

SUMMARY OF X CUTTING RELNS (from Synopsis)

Age Relationships of mineralized veins and fractures

Ground Preparation stage - ^{intrusion of porphyry and} a pervasive biotite hornfelsing adjacent to them

Early Stage - veins + fr

magnetite - hematite ± qtz, pyrite, cpy

qtz - mag - py - chl

Pre-Main Stage - veins + fractures

carbonate ± chl

carbonate - qtz - mag

Main Stage - veins + fractures + pervasive altn

qtz - py - och hem ± chl

qtz - ser ± sulphides

qtz - py - cpy ^{+ MoS₂} with sericitic halos

ser - py

ser - qtz - py

qtz - ser - chl - cpy - py

- qtz - py - carb w. halos
- qtz - ser - chl - cpy w. halos
- qtz - py + halos

qtz - py - cpy (3+ stages)

qtz - py - cpy - MoS₂

qtz - py - ser

↓ - carb
↓ - chl

cpy
cpy - py

py

chl - cpy - py ± qtz

chl - py - carb - ser - hem

chl - cpy - py - och hem

chl - cpy - py ± qtz

py - ser ± chl



perw ser altn ± carbonate after mafics

DLEACH ALTN

* Sulphides often in cores of qtz veins

MoS₂ (slips)

biotite - chl - py

" " " cpy ± och hem

" " " bn - MoS₂

" " " cpy

" " " ser cpy - py

chl after mafics + rept. h. fls

younger? substage

qtz - py - carb ± hem

" - py (3+ stages)

" - cpy - py - carbonate ± chl

" - cpy - py

py

cpy - carb

chl - py - graphite (?)

late ~~stage~~ ^{main} stage

py - carb

carb + py ± chl

qtz - py.

" " epq - chl - hem.

cpy

gypsum - chl

barren qtz

Post-Sulphide

substage 1

carbonate - hematite

gypsum ± cal

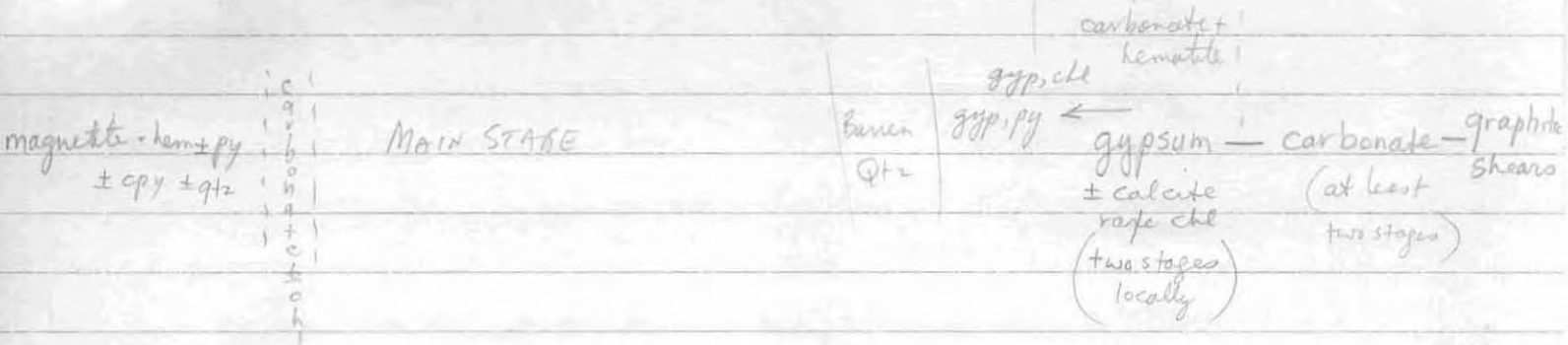
Substage 2

Carbonate (calcite in part) - several episodes

Substage 3

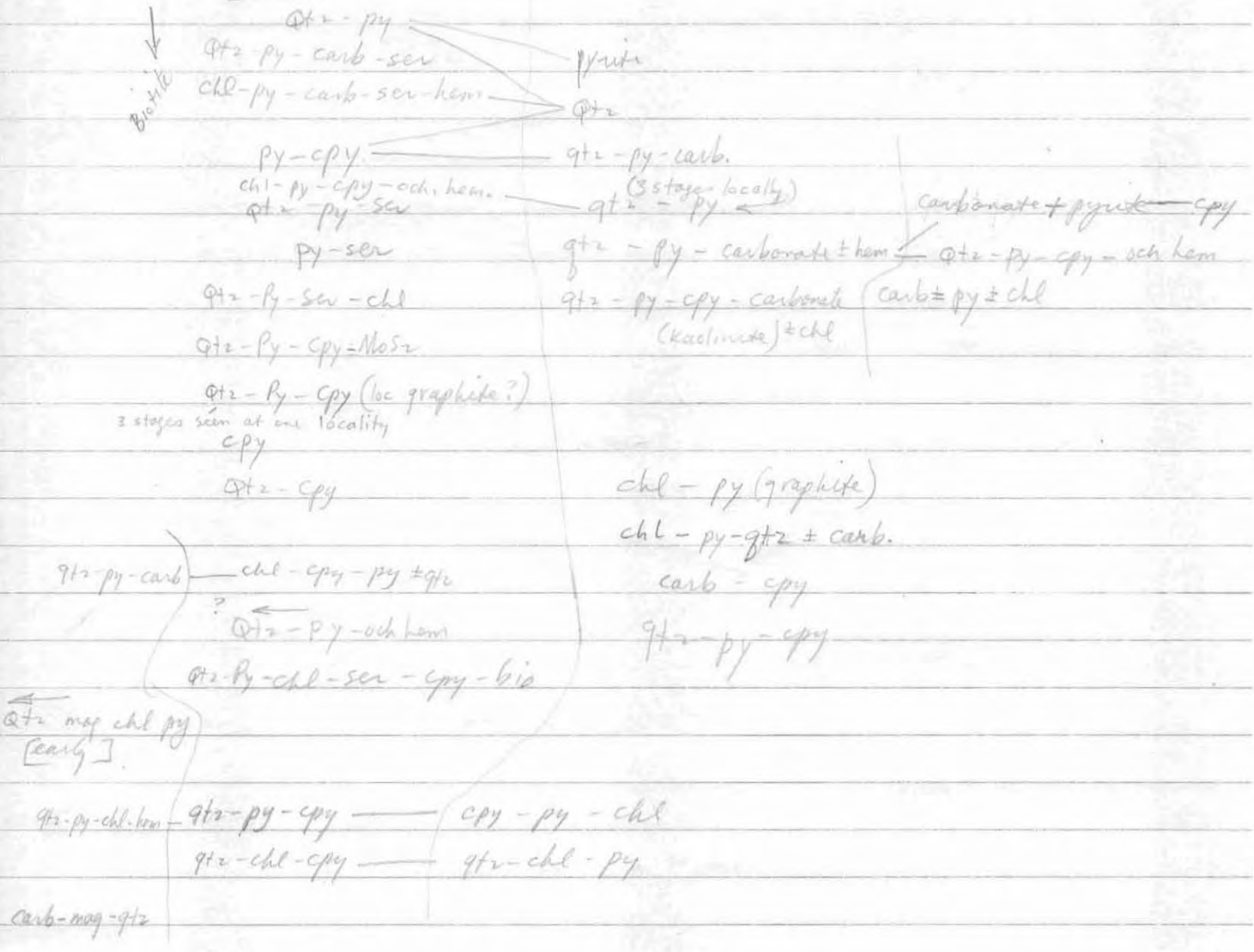
graphitic carbonate shears

X CUTTING AGE RELNS - SYNOPSIS

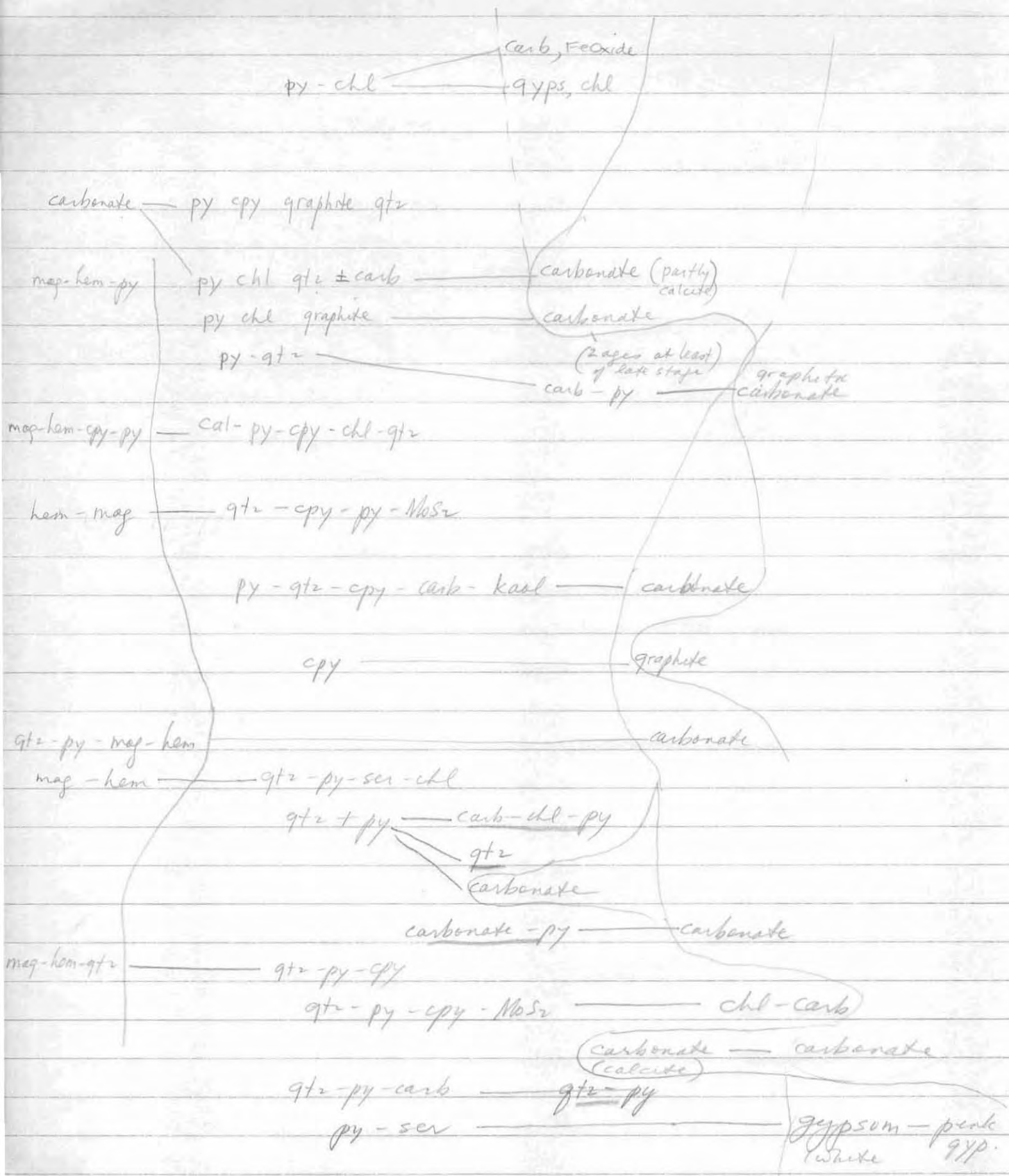


Gyp. seems to be with sulphides loc B4-4, 700'

Main Stage



do paragonize on
 Mineralogy of veins + fractures



qtz - py - och hem ——— qtz - py - cpy ——— carbonate ——— (graphitic carb shears)

py - cpy - chl ——— carb - cpy

qtz - py - carb ——— qtz - " - " - "

qtz - py ——— carbonate

py - cpy - chl - carb ——— gypsum ——— carbonate

mag - hem - gtz ——— qtz - py - cpy
qtz - py - chl - mag

qtz - mag - py ——— qtz - py - cpy ——— carb.

py - qtz - cpy ——— cpy - py - chl

qtz - chl - cpy ——— qtz - chl - py

cpy - mag - chl ——— carbonate - mag - gtz

qtz - py - cpy ——— qtz - py - chl, carbonate - hem,

carbonate ——— graphitic shears

py - chl - ser - cpy - bio - qtz ——— carb - hem ——— carbonate (colcite)

py - gtz - hem - chl ——— qtz - py - cpy

carbonate ——— py - gtz ——— py ——— gypsum
gtz

OLDEST

YOUNGEST

- ① carb
± cal, chl
- ② qtz
- ③ graphite
carb.
± pyalshear
- ④ py
chalco
± chl frac.
- ⑤ qtz py
± chl ser biot
± carb chalc moly
- ⑥ mag hem
± qtz chl
- ⑦ gypsum



by Ken Shannon

W FISH LAKE

74-9

py, chl
py, chl
carb

cut by
cut by
cut by

carb, Fe-oxide
gypsum, chl.
py, chalc, graph, qtz
kaol, carb

py, chl, qtz, carb
py, chl, graphite

cut by
cut by

carb
carb

73-15

~~py, chl, chalc, qtz~~

mag, hem, py, chalc
qtz, py, chl

cut by
cut by
cut by

cal, py, chalc, chl, qtz.
carb cal

~~py, chl, chalc, qtz~~

mag, hem, py
mag, hem, py

cut by
cut by

~~py, chl, chalc, qtz~~
qtz, py, chl
qtz, py, chl

qtz py chl
carb

cut by
cut by

2 ages
of carb

carb
qtz py chl

~~py, chl, chalc, qtz~~

hematite mag
py qtz chalc carb kaol

cut by
cut by

qtz, chalc, py, moly
carb

~~py, chl, chalc, qtz~~

chalc fracture

cut by

graphitic shear

73-6

py qtz	cut by	carb py
qtz py hem mag	cut by	carb
mag hem	cut by	qtz py ser chl
qtz py	cut by	carb chl py
qtz py	cut by	barren qtz
qtz py	cut by	carb
carb py	cut by	carb

73-9

qtz py chalco moly	cut by	chl carb
cal carb vein	cut by	carb stringers
mag hem qtz	cut by	qtz py chalco
qtz carb py	cut by	qtz py
py ser frac	cut by	white gypsum
white gypsum	cut by	pink gypsum
black cal white carb	cut by	carb stringers
carb py	cut by	graph carb shear

74-1

py chalco frac	cut by	qtz py carb
qtz py carb hem	cut by	carb py
carb py	cut by	chalco frac.
qtz py chalco (at least 3 ages)	cut by	carb stringers
hem py qtz	cut by	gyp + carb

79-2

qtz, hem, py
chalco, py, frac
qtz py ser
py chalco frac

cut by
cut by
cut by
cut by

carb
barren qtz
graph carb shear
barren qtz. stringers

79-3

hem py chl carb ser

cut by

qtz

79-6

qtz py

cut by

carb

79-7

chalco qtz

cut by

carb

79-8

qtz py carb ser

cut by

carb

79-9

py frac

cut by

carb.

73-¹⁵~~13~~

qtz py	cut by	gypsum, graphite, chalc , qtz
qtz py chalc	cut by	carb
graph cal carb gypsum shear	cut by	carb
qtz py (at least 3 generations)	cut by	carb (at least two gen.)

73-12

qtz py carb	cut by	qtz py chalc och. hem
carb chl	cut by	qtz py carb
qtz py chalc at least 2 ages		
chl py chalc och. hem	cut by	qtz py
py chalc qtz	cut by	carb

73-10

carb ^{youngest} graphite shear → carb → qtz py chalc → qtz py och. hem ^{oldest}		
M, Fe-oxides	cut by	carb
py chalc chl	cut by	carb chalc
qtz py carb shear	cut by	qtz py chalc chl
py chalc chl carb shear	cut by	pink gypsum
pink gypsum	cut by	carb
py chl mag qtz		
mag hem qtz	cut by	qtz, py, chl, mag
qtz mag py	cut by	carb
py qtz chalc	cut by	chalc py chl
qtz feldspar dike	cut by	py qtz chalc
mag hem qtz	cut by	qtz py chalc
py qtz mag	cut by	qtz py chalc

73-3

qtz py
qtz py
qtz chl chalco
chalco mag chl

cut by
cut by
cut by
cut by

carb
graphite carb shear
qtz chl py
carb mag qtz

73-1

qtz py chalco
qtz py chalco
carb
py chl ser chalco biot qtz carb hem
py qtz hem chl
~~py qtz hem chl~~
py ~~qtz~~ qtz
py frac

cut by
cut by
cut by
cut by
cut by
~~edge with~~
cut by
cut by

qtz py chl carb hem
carb
carb
~~qtz~~ graphite shears
carb cal
qtz py chalco
~~qtz~~
py frac.
pink gypsum

73-11

carb
qtz mag
chl biot py
qtz py
qtz py
qtz py

cut by
cut by
cut by
cut by
cut by
cut by

py qtz
gypsum
gypsum
py frac
gypsum
qtz