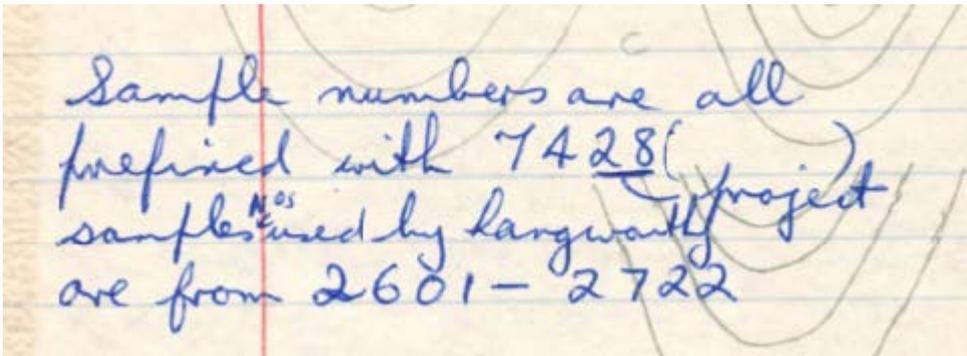# Tips for Alan Langworthy's notebooks

We have 2 of Alan's Antarctic notebooks in our collection. There are some parts in the first notebook (usually near the fold of the page) which are lighter than the rest and haven't been able to be scanned very clearly. I have adjusted contrast etc where I can to rectify this, but there are still a few pages where the text is hard to decipher. In those cases please just use the <unclear> tags and I'll see what I can decipher off the original notebooks when we validate them. Thanks.
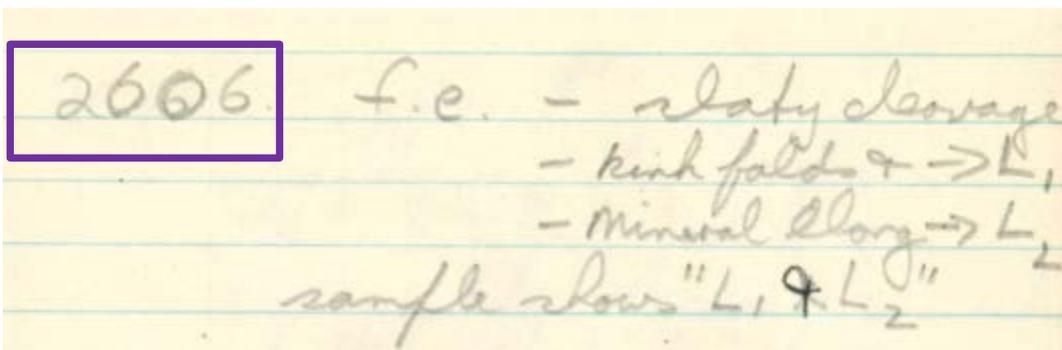
Alan provides some instructions at the start of his notebook about the systems he uses to record his observations.

Sample numbers
All of Alan's sample numbers are prefixed with 7428 = 74 [year] 28 [Antarctic program code]. The sample numbers range from 2601 - 2722

Please record these in Section 2 as:

Rock Sample Number =2606   and   Rock Store Number = 74282606

Further instructions on the system which Alan uses in his notebooks.

Name. Run / Photo 1973 A.L. ↗ (alt.)

Sample Nos.

POINT SYSTEM.

Nº   Sample Nº

DATE

**

LOC.   P+Nº / Run / Photo Nº $\left(3/CM9/050\right)$

PHOTOS.   Desc. or drawing.

Nº / Roll Nº   C / B/W

LITH:

STRUCT.:

ST.   True N+L (f.e. measured)

DIP.

LIN. Dirn & Pitch (f.e. desc.)

NOTES. : Homog, Isotropy., f. e.
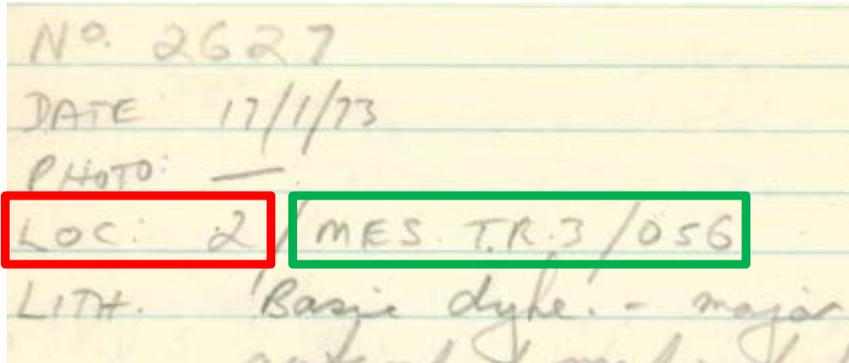Honotachi, Sym. Penetrative.

GEOMORPHOLOGY:

ICE NOTES:

Point/Location Number & Air Photo Runs

Alan records the Point/Location number at the start of the line beginning with LOC. The first number following LOC is the Point Number for Section 2 e.g.

Point # = 2   {see red box}

Air Photo Run = MES T.R. 3/ 056   {see green box}

Alan's notebooks demonstrate a strong background in structural geology. Structural geology is the branch of geology that is concerned with the form, arrangement and internal structure of the rocks. The Sn is used to describe foliation layers in a rock and the abbreviation 's' is derived from the French word for foliations which begins with an 's', n and additional numbers are algebraic notations to represent unknown numbers. Sydney Uni provides additional information on how the S_n is used to make geological maps, if you'd like to find out more – here's the link.
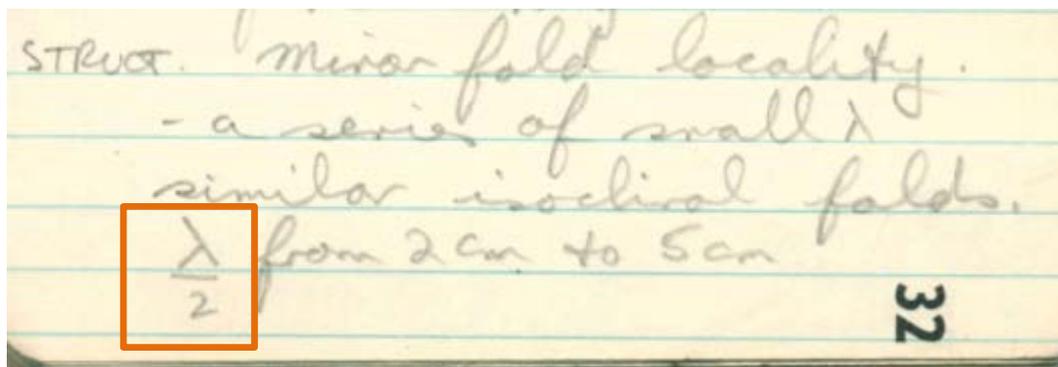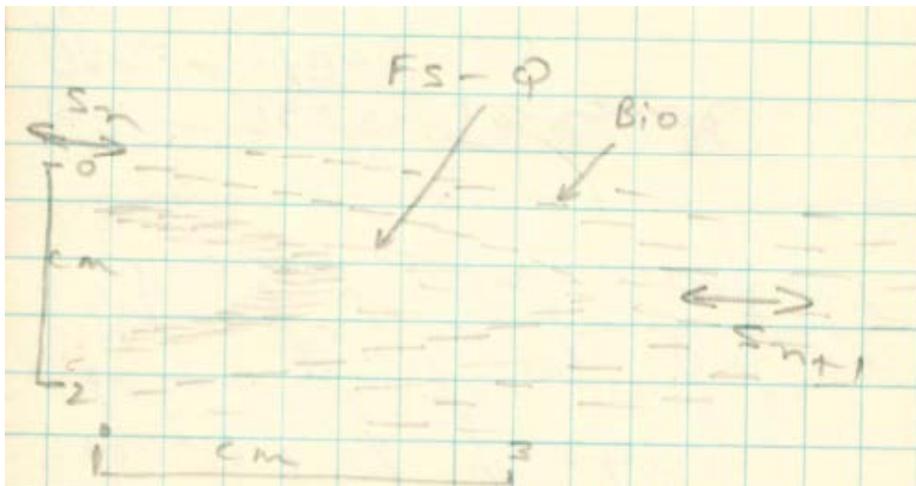
The fraction in the orange box relates to the fold amplitude and wavelength. The symbol above the 2 is the Greek letter "lambda" and in this fraction the 2 indicates the measurement of 2-5cm is of half of the wavelength.

Abbreviations

Some of the abbreviations used by Alan include:

Amph = amphibole
a.p. = axial plane
BIF = banded iron formation
Bio = biotite
Cpx = clinopyroxene
c.g(r) = coarse grain/ed
Diops = diopside
f.e. = fabric element ** Please note the full stops between the f & e means it's not the
        abbreviation for iron (=Fe)
Fe = iron
Fs = feldspar/ feldspathic
Ga = garnet
HNB/ hnbl = hornblende
Ksp = potassium feldspar
Ky = kyanite
Lin = lineation
Lith = lithology
Mu = muscovite
Opx = orthopyroxene
Peg = pegmatite
Plag = plagioclase
Pyr = pyrite
Q = quartz or quartzite
Sch = schist
S_n = formula for metaphoric foliation
s.s./ ss = sandstone
st = strike
struct = structure
sym = symmetrical/ symmetry
Tourm = tourmaline
X = crystal or cross (as in cross section)

Symbols
  II or //   parallel
  L   right angle to
  ->   up to (-> 2cms)
  x   by (3m x 2m)
  +- or +/- or ±   plus/minus

Please see Marie and Ross Davidson's excellent list of minerals and place names in the tutorial links section for extra guidance.

The usual Antarctic geological words are used by Alan such as foliation, concentric, discordant, veins, mineral, gneiss, outcrop, lineation, bedding, surface, layering, intruded, bands, dykes, definition, plunge, parallel, orientation, striking, homotactic, mafic, and magnetic.

Alan's 'p' and 'f' look a bit similar, so if a word isn't making sense with one, try the other.

Thanks very much for all your work with the project. It is greatly appreciated! Jane