

821326

093F/03
Wolf

Rain — Meteoric Waters
Magmatic fluids.

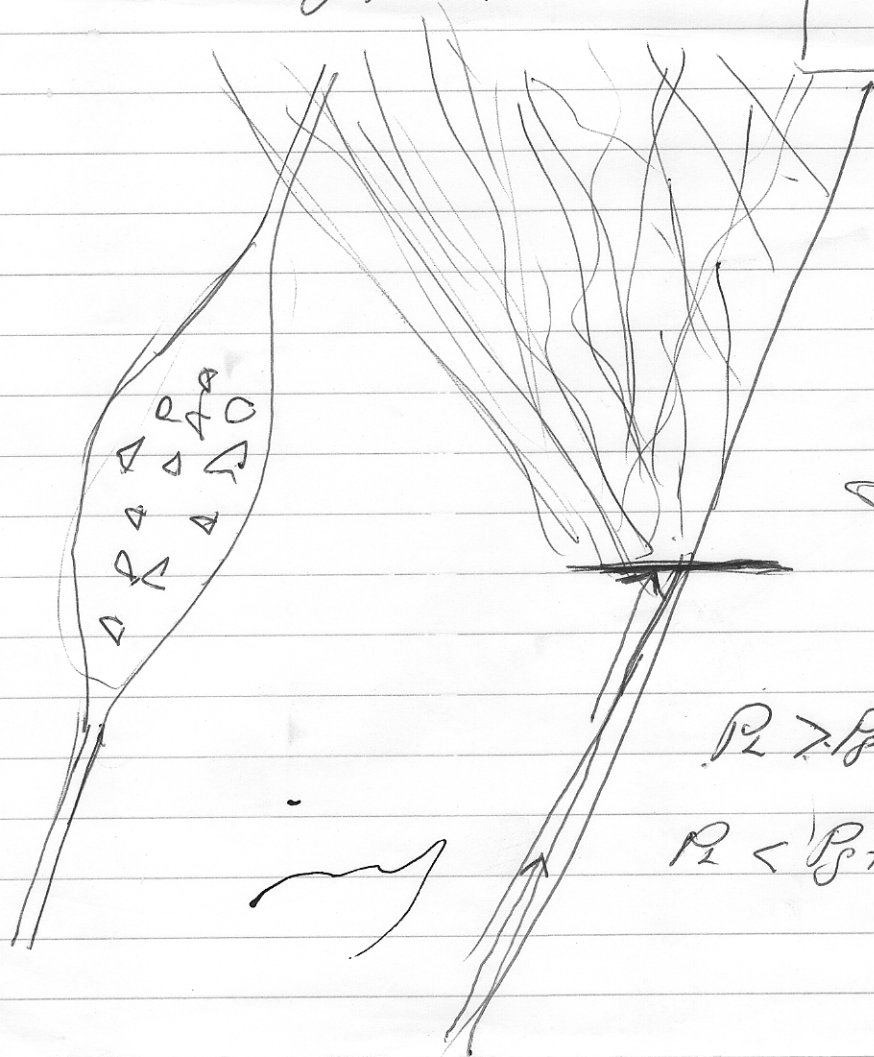
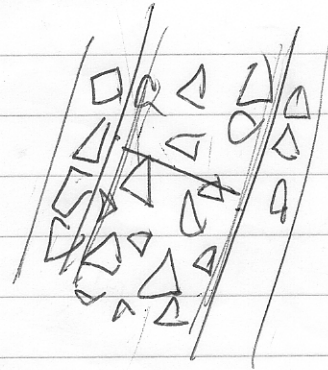
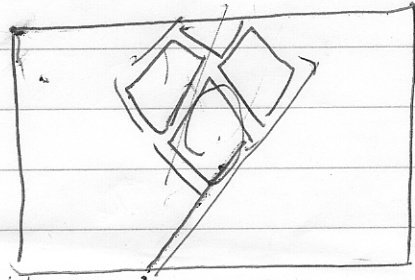
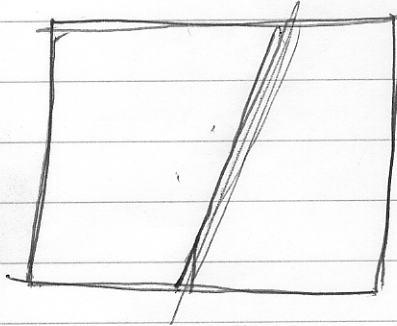
- Heat

- Plumbing

- Fluids

- Metals

Mechanism of precipitation.



$$P_2 > P_1 + T_1$$

$$P_2 < P_1 + T_1$$

EPITHERMAL. → Low Temp

↓
Precious Metals
< 1km. → F., Hg., Ba., Se., Sb., As.
Base metal

Volcanic Environment → Sediment

↓
Heat Source.

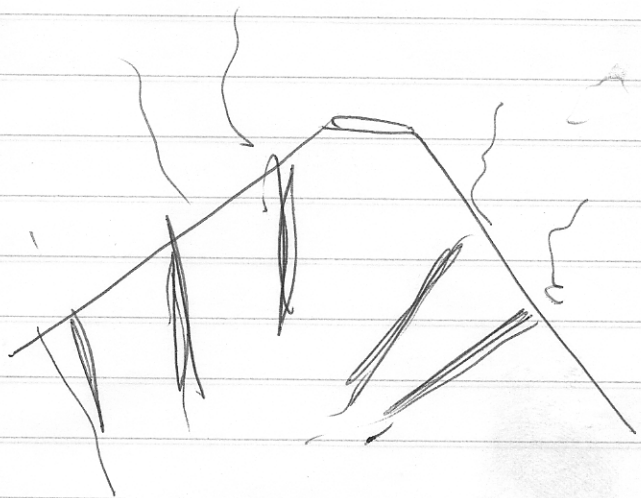
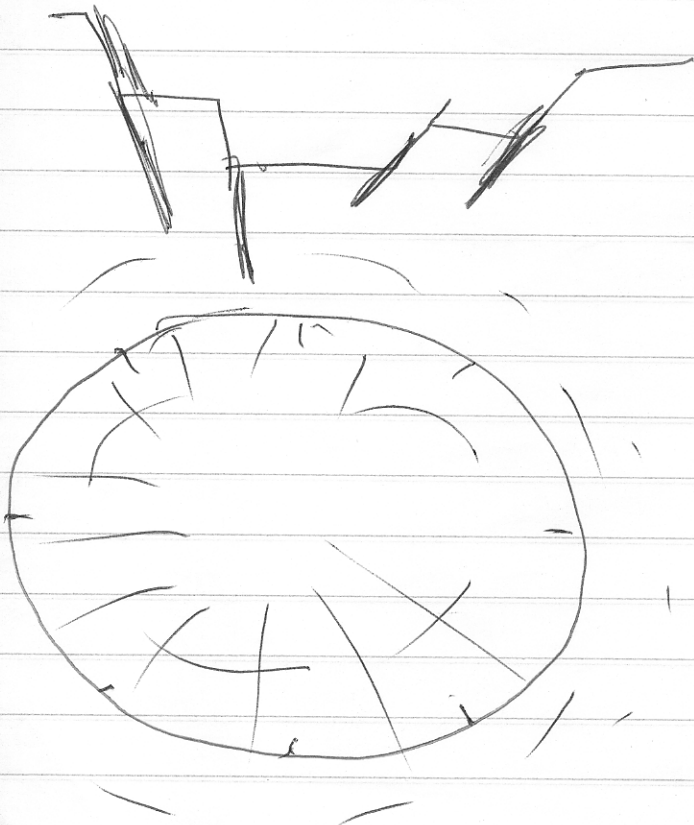
→ Volcanic Hosted

Quartz-Adularia-Sericite

+ low S⁻ (generally)

Acid Sulphate

High S.



Au

HSO_4^-

Cl^-

CN

Magmatic

>5% NaCl

H_2S
 SO_4
 HSO_4^-
 HS^-

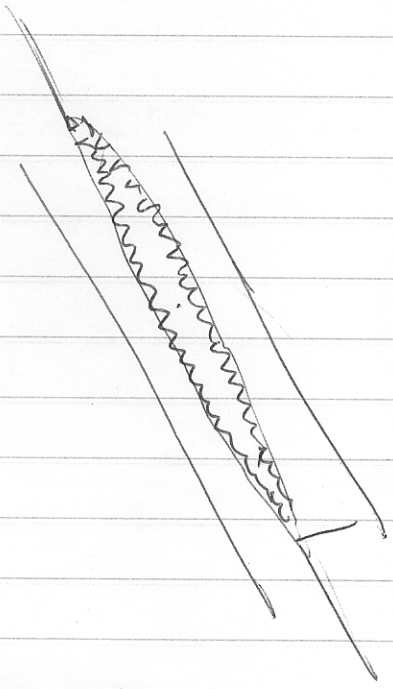
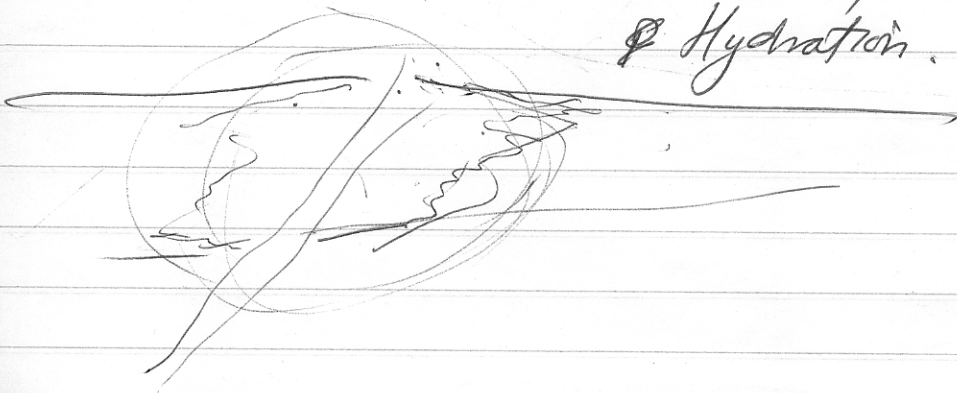
Boiling — Pressure

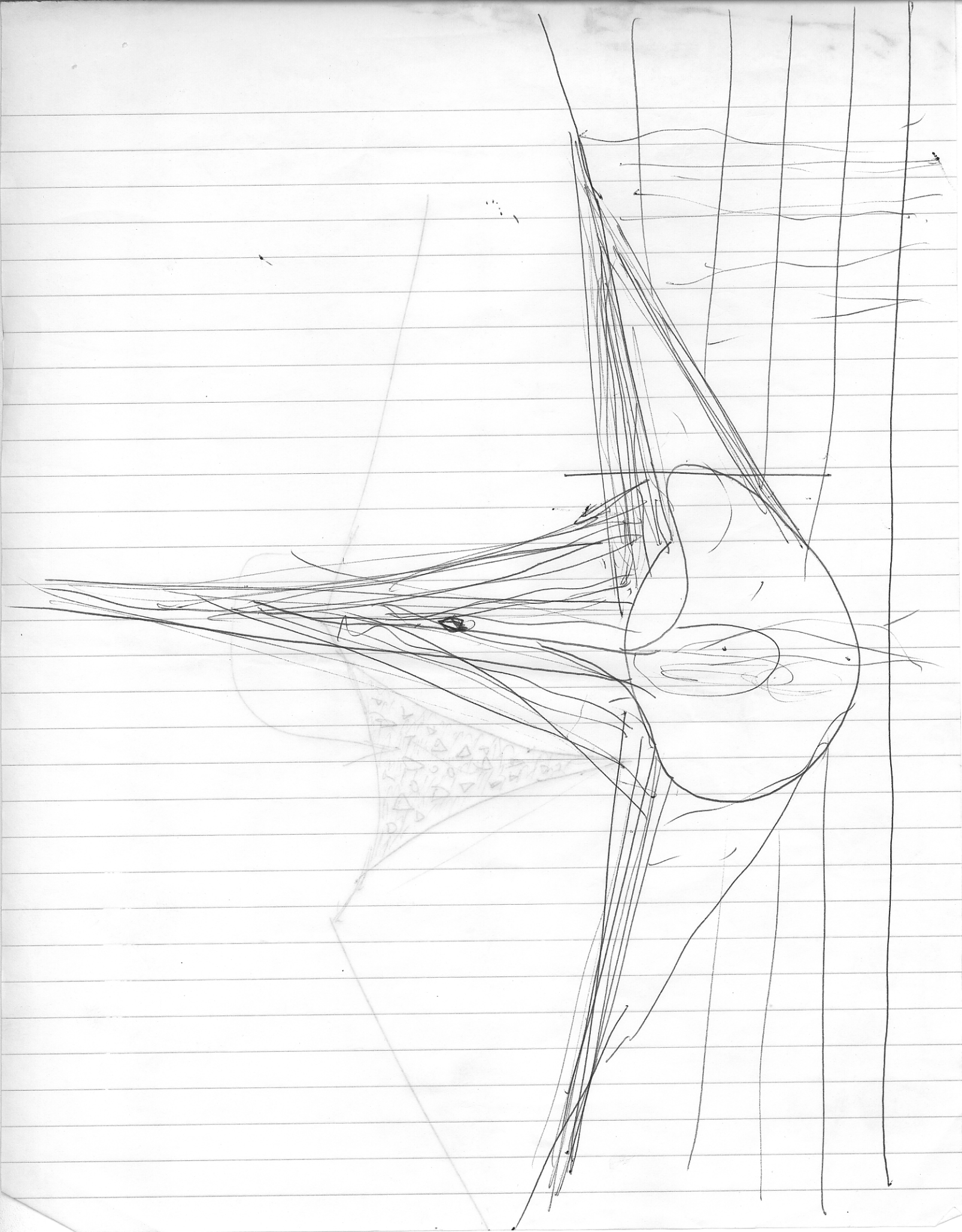
— Cooling

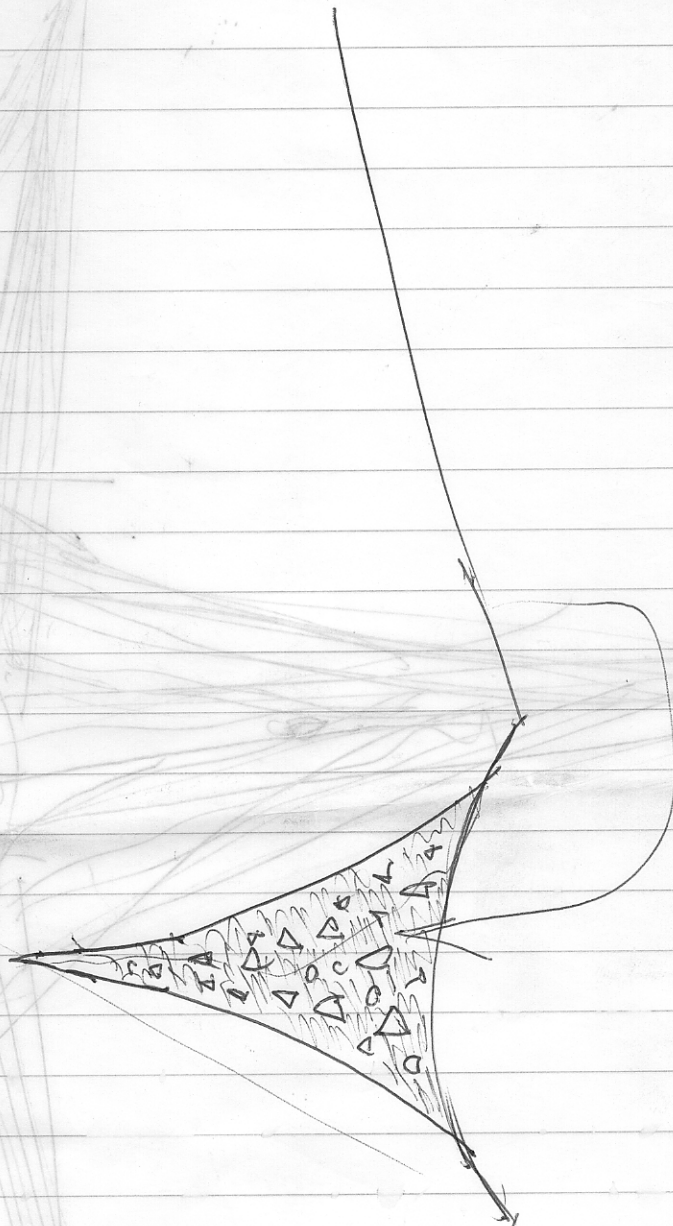
— Mixing. — $\downarrow T^\circ\text{C}$ Cooling \uparrow pH

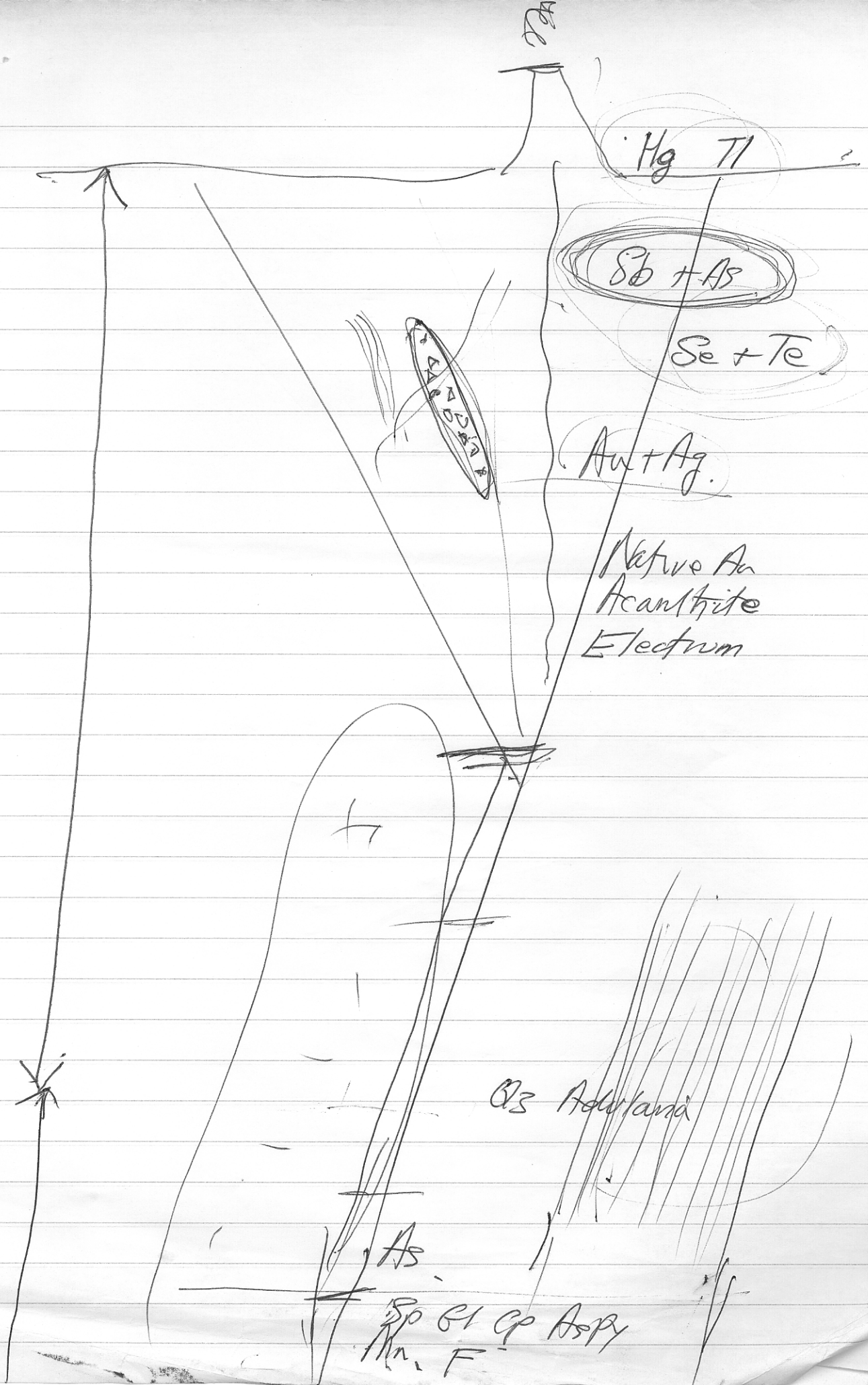
Wall rock reaction.

— Oxidation/Reduction Fe —
& Hydration.









Hg Tl

Sb + As

Se + Te

Au + Ag

Native Au
Acanthite
Electrum

S
A
S
S
A
S
A
S

As Adularia

As
Sb Bi Cu As Py
Mn F



Chlorite Epidote Calcite Pyrite

Plagioclase \rightarrow Epidote + Calcite
 Ferro Mags \rightarrow Chlorite