmed by a selvage of calcite, biotite and magnetite. Lost core 425.0-427.0.

E o H

Cariboo Bell

D.D.H. S-215 July 19, 1973

7.0	Casing
16.5	Breccia: monzonite porphyry 1 highly altered by K. Abrupt textural variations; rock essentially red. Minor malachite.
17.5	Syenodiorite: grey, med. gd. equigranular.
73.5	Breccia: monzonite porphyry 1, extensive K-altn. to near-total replacement. Syenodiorite 30.0-30.7. Copper stain on most slip surfaces; sparsely dissem. chalcop. Syenodiorite 58.5-59.8. Chalcop. in rare threads with magnetite.
86.5	Monzonite porphyry 2 (?)
90.0	Breccia: monzonite porphyry 1, extensive K-altn.; very large augite bleb in K-feldspar at 87.0.
99.5	Syenite porphyry.
109.0	Syenodiorite: dark green, chloritized, pitted. Becomes aphanitic toward 109.0.
135.7	Syenite porphyry: pale buff
165.0	Syenodiorite: light-grey to pinkish; med. gd.
167.0	Basalt: widely spaced mafic phenos in dark green aphanitic matrix.
181.0	Syenodiorite: light grey to pinkish; med. gd.
181.7	Basalt: mafic phenos in dark aphanitic matrix.
213.0	Syenodiorite: dark grey, med. gd; no apparent K-altn. Sand at 194.5-195.0.
216.4	Andesite: biotite phenos in aphanitic matrix; dark green.

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293.0 Syenodiorite: grey to light-grey; syenite porphyry 220.3-220.6, shart contacts. 1' core lost 297.0-298.5.

302.0 Monzonite porphyry 3.

357.5 Syenodiorite: grey; no K-altn. evident. Calcite stringer at low angle at 326.5.

362.5 Syenite porphyry: brownish red; very fine gd.; chilled contacts with syenodiorite. Syenodiorite 360.0-360.2. Felsite has tiny feldspar laths and very little ferromag. so it possibly is a syenite porphyry. It is weakly magnetic.

477.1 Syenodiorite: grey; K-altn. along weak fractures begins after 370.0; very weak after 378.0. Mud seams 402 - 403. Broken and pebbled core with calcite strs. 404.0 -407.0, weathered from 406.0. K-altn. along numerous hairline fractures 407.0-415.0. Stringers of syenite porphyry 417.0-418.0. Core pitted 427.0-428.5. At 434.0, color becomes light grey with occasional streaks of very pale pink. Weathered vuggy core with quartz 458.3-458.8.

480.0 Andesite; few rounded white phenos; numerous very fine hornblende needles in dark green aphanitic matrix.

537.0 Syenodiorite: core broken and much weathered 495.0-496.0; broken core, minor sand 498.0-500.0; broken and pebbled core 505.0-508.0; crushed core 508.5-509.5; broken core, calcite and slickenside at low angle 509.5-513.0. Alteration fades out at about 500.0 and color becomes dark grey. Sand and broken core 527.0-530.0; pebbled core 532.0-537.0.

540.0 Lost core.

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563.0 Syenodiorite: epidote fairly prominent from 540.0, minor pink altn. with it. Core broken and ± pebbled.

569.0 Lost core: sticks marked '4 ft. sand' to 567.0 and '2 ft. sand' to 569.0.

572.0 Syenodiorite: broken and pebbled core. Increased K.

575.5 Lost core.

576.0 Syenodiorite: pebbled core.

580.0 Lost core: stick marked 'sand'.

662.0 Syenodiorite: weathered and broken core with K-altn. and epidote 594.0-617.5. Strong to intense K-altn. 596.5-600.0. Brownish red felsite 603.5-605.0. Malachite stain in foliated syenodiorite, well weathered, 602.9-603.5; scarce malachite stain in foliated syenodiorite; few slickenside surfaces sub-parallel to core. Chrysocella on a sub-parallel slip plane at 632.5. K-altn. along fracts. 639.8-640.8, 659.0-662.0.

664.0 Lost core: stick marked 'sand'.

712.0 Syenite porphyry: contact lost with core. Red color fades to a pale buff and, locally, to grey. Approaching contacts the color returns to red. There are inclusions of syenodiorite toward the contacts.

721.5 Syenodiorite: grey; fine med. gd.; some porphyritic texture; minor biotite with augite.

722.0 Andesite and syenite porphyry making up ± two halves of the core.

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749.0 Syenite porphyry: pale buff to grey; this rock, here and elsewhere, has rare large phenos of chlorite or of glomeroporphyritic aggregates of augite in the general form of hornblende. These phenos are up to 10 mm long. The ferromags in the rock are augite and hornblende. From ± 728.0, the rock has an uneven, breccia texture and numerous small syenodiorite inclusions. Syenodiorite, grey, 745.9-746.8.

752.0 Syenodiorite: green, med. gd.; chalcopyrite and pyrite at and near the contact. (749.0).

801.0 Syenite porphyry: brecciated texture as above.

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6.0	Casing
17.0	Syenite porphyry: extensive K-alteration in what looks like a breccia environment. Scattered threads and blebs of magnetite; frequent malachite stain.
22.0	Monzonite porphyry 1: sparsely dissem. chalcop. Grey, with K-alt. along infrequent fractures; fine med. gd.
38.5	Breccia: monzonite porphyry 1 strongly to highly K-altered; magnetite threads and blebs; frequent malachite stain.
40.5	Syenite porphyry: K-altd., color ranges from dark grey to reddish. Core from 39 to 50 is pebbled and at least 5 feet, in aggregate, is missing.
86.5	Breccia: monzonite porphyry 1 highly K-altered; frequent malachite stain.
93.0	Syenite porphyry: K-altd.
97.0	Monzonite porphyry 1: K-altd. along frequent fractures. Malachite stain at intervals.
101.0	Syenite porphyry: K-altd.; scattered malachite stain.
107.2	Monzonite porphyry 1: grey some K-altn. on fracts. Malachite stain in healed breccia at 102.5-103.0
111.0	Andesite.
130.0	Breccia: monzonite porphyry 1 highly K-altd. Frequent malachite stain. Syenite porphyry 120.5-122.5, also extensively K-altd.
131.4	Monzonite porphyry 2:
132.5	Breccia: sheared and fractured chloritic material with feldspathic filling and copper stain.

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138.5	Syenite porphyry: K-altd.
140.4	Monzonite porphyry 1; grey; minor K-altn; malachite stains.
141.7	Syenite porphyry; red, aphanitic matrix.
194.0	Breccia: monzonite porph. 1 brecciated and highly K-altd. Scattered malachite stain.
232.0	Monzonite porphyry 1: fairly well K-altd.; minor malachite Syenite porphyry strs. 222.5-223.5.
264.0	Breccia: monzonite porphyry 1 well to highly K-altd. Monzonite porphyry (S-214) 235.4-237.0; K-altd. but much less than mon. porph. 1.

E.H