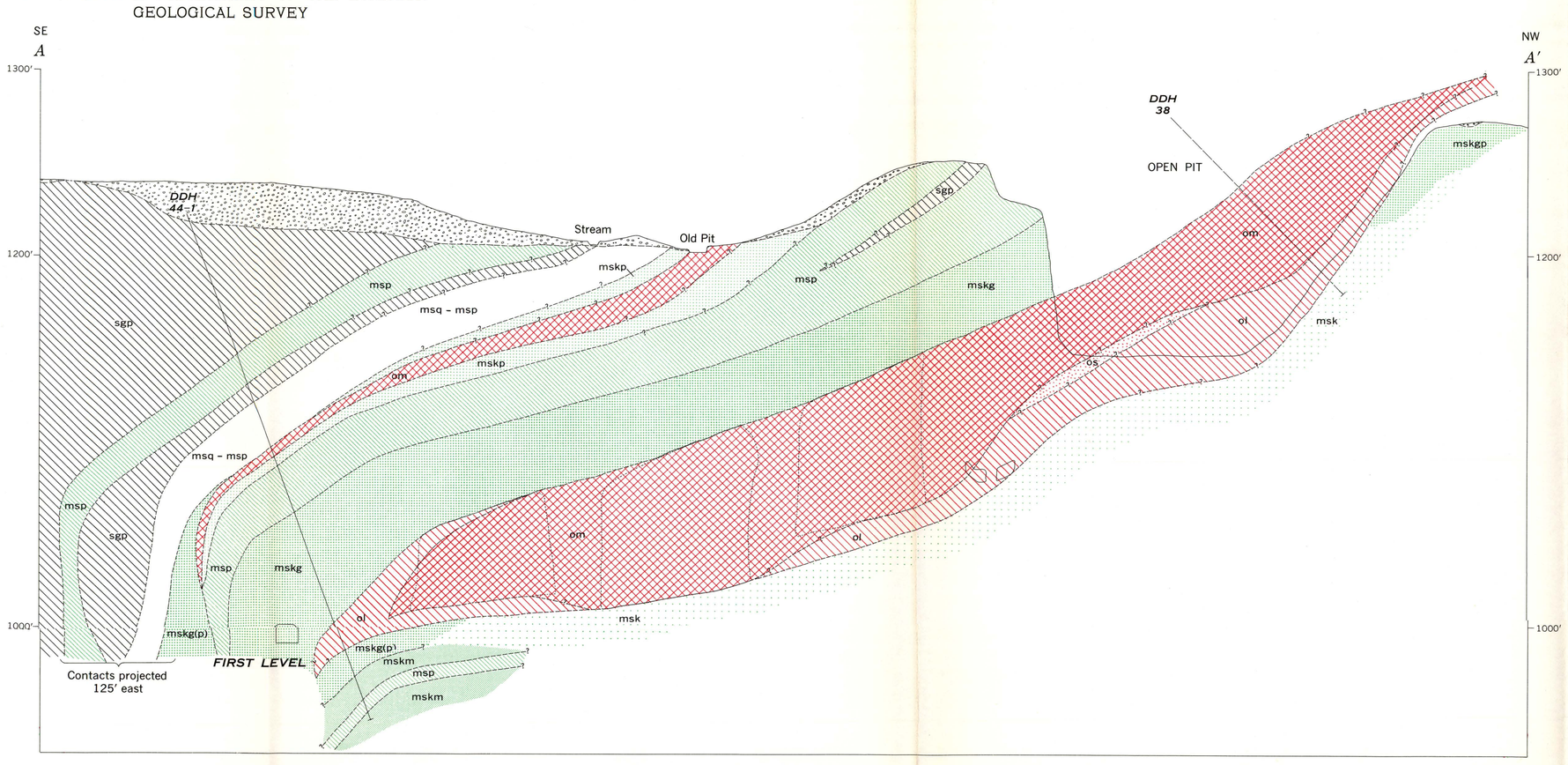

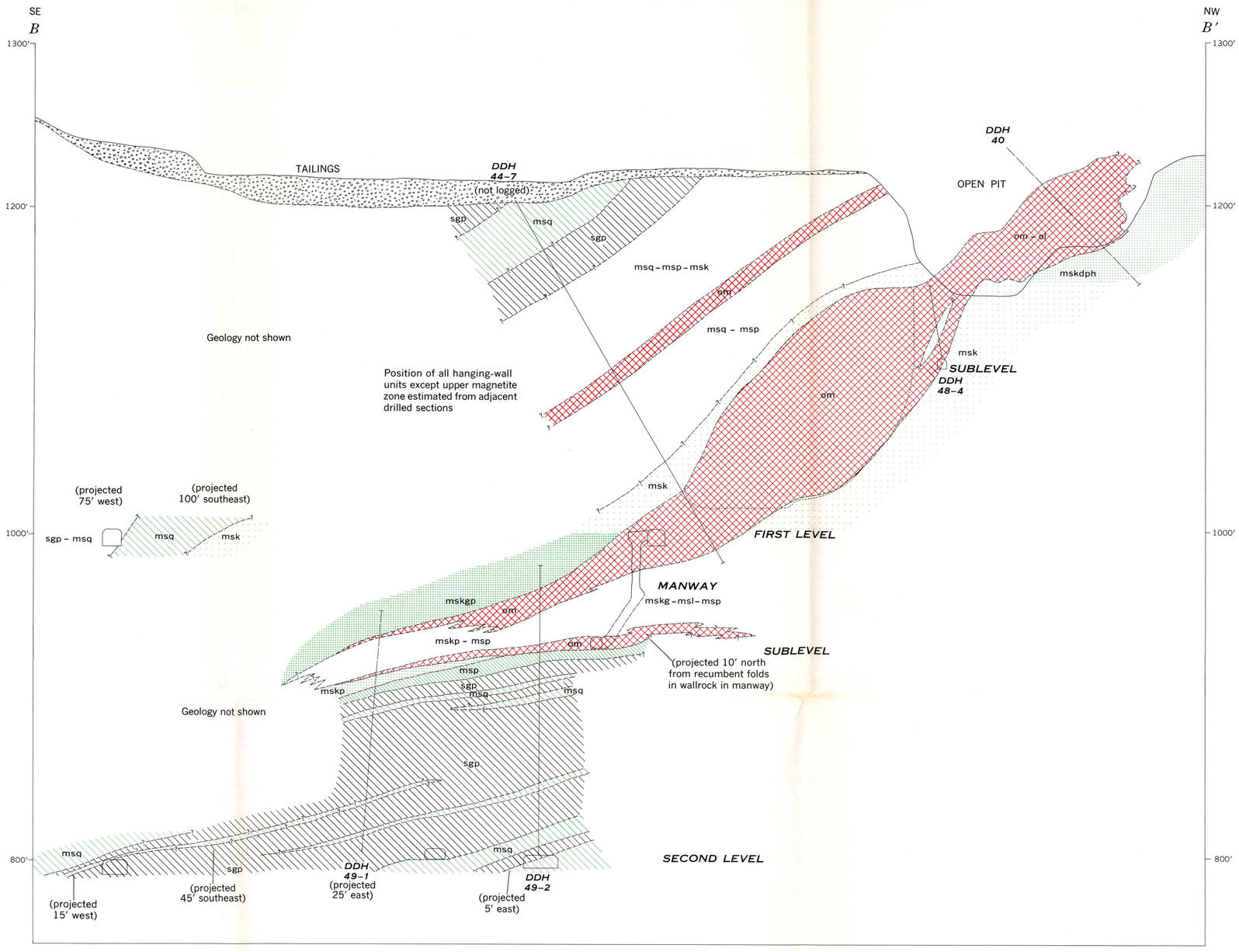

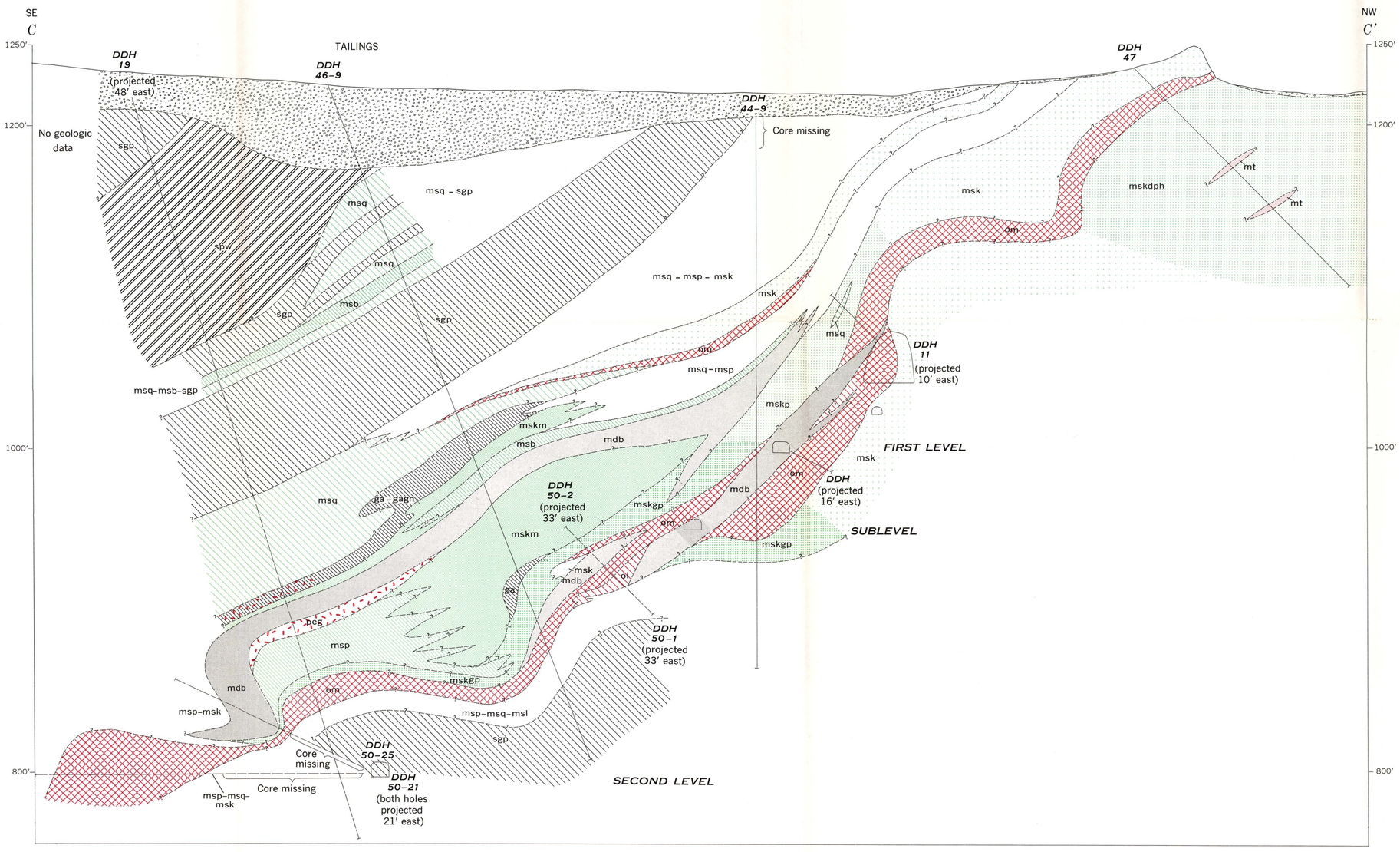

EXPLANATION

QUATERNARY

Overburden
Glacial debris and lake deposits; waste, artificial fill, and tailings. (Omitted in pit)

PRECAMBRIAN

om | ol | os | mt
Magnetite replacing pyroxene skarn and local mica sköls or marble
om, *medium-grade ore, generally 44–45 percent total* Fe *or ~ 38 percent magnetic* Fe. *Range is roughly 37–54 percent total* Fe ≈ *34–46 percent magnetic* Fe. *High-grade ore layers not shown separately*
ol, *low-grade ore, generally 25–26 percent total* Fe ≈ *21–22 percent magnetic* Fe
os, *subore, generally ~ 15–20 percent magnetic* Fe
mt, *magnetite-bearing rock of undetermined grade*

peg
Pegmatite, granitic or syenitic
Commonly somewhat contaminated

ga | ga-gagn
ga, *alaskitic granite; locally contaminated by pyroxenic material. Includes some very small pegmatite bodies*
ga-gagn, *alaskitic granite and granite gneiss; locally contaminated. Includes some very small pegmatite bodies*

mdb
Metadiabase
Locally amphibolitic

spw
Wollastonite-pyroxene syenite
Locally scapolitic or syenite

sgp
Phacoidal granite gneiss
Locally contains slivers of metasedimentary rock

msp
Pyroxene gneiss
Locally includes a little quartz-feldspar granulite. Below first level, unit is in many places involved with syenitic and granitic material of indeterminate origin

msb
Biotite-plagioclase gneiss

msl | msk | mskdph | mskp | mskgp | mskg(p) | mskg | mskm
Approximate order of evalution is from left to right, above
msl, *marble; generally somewhat silicated*
msk, *skarn, undivided*
mskdph, *diopside-phlogopite skarn; commonly graphitic. Contains local phlogopite sköls*
mskp, *pyroxene skarn; medium to dark green, locally with a little calcite. Contains sporadic thin biotite sköls near ore body*
mskgp, *garnet-pyroxene skarn*
mskg(p), *garnet skarn with subordinate pyroxene*
mskg, *garnet skarn; locally slightly pyroxenic. Contains a little sporadic calcite and, in places, considerable pyrrhotite*
mskm, *pyroxene skarn; locally garnetiferous, modified by introduction of quartz, potassic feldspar, or scapolite*

msq
Quartz-feldspar granulite
Pink, gray, or white, with very sparse biotite or pyroxene

msq-msp
Groups of letter symbols indicate compound rock units
In these, if there is a dominant rock type, it is given first, subordinate type following

Note: Stratigraphic relations of the metasedimentary rocks are indeterminate

Contact
Dashed where closely inferred, queried where form, position, or continuation is doubtful

Diamond-drill hole on section

Diamond-drill hole projected or restored in open pit

MAJOR STOPE
Underground mine workings
First and second levels and selected minor workings

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—10324

GEOLOGIC SECTIONS ALONG LINES A–A′ TO C–C′, CLIFTON MINE, ST. LAWRENCE COUNTY, NEW YORK

100 50 0 100 200 FEET