

J.C. STEPHEN
EXPLORATIONS LTD.

672683

WEEKLY CAMP REPORT

PROJECT NEWEX CAMP NAME #1 ECHO - FANTAIL LAKE

NTS MAP SHEET 104 M 10 E DATES JUNE 5-12, 1982
(BENNETT)

AIR PHOTOS BC 5686 N^o 16 & 18 LAT. & LONG. 59° 35' N 134° 25' W

SILT SAMPLE SERIES NONE TAKEN

SOIL SAMPLE SERIES 82E1 TO 82E55

ROCK SPECIMEN NUMBERS 80601 TO 80613

FANTAIL LAKE

GEOLOGY

ROCK UNITS:

UNIT 1 - CHLORITE SCHIST (Specimen HA82-1-1)

THE chlorite schist varies from almost entirely chlorite to a chlorite-quartz schist. The chlorite plates, medium-grained and dark green, define a good foliation which appears to parallel compositional layering. Pyrite is rare. Milky quartz veins are common, parallel to foliation. They are uniformly barren, with the exception of a small percentage which contain minor pyrite. One (sample 80609) contained both pyrite and galena. They range in size from 1cm to 30cm in thickness.

Minor bands of hematitic quartz sandstone and dolomitic marble, too narrow to map separately, are included in this unit.

UNIT 2 - DOLOMITIC MARBLE (SPECIMEN HA-82-1-8)

The dolomite marble is medium-grained, white to dark grey and weathers a pale blue-grey. It appears conformable to the chlorite schist and probably represents a facies change. True thickness of marble bands appears to exceed 20 m. It is resistant to weathering and forms ridges (with the less resistant chlorite schist on their flanks).

Much of the dolomite marble is silicious (silicified?), white and buff weathering. ^(Most) ^(See HA82-1-9) Mariposite (or some other chrome-green sheet silicate) is fairly common, but found only on surfaces accessible to surface weathering. No sulphides have been observed. A 1.0 m wide quartz vein (sample 80610) is ~~is~~ adjoined by one meter of silicious dolomite marble (sample 80611) which is gradational to blue-grey weathering marble.

UNIT 3 - ANDESITE (SPECIMEN HA82-1-5)

The andesite is massive, fine-grained and green. ~~As~~ Small augite phenocrysts are common. No flow structures or stratification are present; it is assumed to be extrusive. It is in fault contact only with the other rock units.

UNIT 4 - FELDSPAR-HORNBLende PORPHYRY (SPECIMEN HA82-1-3)

A few dikes of feldspar-hornblende ± quartz porphyry intrude the chlorite schist near the western edge of the mapped area. The size, proportion and presence of each phenocryst

varies from dike to dike. The dikes are generally less than two meters wide and fifteen meters long. In detail they cut across the foliations of the chlorite schist, but ~~are generally parallel~~. The margins are sharp and unchilled, although some disruption ^{of} the foliation orientation is evident. Most strike northerly and are near vertical.

UNIT 5: DIORITE (SPECIMEN HA-82-1-4)

The diorite is composed mainly of feldspars and pyroxene with traces of pyrite. It weathers to a distinctive speckled tan, with rounded outcrops. It is coarse-grained and foliated only near its intrusive contacts. It is variably altered, with chlorite and epidote replacing the pyroxenes and local silicification (?) and sericitization (?). It is intrusive into the chlorite schist, though largely fault-bounded from it and totally fault-bounded from the andesite.

UNIT 6: BOULDER CONGLOMERATE (SPECIMEN HA82-1-6)

The conglomerate is composed of well-rounded, mostly granitic, boulders, (up to 50 cm across) supported by a matrix of pebbles and fine green material. There is no stratification, sorting is poor, and the clasts come from a wide variety of volcanic and granitic sources. The conglomerate is believed to be sedimentary, possibly just a skin on the surface.

CORRELATION OF ROCK UNITS WITH CHRISTIE, GSC MAP 19-1957

| OUR UNIT N° | NAME | CHRISTIE'S UNIT N° |
|-------------|-----------------|--------------------|
| 1 | CHLORITE SCHIST | 1b |
| 2 | DOL. MARBLE | 1b |
| 3 | ANDESITE | 4a |
| 4 | F-H PORPHYRY | 6 |
| 5 | DIORITE | 6 |
| 6 | CONGLOMERATE | 7? |

STRUCTURE:

FOLDING:

The foliations in the chlorite schist have a fairly constant orientation, striking mainly SE and dipping steeply to the NE. Small folds, some isoclinal, and crenulation of the chlorite are common, and the foliation is very contorted in the vicinity of some faults, particularly the north-east trending one. No evidence of large scale folding was seen.

FAULTING:

Three sets of parallel faulting were inferred, trending north-west, north-east and west north-west respectively.

1. NORTH-WEST FAULTS

The largest of these separates andesite from diorite along its entire mapped length. It continues NW at least as far as the KEY claims and SE to the junction of Fantail River with Tagish Lake. It appears planar and has orientation 127/90NE. Wherever diorite outcrops within a hundred meters of the fault, it is anomalously pyritic (see SAMPLES 80606 and 80608). Similarly, some andesite adjacent to the fault is bleached, silicified and pyritic. However these rusty andesite zones are less than 50 meters long and ~~are~~ most andesite near the fault is quite fresh in appearance.

Eight hundred meters south-west of the main NW-trending fault, a parallel fault separates most of the diorite from chlorite schist. A gully extending down both each sides of the ridge are thought to mark its continuation, (from Brownlee Lake toward Fantail River). Another parallel fault one hundred meters south-west is indicated by a steep scarp. There is no significant alteration along either of these faults.

2. NORTH-EAST FAULTS

Only one NE-trending fault has been shown on the map, although several gullies in the same area parallel the one shown. It is marked by a deep valley and by silicification and pyritization of the adjacent chlorite schist (see SAMPLE 80612). Extensive contortion of the chlorite schist and minor brecciation also indicate faulting.

3. WEST-NORTH-WEST FAULTS

Several gullies trend west-north-west, but no good evidence of faulting or of alteration of adjacent rocks (with the possible exception of the silicification of the dolomite marble) exists. These gullies may represent faults or they may represent less the preferential erosion of the chlorite schist.

ECONOMIC POTENTIAL

The two most interesting ~~are~~ features of this area are 1. Alteration along faults, and 2. Silicification of marble.

1. The alteration along faults suggests some hydrothermal activity. Possibly vein mineralization exists along the altered faults or along cross-fractures.

2. Silicification of marble gives possibility of Carlin-type deposit.

Geochemistry should give answer.

CAMP LOCATION:

Our location on Fantail Lake is excellent. Lake water is murky (with glacial silt) but a nearby creek provides good drinking water. There is abundant firewood and lots of trees to hang tarps from. The trees shelter it from the wind, but there is sufficient breeze to keep the bugs away (well, something kept them away!). Helicopter accessibility is good (or will be when we clear some of the brush away).

ANALYTICAL REQUEST SHEET

CAMP NAME & NUMBER ECHO / CAMP 01 DATE JUNE 12/82

SAMPLE NUMBER SERIES

ELEMENTS REQUESTED

82-E-01 → 82-E-55

As, Au

SOIL SAMPLES

FANTAIL LAKE RECONNAISSANCE PROJECT
TOTAL SOIL SAMPLES = 55
ASSAY FOR As, Au.

NTS 104 M 10 E

SAMPLER _____

LINE _____

DATE JUNE 6 - 1982

PROJECT NEWEX

AIR PHOTO NO. BC 5686 # 016

| SAMPLE NO. | LOCATION | Depth | Horiz | DESCRIPTION | | | | SLOPE | VEG. | ADDITIONAL OBSERVATIONS OR REMARKS | ASSAYS | | | |
|------------|----------|-------|-------|-------------|-------------|--------|----|--------|---------------------|--|--------|----|--|--|
| | | | | Colour | Part Size | % ORG. | Ph | | | | Au | As | | |
| B2 E-1 | FANTAIL | 20cm | B | Rd Br | silt-clay | 5 | | Gentle | Spruce | North side of TP Fault valley at break in slope | 30 | 10 | | |
| E-2 | | 20cm | B | Br | silt-clay | 5 | | Gentle | Jack pine | ~ 300 m W of V-1-1 | 10 | 11 | | |
| E-3 | | 15cm | B | Br | silt-clay | 10 | | Gentle | FW | Base of slope - | 10 | 11 | | |
| E-4 | | 20cm | B | Rd Br | silt-clay | 5 | | Gentle | Willow | " Slope (S-facing) | <10 | 9 | | |
| E-5 | | 15cm | B | Rd Br | sand-silt | 5 | | Gentle | FW | Base of N-facing slope | <10 | 15 | | |
| E-6 | | 20cm | B | Rd Br | sand-silt | 5 | | Mod | Spruce Willow | " " " | <10 | 11 | | |
| E-7 | | 15cm | B | Rd Br | sand-silt | 5 | | Gentle | Spruce Willow | Base of NW-facing slope. | 20 | 11 | | |
| E-8 | | 20cm | B | Rd Br | sand-silt | 5 | | Gentle | Willow | Base of S-facing slope. | 20 | 20 | | |
| E-9 | | 15cm | B | Rd Br | silt-sand | 5 | | Gentle | Willow | " W-facing slope. | <10 | 9 | | |
| E-10 | | 15cm | B | Rd Br | sand-silt | 3 | | Gentle | Grass Willow | Base of S-facing slope. | <10 | 10 | | |
| E-11 | | 10cm | B | Rd Br | silt | 5 | | Gentle | Pine Willow | Base of S-facing slope | <10 | 9 | | |
| E-12 | | 15cm | B | Rd Br | silt | 5 | | Gentle | Pine Open | Dolomite ridge; recessive gully w/ rusty weathering siliceous dol. | <10 | 17 | | |
| E-13 | | 15cm | B | Rd Br | silt | 3 | | Gentle | sparse Willow | Base of S-facing slope North side of fault. | 20 | 5 | | |
| E-14 | | 20cm | B | Rd Br | clay | 10 | | Gentle | Poplar | Base of S-facing slope 300m N of Fantail Lake | 10 | 5 | | |
| E-15 | | 15cm | B | Rd Br | silt | 5 | | Gentle | sparse Willow | Base of S-facing slope | 180 | 9 | | |
| E-16 | | 15cm | B | Rd Br | sand | 2 | | Gentle | sparse Willow Grass | base of S-facing slope | 10 | 17 | | |
| E-17 | | 20cm | B | Rd Br | clay | 7 | | Gentle | sparse Willow | " " " " | <10 | 20 | | |
| E-18 | | 15cm | B | Rd Br | sand | 3 | | Gentle | Grass Willow | " " " " | <10 | 25 | | |
| E-19 | | 15cm | B | Rd Br | coarse sand | 1 | | Mod. | Grass | " " " " | <10 | 51 | | |
| E-20 | | 20cm | B | Rd Br | sand | 5 | | Mod | Grass Willow | S-facing slope base near Lake / Fault Junction | 20 | 22 | | |

NTS 104 M 10 E

SAMPLER _____

LINE _____

DATE _____

PROJECT NEWEX

AIR PHOTO NO. BC5686 N^o 018

| SAMPLE NO. | LOCATION | Depth | Horiz | DESCRIPTION | | | | SLOPE | VEG. | ADDITIONAL OBSERVATIONS OR REMARKS | ASSAYS | | | |
|------------|----------|-------|-------|-------------|-----------|--------|----|--------|---------------|--|--------|----|--|--|
| | | | | Colour | Part Size | % ORG. | Ph | | | | Au | As | | |
| 82 - E-21 | FANTAIL | 15cm | B | Rd-Br | Sand-Silt | 5 | | Gentle | Sparse pine | Top of Ridge - Fault. | <10 | 7 | | |
| E-22 | | 20cm | A+B | Bl-Br | Silt | 15 | | Mod | Grass | 200m - SW slope (Fault Valley) | <10 | 33 | | |
| E-23 | | 15cm | B | Rd Br | Sand | 5 | | Mod | Willow | 400 m - SW slope | <10 | 15 | | |
| E-24 | | 15cm | B | Rd-Br | silt-clay | 5 | | Gentle | Sparse spruce | 600 m - SW slope base | 20 | 5 | | |
| E-25 | | 20cm | B | Rd-Br | Silt | 5 | | Mod | Alder | 800 m - SW slope base | <10 | 33 | | |
| E-26 | | 15cm | B | Rd-Br | silt-sand | 5 | | Gentle | Sparse spruce | 1000 m - SW slope base | <10 | 14 | | |
| E-27 | | 15cm | A+B | Bl-Br | Silt | 15 | | Mod | Grass | 1200 m - " " " | <10 | 53 | | |
| E-28 | | 15cm | B | Rd-Br | Silt | 10 | | Mod | Willow Grass | 1400 m - " " " | 10 | 19 | | |
| E-29 | | 20cm | A+B | Br | silt | 10 | | Mod | Grass | 1600 m - rusty andesite % above | 10 | 7 | | |
| 30 | | 25cm | B | Br | sand | 10 | | Mod | Willow | Many rocks - almost talus sample | 10 | 9 | | |
| 31 | | 20cm | B | Rd Br | Sand-silt | 5 | | Gentle | Alders | Many rocks - " " " | 20 | 14 | | |
| E-32 | | 20cm | B | Br | silt | 5 | | Mod | Willow | Base of SW fault valley (main NW fault) wall | <10 | 17 | | |
| E-33 | | 25cm | A+B | Bl-Br | Silt | 10 | | Mod | Willow | " | <10 | 11 | | |
| E-34 | | 20cm | B | Br | Silt-clay | 10 | | Gentle | Spruce | " | <10 | 15 | | |
| E-35 | | 30cm | B | Rd Br | silt | 10 | | Mod | Spruce | " Rusty silicified andesite float | 10 | 17 | | |
| E-36 | | 20cm | B | Yel Br | sand silt | 10 | | Gentle | Spruce | " Glacial debris | <10 | 22 | | |
| E-37 | | 20cm | B | Yel Br | silt | 10 | | Gentle | Willow | " Glacial debris | <10 | 23 | | |
| E-38 | | 30cm | B | Rd Br | silt-clay | 15 | | Gentle | Willow | " | <10 | 85 | | |
| E-39 | | 30cm | A+B | Gr Br | silt-clay | 10 | | Gentle | Willow | " | 10 | 12 | | |
| E-40 | | 30cm | B | Rd Br | Silt | 5 | | Gentle | Willow | " | <10 | 6 | | |

NTS 104 M 10 E

SAMPLER _____

PROJECT NEWEX

LINE _____

DATE _____

AIR PHOTO NO. BC 5686 No. 018

| SAMPLE NO. | LOCATION | Depth | Horiz | DESCRIPTION | | | | SLOPE | VEG. | ADDITIONAL OBSERVATIONS OR REMARKS | ASSAYS | | | |
|------------|----------|-------|-------|-------------|-----------|--------|----|--------|--------------|--|---------------|---------------|--|--|
| | | | | Colour | Part Size | % ORG. | Ph | | | | Au | As | | |
| 82- E-41 | | 10 cm | B | Rd Br | silt | 10 | | Gentle | Willow | base of SE-facing slope (on valley wall) | 20 | 9 | | |
| E-42 | | 10 cm | B | Rd Br | silt-sand | 5 | | Gentle | willow | " " | <10 | 5 | | |
| E30 | | 25 cm | B | Br | sand | 10 | | Mod | Willow | NE-fault? Many rocks - almost talus sample - base of slope | 10 | 53 | | |
| E43 | | 20 cm | B | Rd Br | sand | 5 | | Mod | Willow | Many rocks - base of SE slope. | 10 | 53 | | |
| E44 | | 20 cm | B | Rd Br | silt-sand | 10 | | Mod | W. Willow | Base of SE-facing slope. NE-fault | <10 | 19 | | |
| E45 | | 10 cm | B | Rd Br | sand | <5 | | Gentle | Willow | Rocky. | 3/10 | 27 | | |
| E46 | | 20 cm | B | Rd Br | sand-silt | 15 | | Mod | Willow | Base of N-facing slope | <10 | 11 | | |
| E47 | | 15 cm | B | Rd Br | sand-silt | 5 | | Gentle | Willow grass | Base of W-facing slope. | <10 | 14 | | |
| E-48 | | 10 cm | B | Br | silt | 15 | | Gentle | Spruce | Rocky sample - Fault at 00N | <10 | 29 | | |
| E-49 | | 15 cm | B | Rd Br | sand | 10 | | Mod | Spruce | 2+00N along fault - splay NE slope | 20 | 17 | | |
| E-50 | | 15 cm | B | Rd Br | sand | 10 | | Mod | Spruce | 4+00N fault splay - NW slope | 10 | 22 | | |
| E-51 | | 10 cm | C | Rd Br | sand | 5 | | Mod | Spruce | 3+00N - soil slump - almost talus | 20 | 36 | | |
| E-52 | | 10 cm | C | Br | sand | 10 | | Mod | Willow | NE fault. | <10 | 4 | | |
| E53 | | 15 cm | B | Rd Br | sand | 10 | | Gentle | Willow | Base of SE-facing ridge | <10 | 14 | | |
| E54 | | 10 cm | B | Rd Br | sand | 5 | | Mod | Alder | Base of W-facing slope | <10 | 16 | | |
| E55 | | 15 cm | B | Rd Br | sand | 5 | | Gentle | Spruce Alder | Rocky sample. | <10 | 45 | | |

