

CENTRAL CUMB.

Lake Dist., Caldbeck,
Penrith, Carlisle, etc.

WFD-NT (1948) = WFDavidson & NThomson "The N-Wern Naturalist"
(1948), 23 pp 136-154

Day FH (1928) Trans Carlisle Nat Hist Soc 4 66-79
"Some notes on the minerals of Caldbeck Fells"
Includes wulfenite

1" 82

ADDACOMB HOLE

Cumb.

4 mile or 2 W of Comm. TSPZ

TGP Ziemia 1973, 1974, P.W. Comm.

Tourmaline var. schorl; pyrite, a little
blende.

1" 82

NY 2916, 2917, 3016

ARMBOTH, St Johns Castlerigg & Wythburn, Cumb."The Lake District" (1982) (Cumb. Geol. Soc., Field notes) ³⁵⁻₃₉

Armboth Dyke, [NY 2916 2917 3016] NW-SE,
 stepped by faulting, in quartz-porphyry
 w. "large" phenocrysts of transparent quartz
 & pink orthoclase in a matrix of orthoclase
 & oligoclase - pink or grey; with patches
 greenish chlorite. ^(→ 1 cm)

At [299 172] marginal dyke rock has
 feldspar phenocrysts w. some pyrrhotite
 and garnet. At [303 166] a fault is
 mineralised w. calcite.

R. Starkey (1998) BMSN 90 9-13. In 1992, B. Young
coll. " β -quartz" from the Armbrook Dyke.
[Does he mean bipy qtz which may have
misidentified as β -quartz - XRD evidence required
that not inverted - low ΔH of inversion!]

NY 316 331 → N

ARM 0' GRAIN, Mungrisdale, Cumb.

Next stream from N, to W of Brandy Gill

Roy Starkey, Priv. Comm. (2/85).

garnets in hornfels near ~~junction~~ ^{contact} on
w. gabbro just N of junction with
grain gill. Further upstream
blocks from valley side (E side)
collapse (along N-S) vein, & near
microgranite outcrop, have moltramite
w. tiny greenish-yellow "barrels" of
"campylob" in vein quartz.
[Near Ab 316 333]

tiny bipyrr
found by Middleton (1983)

Rothwell & Mason (1992) UKJMM 11 30-40

Wulfenite, small yellow plates w.
pyromorphite on quartz at the moltramite
site (317 333). - Cooper & Stanley (1990)

RSN('06) 49 32 Dgreen Field trip. Micro-xl moltramite
smudges of pyrom-group. Cellular "limonite"
[goethite]-stained quartz Abundant dissem
sulphides exposed ~ 25 m downstream.
→ NOT BLUE-INDEXED

1" 82

NY 14 42

ASPATRIA, Cumb.

B. Young, Priv. Comm. (7/88) Millerite
in ironstone band in coal
measures in coal mine.
[Perhaps mine at 162 437?]

B. Young & ^{PHA}Nancarrow (1988) J. Russ Soc. 2(1) 5-7
"Millerite from the Cumbrian Orefield"
[Quoted in D. Green et al, UKJMM (1993) 12, 22]
Millerite from OUGHTERSHAW ✓ OPENCAST
near Aspatia, near Oughterside, NY 11 40
{OS 1" 82 - "Oughterside 11 40?"}

1" 83

NY 386 227

BACKSIDE, QUARRY, Matterdale, Cumb.

BALLIWAY RIGG, Roughton Gill, Caldbeck, Cumb (I)

See also ROUGHTON GILL MINE, etc.

vein exposed - see 1923 plan of old shaft.

AWOK, Priv. Comm. Leadhillite; caledonite (Neumann,

6/49); pyromorphite; plumboselenite;

hydrocerussite (AWOK 4/50); rosasite (MM 31
501) at outcrop of S vein & 60 fm level;

MM 31 813 Powdery jarosite, with beaverite,
bendantite & chrysocolla, in chalcedonic
quartz.

MM 423 (1960) Outcrop of main S vein of SE flank
of Balliway Rigg: carminite in cavities
in quartz, with bendantite & mimetite;
bendantite also with decomp. galena,

cerussite, chrysocolla, jarosite, plumbojarosite,
beaverite.

RSWB et al. 12/8/62. Vol II page 107. In canyon, ~~near~~
above Roughtongill mine, line of dumps. On
dumps & in stream bed: linarite;
galena, chalcocite, malachite, barite, quartz,
cerussite, good pyromorphite; ?psilomelane.

WFDENT (1948) THIEF GILLS [^{counted} near NY 298 336]: Many of the
characteristic Roughtongill mins. occur in these gills,
but much pyromorphite is distinctively sulphur-
yellow, botry., usually around a galena nucleus
or coating hollow casts of former cerussite xls
Linarite, caledonite, hemimorphite, brochantite - a quartz outcrop
vein with ^{pyromorphite} ^{bot manganese}

BALLIWAY RIGG, Caldbeck, Cumb. (II)

MP Cooper, Priv. Comm (6/88) Mattheddleite
has been found in upper
Roughton Gill ie above the
water fall

MP Cooper, Digreen & RSWB UK Journ Mines & Miners 1 [5] (1988) 21
Mattheddleite, one spec (Dig collection) with
minute xls w. caldonite & a leadhillite-group
mineral from waste from ancient workings on
outcrop of Roughton Gill S. vein in higher
Roughton Gill, AT NY 301 339.

D. I. Green, MinMag (1989) 53, 653

Scotlandite in situ in expos. of R. Gill S. Vein
on E flank of B. Rigg at 3006 3383 in v. ox.
galena, in cavities, ass. w. caled, annarkite,
leadhillite & mattheddite

BMS News (9/95) 42 3. "HIGHER ROUGHTEN GILL"
wulfenite (Andy Cartleton)

D. Green et al (2008) J. Russ Soc., 11, 3-28. Full details,
photos etc.

(Acanthite: storage product ex Ag.), anglesite,
aertrchalcite; (azurite doubtful), bariopharmacos,
baryte, (beaverite - ? [AWGK]), beudanticite,

BALLIWAY RIGG, Caldbeck, Cumb. (III)

bindheim, bornite, bourmonite? brochant,
calcite, calcedonite, carminite, ceruss,
cesarolite, chalcopyr, chenite ("chrysocolla"
= Cu-silica gel), cinnabar, connellite, copper,
corkite, coronadite, covellite, cryptomelane,
cuprite, dolom, galena, goeth, haem, hemimorph,
hydroceruss, hydrozinc, jaros, kintoreite,
lanarkite, leadhillite, lepidocrocite, linarite,
malachite, manganite, mattheddleite, mimetite,
mottrocemite, phosphohedyphane, plumbogummite,
plumbojaros? ("psilomelane" = other species), pyrite,
pyrolusite? pyromorphite, quartz, redgillite →
(? or new ^{dimorph} species) montetrisaite (IMA 2007-009),

romanechite, rosasite, scorodite, scotlandite,
segnitite, silver, sphal, sulphur, suscannite,
(tennantite? doubtful), tenorite, (tetrahedrite?),
wulfenite.

D. Green, I. Dassetk (2013) R. Soc. NewsL. 62, 29-31
Survey of B. RIGG part of ROUGHTON GILL.
New are minute xls of ancetase &
arseniosiderite, only vis. through micro.

1" 83 NY 335 295

BANNERDALE LEAD MINE, Mungrisdale, Cumb.

See also SADDLEBACK ^{OLD} MINE; also BANNERDALE "Kenwick".

SRMRGB II (1915)

Graphite at
Bannerdale mine, under Bannerdale Crags, NE of
Saddleback.

WFD & NT (1948): Massive blende; chalcopysite;
galena; baryte; chiastolite in slate; a
little graphite.

TGBZ, Priv Comm, 7/73 & specs exam'd by RSWB, 10/73:
3 levels up crags at 335 295, and one,
with graphite in quartz, near 335 292-3.

Middle of the 3 levels is the main one, with a stope,
and has a pocket of galena, sphalerite, and
chalcopyrite, altered (post-mine) to linarite
micro needle crusts & micro sprays of blades
with brochantite, small amounts langite,
small amounts micro-sprays of beautiful
hemimorphite xls; v. pale whitish-blue
flow-surface hydrozincite; some cerussite,
sooty covellite; colourless rods pyromorphite
or mimetite ~~with~~ on cerussite. ~~Good~~ Malachite
in a small pocket. Much yellow powdery
?jarosite, and some in yellow micro-crystals
with red patches [poss. benduntite + carminite!!]

" 1" 83 NY 34 29

BANNERDALE, Keswick, Cumb.

See also SADDLEBACK MINE, Mungisdale; BANNERDALE LEAD MINE

TMM (1868), 54: Graphite.

TGP Ziembra, Priv Comm 5/72. Sagenitic rutile,
colourless to brownish [ident RSWB] in quartz
loose on path near NY 35, 299. Probably
glacial transported material from higher
up the dale.

TGP2 Priv Comm 22/9/72 Tourmaline, found
by Geol Surv. according to Mr Wodge (of
Geol Surv, Leeds).

~~FOP2 Riv Com 7/73. In main Bannerdale level
(with stope). Pocket of galena sphalerite &
chalcopryite altered (post-mine) to
linarite (?) micro needles; small amt
beaut micro-sprays hemimorphite; v.
pale whitish-blue flow-surface of
smithsonite. Good Malachite in a small
pocket~~

~~TO SADDLEBACK M. platy white~~

To N of B. MINE, rutile at 333 297, in scree above 3-vein
junction (a N-S Pb vein, an EW Ba/Qz vein - a ca E-W high temp
qtz-mica vein running up crags - prob. source of the rutile)

Mine at 332 287 has nice botry psilomelane & is on
vein along stream course, with another pair of levels at
334 284 (traces chalcopry & green Cu mins) & a barren level at
3435 275 - on wrong vein?

1" 83 48,28 NY 4 2

BARON CROSS QUARRY, Stainton, Penrith, Cumb.

Rayners Cat. (1960). Aragonite

WFD & NT (1948) Aragonite, fine xls, up to 3-4 ins.
in the l'st., with calcite xls. & unker
["limonite"]

1" 82

NY 233 217

BARROW MINE, Uzzicar, Above Derwent, Cumb.

See also STONECROFT M.; NEWLANDS

Postlethwaite (1913). On YEWTHWAITE vein. Some work on NW side of hill near top, but most on SE side, top & bottom. 300-400 yrs old. galena; cerussite

T. Eastwood, N-F (1959), 158. With sections. Abandoned ca. 1890. Lode split here into two branches. To W - ~~SAND~~ SANDY VEIN, where silica is sandy. To E - BARROW LODGE, where silica is a cement. galena; some blende.

WFD & NT (1948) galena; blende; cerussite; pyrite; pyromorphite; hydrozincite

Stanley CJ (1979) PhD Thesis Aston

Boulangerite & ullmannite, minute
inclusions in galena, as well as: 2

Stanley CJ & Vaughan DJ MU (1981) 44 257-60
Boernomte & nat. antimony intergrowths
in galena, ident in polished sections
coll. from NY 2320 2180

1" 82

NY 219 263

BECKSTONES MINE, Above Derwent, Cumb.

See also THORNTHWAITE MINES.

Beckstones. 219 263

Postlethwaite (1913).

BELL PIT, Caldbeck, Cumb.

See OLD BELL PIT.

1" 82

NY 20 37

~~NY~~
C

BIRD HOUSE, Bewaldeth & Snittlegarth, Ciemb,

Small baryte mine, with some
copper, at 201 376

1"82

NY 30 35

BIRK GILL, Caldbeck, Cumb

AWGK's map shows old levels in
Birks gill, at 301 358 and 2 near
306 354. No species noted.

182

NY 32 12

BIRKSID GILL MINE, Wythburn, Cumb.

OS 6" map has "Copper mine" at 3295 1260
in Birkside Gill, with "Old Levels" below
at 326 1265(?) and at 3275 1250

1" 82 NY 24-5 18

BLACK CRAG VEIN

Above Derwent, Cumb.

Postlethwaite (1913) Crosses the valley [of Borrowdale,
near Grange] and the N-S (lead) veins, near
SALT WELL MINE

Black Crag 2418

BLACK DUB or MOSS, Caldbeck, Cumb

See CARROCK Cu MINE

1" 82

NY 214 141

BLACK STAR QUARRY, borrowdale, Cumb.

1" 83

Near NY

340

358

BLEA GILL ADIT, Caldbeck, Cumb
= SAND BEDS EAST MINE [qv]

NOT = The Blea Gill betw. Roughton Gill & Mexico mine.

RswB (3/67) 5 73. Found partly collapsed
adit, small dumps near 340 358, beside
track, near crossing of Blea Gill.
Poorly mineralised. Some baryte;
traces pyromorphite.

? = Howthwaite Level

1" 82

NY 315 260 (?)

BLEASEGILL MINE,

Cumb.

See also BLENCATHRA MINES, Threlkeld.

Postlethwaite (1913):

1" 82

NY 2972267

BLENCATHRA MINES, Threlkeld, Cumb.Postlethwaite (1913):

large N-S veins; chalcopyrite;
malachite; galena; cerussite; blende; pyrite;
baryte. GATE HILL M (old); GLENDERATERRA, at

* 297272" is in metamorphic rock, not granite;
 297274? WOODEND; old, working up to 1863; BLEASE GILL M;
 SADDLEBACK OLD mine.

BMSN (2000) 55, 9, 10. D. Green → BMS coll. 2175:
Linacite

" 1" 82

23 12

BORROWDALE, " ~~Keswick~~ Cumb.

TMH (1868), 54 : Actinolite; graphite.
(Borrowdale, "Keswick", Cumb.)

1" 82

NY 230129 - 233124

Seathwaite.

BORROWDALE GRAPHITE MINE, Borrowdale, Cumb.T. Eastwood NF (1959), 172.Graphite (locally "wad") assoc.
with an altered diorite dyke in Borrowdale Ashes.Gr. in strings & nests in diorite. Worked by
levels. Some impure graphite on dumps.Postlethwaite (1913), 112.

Plan & section given [See Plans File].

WFD & NT (1948)

still

collectable

Massive & nodular graphite

BOWDERSTONE QUARRY, Borrowdale, Cumb.

See QUAYFOOT QUARRY

1" 82

NY 11 15

BOWNESS KNOT, Ennerdale, Cumb.

Eastwood et al (1931) 54-5 Pegmatite represented by one unlocated vein, known only from fallen blocks on S side of Bowness Knot. Is a coarse quartz-albite rock with abundant hex. xls of apatite to $1" \times \frac{1}{4}"$.

? Blue quartz in scree, S side of Bowness Knot.

1" 82

Around 298

354 NY

BRAEFELL MINE, Caldbeck, Cumb. (I)

See also OLD BELL PIT, ROUGHTONGILL M; MEXICO MINE

AWGK, Priv. Comm. " = MEXICO MINE of Greg & Lettsom "On dumps. Trace linarite; pyromorphite,
chrysocolla, malachite, leadhillite,
lanarkite, hydrocerussite; anglesite (9/50).TMH (1868), 54 "MEXICO MINE", ~~Nesket Newmarket~~ "In
Carb. lim. Anglesite, cerussite, linarite,
malachite, mimetite, molybdenite,
pyromorphite.
[NB = ? Roughtongill M]

RSWB et al. 12/8/62 (Vol II, p. 108); 11/7/64 (IV, 135). Line of old
dumps & collapsed adobe down hillside: Quartz;
pyromorphite; malachite; good cerussite; a little
limonite; a little anglesite; quartz matrix.
MPC spec → RSWB for IR 5/87. White silky crust on qtz = hemimorphite

W.T. Shaw (1970) Map, p 37. Account, p 59-60
WNW Lode, exposed by husking, of quartz, some
galena, pyromorphite, traces malachite.

2 levels along lode ~ 10 fm apart, upper ~ 10 fm
below outcrop in husk, where rise to surface.

Long fallen in; no plants exist; dumps suggest
fairly extensive

RSWB (MPC) IR / topog of material off "86L-20" (MPC 23) on loan to
MPCooper from RJ King, coll RJK ~ 1940's, label
stuck on so should be genuine BRAEFELL material
= mattheddleite.

BRAE FELL MINE, Caldbeck, Cumb (II)

MP Cooper, D I Green & RSWB (1988) UK Journ of Mines & Minerals 1 [5], 21. Mattheddleite on two specs (i) Coll RTK, in NM Wales referred to above, with ceruss epytrom on leadhillite (ii) Coll AWGK, in BM(NM) sharp xls on lanarkite & leadhillite

T. Bridges (& D. Green) Field notes, (expanded). RSN(105), 46, 34-35. Also:- barite (rare, blades); ankerite, chalcopy., bindheimite (pdr yell confirmed); goeth. limon.; brachantite; covellite; caldonite rare; sulphur (? - 1 in galena); motttram (checked); mimetite (confirmed); sphalerite

Bridges & Green (2008) J R S 11, 48-50. Superg. baryte

Above Derwent, 1" 82

NY 23 23

BRAITHWAITE, Comb.

See also ~~BARROW MINE, FORCE CRAG, THORNTHWAITE MINES,~~

BM: vg platy cerussite.

BRAMCRAIG QUARRY, St. John's Castlerigg, Cumb.

Microgranite (!).

RSWB, TGPZ, P.T. 11/6/72calcite. [$G < CHBr_3$ e only]
vv slightly > calcite
bx Rut. Car

Recently abandoned quarry in igneous rock. A ca horizontal structure ca 5-10 ft above quarry floor has quartz with clusters of clear fine xls in cavities, with ~~zoned~~ minor chalcopyrite xls, espec. in NE part of quarry near 3205 2205.

In the screens of Wantthwaite Crag above the quarry, epidote veins, with

quite good xls, in dark grey matrix
with pyroxene phenocrysts.

or BRANDLEY

1" 82

NY 251196

BRANDLE HOW, LEAD MINES, Above Derwent, Cumb. (I)

See also OLD BRANDLE HOW MINE.

OS 2½" map shows "Brandlehow (Lead Mines) (Disused)" at above loc.

Postlethwaite (1913). Cerussite - "Brandlehow Vein"
"Brandley or Brandlehow Mine" Very old. Working 1889.
Galena; cerussite; blende; pyrite; "manganese";
baryte; gold. N-S Vein. Also OLD
BRANDLEY MINE nearby.

T. Eastwood N-F (1959), 160. Quartz; galena; blende.
Main wks nr. lake. Adit ca. 250 ft OD. Main
wks approached by short x-cut near shore.
ENGINE Sh. nearby. Reopening unlikely. Closed ca. 1890.

KCD; SRMRGB 4 "F" (1952), 15. Mr W.C.C. Rose discov'd ribs of
amber fluorite up to 12" wide in the Brandlehow
Vein. [See OLD B. M.]

WFD ENT (1948). Galena; blende; cerussite;
dolomite; pyrolusite; baryte.

W.T. Shaw (1970) 104, Section, p105 - "BRUNDHOLME
MINE". Abandoned ~ 1880, reopened
early 20th cent. Shaft 26 fm deep below
shallow adit, levels off at 8, 16, 24 fm below
adit. New shaft sunk, above &
near adit level, event. → 35 fm below adit.
V. wet mine. Lead ore. Abandoned

BRANDLEHOW MINES, Above Derwent, Cumb. (II)

"The Lake Dist." (1982) (Cumb. Geol. Soc., Field notes) 68
galena, cerussite, sphalerite, pyrite,
fluorite, baryte, quartz, on tips.

BRANDLEY MINE, Above Derwent, Cumb.

See BRANDLEHOW MINE.

BRANDY GILL, Mungriaddale, Cumb.(I)

See also CARROCK W MINE; DRY GILL MINE

TMH (1868) 53; Pb mine. Apatite; bismuth; bismuthinite;
felspar; gilbertite; mica; mimetite; arsenopyrite;
molybdenite; pyromorphite; quartz, var. rock xl;
scheelite; talc; tetradymite; wolframite; "wolfram
ochre." (cf CARROCK W MINE)

↳ [Key: Ferritungsite or tungstite]

Rayners Cat (1960): Duftite; stolzite; mimetite;
malachite; bayldonite. (WFD, no doubt).

AWGK Priv. Comm. (1960): Three main locs 3/4 way up Gill
"A": Old level going in E, in granophyre much
altered near vein. Mouth obliterated; driven 1864-18
1870. Spongy quartz matrix. Cu minerals uncommon;
blende; mimetite common; lindgrenite in wall rock;
descloizite; mottramite; vanadinite;

jarosite; wulfenite.

"B": Dumps on W side - intersections with granitic vein in situ. Outcrop of vein blasted out by AWGK. Galena; chalcopryite; arsenopyrite; no blende; grey-brown massive mimetite plus mottramite; bayldonite (9/47); linarite; caledonite; anglesite; beaverite, yellow powdery aggs; beudantite; jarosite; pyromorphite; "calcioduftite" (8/49); stolzite (8/49); arseniosiderite; carminite. [= calcian duftite]

"C": Small dump from old trial level on W side, now obliterated. Only baryte and psilomelane.

AR MM 321 (1936): Wulfenite (coll. 1933) "A".

AWGK MM 289 (1956): Descloizite^{*}; mottramite; vanadinite; from "A". "B"- mimetite + mottramite.

* v. infra (IV)

BRANDY GILL, Mungrisdale, Cumb. (II).

AWGK & Hartley (1955) MM 10 723-b Lindgrenite, wulfenite etc

AWGK MM 499 (1957): "B": arseniosiderite.

AWGK MM 813 (1957): "A": jarosite. "B": jarosite in
vein outcrop.

AWGK MM 423 (1960): "B": Carminite, mostly altered to
beudantite, in vein outcrops, assoc with beaverite,
mimetite, & bayldonite, in quartz.

→ All AWGK reports suspect

WFD all the stolzite from the intersection
of passages. — WFD; R. Sutcliffe

~~1965/5 Bayld (18) ceruss, mimet, mal;
qtz; arsenicalite
both in pyromet.~~

WFD & NT (1948): Wulfenite, tiny yellow xls, on dumps

$\frac{2}{3}$ way up; arsenopyrite; molybdenite; pyrite.

At the same part of the gill, high up on the W slope, a dump from a small x-vein: - galena; chalcopyrite; linarite; pyromorphite; mimetite; malachite; cerussite; ankerite; botry green duftite, new to Britain. Stolzite

(BM xray) with the duftite; quartz; "The latest report from the BM is that all the Br. Gill material is duftite; Sandbed - no duftite, all bayldonite"

Near head of gill: botry psilomelane

Near foot, beneath the bank, close to the bottom waterfall & on the E side, a vein outcrop has impure scorodite.

BRANDY GILL, Mungrisdale, Cumb. (II).

AWGK & Hartley (1955) MM 10 723-6 Lindgrenite, wulfenite etc

AWGK MM 499 (1957): "B": arseniosiderite.

AWGK MM 813 (1957): "A": jarosite. "B": jarosite in
vein outcrop.

AWGK MM 423 (1960): "B": Carminite, mostly altered to
beudantite, in vein outcrops, assoc with beaverite,
mimetite, & bayldonite, in quartz.

→ All AWGK reports suspect

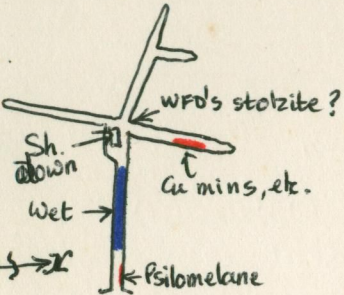
WFD all the stolzite from the intersection
of passages. — WFD; Rutcliffe

~~1965/5 Bayld (18) ceruss, mimet, mal;
qtz; arsenicalite
both in pyromet.~~

BRANDY GILL, Munguisdale, Cumb. (III)

Raub, PT, etc. (4/67) 5 78, 79, 84

to adit on W side ["B"]



Dug out entrance
From adit roof near
entrance, botry. psilomelane
on quartz. From RHS branch (see plan)
gozzany qtz with alt. galena, much
bayldonite (IR); cerussite; mimetite (IR)
malachite; chalcopryite; ~~azurite~~;
"copper pitch"

$\downarrow \text{Cu}^{2+} \text{Ca}^{2+} [\text{Zn}^{2+} \text{CO}_3^{2-}]$
"deviline" ^{abs}
BUT IR = malachite

Amer Min (1982) 67 855. Ingodite [See Carrock W Mine]

Roy Starkey Priv. Comm 11/85 Neddyphane vls!

MPCooper Priv Comm 26/8/86 Beudantite

(BM, X-ray) in float quartz at top
of Brandy Gill

GR, 1962 From dump "B" NY 3224 3881, on W.
bank: "Q 32", light green microxt. crust on
iron stained quartz. IR: Unident ars e/or van
OH. BM Xray 20628, 3306F - "no match with
standards" (1981). PJ Dunn (1988) = "duftite"
RSWB IR = that of MPC 52 from Brandy Gill.

BRANDY GILL, Mungrisdale, Cumb (IV)

Rothwell & Mason, UKJMM (1992) 11 30-40

Wulfenite, from dump in centre
of gill (AWGK). A vein outcrop on
E side, just N of the dump has small
"honey-yellow" xls of stolzite

seen. — RSN (1996) 28

On the way up Brandy Gill, one of the side
turnings was explored and I found some cinnabar. (?)
The Brandy Gill dumps are pretty barren. It is
difficult to find even the more common minerals
like bayldonite and malachite. No doubt they are
there if you dig into the dumps (and tidy up
afterwards!).

[How do you know it
is cinnabar? Plenty
of ~~deep red~~ bright
red iron oxides in
the area]

GR. BMSNews (1999) 52 14-15. AWGK's

"descloizite"
in BM $\equiv$ Mammoth M, Ariz. material

1"82

N4 26 32

BROCKLECRAG, Udale Fells, Cumb.

GS map: Quartz veins, at 264 327, near
Brocklecreag.

BRUNDHOLME MINE, Above Derwent, Cumb.

See BRANDLEHOW MINE

Mangrisdale ph. 1" 82 NY 307 323-5
BURDELL GILL, Caldbeck, Cumberland (I)

AWGK, Priv. Comm. Old Fe, Mn workings, near 317325
N-S Fe, Mn vein. Psilomelane, pyrolusite,
cacoxenite, limonite, dufrenite, chlorite,
strengite, scorodite, vivianite.

AWGK, MM (1962) Exhibit: strengite

AWGK, MM 31 813 (1957). Pharmacosiderite, rather like
the jarosite - up to 2mm rhombs on goethite-
quartz matrix

TMH (1868), 53. "Burdle Gill". Limonite, manganite, rock xl,
pharmacosiderite.

WFD ENT (1948) "BURDLE GILL". Pharmacosiderite
still obtainable, small green or brown cubes.
Limonite, pyrolusite, manganite.

TGPZ, Riv Comm 11/73 Pegmatitic vein in
stream bank ~~near~~ at foot of Burdell
Gill carries schorl tourmaline.

RSWB 78-206 via H. Winstanley.

Mimetite, class short hex prisms w. basal pinacoid
CR; remarkably phosphate-free), w. pharmacosiderite
in qtz-goeth gozz, with traces ? rhodochrosite leucophos

  ?  red

greenish brown

MPC Riv Comm 3/8/87 Beudantite tiny rhombohed xls on
gozzany matrix, BM x rays

BURDELL GILL, Mungrisdale, Cumb. (II)

Meanwhile, as we all basked in the warm April sun, Chris had made the vertical climb of 260 metres from the River Caldew, up Burdell Gill, to the given map reference, only to find herself thigh deep in snow! Although ice is listed in Fleischer, she gave this the cold shoulder and dug down to discover a very attractive miniature

BMSN(1998)

pitted with deep vugs lined in deep green pharmacosiderite.

M. Leppington, BMSN(1998) 51, 12-13. BMSColl. 2050

Rhodochrosite, confirmed EDAX; "insignific.
c'less xls". [M Rothwell]

T. Neall & C.M. Leppington (2003) J. Russ. Soc.
8, (1), 1-9. Mineralisation.

Pharmacosid (green) in goethite-pyrolusite-cryptomelane impreg qtz ven/s. Also baryte, beudantite, barium-pharmacos (yell to orange-brown cubes), ars-py., ~~ars-py.~~, carminite, haem jaros. powder, lepidocrocite, mimetite, oclave, plumbogummite (c'lless drusy), pyrite, rhodochros (tiny glassy c'lless $\rightarrow$ grey $\rightarrow$ pale pink), romanechite, scorodite (minute pale yell bladed & c'lless drusy), switzerite (c'lless to v. pale brown sprays of blades or pale fibrous), tourmaline.

BURDELL GILL, Mungrisdale, Cumb (III)

vivianite-parasymplesite, dk green to
blue sheaves of blades to ~0.2 mm on
gozz-qtz; wolframite

BURTHWAITE, Bassenthwaite, Cumb.

OS 6 in map shows "Old lead mine" ~~at~~ near
239 319 by Chapel Beck ESE of
Burthwaite.

BURTNESS WOOD, Buttermere, Cumb.

See COMB BECK.

1"82

NY 1715 1716
1815 1816

BUTTERMERE Cumb.

See FLEETWITH Q; COMB BECK.

"The Lake Dist." (1982) (Cumb. Geol. Soc., Field notes) 76
Traces of copper mining on SW shore
of Buttermere [1815].

Caldbeck, 1" 82, 83

NY 3 3

CALDBECK FELLS, Cumb.

Postlethwaite (1914), 129 quotes old proverb: "Caldbeck, & Caldbeck Fells, are worth all England else".

TMH (1868), 53. Apatite; bismuth; bismuthinite; galena;
mimetite; molybdenochre; molybdenite;
pyrite; pyromorphite; rock xl; scheelite;
talc; wolfram.

WFD & NT (1948) AWGK reported covellite,
pseudomalachite & hydrocerussite
from this area in 1950, locs. not
specified. (We have coll specimens
looking like hydrocerussite from Driggeth
M, but not ~~an~~ verified).

REF
CALDBECK Cumb. REFS.

- ① Spec. Min. Res. Rep. 30 (1925)
- ② AWGK Priv. Comm. & Manuscript Maps.
- ③ AWGK Min. Mag. 31, 289 (1956)
Vanad. Mins, Cald. b.
- ④ AWGK, MM 31, 296, (1956) Pb sulphosalts, Grainsg.
- ⑤ AWGK, MM 31, 349, (1956) Atacamite, Cald. b.
- ⑥ Hitchen. QJGS, 90, 158 (1934)
Mineralisation of Grainsgill.
- ⑦ MM 12, 45, (1898) - Grünlingite
- ⑧ MM 30, 723, (1955)
- ⑨ AR., MM 24, 321, (1936), Wulfenite, Brandy Gill
- ⑩ MM 29, 609 (1951) - Duftite, Brandy Gill
- ⑪ MM 31, 502 (1957) - Carpholite
- ⑫ MM 31, 499 (1957) - Arseniosiderite
- ⑬ MM 31, 501 (1957) - Rosasite
- ⑭ MM 31, 604 (1957) - Serpentine
- ⑮ AWGK, MM 31, 813 (1957) - Jarosite and
Natrojarosite.
- ⑯ MM 31 500 (1957) Phosgenite

CALDEW RIVER (Source of), Cumb.

See also CARROCK W MINE etc; COOMB HEIGHT

TMH (1868), 54.

Cumb"

" Source of Caldew River, Hesket Newmarket;
Molybdenite, in granite

NB Source of Caldew R. is nowhere near Hesket Newmarket, but on the E side of Skiddaw, near 265 288! (panist of Underskiddaw)
Molybdenite known from Carrock Mine

1" 76 Cont ~~405~~
on NY 400550

CARLISLE, Cumb.

TMH (1868), 53:

Alabaster, in New Red Sandstone

CARROCK COPPER MINE, Caldbeck, Cumb.cf CARROCK W MINE.SRMRGB XXX (1925): Near Black Dub, 1 ml N of Mosedale.

Probably E continuation of Dry Gill Pb vein. Fault between N Borrowdales & S felsites. In open cut at main working vein is 4ft soft quartz, crushed rock, and chalcopryite. Four X-cuts near small peat moss of Black Dub, one further NW - S of Rospow Hill (not safe). Last worked 1840, not extensively.

Dumps mainly deads, with some iron, malachite, & chalcopryite.

WFD ENT (1948) CARROCK END MINE: On dumps, small malachite xls, with small sphetules chrysocolla; massive chalcopryite.

Also seen in situ where vein outcrops, not far from the site of an old adit.

W.T. Shaw (1970) = QUEEN MINE = CARROCK END M.

Map, p 37. Descrip, history, p 47-48 Last worked
~120 yrs ago. Lode on faulted contact Carrock Fell granophyre
with Eycott Hill lavas. Vein of quartz w. chalcopyrite,
malachite. Elizabethan? Worked before 1692.
Once known as DUTCHMANS MOSS. Shafts, levels,
opencast, a hush.

JW Watson "A Compendium of British Mining". Extensive sett,
several lodes; worked 1813 successfully.

FH Day. Carlisle Nat Hist Soc (Sept 1927) "Some Notes on The
Minerals of Caldbeck Fells" notes old record of 1794 of
large copper vein on N side of Carrock Mt.

CARROCK END { MINE
VEIN, Caldbeck, Cumb

See CARROCK Cu MINE

1" 82, 83 Caldbeck, & Mungforddale

NY 3433

CARROCK FELL, Cumb. (I)

See also GRAINSBILL, CARROCK W MINE, etc.

TMH (1868), 53: Agate; stibnite; apatite; bismuthinite;
"CARROCK FELS" chalcedony; chiastolite; columbite;
haematite; limonite; marcasite;
mimetite; arsenopyrite; molybdenite;
rock xl. tourmaline; wolfram.

SRMRGB XV A/Sb (1920) p. 54. Antimonite has been found
at Carrock Fell [Postlethwaite "Miner & Mining in
The Lake Dist, 1913].

MM 45 (1898) "grünlingite Bi_4TeS_2 "

AWBK MM (1965) 424 is not grünlingite or tetradymite,
but joseite

BM spec

Corundum in nacrite

TGP2 Riv Comm 5/72 Fine-grained gabbro
pegmatite from head of Furthergill Sike
[NY 3 3], Carrock Fell contains apatite.
[Pale straw, thin prisms, ca. $\frac{1}{2}$ cm], adjacent to
gabbro-granophyre contact.

TGP2 Riv Comm 7/72 Gabbro-pegmatite;
ilmenite-gabbro, & a heavy-mineral
segregation from Carrock Fell, sent to
RsubB. One of the segregs, examined by
the Geol Surv, showed 60% chromite,
size or origin of sample not stated.

CARROCK FELL, Cumb (II)

TGPZ, Priv Comm 22/9/72 Mr Wodge states that
the gabbro segregation.... evaluated during war
.... contains chromite. In situ supposed
to be 700 yds S 34° W of Stone Ends farm
[ie at 352 331, at top of Crag Foot]

RSWB 81-97, 98, Purchased ex Isis Minerals,
8/81: Fülöppite - "checked by BM",
bright metallic blackish acicular
in quartz, from "Carrock Fell". New
find. [~~Prob. from Carrock mine~~] - IS

FROM DRY SWINE GILL, NY 3132
according to David Hacker.

"The Carrock Fell region." "The Lake District"
(1982) The Cumb. Geol. Soc. 50-57.

Fordey et al J. Russ. Soc (1990) 3 (1) 15-22

Recent re-exam of the spec. of "chromite"
in the BGS coll recorded by Eastwood
et al 1968 & Young 1987 shows only
magnetite w. no signif. Cr.

PGE (1977) MM (4th List) (Tsumebite "Carrock Fell" [Ts
actually from ROUGHTON GILL M., q.v.]

CARROCK WOLFRAM MINE, Mungrisdale, Cumb. (I)

See also GRAINSGILL, CARROCK FELS, CALDBECK FELS,
cf CARROCK Cu MINE; BRANDY GILL.

AWGK, Priv. Comm (1950): On dump of main level on
Harding Vein: stolzite (4/50); olivenite (9/50).
Near low level X-cut: beryl.

AWGK, MM 502 (1957): From Emerson vein - carpholite,
 $\text{MnAl}_2\text{Si}_2\text{O}_6(\text{OH})_4$ - thin very pale yellow fibrous
aggregates in joints in white vein quartz, with
wolframite.

→ Is jozeite (v. infra) or ingodite (v. inf.)

MM 45 (1898): "Grünlingite Bi_4TeS_2 - "Carrock Fell".

AWGK, MM 289 (1956): Vanadinite, on a small dump.

Mus, Specs. Apatite; gilbertite; scheelite; quartz;
molybdenite; wolframite

(IX)

v. infra

AWGK, MM 296 (1956): Cosalite, $Pb_7CuBi_8S_{22}$, in small barren quartz stringers, and in the greisen itself, fibrous. Also aikinite, zinckenite, jamesonite, boulangerite.

RSWB et al. 9/8/62; Vol II, pp 99; 102-103, Vol IV, pp 31. Quartz, gilbertite; scheelite; wolframite; molybdenite; siderite or ankerite; apatite; arsenopyrite; bismuthinite.

AWGK MM (1965) 424. The "tetradymite" or "grünlingite" is all joseite

T. Eastwood, N-F (1959), 167-9. Sections, p 167. Worked sporadically in this century. Several N-S quartz veins & strings, carrying tungsten,

CARROCK W. MINE, Mungisdale, Cumb. (II)

crossed by minor E-W fissures with Pb-Zn
(of no value).

Three main veins. On E, Emerson, 200 yds to W,
Harding; 50 yds further W, Smith. Harding v
most important

Veins from a few inches to 5 ft across, of
quartz with primary wolfram & scheelite,
followed by arsenopyrite, pyrite, pyrrhotite,
"marmatite" (Fe-blende) and ankerite (which has
reacted with wolfram to give more scheelite).
Also: galena, molybdenite, chalcopyrite,

bismuth, tourmaline, apatite, dolomite,
calcite, baryte. No Sn minerals
identified, but Sn has been recorded
in some assays.

Wolframite tends to occur near walls -
bunches of xls up to 8 in long.

WFD & NT (1948): Galena; chalcopyrite; traces
malachite & chrysocolla; blende; wolframite;
scheelite esp. $\frac{1}{2}$ on dumps from Harding V.,
Tungstite, yellow powdery, with wolframite, uncommon.
arsenopyrite; scorodite; nat. bismuth, rare;
bismuthinite, common; joseite, usually

CARROCK W MINE, Mungisdale, Cumb. (III)

intergrown w. bismuthinite; x-luses in splendid round plates w. a blue tinge, tarnishing brownish.

Bismite, v. rare, yellow white pdr., w. bismuthinite.

Molybdenite common; Mo-ochre, rare [ferri-molybdate]

corundum (BM spec. - detached opaque hex xl. embedded in yellow nacrite - "Carrock Fell's")

Tourmaline - Schorl - "Emmerson V." Fibrous

tremolite - Harding v. Calcite; aragonite;

dolomite; ankerite; apatite; fluorite;

mauve, purple - uncommon; pyrite; marcasite;

pyrrhotite, massive, common (Harding V.).

Gilbertite; muscovite; felspar; quartz;
bornite; chalcocite

H. Cooke. Riv Comm. 1969.. Gold in qtz with scheelite -
found on a spec. of scheelite picked up at
night by u/v survey. Spec. sold to J R Knight

RSWB, PT, T&PZ 11/6/72

Reopened - mill to start 12/6/72 - stuff straight
from Harding V. to mill (∴ specs will be rare!).

A. Bennett has specimen & analysis contracts.
From u/grd & small temporary dump; - scheelite,
incl. xls; qtz; wolframite; apatite; arsenopy; pyr; galena;
molybd; gilbert. Rec. to mill manager (Mr. Copeland) - ^{some} powellite

CARROCK WOLFRAM MINE, Mungrisdale, Cumb. (IV)

174. Jerry Colter (?) Stannite said to have been found in sections, by Royal School of Mines.

Tony Ellis & Co 175. Collected v.g. "granlingite" (presumably = joseite) ringed with gold

RSWB 3/77. Working. Reopened Sept 1976. Coll v.g. wolframite, scheelite, joseite (?) (incl. terminated xls!) with "plumosite" mineral(s)

Anon, Mining Mag. March 1977, 169-175, "Carrock
Fell - UK tungsten mine with an interesting
history is again producing concentrates".

History, development work, geol & mineralogy,
present operation, mineral processing.

Map, plans, section, photos.

WT Shaw (1970) Map, p 37. History, etc. pp 49-52. ~~Widom~~
Photo (undergr'd) p 53. Started on lead vein
at foot of Brandy Gill; another lead vein
higher up B. Gill found 1868 - E-W ~ 200 yds
between Harding & Smith Veins - 2 levels on
W side of Gill - Stolze found here.

CARROCK WOLFRAM MINE, Mungrisdale, Cumb. (V)

Worked for W 1901-1905, 1908-1911, 1913-1919,
1942 → by Canadian sappers when new X-cut
adit driven to Harding V. Closed when
war situation improved.

Veins: Lead veins; EMMERSON, HARDING,
SMITH'S, MOLYBDENITE V., Carbonate vein.

Harding V most ^{on both sides of grainsgill;} productive, then Emmerson
on E side of Br. Gill. — barren to S of grainsgill
— is accomp by later Carbonate vein which
diverges Wwards in the N & continues through
Dry Gill lode to Driggith, where it carries Cu ore
in 30-fm level.

Fine spec's of bismuth with a little gold
from Emmerson vein. S of granisgill a trial
gave vuggy lode w. fine quartz xls but no
ore.

Various levels.

Smith vein poor in W but rich in arsenopyrite

The lead v. crosses the Harding V 190 ft N
of the X-cut, but has only traces galena

Scheelite, especially in subsid. veinlets on
W side of Main vein [Harding]. Also apatite.

Ladderway rise 330 ft N of X-cut to old
Harding Level. Rise top in W section of split
lode with large horse between. To N some
"marmotite", looking like wolfram.

[Fe-sphalerite]

? = marmotite

CARROCK WOLFRAM MINE, Mungrisdale, Cumb. (VI)

S of main X-cut the New Tunnel Level driven 620' ore bearing but less rich than to N; mostly in greisen, terminates in the granite rise to Old Beck Level - v rich W here. No connection w. higher Penny level which goes further S.

No Sn ore, but a little in assays.

To S some W in float qtz in Dry Swine Gill [Not on $2\frac{1}{2}$ " maps]. To N, some bismuth in qtz float on Dry Gill side of fell, but no W. Veins known in upper Brandy gill but not known if any W apart from stolzite.

TJ Shepherd, RD Beckinsale, CC Rundle & J Durham
"Genesis of Carrock Fell tungsten deposits, Cumbria:
fluid inclusion & isotopic study". Trans. Inst.
Min. Met. B 85 B63-73 (1976). Concludes that
ores formed by interaction of the Skiddaw
granite with ~~some~~ non-magmatic waters carrying
W.

B. V. Cooper Priv Comm 24/10/77 Recently found
"a small specimen of pharmacosiderite at
Carrock Fell Wolfram Mine".

B. Beddoe-Stephens & N.J. Fortey Min Mag (1981) 44, 217-223
"Columbite from the Carrock Fell tungsten deposit.
Hitchen CS (1934) Q.J. Geol Soc Lond 90 158-200

CARROCK W MINE, Mungrisdale, Cumb. (VTI)

"The Carrock Fell region". "The Lake District" (1982)
50-57. The Cumb. Geol. Soc.

E.N. Zav'yalov & V.D. Bezegov, "The new mineral
ingodite, Bi_2TeS ", Zapiski Vses. Mineralog. Obsh.,
(1981), 110, 594-600; "Once again on the
problem of grüningite" Zap. Vses. Min. Ob. (1981),
110, 633-635. Abstr - Am. Min. (1982) 67, 855

Numerous museum spec's of "grüningite"
examined - all either joseite-A or bismuthinite
A sample from type loc "Brandy Gill" & one from
^{min}Ingoda deposit, Transbaikalia are new mineral

Ingodite, Bi_2TeS , hex. XRD given.

~~MP Cooper~~ MP Cooper, Priv. Comm. 2/86. In R.J. King coll. coll'd 1940's are 2 specs of cassiterite xls from Carrock mine.

D. Hacker Priv Comm Spec $\rightarrow$ RSWB (7/87). From a cavity in Smith vein, recently:
Fluorite, (greenish inside, purplish outer) etched octahedra $\sim$ 3 mm, on quartz crystals, with pyrite, tiny tarnished cubes, and clusters of opaque white aggregates of microcline (12) rhombohedral crystals (xls $\rightarrow$ 2-3 mm) in clusters to 1 cm.

CAR ROCK W MINE, Mungitdate, Cumb (VIII)

MPC, Priv. Comm (12/10/87). Fluorite, pale green sharp octahedra to ~1 cm in Smith/Wilson vein, not far from D.H.'s strike.

Rothwell Mason (1992) UKJMM II 30-40

Hartley (1984) reported wolfeite from a dump at foot of Brandy Gill nr. junction of an E-W Pb vein with the N-S Emerson V. None seen since. [cf AWGK's stolzite [card I, (1950)]]

BMS Newsletter (1996) 45, 12. Rutile (from Mo vein)

as we walked the short distance to Carrock Mine. Facing north towards Brandy Gill, two of the north-south trending veins could be seen rising up the hillside. The Emerson Vein lies to the east and the Harding Vein to the west, below which is the now boulder-filled portal to the Canadian Cross-Cut Level. Further still to the west are the Smith and Wilson Veins, but collecting activity was concentrated around the 'horseshoe' dump at the foot of Brandy Gill and the dumps leading down to Grainsgill Beck.

Finds included arsenopyrite, molybdenite, pyrite, scheelite and wolframite. Deanna Earl found nice muscovite var. gilbertite with scattered overgrowths of quartz which should be pretty once cleaned. Some good thumbnails of dolomite encrusted in water-clear quartz were collected together with calcites and greisenized granite shot through with veinlets of pale apple green apatite. Unfortunately, to my knowledge, no euhedral apatites were found, but one block of opaque splintery quartz did contain a hexagonal section of a deep lilac apatite to 2mm.

RSN (1994) 25

R. Soc. N. (1994) 25
Carrock Mine, Grainsgill Beck, Masedale,
Cumbria - Friday 8 April 1994

Leader: Dave Charlton; Reporter: James Farquhar

Carrock Mine lies in Grainsgill at the foot of Brandy Gill, and is the only British mine outside the West Country to have produced commercial quantities of tungsten ore.

The meeting place for collectors was the small bridge approximately half a mile SE of the mine, at 11.30am. Eleven hardy souls appeared, to be greeted by Dave Charlton, our illustrious leader and what looked like several feet of snow! Our trail firstly took us NW to the Canadian Level cross-cut. The weather was against us from the start, heavy snow showers and a strong breeze hampered most efforts at spotting likely specimens. In fact we only stayed at the Canadian Level for about twenty minutes, during which time we found only wolframite.

Cont'd → (ix)

CARROCK W MINE, Mungrisdale, Cumb. (IX)

Contd...

The party next moved to Harding Vein south and spent a further half hour or so in a largely fruitless search for anything of any interest. The conditions were worsening so we moved back to Emerson Vein south, which was slightly more sheltered. Here we had more luck, our finds including ankerite, chalcocite and quartz.

At about one o'clock we decided to beat an orderly retreat from the weather and the party went to the Caldbeck Museum. Here we spent a pleasant, if uneventful, couple of hours browsing through the collections of minerals and mining artefacts on display - and, more importantly, imbibing large quantities of hot beverages!

Minerals collected on the day:- ankerite, apatite, arsenopyrite, chalcocite, ferrimolybdenite, molybdenite, molybdenite, muscovite var. gilbertite, quartz, scheelite and wolframite.

Molybdenite - MoO_3 (!?)

GR BMS Newse (1999) 52

14-15 AWG-K's

"carpholite" in BM

≡ Schlaggenwald

(Slavkov), Czech. material

His "vanadinite" ≡

"endlicheite" from Hillsboro,
New Mexico.

* RSN (2001) 39 20. D. Green
Raspate

J. Neall & D. I. Green (2001). J. Russ. Soc. 7 (2) 91
"Raspite from Carrock M.... 1st British occurr).

Raspite (XRD), a few small lustrous yellow prism.
xls., looking monocl. ass w. sim. coloured bipy-
stolzite. Rasp to 0.3 mm. Or quartz
keinstone.

D. Green et al (03) J. Russ Soc. 8, (1), 16-17

Symplectite, sage-green poor xls thin prism.
to 0.5 mm in patches to 1.5 mm on part ox'd
arsenopyrite

1" 76

NY 54 55

CASTLE CARROCK, Cumb.

WFD & NT (1948) Thin strings chalcoprynite
noted in the area in recent years.
In New Red series.

1182

Ny 270 227

CASTLE HEAD, Keswick, Cumb.

"The Lake Dist." (1982) (Cumb. Geol. Soc., Field notes) 73

Castle Head - Tree-covered knoll of dark,
fine-grained dolerite w. glittering augite
x/s.

CASTLENOOK MINE, Above Derwent, Cumb
See also NEWLANDS

OS $2\frac{1}{2}$ " map shows "Castlenook Mine (Disused)" at above loc.

RSW(1994): ing on to the site at Castle Nook Mine (NY 227 170). The dumps here provided a chance to see examples of comparatively fresh sulphides including galena, brown sphalerite and traces of chalcopyrite. Examples of cerussite and hemimorphite were seen and the local abundance of a compact clay mineral, probably illite, was noted.

RSW(2001) 35, 14. Xls of sphalerite, hemim, ceruss.

1" 82

NY 2619 2719

CAT GILL, Grange, Borrowdale, Cumb.

Keswick Mus.

Epidote, quartz.

1" 82

NY 21^{5c} 210?

CAUSEY PIKE, Above Derwent, Cumb.

See also ~~COBALT~~ ~~Ag~~; SCAR CRAGS; LONG COMB MINE

AWGK, MM 31 501 (1957). Childrenite, in unusual quartz-chlorite vein a little to the W of Causey Pike; this vein has apatite (up to 1" long) and arsenopyrite, some löllingite & scheelite; clearly a lower-zone, higher-temp. type with granitic affinities.

* The BM specimen, pres. AWGK is labelled "LONG COMBE VEIN, Causey Pike, Derwent Fells, Cumb." [q.v.]

1 #82 NY 311 346
CHINA CLAY MINE, Caldbeck, Cumb.

W.T. Shaw (1970). Map, p 37. Plan, p 62. Account,
pp 61-63. On Roughtongill South Lode, NE-SW
here almost devoid of Pb & Zn minerals, but
with umber in 3-6 ft of rotten sugary
quartz. Hanging wall Borrowdale Volcs,
footwall a decomp hypersthene - a type
of china clay. Anal: SiO_2 , 75.60; Fe_2O_3 , 0.20;
 Al_2O_3 , 18.30; CaO nil; MgO , 0.25; H_2O^+ , 5.65; moisture,
15%; loss on ignition, nil; total 100%.

Short X-cut adit at ~1800 ft OD, S 60 ft
to lode - plan of workings. Worked 1887-1894

1" 82

Cont. on NY 158 365

CLINT'S QUARRY, Moota, Blindcrake PH, Cumb.

RSWB, TGP2, 27/2/72

Working limestone quarry. Some baryte,
white, platy, some assoc. w. limonite
masses. Calcite, small rhombohedra; small
amounts chalcopysite, some embedded in
v. pale brown (Fe poor) sphalerite in
calcite joint-coatings; some chalcopysite
altering to malachite. Calcite flowstone

COBALT MINE, nr Force Crag, Above Derwent, Cumb.

See LONG COMB MINE

1" 76

NY 470 510

COCKLAKES GYPSUM MINE, Cotehill. Cumb.

See also COTEHILL

R. Ancliff. / 6? Near Carlisle. Gypsum, occasionally var sebenite.

RSWB / 70 Gypsum, mostly massive

1" 82

NY 181 149

COMB BECK, Buttermere, Cumb. (I)

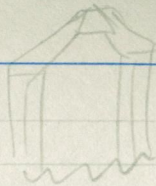
See also BUTTERMERE

D. Hacker, Priv. Comm. (Spec → RSWB, 85-154); 10/85:

Small vein exposure by Comb Beck, at 181149 examined 13/10/85 by Brian Young (Geol. Surv., Leeds) and George Wilson who found "green Cu-Pb material" & one tiny ~~bit~~ of what looked like wolfeinite. Explored 20/10/85 by D. Hacker & J. Geo. Wilson, who found:

- (i) In soft friable white matrix from centre of vein, dull green powdery malachite (IR) pseudomorphs after a cubic(?) material

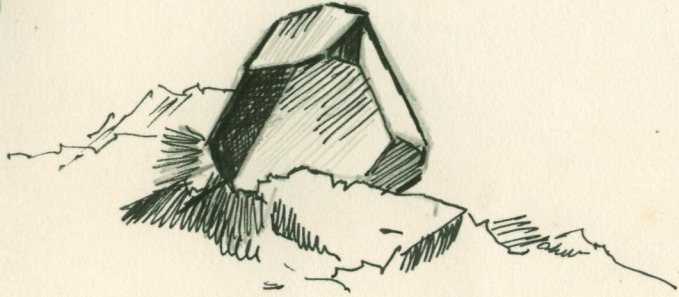
and one after a 2 cm xl →
[A bit like azurite !?!!]
or baryte?



(approx)

(ii) In harder iron-stained vein quartz by vein edge, arsenatian-pyromorphite (IR) pale, whitish-green xls. mostly small v. 1 mm projecting from matrix, some lying across them, very long → ~ 5 mm but very thin; a few larger greener xl portions. Brownish-yellow "cuboid" wulfenite xls up to ~ 3 mm!! (habit v. like that from Mina Ahumada, Sierra de los Lamentos) only in one small area. Later than (penetrated by) the pyromorphite. Few specs - 1 v. g (→ G. Wilson Coll); 1 good (→ D. Hacker Coll); 1 not bad (→ RSWB 85-154) + "some bits". [Wulfenite checked by IR & evapw. HCl → deep blue.]

(espec. in cube-voids)



Pseudomorph.
Sketch by Liz Macker

COMB BECK, Buttermere, Cumb. (II)

J.G. Wilson, Riv Comm 11/85, Specs → RSWB (85-238→242) Another look at vein -
"at 1819 1500": Some more wulfenite (not a lot)
chrysocolla with malachite; greenish to
yellowish short prismatic + basal pinacoid
arsenation pyromorphite (IR); one spec.
with bayldonite (IR) thin apple green
knobbly coating on vein quartz.
Malachite powdery ψ -after cubes w. octa-
hedron faces (galena?).

Clark, L. (1963) "The geol. & petrol. of the Ennerdale

granophyre, its metam. aureole & assoc. mineralisation"
Unpub. PhD Thesis, Univ. of Leeds. Wulfende
from Burtness Wood, NY 176159.

COOMB HEIGHT, Munguisdale, Cumb.

See also CALDEW, etc.

WFD & NT (1948) From flank of Coomb Height,
ca $\frac{1}{4}$ ml E of Burdle gill - quartz with
tourmaline (schorl) xls.

1" 82

NY 253216

COPPERHEAP BAY, Above Derwent, Cumb.

Postlethwaite (1913)

Named from the
"mound of very impure copper ore which
still remains there"

1" 82

NY 249 178

COPPER PLATE MINE, Above Derwent, Cumb

Postlethwaite (1913) Copper Vein, worked 'till mid-
19th Cent. up hillside; near SALT WELL MINE.

1" 76

NY 47 50

COTEHILL

Cumb.

See also COCKLAKES GYPSUM MINE

WFD & NT (1948) Gypsum & anhydrite worked,
no x/s. [Almost cert = COCKLAKES MINE, qv]

1" 82

NY 2

2

CROSTHWAITE, Keswick, Cumb.

TMH (1868), 54: Epidote in Lr. Silurian.

OS maps. "Gt. Crosthwaite" is at 2624; "Little Crosthwaite" at 2327
in ph. of Underskiddaw.

1" 83 NY 4605 2645

DACRE CASTE, Penrith, Cumb.

TMH (1868), 54. Dev. & Comb Lim. chiastolite.

DALE HEAD MINE, Above Derwent, Cumb. (I)
 See also NEWLANDS.

OS 2½" map shows "Old Copper Mines" at above loc.

Postlethwaite (1913). 1½ ml S of GOLDSCOPE MINES.
 Several ESE veins. Chalcopyrite; malachite;
chrysocolla; pitchy copper As old as Goldscope
 Mines.

GR 165 Much chrysocolla, malachite. Not
 much else. On a v. steep hillside, with
 a level perched among crags - how worked?

WFD & NT (1948) Malachite; chalcopyrite; "copper
pitch;"

chrysocolla; pyrite; pyrrhotite - all massive.

1/76 Eve-class student:- Malachite, chrysocolla, bornite.

W.T. Shaw (1970) 106 DALE HEAD: LONG WORK MINE
EW copper vein - the "Long Work" - started by Elizabethans. New X-cut started ~1919 to SW from W side of Newlands Beck opposite small sheepfold. Cut vein. Old stopes extend to unknown depth below X-cut

DALE HEAD MINE, Above Derwent, Cumb. (II)

A farther walk brought us to the old workings at Dale Head Mine. The lowest workings in the Skiddaw Group rocks (NY 228 164) consist of a series of deep, and in places potentially dangerous, open stopes and collapsed levels. A rich sulphide assemblage of chalcopyrite, pyrrhotite and some local arsenopyrite was seen.

A steep but invigorating climb took us to the upper workings at Dale Head, in the Borrowdale Volcanic rocks (NY 222 157).

The workings here are very old and most conspicuous are the spreads of waste from the hand dressing of copper ores, possibly dating back to Elizabethan times. The veins are not exposed here but the abundant waste shows bornite, accompanied in places by a little djurleite with chalcopyrite as the main sulphide. Coloured oxidation products are more abundant here than at many Lake District copper mines outside of the Caldbeck Fells. Malachite and chrysocolla are most prominent with some brochantite. A few small examples of pale yellow pyromorphite indicate the presence of a little lead in the vein.

Some blocks were found with a coating of what is believed to be the remarkable copper-secreting rare lichen *Lecidea inops* in one of its two known Lake District localities.

RSN(2001) 38, 14.
Bornite mineralisation,
chrysocolla, malach,
one pyromorphite.

RPJLamb. Visited a lower
dump at NY 225 162
in 1974 & coll material
investigated later.
Re-visited 9/06. PTO

RSN(1994) 25, 17

→ 0.5 mm

(RPTL) Found in 1994 childrenite, small [↑] c'less ^{radiating}
xls (ident FRIR, RSWB 2006) with oxidizing, 1
arsenopyrite, ^{minor} galena, chalcopyrite, on quartz
with siderite (RSWB, IR '06), ? scorodite, 2 tiny
~~blue~~ sky-blue spots reminiscent of lavender? childrenite
not found in '06; ~~well-ited arsenopy~~,
[no siderite, scorodite].

In '06 found similar but less oxidized
matrix of quartz, white mica (muscovite) &
gray shale with ^{minor} arsenopyrite ~~mostly~~
~~in good but small xls, some radiating~~, much
pyrite, chalcopyrite
cubes & occasional octahedra to 0.25 mm

NY 262 312

DEAD BECK, Bassenthwaite, Cumb.

OS 6" map shows "Old lead mine" at NY
262 312 in Dead Beck, W of Dead Craggs.

1" 82

NY 31 36

DEER HILLS ~~ABANDONED~~, Caldbeck, Cumb. (I)

See ^{also}
1 POTTS GILL BARYTE MINE

W.T. Shaw (1970). DEER HILL LEVELS of POTTS
GILL Ba MINE. Trial x-cut 1960 ~ 500' W
of No 1 workings hit baryte lode. Another
520' W driven 515' to lode. Some cuprite

MP Cooper. Priv. Comm. (7/87) Quartz with ^{small} but nice
pharmacosiderite, also brownish drusy
scorodite (ident IR, RSWB)

Russ Soc Newsletter 20 (1990)

Initially we walked up to the old trials on Deer Hills and poked around on the small dumps. Shortly a few small sprays of pale green Ce-Agardite turned up with some malachite, chrysocolla and a little cuprite and native copper all in a quartz matrix.

The small shaft further up the hillside produced good beudantite, minor pharmacosiderite, some scorodite and by my admittedly low standards, excellent carminite, much of which was microcrystalline in small needles. The best find went to Max Wirth who turned up the first British specimen of schultenite.

First stop was the loading bay area of the Deer Hills baryte deposit where some excellent work by Don Alderson provided most of the party with agardite specimens. On to the actual baryte deposit where we only stopped a few minutes and nothing was collected.

The carminite deposit was reached at lunchtime. Whilst some of us basked in the sunshine and admired the views towards Scotland and the Pennines, others hammered away at the various blocks of quartz in an effort to find carminite. Two hours later, having collected specimens of

baryte, beudantite, carminite, mimetite, pharmacosiderite and scorodite the party ambled off to Potts Gill Mine.

RSN(1994) 25

RSN(1990) 29

Baryte, narrow bladed; at the carminite deposit, asenopyr; beudantite, carmin, cerussite, mimetite, scorodite

RSN(1998) 33 16

Carm, beud, scor.

DEER HILLS, Caldbeck, Cumb. (II)

BMSN(1990) ~~28~~ 5-6 M. With → BMSoll No 883.

Schultenite (BM, XRD) from DEER HILLS
BARYTE MINE

BMSN(1989) 26 7. Agardite from the two W dumps
the 1st nr head of INGRAY GILL the 2nd a
little to the E ["D.H. Ba M" is betw top of
Ingray gill e w end of Old Potts gill Ba mine]
Also from 2nd dump, green minutely glob
"cuprian adamite" (BM, XRD) with agard-mixite
(BM, XRD the two indistinguishable by XRD)
From D.H. QUARTZ LODGE bendantite, ssorodite,

carminite, pharmacosiderite - all minute
+ brownish grey ~~needle~~ pyromimetic.

Bridges & Green (2008) JRS, 11, 48-50. Supergene baryte.

RSWB et al (2009) JRS 12, 3-9. The "ce adamite"
is zincolivenite

1" 82, 83

NY 32x 35y

DRIGGITH MINE. Caldbeck, Cumb. (I).
See also SANDBED MINE.

AWGK Priv Comm (1960): In depth the S vein carries quartz and baryte, with blende, galena, & chalcopyr in middle. @ 4ft vein, worked for 1/2 ml on 30, 60, & 90 fm levels.

30 fm level dumps: Bayldonite (8/49); aurichalcite (4/50); leadhillite; serpierite; rosasite; smithsonite; hemimorphite; malachite; blende; Cupyr.

12 fm level dumps: Bayldonite (8/49); brochantite; aurichalcite; rosasite; linarite; caledonite.

Sinking on vein just SE of X-cut at 12 fm X-cut (9/50)
Duftite; fibrous pyromorphite.

Beaverite

AWGK MM 423 (1960): Outcrop of vein: In iron-stained quartz (granular) - carminite, with yellow-brown microxline beudantite; mimetite, & cerussite. Beudantite in yellow-brown powdery aggs investing decomp galena and cerussite.

AWGK MM 501 (1957): Rosasite, small blue-green wart like aggs with smithsonite, hemimorphite, malachite, and aurichalcite.

AWGK MM 604 (1957): Serpierite, looking like aurichalcite. Aggs of tiny pale blue lath-like xls with pearly lustre, in narrow veinlets, or coating joint surfaces in massive intergrown chalcopyrite plus blende.

TMH (1868) 53: Silver-Pb mine. Cerussite, pyromorphite.

DRIGGITH MINE, Caldbeck, Cumb. (II).

RSWB, TG. 6/6/62 Vol II, 67. Outcrop of vein: vg
pyromorphite var campylite, green (checked by IR);
malachite; ?smithsonite. Dumps: Pyromorphite,
cerussite, quartz, galena, malachite, linarite.

AWGK MM (1957) 500: Old opencast between the two mines
in the main Driggith-Sandbed vein: colourless
phosgenite with anglesite, in decomp massive
granular galena.

BM: Planchelite (?) [AWGK spec. ... doubtful]
≡ Katanga GR, BMS Newell
(1959) 52, 14-15

T-Eastwood N-F (1959) 164. Opened 1700. Worked also
1810-1870, 1904-1908. Galena, blende, barytes, copper ore.
The vein is Roughtongill S Lode [qv], up to 8 ft

wide, average 4 ft. 6 in rib of baryte on hanging-wall, then quartz with two 6-in ribs impure psilomelane, then irregular ribs baryte on footwall. In depth, said to have had quartz & baryte on the walls, blende, galena & Cu-ores in the middle, mostly blende. A thick baryte vein is reported from the deeper workings

WFD ENT (1948) Mr Gregory of Fellside has reopened 2 of the old levels recently & also worked the outcrop. Baryte; galena; pyromorphite, on baryte or quartz. Anglesite x/s, cerussite x/s,

DRIGGITH MINE, Caldbeck, Cumb. (III)

^x
pyrolusite, dendrites on baryte; blende;
psilomelane; small powderings brochantite;
malachite; chrysocolla - "DRIGGETH MINE"

? hydrocerussite, thin lustrous plates,
with cerussite & anglesite

TGP2 (1974) Driggith 12fm level.

blende + galena + chalcopysite
to blueish "paint" grading
brochantite, langite, minor
A little cerussite

Blueish tarnished
with greenish
into crystals
linarite.

W.T. Shaw, (1970), Map. p 37. Section, p 50. Photos, p 54.

History, account, pp 52-59. On NE-SW South
Roughtongill Lode, which dips N here. First mentioned
1790, reopening - opencasted at outcrop & shallow
X-cut adit. Worked intermittently to 1907. Fried
1926, 1943, 1944, 1948. S.R. Lode in 2 parts at

Driggith - Ne S ~~veins~~ veins, 4-10 ft, of quartz,
baryte, arg. galena (galena in lodes tends to be v. arg
when gangue = baryte); chalcopryite, a little
chalcocite; blende. ~~is lower part~~; near surface
pyromorphite & cerussite (still found in old
opencasts)

LEVELS: No. 12 X-cut ~1850' OD at head of Driggith Beck

DRIGGITH MINE, Caldbeck, Cumb. (IV)

(12 x cut:) 70 yds to lode, 66 ft below outcrop, where rise to surface (open). On lode:- to NE:- short distance, blende in floor, face shows strong but poor lode. To SW:- just SW of X-cut sump down 15 ft to galena (area not reached by 30 fm lev). Then unk distance further SW, blocked by slope fall at 120 ft. Probably driven to:-

No. 10 X-cut, 800 ft SW of No. 12. Most SW working. To Lode, 5 ft of quartz, traces galena. Not driven along lode.

30-fm level:- ~ 1620' OD at head of RHS fork of Drigg Beck 18th Cent. On NS vein (? = Emmerson V. of Carrock M) with a little Cu ore; then lev. leaves it, as X cut to main lode, total length 660 ft. On way some Baryte stringers and a quartz vein,

(followed SW 20 ft. with sump; N ~~E~~ 100 ft.), then 20 ft to main lode, followed SW ~ 1000 ft, NE ~ 300 ft.

60-fm lev. ~ 1500' OD from Sandbeds side. Started 1822. goes at least 3000 ft, mostly stoped up to 30 fm level. At 300 ft, a X-cut SE to look for FOXHOLE VEIN. Just NW of gt. Crosscourse at X-cut S 250 ft towards S. Vein: not found, only EW baryte stringers, one with Copper ore. Re-driven nearly to No. 3. Shaft & shows all old stoped ground collapsed. X-cut 60 ft S to S vein at No. 2 Shaft; some baryte.

90-fm level, from Sandbeds side. Started 1858. Mal-surveyed. Wandered in search of lode. Hit Sandbeds Baryte Vein ~ 1000 ft in. Hit main

DRIGGITH MINE, Caldbeck, Cumb. (V)

lode in 1867 - at No. 1 shaft at 1600 ft. Driven along N vein - poor. No X-cut to S. vein.

75-fm level for 1200 ft SW from No 1 shaft to No. 5 shaft. No ore worked.

Summary: Enriched ore in upper part, rapidly poorer with depth.

Stanley CJ & Vaughan DJ, MM(1981)44 257-60

Bournonite & native antimony, intergr. in galena, ident. in polished sections in specks from Driggith vein at Sandbed mine & surface workings at NY 32803520
Bournonite also in tetrahedrite

15 minerals: quartz, baryte, calcite, chalcedony,
pyrite, arsenopyrite, galena, sphalerite,
chalcopyrite, bornite; argentian
tetrahedrite on quartz and grains in
galena; nat. antimony. 25 minerals:
Djurleite, covellite, goethite, "limonite",
nat. copper, azurite, anglésite,
pyromorphite, psilomelane.

Thimmaiah, T., PhD Thesis (1956) Univ. Coll. London
"Mineralis'n of the Caldbeck Fells area, Cumb'ld"

Bornite

NAC Priv Comm/6/87. From Driggith smelter site recently:
?phosgenite (ixl, awaiting XRD); lautenthalite (XRD; David Green)
A dendritic? nat silver in cerussite

DRIGGITH M., Caldbeck, Cumb. (VI)

MPC, Priv. Comm (12/10/87) From Driggith
smelter: Sprays of tiny purple xls
in slag, probably elyite.

G Ryback, IR K807, Coll N. Hubbard 5/90
Philipsburgite, pale blue-green fibrous
micro-botryoidal in vugh in quartz,
from 30 fm lev. dump. ($P \approx As$.)

Rothwell & Mason (1992) UKJMM. II 30-40
Hartley (1984) reported yellow plates of
wulfenite on pyromorphite in an
opencast at 328 ~~328~~ 354 betw. Dr. and
Sandbed mines.

BMS Newsletter (1994) 32 18

**A PROBABLE FIND OF NAMUWITE AND DEVILLINE
FROM DRIGGITH MINE IN THE CALDBECK FELS**

Mike Rothwell

Energy dispersive X-ray and microchemical analysis of a small cluster of pale blue-green plates found by John Dickinson on the 30 fathom level dump at Driggith mine confirmed the presence of copper and zinc cations with the sulphate anion.

The EDAX spectrum is closely similar to that of namuwite from Dyfnwgwm and Ystumtuen in the mid Wales mining field. The plates are sharply hexagonal in form and the associated minerals are sphalerite and a blue mineral, botryoidal to the naked eye but seen to consist of minute plates under the microscope. EDAX analysis shows this mineral to be closely similar to devilline from the above sites in mid-Wales.

A separate specimen from the same location shows some green-blue crystals closely associated with sphalerite. These may be ramsbeckite, which has been found in a similar association at the nearby Sandbeds mine; however, these crystals have not yet been analysed.

DRIGGETH M., Caldbeck, Cumb. (VII)

Leaving four of the group behind, the braver members of the party set off for Driggeth just before lunch. By this time the weather had changed. With snow swirling around, the group headed up the hill, trudging through the drifts to Driggeth Opencut. Acceptable pyromorphite/mimetite specimens were collected, with Roy Starkey picking up some specimens for the party who had stayed behind at Sandbed Mine.

With no improvement in the weather there was a questionmark as to whether we should carry on to Driggeth Mine or return to Sandbed, but carry on we did. Fortune favours the brave because the weather broke and we had an hour of collecting before once again the snow was flurrying around. In that time, some good specimens were collected - the best finds going to Roy Starkey with a very fine bayldonite and to Austin Lockwood with the best hemimorphite I've seen from Driggeth. Other minerals collected were adamite, baryte, brochantite, cerussite, galena, langite, linarite, malachite, rosasite, philipsburgite, pseudomalachite and pyromorphite/mimetite.

R. Soc. N. (1994) 25

BMS Newsl (1995) 40 14

S. Burchmore has "very nice" nat. silver from main dumps at "Driggeth"

Bellerton et al UKJMM
(1996) 16 13-15 "Min. Notes"

Chenite

BMS Sympos Spec. (1997)
(Rsws 97-55) "Cyprian
adamite" green individ
xls scattered on qtz
(see VII)

GR, AM Clark & CJ Stanley, Geol. Curator
(1998) 6, 317-322. Some AWGK falsifications.

RSN(2000) 37, 10. 7/5/00. Linarite, beudanticite,
baryte, cerussite, brochantite, calledonite,
pyrom-mimet, galena, sphal. adamite
bindheimite, covellite, "hawley-greenock."
- All "VISUALLY IDENT" (H. Critchley) - 5

BMSN(190) 28 7 MPC - on 30 fm level dumps [CdS_{amorph}?]
an unid. "pale peppermint-green serpate or globular"
min., sol dil HCl without efferv.

RSN(2001) 39 20. D. Green Bechererite; chenite

DRIGGITH M., Caldbeck, Cumb. (VIII)

D.I. Green, J. Betterton, R. Bell & T. Neall. (2001)
J. Russ Soc. 7 (2), 86-87.

Ramsbeckite $\times 15^{(XRD)}$ to 0.4 mm w. crudely hex
foliated eggs Schulenbergite (XRD) to 0.3 mm
subhedral grains bluish posnjakite (XRD)
serpier & linar.

RSN('06) 48, 14-15. D. Green. Field trip. Little pyrom in
open cut. Horseshoe dump above 12 fm lev gave a
few MM's of linar, caed, ceruss etc. 30 fm
lev dump $\rightarrow$ pyrom-mineet, bayldonite crusts,
adamite, a little philipsburgite. Brook, linar.

RSWB et al (2009) J. Russ. Soc. 12, 3-9

Adamite rare; zincolivinite more common

DRY GILL MINE, Caldbeck, Cumb.

(I)

SRMRGB XXX (1925): Faulted boundary between S shales & N Borrowdales: thrown several yards by N-S vein through Brandy Gill (qv), which in the S has wolfram in greisen. Minerals similar to DRIGGITH (qv)

Mus. specs. Campylite, with psilomelane, on quartz.

AWGK MM 423 (1960): Lower level, on outcrop of vein: beudantite, with baryte, azurite, and psilomelane. Middle X-cut, ca. half way up the gill - beudantite, greenish-yellow powdery aggs assoc with olivenite.

: Coronadite (? - v. infra (II, back))

R. Sutcliffe Priv Comm (1969): One specimen ~~from~~ light blue plumbogummite with campylite. CONFIRMED - IR (RSCOB)

TMH (1868) 53: Pb, Cu mine. Baryte; calcite; mimetite;
psilomelane.

WFD & NT (1948): Campylite; pyromorphite;
quartz; baryte; psilomelane; a small
group of pharmacosiderite xls.

W. T. Shaw (1970). Map, p 37. Account, p 46-7
"Kampylite", pyromorphite, scarce galena,
baryte, "manganese soot"; "coronadite"
Coloured lead ores said to have been
sold to glass manufacturers. Largest working
a X-cut @ ~1750' on N from gill to lode - where
slope to surface - lode here in 2 branches,
most work on N branch. Midway between these levels
a X-cut S into hill towards Brandy Gill - partly fallen & full of water
much quartz, a little baryte

DRY GILL M., Caldbeck, Cumb. (II)

MPC, Priv Comm. 3/8/87 Romanekite
(BM xray) (sent in as ?coronadite)

T. Neall & M. Leppington (1994) J. Russ Soc 5 1234
Cinnabar, bright red earthy coatings
in 2-5 mm diam. voids in coarsely granular
quartz w. residual sphalerite; ass w. mimetic
var. "campylite".

BMSN (1997) 46 9. (BMS coll) Wulfenite, pres. N.
Bartlett

M. Wolfe "Mineral News" (2006) UKJMM 27, 8. All
samples of black MnO's examined = romanekite.

The party set off for the tea rooms in Mosedale at 4.00pm and just made it before closing time. The finds were discussed over pots of tea and material selected for examination by X-ray diffractometry and SEM EDAX at Manchester University.



Figure 3. A thin section in crossed polars showing black romanèchite in campylite.

Preliminary XRD results on these and other specimens submitted by the party for examination suggest that almost all of the manganese oxides present at Dry Gill are romanèchite, the barium-rich manganese oxide mineral. Romanèchite was the dominant species in all eight specimens examined by XRD, and only one showed any evidence of another manganese oxide mineral. Specimens are commonly labelled as coronadite by collectors and dealers and these should be treated with some scepticism. Even material in direct contact with campylite proved to be romanèchite, not coronadite.

Some of the yellow crusts examined proved to be plumbogummite, which seems to be rather more common than hitherto supposed, albeit in rather inconspicuous crusts. A rich specimen was selected for the Manchester Museum collection. Small yellow drusy crystalline crusts on one specimen are an extremely good XRD match to the rare mineral segnitite. This has also been retained to be added to the Manchester Museum collection. Segnitite and beudantite are difficult to distinguish by XRD alone and further work is ongoing. However, the fact that the mineral fails to leave a white lead sulphate precipitate when decomposed in nitric acid suggests that it is sulphate-free, and therefore segnitite rather than beudantite. Quantitative chemical analyses would be justified on a wide range of so-called beudantite specimens from the area.

The green crystals found on the single specimen described above proved to be brochantite by XRD. This appears to be the first XRD confirmed report of crystallised brochantite from the mine. This specimen was retained for the Manchester Museum collection. The white blocky crystals found by Chris and Harry Critchley and thought to be anglesite proved in fact to be baryte. Another specimen thought to be anglesite which was lent to the author also proved to be baryte. These specimens are clearly of supergene origin and as they look very like anglesite, further investigation of the original work on anglesite at Dry Gill is needed. A red powdery mineral collected from a black manganese-rich dump at [NY 3221 3451] proved to be a mixture of quartz and kaolinite. This probably represents altered

DRY GILL M., Caldbeck, Cumb. (TII)

RSN (106) 48, 15 D. Green Field trip. White to yellow
encrusts plumbogummite some w. black
romanechite; "campylite".

Bridges & Green (2008). JRS, 11, 48-50. Supergene baryte

1"82

NY 210 134

DUB'S QUARRY, Borrowdale, Cumb.

DUMPY STONE, Caldbeck, Cumb.

See also NETHERROW BROW, SANDBED MINE

AWGK Priv Comm (1960): Level N of Dumpy Stone, on
Netherrow Brow (qv): Beudantite; scorodite; beaverite
adamite; plumbojarosite; jarosite.

AWGK MM (1957) 813: Jarosite.

AWGK MM (1960) 423: Carminite, with considerable amts
beudantite, and red-brown scorodite.

RSWB TG 6/6/62 Vol II, 66-67. Pharmacosiderite.

EAST POTTSGILL MINE, Caldbeck, Cumb

See POTTS GILL BARYTE MINE.

ELIZABETHAN M., Thirlspot, Cumb

See THIRLSPOOT TRIAL

1" 82 NY 174 309 W

EMBLETON (QUARRY), Cockermouth, Cumb.

MM. 32 418 (1960) Spec. of thaumasite with gypsum,
dickite, alunite, & zunyite in BM. Coll. AWOK, (1956)
AWOK. jarosite (checked IR-GR)

RSWB et al. 11/8/62. Vol II p 103 Hard dolomite, shale.
joints with quartz; some calcite; chalcopryite;
pyrite; ? pyrrhotite.

Proc. Cumb. Geol. Soc (1979-81) 4 [2] 153-5 (Field trip)
Embleton area; intrusions; map; refs.

AS maps show a lead vein just to W, at 169, 305-8

END VEIN, Caldbeck, Cumb.

See CARROCK ~~AND~~ ~~AND~~ ~~AND~~ Cu MINE

ENDEAVOUR LEVEL, Caldbeck, Cumb.

See POTTS GILL BARYTE MINE

EWER GAP, Borrowdale Tels, Cumb.

See ORE GAP

1" 83 NY 38 29

EYCOTT HILL, Mungrisdale, Cumb

H. Conke, Priv Comm 12/70. Bytownite.

1" 82

NY 272 20₅

FALCON CRAG, St Johns Castlerigg, Cumb.

See also WALLA CRAG

Postlethwaite (1913): Chlorite; epidote.

WFD & NT (1948): Small agates & garnets
are common

1" 82

FLEETWITH Q'y, Buttermere, Cumb.

See also BUTTERMERE

OS 1" 82 "Fleetwith Pike" at W end of Honister
Craig, at 205 142.

W.T. Shaw Coll., at "Grove House Gallery", Keswick (1984)
Azurite, epidote.

1" 83. Centon NY 462 293

FLUSCO QUARRIES, Newbiggin, Stainton, Cumb

WFD & NT (1948) Calcite xls. found occas.,
also laminated selenite [gypsum].

1" 83

NY 472 281

FLUSCO LODGE QUARRY, Newbiggin, Cumb

Above Derwent, 1" 82 NY 200 216

FORCE CRAG, Keswick, Cumb.

NB also

204 206
("Co mine")

(I)

See also COBALT MINE.

Stolzite. (200 216)

Rutley, 15th Ed, 199: smaltite.

TMM (1868), 54: (Pb Ag)

Blende; cerussite; erythrite;
manganite; smaltite; stolzite; tourmaline

Postlethwaite (1913)

FORCE CRAG MINE on ENE vein.

Baryte; psilomelane; blende; pyrite; galena;
cerussite; stolzite.

Mid-19th-cent. Levels

at base of Grizedale

Pike. p. 63- manganite

BM. Pink platy sheaf baryte.

T. Eastwood N-F (1959), 160. Section given. Blende & baryte
predominate over galena. Working. Other
mins: quartz; dolomite; psilomelane; pyrite;
fluorite is a rarity.

Nos 1, 2 & 3 LEVELS in Coledab → blende & galena,
approached by narrow but well-graded road, orig. a tramway,
from Bradthwaite

Higher workings reached by ropeway & "extremely rough
track" — HIGH FORCE LEVEL, made ca 1929, 1710 ft
from High Force Crag. baryte. (Some blende & galena).

No 7 LEVEL = PUDDING BECK LEVEL.

T. Eastwood. SRMRGB 22 (1921) Fluorite (cited by KCD, SRMRGB 4" F (1952))
4/70 R Sutcliffe has recently coll. v. g. baryte x/s.
cluster of big plates "from one vein", with sphaler, galena.

FORCE CRAG, Above Derwent, Cumb. (II)

WFD & NT (1948) Baryte; well x'ised blende;
dolomite, small xls; psilomelane, botry.;
galena; pyrite; fluorite rare, pale yellow
xls.; calcite, a few long dog's teeth from
the top workings during 1939-45 war.
The old record of stolzite doubtful
- no W minerals in the vein.

W.T. Shaw (1970) 108-III, photo, p. 109. Baryte

worked from 1860's. Worked intermittently
to present day. Galena, blende.
eg Braithwaite Mines Ltd formed 1916 [NB the
BM census ??]

No. 0 Level: X-cut to NNW at base of mountain,
100 ft below No 1 or Mill Level, originally
for 350', no vein cut, No's 0 & 1 levels
recently reopened and one new ore shoot
found.

High Force Crosscut in steep crags beside Puddling
Beck at 1710 ft to fine baryte vein after
520 ft. By 1947 stopped to 80 ft
below High Force Level (the bottom level
off an internal shaft)

FORCE CRAG, Above Derwent, Cumb. (III)

LaPonte drove long incline from No 3 Level, with a rise to 80 ft level.

No 3 Level driven in 1960 to below oneshoot - poor in baryte.

High Force Level West driven further, finding baryte.

Stanley CJ & Vaughan DJ, MM(1981) 44 257-60

Bournonite & nat. antimony, intergrowths in galena, ident in pol. sections from NY
2020 2175

B. Young (1987) "Glossary..."

Siderite,
sphalerite, ankerite, calcite (a few long
dogteeth from higher adits), antimony, galena
bournonite, cerussite, clinochlore, cordierite
dolomite, fluorite, goethite, illite, traces
malachite. manganite as w. smaltite,
tourmaline & stolzite in upper levels.
Pyrite, pyromorphite, quartz (incl amethyst &
chalced). wulfenite (? stolzite)

FORCE CRAG, Above Derwent, Cumb. (IV)

Russ Soc Newsletter 20 (1990) | At Harrogate Show 8/96

6th May 1989 Force Crag Mine & Old Brandlehow Dumps, Keswick, Cumbria. A party of over 20 turned up on a gloriously sunny morning at Force Crag Mine. After the usual introduction to the mine and its

geology, Lindsey led the party into the 0 Level and onto the vein. This really displays all the main features of fissure vein mineralisation very well with slickensides, the vein pinching out regularly, a reasonably clear paragenesis and interesting cavities. From 0 Level we climbed up to the sub level and collected interesting small baryte blades and sphalerite crystals. Up the ladder to No. 1 Level and then out via the big stope. Our thanks go to Lindsey for another interesting morning.

Brown pyromorphite
xls "recently obtained
underground"

BMSN (1996) 45 2

D. Green has shown the
brown pyrom to be
near a end-member

BMSN (1997) 46 4-5. D Green

Brown pyrom → > 1 cm.

BMSN (1997) 47, 3. BMS Coll., pres. D. Green: Silver;
serpierite, linarite, pyromorphite.

M. Wolfe (1996) UKJMM 4-6 "Min. News" Jackstraw
cerussite on brown pyromorphite

RSN(2001) 39 19 D. Green. Ba, sphal, gal. Upper levels:-
pyrom, ceruss, silver (some dendrites completely
alt'd to spiky acanthite after 1 yr in a
Manchester office). Micro namuwite, langite,
serpierite.

1" 82

NY 32 26

GATEGILL MINE, Cumb.

See also BLENCATHRA MINES, Threlkeld, THRELKELD MINE.

Postlethwaite (1913). Oed.

1" 82

NY 268 381

GILLHEAD QUARRY, Ireby, Cumb.

1" 83

NY 360 1895 Cuthb.

GLENCOYNE ADIT, Patterdale, ~~Westm.~~

See GREENSIDE MINE, Patterdale, Westm.

W.T. Shaw (1970) GLENCOYNE LEVEL, only
working in glencoyne dale is X-cut 40
fms to vein below "Dukes Sump" - v. old trial.
~~See~~ Driven S on vein 60 fm where shaft
to High Horse Level of greenside M., and N
for 80 fms. Abandoned 1873 - no lead
ore found, except in Dukes Sump

WFD & NT (1948) GLENCOYNE ADIT, a short
level on the higher part of the Greenside

vein, part of v. old workings. From a
small dump here - mammillated
hemimorphite, mostly bright blue (v.
similar to that from Roughton Gill)
on cockscomb baryte; some white
on chalcedonic quartz.

GLENDERAMACKIN LEVELS Threlkeld &
Mungrisdale, Cumb.

See SADDLEBACK OLD MINE .

VALLEY 2
 1" 82 Mine NY 297 274 (or 2?)
 Valley NY 2925, 2926, 2927
GLENDERATERRA MINE, Threlkeld, Cumb 2928 3028
 See also BLENCATHRA MINES 3029

Marked "GLEND" in MS on GR's 1" OS map.

Postlethwaite (1913) In metamorphic rock, not granite.

WFD & NT (1948) From glenderrterra Valley — mammillated
chalcedony

TGPZ sample sent → RSWB, 10/72. Colourless
 hexag xls = pyromorphite with a
 peculiar arsenate (?) peak

"The Lake Dist." (1982) (Cumb. geol. Soc., Field notes) 40-49

At 299270 chiastolite in slate. At 298276

(Roughten Gill) bridge stones of hardened hornfels w.
blotches of cordierite (same stuff as "musical stones"
in Keswick Mus)

At 301282 granite exposed, &
at ~~300~~ 300282 kaolinised granite exposed, in
Sinen Gill. 2 Mineral v's in main gill

betw confluences of Rought. & Sinen Gills - i.e.
296275 e to N - w. abund iron-stained quartz
gozzan, small spec's chalcopy & malachite -
collapsed adit on N vein. At Glenderaterra

mine 296276 one shaft flooded to surface:-
quartz, galena, baryte, pyromorphite.

1" 82

NY 190162

GOAT CRAG, Buttermere, Cumb

"The Lake Dist." (1982) (Cumb. Geol. Soc. Field notes) 79, 81
At 190162 in deep ravine behind
water catchment pond a fault w. a
thick lens of crystalline quartz several
metres long. See Fig 35, p 81

1" 82

NY

233 185

GOLDSCOPE MINE, Above Derwent, Cumb. (I)
See also NEWLANDS.

OS 2½" map has "Goldscope Lead Mines" at above loc.

TMM (1868) 54. Pb^{Ag} mine. Cerussite; arsenopyrite;
chalcopryite. "Goldscope Mine, Keswick, Cumb."

Postlethwaite (1913). Parallel lead veins crossed by
diagonal E-W copper veins. Galena;
chalcopryite (with Ag & Au). 13th Cent to 1864.
Olivinite. [In tables on p63]

JRK coll 1 specimen micro-xl? wulfenite [cf (II)]

RPH Lamb, 9/06 examined dump S of main → (II)

WFD & NT (1948). Chalcopyrite; galena;
cerussite; anglesite; chrysocolla;
pyromorphite; linarite. We have not
found arsenopyrite & olivine, but they
came from this locality [no references]
The reports of gold are dubious.

W.T. Shaw (1970) 104-106. Grand Level reopened
early 20th Cent. & driven beyond great
Pb ore shoot along the copper vein, seeking
junct'n w. Sealby's lead vein - not found
Stanley CJ & Vaughan DJ, MM (1981) 44 257-60
Bournonite & nat. antimony intergr. in galena
in polished sections from NY 22551850.

1" 82

NY

233 185

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in polished sections from NY 22551850.

GOLDSCOPE MINE, Above Derwent, Cumb. (II)

From (I) side

complex, at NY 231 178 on E side of valley
by Near Broadgill ("Levels (dis.)" on OS 1:25000 map)
Some coatings yellowish $\rightarrow$ apple- $\rightarrow$ grass-green
pyromorphite on quartz. Some with black
road, some with patches of orange
coatings(?). One has a tiny orange
bipyramidal wulfenite crystal (seen,
RSWB) (0.2 mm).

GRAINSGILL, Mungrisdale, Cumb.

See also CARROCK W MINE, CARROCK FELL~~S~~, CALDBECK FELL~~S~~;
BRANDY GILL

Rayners Cat (1960): Apatite.

AWGK MM 813 (1957): Jarosite, crusts of minute xls ~~in~~
granitic suite of veins; assoc with pale buff earthy
alunite.

AWGK MM 499 (1957): Arseniosiderite, tufts of minute
brown glistening scales, with scorodite, beudantite,
and carminite.

AWGK MM 423 ~~XXX~~ (1960): Beudantite. "Carminite appears
to be absent".

BM: Aikinite, yellow-grey

J. Dawson, R K Harrison, Bull GS (1966) 25, 91. The

greisen on N side of the beck has a no. of N-S quartz veins, carrying mica, wolframite, arsenopyrite, & ^{some} have shallow opencast trials. In one such trial, immediately W of the former smithy of Carrock M., the greisen on E wall of a vein found to be weakly radioact. Greisen is of quartz, sericitised feldspar & muscovite, with accessory apatite common & rare xls ^{mm} xenotime. Greisen assayed 0.028% U_{308} ; autorad graphs showed 0.01-0.2 mm grains of uraninite. This wall rock also has narrow veinlets & impreg's of arsenopyrite.

GREENSIDE MINE, "Cumb"

see under Westmoreland.
part of the workings are in Cumb, eg
GLENCOYNE ADIT portal [qv].

1" 83

NY

3

3

HALTCLIFF SMELTER,Cumb.

departed for the journey home. A small party concluded the day with a brief visit to the Haltcliff Smelter site north of Mosedale and gathered some slag samples for breaking up at home. A brief inspection revealed brochantite, caledonite, cerussite, langite and linarite. ^{RSN}
(1994)

Gg 2½"

H. Bridge

36 36

- with "MILL (dis)"

H. Hall

36 37

H. View

35 35

1" 82 NY 307360

HAY GILL, Caldbeck, Cumb. (I)

cf "HAY GILL MINE, Alston Moor" of TM Hall.

SRMRGB 30 (1925). In Borrowdales, at 303361. Ore
appears to have come from ~~B~~ NW vein.
Small level, now obscured, at bottom of
gill. Chalcopyrite in quartz

AWGK, Priv. Comm. Level at 307360: Pyrite,
calcite, malachite, chrysocolla, cuprite,
atacamite (looking v. like malachite).
old level, no dump, to SE at 303361.

TMH (1868) 52: (Pb). Malachite, melaconite, chalcopyrite
—"HAY GILL MINE, Alston"

WFD & NT (1948) Malachite, hard to find

WT Shaw (1970). Map, p 37, Account, p. 61.

? Elizabethan copper mine, said to have once been rich (before records). Main lode N 50° E crosses stream ~ 100 yds below junction of Long & Short grain Becks. Long collapsed, old working on S side, old collapsed level, also shaft, on N side. [N 4 307 360]

No 1 X cut to SE (from 200 yds lower down gill) 500 ft to lode then NE to the shaft at 60 ft below collar. Copper ore on old sorting floor. Re-tried 1866. Some Cu sold 1871.

A Dale Beck Level to SSE for 81 yds along barren vein 1,100 ft from level mouth & 120 ft below it. All working ended by 1874

HAY GILL, Caldbeck, Cumb. (II).

T. Bridges RSN(105) 46, 34-5 Field notes etc.

Also... ankerite/dolomite; goethite, jarosite?,
black Ce sulphides rare, surrounding
some crpy grains.

1" 82, 83

NY 33 15

HELVELLYN, Cumb.

See also under Patterdale, Westmoreland; BROWN COVE M (Westn)

TMH (1868), 54: Calcite; galena; hornstone.

OS 6" map shows "Lead Mines" & "Old Levels" near 3315 nearly 1 mile to WSW of the summit, on the lower slopes above Thirlmere, in parish of St. John's Castleterigg & Wythburn. Also two old levels to N of summit in Patterdale parish, Westmoreland.

WFD & NT (1948) On ST. SUNDAY CRAG [Not on OS $2\frac{1}{2}$ in maps, possibly in W'mld] in the Helvellyn range - stibnite, small needle-thick veinlets in quartz strings. [NB see Wanthwaite M.]

1" 82, 83

NY 330 150

HELVELLYN MINE, St. John Castlerigg, Cumb.
^{& Wythburn}

See also HELVELLYN, Patterdale, Westm.

Postlethwaite (1913). On W side of Helvellyn.

OS ~~1:63,360~~ map shows "Lead Mines" & "Old Levels" on W side of Helvellyn, near 330150

TMH (1868), 70 "Helvellyn, Westm." In hr. Sd: Calcite; galena.

W.T. Shaw (1970) pp 75, 100-101. Map, p 76. Lead veins, worked from early 19th cent.,

in upper part of steep Mines Gill, to 1880,
when M/C Corp. took Thirlmere for water supply.
Blue Rock V. & Old Vein, NNE-SSW (Blue Rock most W),
joined by Brown Cove V, SW-NE; cut off to S
by nearly barren EW vein. (? = Eagle Crag v?)
Arnison Level, 2100 ft OD, on Old V., to Brown Cove
V & Blue Rock V. One rich at junctions
esp. in No 1 level 150 ft below Arnisons.

No 2 level, main producer, from W side of gill
at 1750 ft, for at least 100 fms, to Brown Cove
V. junctions. Felsite from dykes on tips.

Quartz baryte galena, some v. Argentif.

No 3 level (older?) 150' lower than No 2 is
X-cut to Old Vein; dump washed away, entrance closed.

No 4 level in fir wood @ 1400 ft OD - a short
X-cut to the EW vein - "No mineral is to be found on the tip"

NY 34 38

HESKET NEWMARKET, Cumb.

TGPZ, Priv Comm 7/72 . Old quarry at
341 388 fairly well grassed-over & now
a rubbish tip. No mineralisation noted.

HIGH PIKE, Caldbeck, Cumb.

WFD ENT(1948) good Kaolin, from the level, now
fallen in.

HIGH SNAB BANK, Above Derwent, Cumb.

See NEWLANDS

1" 82

NY 321 231

HILLTOP QUARRIES, St Johns Castlerigg, Cumb.

1" 82

NY 216 139

HONISTER QUARRIES, Borrowdale, Cumb.

HOWTHWAITE LEVEL, Caldbeck, Cumb.

See SANDBED MINE

INGRAY GILL LEVELS, Caldbeck, Cumb. (I)

AWGK Priv. Comm. (1960): Two levels, opposite each other on NNE-SSW vein crossing Ingray Gill at NY 308367, have Pb, Zn, Cu, As, & Ba, (Co. ~~Au~~ *dubious*)

AWGK MM (1957) 499: Arseniosiderite, with pharmacosiderite, scorodite, and erythrite. *ALL dubious*

AWGK MM (1957) 813: Jarosite, small rhombs, some altering to limonite, with arsenates, from N level. *Dub.*

AWGK MM (1957) 700: Beaverite. *Dubious*

AWGK MM (1960) 423: From N cross-cut: Carminite, assoc with beudantite, scorodite, and pharmacosiderite. beudantite on decomp. galena and quartz. *Dubious*

RSWB et al, 12/8/62. Vol II, p. 106. Quartz; galena; traces
linarite staining; trace "erythrite", cerussite xls;
malachite; yellow microcline pyromorphite

Rothwell & Mason (1992), UK JMM 11, 30-40
Hartley (1984) reports wulfenite among
species from the 2 old levels but
gives wrong NGR, repeated by Young, 1987
of "308 359". Is 308 367. **DUBIOUS (AWGK)**

D. Green et al (2009) J. Russ. Soc. 12, 33-45 "A
Review of the Mineralisation at Ingray Gill, Caldbeck
Fells, Cumbria". History, survey, minerals, photos.
Strial @ 3078 3670 closed up. Dump grassed. Level
flooded, a little pyromorphite on quartz in roof.

INGRAY GILL, Caldbeck, Cumb. (II)

N trial at 3081 3674 open. Level ~ 90 m long.
Also tiny trial on N flank of valley at 3062 3680
prob the "Middle level" of Adams (1988) & BGS
(1997). No sign of mineralisation.

Anglesite xls to 4 mm, ~~as + r~~ ^(s + r) 1 mm (N trial); baryte;
bindheimite, yell powdery (N); cerussite; "chrysocolla"
The "erythrite" has no Co or As & is BiO! galena;
goethite; linarite (minute on 1 from N); malachite;
minetite ass. w. the pyrom; motttramite, drusy
yell → yell-brown crust (N), common! quartz;
vanadinite, a white epimorph & a hex xl, pale
brown overgrown w. motttramite.

The AW&K coll in the NHM has ~ 75 spec's

labelled as from Ingray Gill, but mostly they do not match authentic specimens - only 5 specimens similar of N. Thomson's authentic ones! His spec's have the following:-

Prob. genuine ~~specimens~~: Anglesite, baryte, bindheimite, brochantite, caledonite, cerussite, chalcopy, "chr'olla", galena, linarite, malachite, mottam (not recognized by AWGK!); pyrite; Pyromimetite; quartz.

Dubious:- Arseniosiderite (Wittichen); arsenopyr;
bayldonite; beaverite; beudantic; carminite;
erythrite (ex Wittichen & Schneeberg); gold;
hemimorphite; jarosite; olivenite (ex Cornwall);
pharmacosiderite (ex Cornwall); psilomelane;
pyrolusite; scorodite; vanadinite (Leadh-wan);
wulfenite.

IRON CRAG, Roughton Gill, Cumb

See ROUGHTON GILL MINES

1" 82 NY 2623

KESWICK, Cumb.

See also locs in Above Derwent PH.

TMH (1868), 54: Cerussite; chrysocolla;
 garnet; graphite; haematite;
 molybdenite.

1" 82

NY 29 32

KNOTT, Caldbeck, Cumb.

GS map shows Mn, ~~the~~ veins on S slope
of Knott, in square 2932

1" 83

NY 393224

KNOTTS QUARRY, Matterdale, Cumb.

1" 82

NY 2 2

LADSTOCK MINE, Above Derwent, Cumb.

See also THORNTHWAITE MINES.

Ladstock 222 249

Postlethwaite (1913) oldest of THORNTHWAITE MINES.

1" 83

NY

57 33
56 33

LANGWATHBY Cumb.

See also LONG MEG MINE

MA 72-1917 (23 [3] 1972, 178)

R.S. Arthurton, Rept Inst Geol. Sci. No 71/17 (1971) ^{18 pp 4 figs} "The Permian
Evaporites of the Langwathby borehole, Cumberland".
BH in Vale of Eden. 5 main evaporite horizons
mainly of anhydrite. Some gypsum, dolomite,
magnesite nodules. Some anhydrite is pseudo-
after gypsum.

1" 82

NY 24 15

LINGY BANK, Borrowdale, Cumb.

OS map shows "Old level" at 249 155
below RIGG HEAD Q.

1" 83

NY 23 42

LITTLE MELL FELL, Matterdale, Cumb.

"The Lake District" (1982) (Cumb. Geol. Soc., Field notes) 31

Clasts exposed at 425 235 on S side
of fell are coated w. haematite.

Small g'y just N of Folly Cottage on track
on E base of fell has olivine basalt w. vesicles.

1"82

NY 234 191

LITTLE MINE CRAG, Derwent Fells, Cumb

LONG COMB MINE

1" 82

NY 206 206-7

~~COBALT MINE~~, nr. Force Crag, Above Derwent, Cumb. (I)

See also FORCE CRAG, CAUSEY PIKE; SCAR CRAGS.
[LONG COMB(E) M.]

T. Eastwood N-F (1959), 172. Extensive trials $\frac{1}{2}$ ml SE of Force Crag dressing floors were fruitless, though little spent on mining.

WFD & NT (1948) Near Scar Crag. Little remains of the old working, & not much interesting vein stuff to be seen. In 1948 WFD coll. a few spec's. erythrite, but saw no smaltite. Also found: arsenopyrite; scorodite; psilomelane. On an old specimen are traces Cu minerals & erythrite.

TGPZiemba, Priv Coman 10/71, 12/71 Specs → RSWB for ident.

From screens/dumps. Quartz-chlorite veinstuff with cobaltiferous arsenopyrite [RSWB 71-273] (coll' 23/10/71)@

Coll. 11/12/71 from collapsed leads in the only accessible slope: - V different matrix of chlorite-free vein quartz, with on edges spongy grey to greenish to pinkish scrodite (IR) and in vugs in the quartz, colourless radiating fibrous wavellite (IR) rarely; assoc. with pale green radiating clusters of variscite xls (IR, det. orthoclase (3 specs), n close to CHBr_3 (1.598)) [RSWB 71-330]

TGPZ, RSWB 26/2/72; 10/6/72 Above; also erythrite on arsenopyrite; apatite large radiating idiomorphic xls (IR) embedded in quartz-chlorite (green)-arsenopyrite. A brown oxidised ?chlorite Near arsenopyrite,

Long Coombe mine, Above Derwent, Cumb.

= "Cobalt Mine". Approx. 205206.

*AWGK, Min. Mag. 1957, 31, 499.

The reported occurrence of erythrite "at 'Force Crag' and at the nearby so-called 'Cobalt Mine', in the Causey Pike range (both of which probably refer to the same, latter, locality), is of considerable doubt. X-ray examination of many specimens of pink minerals collected at the so-called 'Cobalt Mine', and which, superficially, might be taken for erythrite, has in almost every case shown them to be scorodite; the other examples of this material are simply iron-stained, altered apatite." (The only definite erythrite in the Lake district is from Ingray Gill, NY/33, and from Coniston mines, Lancs,).

*Postlethwaite (1913), 109.

The Cobalt Mine, opened by Keswick Mining Co. shortly after starting Stoneycroft mine. Moderately large N-S vein, four short levels. Costly machinery installed to extract the large quantities of cobalt believed to be in the ore, but little if any was obtained!

pl60 Erythrite, smaltite

*Goodchild, 1881-4.

Ward's Memoir mentions small specks of cobalt (smaltite ?) in a quartz vein between Sail Crag and Scar Crag.

*Davidson & Thomson (1950).

Cobalt mine, nr. Scar Crag: little now remains. Davidson collected a few specimens of erythrite in 1948, but saw no smaltite. Also mispickel, scorodite & psilomelane. On an old specimen are traces of Cu minerals & erythrite.

Not mentioned in W.T. Shaw's "Mining in 90

LONG COMB M., Above Derwent, Cumb. (II)

→ 2006 EDV = Fe, As, P only. IS "NEW SPECIES" - the Fe²⁺ analogue of arthurite - "unimanchite"
~~= benedictite or its all Fe³⁺ analogue.~~
and usually next to quartz grains
yellowish-greenish-brownish lustrous fibrous
micro-veinlets "arthurite" (X-rayed, E. Feyer,
BM. Letter of 27/11/72 → RSWB. "arthurite + scorodite".
"Differences from our standard pattern are probably
due to additional impurities").

BM:- LONG COMBE VEIN, Causey Pike, Derwent Fells, Cumb.
(AWGK). Childrenite, spectacular little group
of xls on white quartz. AWGK MM 31 501
(1957): Childrenite, in unusual quartz-chlorite
vein a little to the W of Causey

Pike; this vein has apatite (up to 1" long) and arsenopyrite, some löllingite & scheelite; clearly a lower-zone higher-temp type, with granitic affinities

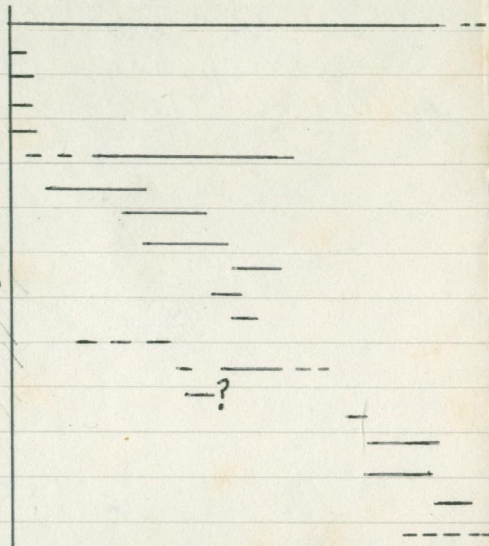
RAI xer, C.J. Stanley & D.J. Vaughan "Co-, Ni-, & Fe-bearing sulpharsenides from the north of England" Min Mag (1979) 43 389-395. Co-Fe sulpharsenides w. Aspy in a qtz-chlor-apat vein @ Scar Crag. Inclusions in qtz include rutile. Traces tourmaline. Aspy overgrown by alloyase or glauco-dot less commonly. Nat Bi inclusions in aspy & early qtz; bismuthinite in fractures in aspy & alloyase. Traces micro-molybdenite fibres. Scheelite, löllingite not found.
Paragen diag ~~is~~ on card III

LONG COMB MINE, Above Derwent, Cumb (III)

Ixer et al (1979) (Cont'd)

NY 2060 2070

qtz
Muscov
Apat
Tourm
Rutile
Chlorite
Aspyrite
glauco dot
Alloclase
Cobaltite
Skutterudite
Marcasite
Bismuth
Bismuthinite
Molybdenite
Pyrite
Hedemite
Scorodite
Psilomelane
Erythrite.



B. Young (1988) "Wav & Varisc from Scar Crag (balt
M., Cumbria" ~~Proc~~ Proc Cumb Geol Soc 5 [1] 13-16
Descrip, including our work, of the
occurrence of wavellite & variscite.

LONG COOMBE MINE, Above Derwent, Cumb.

See ~~COAL~~ ~~LEAD~~ LONG COMB M.

1" 82

NY 27 35

LONGLANDS FELL, Ireby, Cumb

RSWB, TBG, JRK, 7/64; IV, 137. No sign of level
of OS 6" map, near NY 272 357. Open level, at
NY 271 353, gated, with water pumping gear:
dump v. barren. - 2 minute green specks seen!
To SE, dumps near ^{NY} 272 351₅. Quartz matrix,
small patches chrysocolla & malachite,
some as silky needles. Higher up the gill,
more dumps & old workings near NY 273 351₅.
Mineralog. similar.

1" 83

NY 563 378

LONG MEG MINE, Hunsonby, Cumb.

Nr. LANGWATHBY (qv)

"The Lake District" (1982) (Cumb. Geol Soc. Field notes), 26
Anhydrite mined in now disused
Long Meg mine (563 378).

LONG WORK MINE, Above Derwent, Cumb.

See DALE HEAD MINE

1"
LORTON, Lorton, Cumb.

NY 17 25

N.J. Fortey & P.H.A. Nancarrow J. Russ. Soc (1990) 3 (1) 15-22

From NY 1755 2577 near Scaugill Bridge,
Lorton, in Whinlatter Pass area, chromite &
an unnamed Cr-Ti-rich oxide as accessories, with
titanite (sphen), rutile, pyrite, chalcopyrite,
~~off~~ a Ni-As-S (?gersdorffite) a Co-As-S (poss.
cobaltite, glaucodor or villamaninite) in an
augite rich microdiorite.

1" 82

NY 11, 12

C

LOWESWATER MINES, Loweswater, Cumb.

Postlethwaite (1913) 106

Loweswater M shaft on W side of
R Cocker, opposite Scale Hall [i.e. NY 14 21]
"a good deal of ore ... from it".

Another 11e vein betw. Whiteoak &
Highnook Becks [i.e. NY 12 20] - "some ore"
& another on W side of Masedale,
Beck beneath Hencombe [i.e. NY 13 ~~17~~ 17-18]

AWGK(?) Priv Comm. Big dumps at the 12 20
loc, lead ore, green fluorite

1" 82

NY 31 35

LOW PIKE, Caldbeck, Cumb. (I)

AWGK's annotated map: "Old trials workings"
on N vein near 317 355.

On other maps, levels ~ 320 357, 325 360

MPCooper, samples → RSWB for ident, 7/87.

From an old trial on Low Pike, that has only recently been investigated - very small site, little material. IDENT IR (RSWB)

Bayldonite, green crusts on quartz, fairly common, in part pseudo after pyro-mimet.
Pyromorphite-mimetite (~1:1, P:As) small whitish to greyish green xls. Pale drusy green crust cornwallite (X-rayed)

grading to darker green on "limonite"-
quartz gozzan, which is very phosphatian
cornwallite (microprobe shows major Cu, P, As).
Pale blue-green fibrous slightly banded
mass ("one spec") is philipsburgite (As > P);
pale green to almost white minutely
botry. masses and tiny platy & aggs
found with cornwallite (X-ray: diffuse
pattern, not matched) IR = philipsburgite
(P > As) + impurity.

→ ie. could be phosphatian kipushite - needs analysis

MPC Samples → RSUB for ident, 8/87. MPC 90 soft green
crust = arsenatian pseudomalachite; on bayldonite.
MPC 92 DK green radiating thin fracture filling, looks like
malachite but is phosphatian cornwallite

LOW PIKE, Caldbeck Fells, Cumb. (II)

MPC Priv Comm (Telephone) 18/9/87 "Reichenbachite
has been ident." A spec $\rightarrow$ RSWB, IR = Phos-cornw
MPC Priv. Comm (Telephone) 12/87. Orig. spec.
XRD re-checked - it is phosphatian
cornwallite, NOT reichenbachite.

B Young, MPC, PHA Nancarrow, Digreen. J Russ. Soc ^{To be published} (Referencing job)
Trials at 325 360 made in 1927, & further w. ~~V. inf.~~
Dumps have. quartz, baryte; Mn oxide stains,
a little galena, chalcophyrite, barylonite,
kendallite, cornwallite (incl. phosphatian)
pseudomal (incl. arsenatian); duftite, malachite,

mimetite (phosphatian); philipsburgite
(phosphatian - 2 specs analysed).

B. Young, M. Cooper, P. H. A. Nancarrow & D. I. Green J. Russell
Soc (1990) 3 (1) 25-28. At NY 320 358

Vein quartz, rare py sulphides - cupy, galena.
Baryte, bayldonite, berdanite, brochantite,
cornwallite, some phosphatian; duftite
malachite, phosph. mimetite; mottramite,
philipsburgite, pseudomalachite

The party then climbed up to the small dumps in Low Pike where a little bayldonite, pseudomalachite and philipsburgite were unearthed. The last mineral is easy to identify but I am having difficulty with the other two. Some of the bayldonite is relatively dark and crystalline.

Russ Soc Newsletter 20 (1990)
RSN (1998) 33.16. Ceruss,
bayld, philipsburg.

LOW PIKE, Caldbeck, Cumb. (TIT)

BMSN (1989) 27 14. Baryte transp. "multi-faceted", a variety of forms. LOW PIKE.

D. Green et al (2003) J. Russ. Soc. 8 (1) 43-44
Gartrellite from adit at NY 320 358
 on Low Pike v - qtz. Yellow crust in
 fractures in qtz to several cm², some
 crude spherules to 0.1 mm

Bridges & Green (2008) JRS, 11, 48-50. Supergene baryte

1" 82

NY 2416

LOW SCAWDELL, Borrowdale, Cumb.

P. Fleming in "Beneath the Lakeland Fells" (1992) p18

Copper oxide, tenorite and small quantities of cuprite, noticed first in Oct. 1990 in the rough ground of Low Scawdell, in Borrowdale

1" 82

Cent on NY 307 345

(I)

MEXICO MINE, (Herkert Newmarket), Caldbeck, Cumb.

See also BRAEFELL MINE; ROUGHTON GILL MINE

T&P Ziemba Riv Comm., Letter (12/12/71). E Part of Roughtongill complex, around Clints Gill.

TOP LEVEL [NY 309 345] open. ~~the~~

40 fm LEVEL [NY 30753445] being excavated by T&P Z (12/71)

60 fm LEVEL [NY 3055 3450] blocked after short distance

From 40 fm level dumps, at 30753445, chalcocite, grey sectile massive with island patches cuprite, chrysocolla in quartz. On surface

of specimen (RswB 71-301) traces blue needles

?? connellite [All ident RswB — the chalcocite gives no sublimates in open tube — only SO₂. Only Cu detected, no Pb etc — one spot on paper chromatog.]

~~MEXICO MINE, Heskett Newmarket, Caldbeck, Cumb.~~

~~See also BRAEFELL MINE~~

~~TMH (1868), 54. Carb lim. Anglesite; cerussite;
linarite; malachite; mimetite;
molybdenite; pyromorphite~~

PTO

Another specimen (K80371-) shows traces
brochantite, cerussite, malachite, cuprite,
chrysocolla, langite (pseudohexag xls).

WT Shaw (1970) "Mining in the Lake Counties" p40, S lode has
gramophyre on N (hanging) wall here. p44 Between Blea
& Clints gills. Most workings on S lode, here

MEXICO MINE, Caldbeck, Cumb. (II)

large & almost entirely quartz. Most of Pb is pyromorphite - a little galena. Small quantities Cu as red & grey oxides. Shallow level, 40 fm & 60 fm levels. The 90 fm level [of Roughton Gill mine presumably] has been connected to these workings.
Map, p 70

WFD & NT (1948)

Brownish-red mimetite

TMH all (1868) 54
In Carb Lim.

MEXICO MINE, Hesketh Newmarket.

Anglesite, cerussite, linarite,

malachite, mimetite, molybdenite,
pyromorphite.

M.P. Cooper, Priv. Comm. 2/86. Dave Middleton,
of Blidbrook, Wolverhampton has 2 spe's
corkite on goethite from Mexico mine
dumps

MPC Priv Comm 8/87. Wulfenite - ^{Bipy. orange w. ceruss} Roughton Gill
S vein near Mex. M. High level; also dumps
from Low level in Tod Gill - tabular yellow
with pyro-mimet. [See Rothwell & Mason, 1992,
UK JMM II 30-40]

MEXICO MINE Caldbeck, Cumb. (III)

A summary of field trips during 1994 to Mexico Mine, Caldbeck Fells, Cumbria

John M. Pearson

RSN (195) 26, 33-5

Penetrating rain, intermittent fog and persistent driving winds, this most inclement December weather heralded the start of the walk from Fellside toward Mexico Mine, on my twenty third visit to the mine in 1994, on this occasion accompanied by my son Thomas G. Pearson.

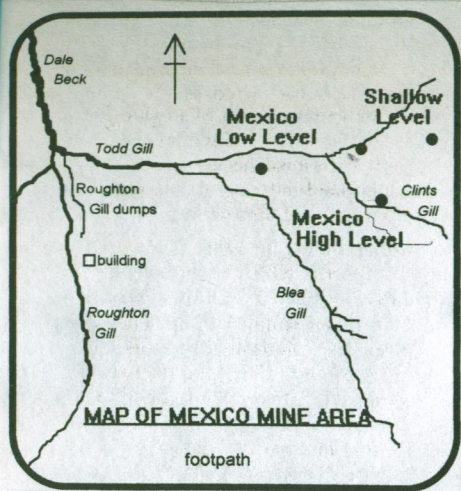
Fellside (NY 304 375) is a small village south-west of Caldbeck. A short road from the village by the side of Fellside Farm, where, incidentally, there is space to park cars off the road, leads to a gate, beyond which are the Caldbeck Fells.

Access to Mexico Mine is on foot, approximately 2 miles from Fellside, over a stile adjacent to the gate, following the main track to the right, and uphill, alongside a dry-stone wall, the end of which marks entry into Dale Beck valley. This is a remote area, quiet and beautiful, surrounded by rugged fells broken occasionally with cascading Gills running down from the 'tops', and, so far,

remains relatively unspoilt, despite the centuries of mining throughout the length and breadth of the valley.

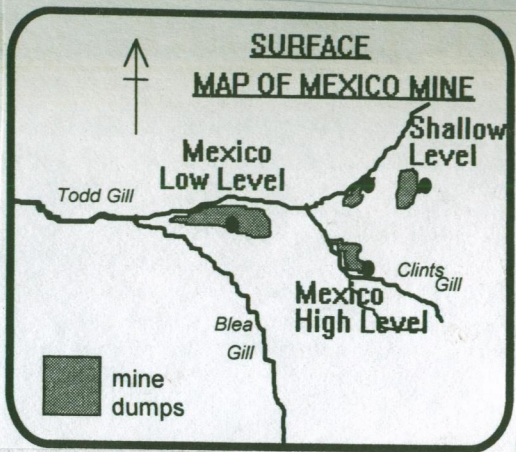
Continuing along, the track leads to Roughton Gill Mine main dumps, at the head of the valley and after negotiating the ford across Roughton Gill (NY 3019 3450), one crosses the dumps in an easterly direction to join a path leading uphill. This passes some old water reservoirs to the right which are now overgrown but clearly discernable in outline, with Todd Gill on the left. It climbs until it crosses Blea Gill shortly before it joins Todd Gill, where we arrive at the Mexico Mine Low Level dumps, which are mostly grassed over.

It is about 325 metres from Roughton Gill to Mexico Mine Low Level (NY 3051 3452). This is where the 70 fathom level was driven onto the Roughton Gill South Vein.



In the centre of the Low Level dump, on the south side, are the ruins of an old mine building and immediately east of here is the area of the dumps most frequented by mineral collectors. From this area we have recovered several specimens this year including;

Cerussite; as white tabular crystals to 3mm on massive cerussite,



Goethite; as a black minutely botryoidal crust to 2mm thickness on quartz.

Quartz; minute to 0.5mm, water clear, brilliantly lustrous crystals, spotted with spherical canary yellow pyromorphite to 1mm.

Anglesite; dull, white to grey, steep bipyramidal crystals, few being terminated to 8mm.

→ (IV)

MEXICO MINE, Caldbeck, Cumb. (IV)

Malachite; individual acicular crystals to 4mm in small cavities in massive quartz, also as radiating fibrous masses to 6mm associated with botryoidal, light-blue to light-green crusts of chrysocolla.

Pyromorphite-mimetite; - globular and curved, mid-brown crystals some with dark green terminations to 2.5mm on massive brown stained quartz. - Olive green crystals with curved faces to 3mm on brown stained quartz. - Globular yellow-green crystals, with vitreous lustre to 5mm on quartz. - Superb, lustrous,

globular crystals, amber through khaki to yellow to 4mm.

On the opposite side of the Low Level dump, by the side of Todd Gill we have found;

Mimetite; globular, honey-brown crystals to 8mm on quartz crystals.

Pyromorphite; solid globular masses to 12mm, the surface being covered in khaki green

crystals to 2mm, radiating as from the centre of the sphere.

Psilomelane; as coatings associated with globular pyromorphite described above.

Leaving the Low Level in an easterly direction, a further 225 metres uphill, crossing Clints Gill, reaches the Mexico Mine High Level (NY 3074 3447) or 50 fathom level, above which, may be seen a rocky outcrop of the Roughton Gill Vein.

The main dump, just below the High Level entrance, provides excellent collecting. On the steep south side, adjacent to Clints Gill, although very muddy in wet weather, we have found specimens of very good quality, a few of which are listed below;

Malachite; radiating fibrous masses to 4mm in small cavities in massive quartz.

Mimetite; curved, yellow-orange, resinous crystals to 6mm on quartz.

Quartz; pseudomorph after baryte?, covered with small lustrous crystals to 1mm, spotted

P.T.O.

infrequently with olive green globular pyromorphite to 2.5mm. The whole being partially covered in a thin coating of yellow-orange clay.

Pyromorphite-Mimetite; - mid to honey-brown crystals the habit varying from globular to rounded with fine tipped termination's to 8mm on quartz, associated with coatings of psilomelane on the quartz. - Globular, yellow, translucent, lustrous crystals to 2mm on massive quartz. - Dark brown to khaki to oil yellow, curved and prismatic crystals to 2.5mm on quartz, the crystals have attractive iridescent surfaces.

Psilomelane; smooth black botryoidal crust to 3mm thickness on quartz.

On the west facing side of the dump good quality specimens are few and far between and require a little more searching for, however we did find several some of which are listed below;

Pyromorphite; globular, bright yellow-green lustrous crystals to 4mm on quartz. - Lime green rosettes to 3mm on massive quartz. - Yellow-green rosettes to 4mm on massive quartz.

Psilomelane; attractive black dendrites on pink stained quartz.

North-north-west from the High Level, and approximately 110 metres distant is another level, which is connected into the two other levels by the Mexico shaft, this Intermediate level is the lesser known of the three (NY 3068 3457). I have spent very little time here, and as a consequence have no specimens of note to report.

Moving east now, the final level is reached after 175 metres uphill. This is Shallow Level East (NY 3086 3455), and is not connected into any of the other levels. I have found little here other than small examples of green or yellow pyromorphite, occurring as both prismatic and globular crystals.

1" 82

NY 149 361

MOOTIA HILL QUARRY, Blindcrake, Camb. W

1" 82

Ny 323 370

NETHERROW BROW, Caldbeck, Cumb.

See also DUMPY STONE, POTTS GILL MINES.

AWGK Priv Comm (1960): On dump of old level by bend in road up to Potts Gill Mine: beudantite, cerussite, mottramite, adamite, jarosite.

BM spec. vg adamite (AWGK - from Lavrion!)

AWGK MM (1956) 289: Mottramite.

AWGK MM (1957) 813: Jarosite, in quartz.

AWGK MM (1960) 423: From material from old level near farm: carminite, in small drusy glob. aggs, assoc. with small yellow acute rhombohedra of beudantite,

Young et al (1992) (1993) J. Russ Soc. 4, 64

Symplectite, ~~argenticite~~, ~~annabergite~~ etc

brown scorodite, and arseniosiderite. Beudantite
with mimetite, mottramite, scorodite, beaverite,
pharmacosiderite, plumbojarosite, arsenopyrite,
galena, blende, and chalcopyrite.

BMSN (1990) 28, 5. M Leppington $\Rightarrow$ BMS coll 866-7.

"Cyprian adamite", pale blue-green x line
spherules on baryte e qtz. (XRD-BM)
[Zincolivenite]

BMSN (1990) 28, 8. 2 levels her "DUMPY STONE" [qv] e
"FARM". From FARM, nice but small xls
pharmacosiderite, also a "fibrous grey
sulphosalt".

RSWB et al (2009) J. Russ. Soc. 12, 3-9. Zincolivenite

1"82

NY 23 20 (Village)
NY 2315 → 2323 (Vale)

NEWLANDS, Keswick Cumb.

See also GOLDSCOPE M., BARROW M., STONEYCROFT M., YEWTHWAITE M.,
CASTLENOOK M., DALE HEAD M.

TMH (1868), 54: Chrysocolla; olivine ("Newlands")

WFD & NT (1948): NEWLANDS VALLEY: An old,
unconfirmed record of rhodochrosite.

Niccolite was formerly claimed to occur
in specks in a vein in HIGH SNAB BANK
[NY 2118]

TGP Ziembra, Priv. Comm. 5/72. Vein on HIGH SNAB
BANK. Pb/cu, quartz matrix. Bottom level
& outcrop tips in valley bottom near 217-8 184
Galena in quartz; minor linarite; cerussite;

traces chalcopyrite.

Top outcrop of vein at ca 1250 ft OD, near
206 185 - Pyromorphite

OLD BELL PIT, Caldbeck, Cumb.

See also RED GILL MINE, BRAEFELL MINE, SMALE GILL V's.

AWGK, Priv. Comm. Old Bell Pit e dump. Superb linarite
(9/50).

RSWB et al. 11/7/64 (IV, 135). galena; linarite;
8/5/65 (IV, 174): Chalcopyrite; chrysocolla; malachite;
quartz.

1"82 NY 247 204

OLD BRANDLEHOW (=OLD BRANDLEY) MINE, Above Derwent, Cumb.

See also BRANDLEHOW MINE

BM: V.g. pyromorphite

WFD & NT (1948) Galena; chalcopyrite;
blende; pale yellow fluorite; cerussite;
green pyromorphite.

George Wilson Pers Comm 10/84. Best near
top. Deep green pyromorphite rarely
~~big~~ xls; fluorite v. pale yellow.

RSWB, D Hacker 10/84 Best near top. At
top of hill old opencasts, shafts

(with little mineralisation exposed).
Dumps just below have gangue
of quartz, w. barite a little wtless
fluorite; with galena, minor
sphalerite & chalcopyrite; deep
green pyromorphite, black
iron or manganese oxide coatings.

Russ Soc Newsletter 20 (1990)

Most people lunched at the mine and poked around on
the dumps and then we adjourned to Old Brandlehow.
It was sunny, warm and the scenery out over Derwent-
water was fabulous. The dumps of the old lead mine
were well combed and produced nice pyromorphite
and cerussite with the large cubes of fluorite and quartz
after barite pseudomorphs that the site is noted for.

OLD BRANDLEY MINE, Above Derwent, Cumb.

See also BRANDLEY MINE

Postlethwaite, (1913). = OLD BRANDLEHOW MINE (qv)

OLD POTTS GILL MINE, Caldbeck, Cumb

See POTTS GILL BARYTE MINE

1" 82

NY 24 07

ORE GAP, Borrowdale Tells, Cumb

Postlethwaite

consid. prop'n

Finest quality haematite,
being kidney ore.

WFD & NT (1948)

Haematite - EWER GAP.

1" 83

NY 410 331

PARK HOUSE QUARRY, Greystoke, Cumb.

D. Hacker (Riv Comm., 7/87) Aragonite,
 radiating spiky; smallish but very
 clear. ✓ (see RSWB 87-166 pres 10/87)

Beryl Taylor Coll 6/88, shown → RSWB. In
 fozzany limestone, calcite etched-looking
 rhombohedra with curved faces. with
 it chalcopysite malachite needles,
 (efferv del HCl. merc-thiocy → apple green only)
 one spec platy sheaves → 2 mm of
aurichalcite (efferv del HCl merc-thiocy →
 almost entirely purple x/s).

RSN(2001) 30 19 D. green. Aragonite w. an
assemblage w. Ni minerals.

PODDY GILL, Mungrisdale, Cumb. (I)

AWGK, priv comm.

Finely fibrous tourmaline

RSWB, TBG, GR, Min Mag (1963) 33, 720 . Vol II p. 100. Small pale orange yellow tablets wulfenite (X-rayed - BM "nearer wulfenite than stolzite") on pyromorphite on quartz matrix. Linanite; cerussite; blende; galena; traces green copper staining. Dump on E bank above stream ca 150 yds up - near 328328.

WFD & NT (1948): Tourmaline (schorl) in a quartz

vein xing stream high up the gill.

Cerussite in a dump @ foot of the gill,
with galena & pyromorphite, but little
remains.

"Dr W. Goodchild recorded wulfenite from this
locality" [where did he record it??]

RE Starkey, Min Realm (1981) Nov/Dec 30-31 "wulfenite
from Paddy gill" Wulfenite w pyrom. in
limonite-stained quartz vein crossing the
gill by prominent muddy scar on E bank [In
line with a prob = EW vein of Carrock. = "Pb vein"
on AWGK's map]

PODDY GILL, Mungrisdale, Cumb. (II)

MPC Priv Comm (tel) 1/89. A number of "wulfenites" from Paddy Gill have been microprobed and found to be stolzite. The BM have re-checked the X-ray of the 1963 material and still identify it as wulfenite.

RSWB 1/89. All 5 spec's tested using HCl warm, then CN₃ then 5mL₂/HCl then warm w HCl.

All show much? w some? Mo. ∴ stolzite-wulfenite prob mostly nearer stolzite.

[See also Rothwell & Mason (1992) UKJMM II 30-40]

Chris rejoined us for lunch, then most of the group moved across to Poddy Gill in search of the east-west trending lead vein. Specimens found included highly reflective black pyrite (?) cubes to 1mm, slightly modified by the octahedron form in massive quartz; a pale lemon fluorite crystal to about 6mm nestling in a quartz vug and some wolframite blade sections to 0.1x2.5mm in quartz.

Also collected, but of very poor quality, were acicular oil-green pyromorphite crystals coating an iron stained fracture in quartz. Scattered amongst these were wulfenite/stolzite (not yet determined) crystal sections to 2mm with rich yellow/orange outer crusts and pale honey cores of adamantine lustre.

RSN (1994) ²⁵ Summer Me

121
← Goethite
pseudo-after pyrite (?)

POTTS GHYLL MINE, Caldbeck, Cumb.
See POTTS GILL MINES.

1" 82

NY 320 36x
+ 329 366

POTTS GILL BARYTE MINE, Caldbeck, Cumb. (I)

See also POTTS GILL Cu MINE; NETHERROW BROW etc;

AWGK MM (1957) 700: Beaverite, with carminite - "Potts Gill".

AWGK MM (1960) 423: From "Copper Dump": chalcopyrite; galena; blende; arsenopyrite; pyrite; löllingite; carminite, tufts of minute brick red needles, with acute rhombohedra beudantite; scorodite, and pharmacosiderite in gozzany quartz-goethite matrix. Beudantite also powdery yellow-brown on altering galena.

OS 2 1/2" map shows "Potts Ghyll Mine (Barytes)" at NY 320366, S of "Potts Gill" farm.

AWGK Priv. Comm. (1960): ENDEAVOUR LEVEL (at 319364) is

↑
see Aug 6 suspect
↓

old part of mine, with a newer cross-cut adit to its E, (at 320364). Above, (at 319₅362) is a dump "COPPER DUMP", rich in copper minerals, from a trial, above which lie two parallel E-W lodes, above which the main vein is reached.

From COPPER DUMP: Bayldonite; malachite; chrysocolla (9/50); pseudomalachite; cornwallite; antlerite; conichalcite; atacamite (MM 1956, 349); olivenite; libethenite; blende; brochantite; aurichalcite; vanadinite (MM 1956, 289); rosasite (MM 1957, 501); serpierite & smithsonite (MM 1957, 604); jarosite in oxidised veinstuff (MM 1957, 813).

BM: Tyrolite; libethenite, diopase, conichalcite,
vanadinite, carminite.

Non mineral "P" like to find on qtz.

POTTS GILL BARYTE MINE, Caldbeck, Cumb. (II)

T. Eastwood N-F (1959) 166. "POTTS GHYLL MINE",
working for baryte. Two veins, ca E-W
NORTH or MAIN VEIN: Baryte lenses separated
by quartzose breccia.

SOUTH VEIN. ca 50-60 yds to the S. Thinner
than N. vein but more regular. ~~the~~

Worked by X-cut & levels: Lowest = ENDEAVOR L
at 1320 ft OD. - 300 yd X-cut S to Main Vein, then
drives to E & W, giving ca 260 ft of backs now

largely stoped. Further E levels on vein from
~~East side~~ hillside, vein here shifted slightly
by X-faults. SOUTH V. less worked - baryte,
quartz.

WFDENT (1948) From a small Cu vein above the
present workings: chrysocolla, malachite,
brochantite, tenorite, marcasite, fan-aggregs
of blades. Baryte mined - massive, only one
"lough" with xls has been found - pale blue,
curved, tabular, $\frac{1}{2}$ inch, on psilomelane.

In driving a long X-cut at a point between
this mine & Sandkeds Mine, in 1950, a small
stringer of x-lised arsenopyrite found.

POTTS GILL BARYTE MINE, Caldbeck, Cumb (III)

RSWB, 5/65; IV, 176. On dumps, vein quartz
with drusy cavities with ? wad;
glob aggs malachite and grassy green
philipsburgite (BM, x-ray 12696^x - "unknown, matches
JL 4777 W.F. Davidson's unknown) (IR(22/9/86) = Philipsburgite
off AMNH 161201)

W.T. Shaw (1970) Map p37 Account p 63-70. <sup>2 main
EW lodes</sup> - N, & S.

OLD POTTS GILL MINE, p65-67

Potts Level (No. 5), 1430' OD, started ~1844, from
the gill, to W on North (Main) Lode for 480 ft
Nicholson's X-cut (No 3 lev), 1510' OD, from 1891 on N Lode

No 1 X-cut 1484' OD cut N. Lode @ 240 ft, in 1914.
Extended 140' to S. Lode-stoped; then 160' further S → barren.

Hodgson's Lev. (shallow) from gill, to W on S. Lode

Angus Gulf A short level on S lode to a baryte pocket,
further E than No 1.

Endeavour Level, 1319' OD, from 1928, then 1936. X-cut
from W side of gill. Cut N lode ~~at~~ after ~ 650'
- baryte worked. Rise to No 1 (161' higher) - ore all
way. X cut 30' to S lode-ore. Worked by
"cut-&-fill stoping". Exhausted, 1947. Had cut
a small lead vein with arsenopyrite; [Fe-blende]
("marmatite"), a little galena.

Deer Hill Levels. Trial X-cut 1961 ~ 500' W of No 1
workings hit 3' baryte lode, so 520' W of trial
a X-cut 120' at 1414' OD driven 515' to lode,
stoped; on further S via small Cu vein 55'
from lode. Stopped @ 65' from lode. Some cuprite
specimens obt. from hanging wall of main ore pocket

POTTS GILL BARYTE MINE, Caldbeck, Cumb. (IV)

On S Lode just W of No 1 level x-cut a small NS vein on hanging wall side from which a little bunch of ore taken out, with chalcopyrite, melaconite, malachite & cornwallite.

On E 80' level, mineral leather [? palygorskite] in a patch of 'hard unaltered' rock on hanging wall side of New North Lode.

Surface trial to W of Endeavour Level showed baryte deposit with much quartz & Mn soot [wad?]

EAST POTTS GILL MINE, p 67-70. Newer part, E of the gill.

Started 1942 with 2 trial levels at ~1600' OD, one on N Lode one on S Lode:-

Thomas L on S Lode from Angus gulf in ore, cut

Shaws X-course - to total 450'. X-cut S for 1030' cut 3 veins, only Edgar's Vein (Job's Well) workable. Not much workable baryte in system.

Jon Level, at 1594 ft, on N(Main) Lode - quartz, v. little Ba; cut Shaws X course at 130 ft. just E of which X-cut N 20 ft to New North Lode, with v. g. ore for 750 ft. 780' E of X-course cut NE-SW Blockley Lode, stoped 360 ft barren to total 500 ft. Both Lodes worked to surface.

Later Victory Level ~1564 ft OD, from 310' W of Sh's X-course cut rich pocket just E of Edgar's X course, with Baryte, quartz, umber, soot [MnO_2 ?]. No more ore until Sh's X course passed. At 290' short X-cut N to Back Vein, driven on E to junct w. New North Lode, which latter extended to 670'. X-cut S to poor Main (N) Lode @ 470'.

POTTS GILL BARYTE MINE, Caldbeck, Cumb.(V)

Gill Level, 1520 ft OD from Potts Gill opposite old No. 5. On New N Lode much ore. X cut to Back Kern (rich) & Main Lode (workable) → to 500' E to Blackley Lode. A rise to Victory Level X-cut. Blackley Lode cut also in New N Lode, also reached by another X cut, & stopped up to Jon Level for 320'.

X-cut driven 1946 from near mill, at 1319' OD to SE. Cut poor Rainbow Lode near portal, and New N Lode (stopped) at 1940 ft. X-cut 105' to N. Lode worked to W up to Turners Level 100' above, which also stopped up.

BM 1958, 120 "Pseudomalachite", drusy
crust on malachite. Sample
(89-61) IR: Not = pseudomalachite; =
phosphatian cornwallite

T. Neall & M. Leppington (1994) J. Russ. Soc. 5, 123-4

Cinnabar thin crimson coatings in cavs
in quartz (cellular) confined to a small area
of dumps immed. W of Gill Beck, below the track
to the Deer Hills trail

RSN
(1994)
Potts Gill is effectively barren but, with diligent
effort and a great deal of luck, three members of
the party found acceptable specimens of
philipsburgite. Also found were agardite,
aurichalcite, baryte, cerussite, linarite and mala-
chite.

POTTS GILL Ba MINE, Caldbeck, Cumb. (VI)

RSN(1988) 33 15-16.. From P. & mine, headed along track towards Deer Hills; near fork leading up to the hills, beside track small boulders & pebbles - one on breaking yielded good agardite (to 3 mm).

RSN(2000) 37.10. 7/5/00 H. Critchley. Found v. little; at 319 367. Calcite, benduntite.

RSN(103) 42, 29. Visit. As before + anker-or dolomite ? bindheimite, ? adamite translu emer-green xls on atz [? error for philipsb?] [v. over page]

D. Green et al (2005) J. Russ Soc. 8 [2] 81-84
Antlerite, cornwallite on qtz + baryte

RSWB et al (2009) J. Russ Soc. 12, 3-9. Kingsbury's
"adamite" fake, but zincolivrenite occurs.

POTTS GILL COPPER MINE, Caldbeck, Cumb.
See also POTTS GILL BARYTE MINE etc.

AWGK Priv. Comm (1960): Is at NY 318369₅ & 318371 (Two levels).

W.T. Shaw (1970) Map. p 37. Account, p. 63.

Old Cu mine just S of Potts Gill Farm. 2 adits on EW Cu lode. Upper = No1 to W along lode from gill side at 1000' OD; Lower = No2 - a X-cut 60 ft below No1, SSW ~ 300 ft to lode - now walled up & water supply to farm. No 1 examined ~ 1950 - totally collapsed. chalcopyrite on old sorting floors below. Lode trend to E by open cuts along Netherrow Brow. Unsuccess(?) X-cut at

sharp corner in road to the Baryte mine
[See NETHERROW BROW]

No plans or records. Some baryte in lode.

Upper level reopened 1868, when lower
started. Aband. by 1871.

RSN (1966)
Finally, it was down the gill to Potts Gill Copper Mine to pick up agardite and malachite. Brian Young also found arsenopyrite which has not previously been recorded from here. Then it was back to Fellside for the long trek home.

RSN(2000)37 10. H Critchley
"visually ident.": Cuprite,
malachite.

RSN('03)42 28-9 @ 3184 3696. 2 dumps on N-Sv.
Quartz, baryte, calcite, chalcopyrite, rarely pyrite
one arsenopyrite; "limonite" (goethite) "wad" (pyrolusite)
malach, chilcolla, ? pharmaco - minute yellow cubes,
? agardite - grp - apple green needles.

QUAY FOOT or BOWDERSTONE Q'y, NY 253 168
Borrowdale, Cump

A. Bennett (Priv Comm., via TGP2, 11/73). Traces
purple fluorite in $\frac{1}{2}$ in. quartz vein.

QUEEN MINE, Caldbeck, Cumb.

See CARROCK COPPER MINE

1" 82 NY 223 257

RACHELWOOD MINE, Above Derwent, Cumb.

See also THORNTHWAITE MINES.

Postlethwaite (1913).

1" 82

Around 295 348 (NY)

RED GILL MINE, Caldbeck, Cumberland (I)
See also OLD BELL PIT

BM: Very good linarite, with anglesite, caledonite
etc.

TMH (1868), 53 (Pb/Ag): Anglesite, caledonite, cerussite,
galena; leadhillite; linarite; malachite.

RSWB et al 12/8/62 (Vol II pp 107-8); 11/7/64 (Vol IV p 134-5); 7/5/65 (Vol IV, p 172);
8/5/65 (IV, 175).

Small dump near 296 350, main dumps, & dumps up Sornburn
gill, opposite main dumps: good linarite; good caledonite;
anglesite; pyromorphite; chrysocolla; malachite; cerussite;

galena; chalcopryite; sphalerite; quartz; traces
of leadhillite.

AWGK ~~Hy~~ H'cerussite?

J. Sweet-MM — Gold

WFDENT (1948). Galena; chalcopryite; anglesite,
common, with linarite, caledonite, cerussite,
etc. Cerussite abundant, small xls, occas. to
1 in., sometimes coated w. malach, linar, chrysoc.
Pyromorphite, not very frequent, yellow coatings
& tiny green xls; v.g. linarite, distrib on dumps
in pockets, suggesting zoned in the mine;

RED GILL MINE, Caldbeck, Cumb. (II)

Caledonite, not rare; leadhillite, rare, in
cav's in sugary qtz, on dump from middle
level; brochantite, rare; digenite, blue-
black powder, x-rayed (BM); malachite;
chrysocolla; quartz; psilomelane; baryte.

W.T. Shaw (1970) Map, p 37. Section, p 45. p 44-47.
Output v. small. 3 lodes, only one
economic, NW-SE. 3 x-cut adits
Deep Level (No. 1) from side of beck, to SW

cuts vein ~ 5 fm below gill bottom - a rise here. Extends to NW 100 fms with bunches of lead ore - not viable; closed 1866. Then, NW, deeper level 40 fms lower down gill worked on small scale to 1871.

Across bed, on W side of Yard Steel, 2 levels on lode - upper goes 16 fms, had 2 small pockets of lead ore. Both run in - lead ore on tips.

Level at ~ 1750' OD higher up Swinburn gill on NNE-SSW fault. Water pours out. Galena on tips.

Between this lev & No 1 lev, on W side of gill, site of old level now under scree.

RED GILL MINE, Caldbeck, Cumb (III)

Tip has no Pb or Cu ores but has baryte
(Main lode is in quartz)

Old Dutch Level X cut (No. 2) is 16 fm
higher than No. 1; cuts lode at 6 yds
in; continues SW & at 8 yds from
lead lode cut a small copper vein.
Rise to Top Level. The v. fine specimens
of linarite mainly from No 2 level.

Top Level - short X cut SW, then to NW
[on vein] for 50 fm with a rise to
surface just SE of X cut. Probably v. old
- older than No 2 - attrib. to Elizabethans

Reopened ~ 1862, ~~then~~ driven a short way further, a small bunch of ore being found.

Red gill lode minerals:- Linazite,
galena, chalcopryite, malachite,
cerussite, baryte, chrysocolla,
leadhillite, caledonite.

Avril Woodburn 9/82. One spec arborescent
native silver assoc. w. anglesite xls,
also leadhillite, in quartz.
MPC. Priv Comm (7/87) A new mineral. ^{Al⁵⁰⁺} A white rad.
fibre mineral forming small botry. masses

RED GILL MINE, Caldbeck, Cumb (IV)

sample sent → RSV05

of silky fibres on leadhillite Δ IR:
unident - looks related to chain
silicates like xonotlike!! No OH; = QUENTITE!!
Lanarkite & macphersonite have been
found. ~~rather white looking to microscope~~

MPC Riv Comm 3/8/87 Macphersonite, 1 small spec
ident x-ray (David Green): wroewolfeite ditto;
Several good mattheddleites recently from
dumps (with caledonite)

Asul woodburns "silver" looks more like
the dendrites which sometimes grow on
sulfides

MPC Riv Comm 12/10/87

BM xray - (found Maxwirth)
Susannite, steeply
rhombohed. pale aquamarine xls in epitax on
? leadhillite. Some material of similar
appearance = leadhillite (inversion ψ after susann?).
Microfale blue ~~fib~~ needles w. the quartzite = caledonite
(XRD).

MPC, DI Green & RSWB (1988) UK Journ Mines & Miner. 1 [5] 21

Mattheddite ident on ~10-20 specs w. th
caledonite, leadhillite, anglesite, susannite on quartz
or alt. galena. One spec w. macphersonite
one w. minute sprays lanarkite on galena

RSWB, MPC & A. Hart (1989) Min Mag 53, 508-9 Quartzite
white silky botry on leadhillite & susannite (pale
blue steep rhomb'hedra) on quartz w. ceruss & caledonite
(last min. to form, minute needles). From dump of No 2 (old butch) lev.

RED GILL MINE, Caldbeck, Cumb. (V).

RPH Lamb, spec → RSWB (8/96). FTIR (20/8/96):
Colourless blades, radiating =
hemimorphite

M. Wirth, BMS N'lett. (1999) 53, 9-10. → BMS Coll 2107
from Red Gill M. (east, NY 296 346), E side
of burn, coll. 1990, small amount of red
? cinnabar around edges of weathered
sphalerite.

M. Wirth BMSW (1988) 23 15-16. Called; anglesite;
hydrocerussite, thin white "blades, vaguely hex"
(BM, XRD) susannite (BM, XRD), native silver or

gold (BM XRD indistinct - spec destroyed), with galena, pyrite, spal, ceruss, angles, l'hull.

T Bridges et al (2008) J. Russ. Soc. II, 29-47

Details, photos etc. [Acanthit - develops on storage], angles, anker, aerichalc, baryte, bindheim, brochant, calcite, caledon, ceruss, chalcopyr, chenite, "chr-colla" (= Cu-silicagel), cinnabar, covell, cuprite, digenite, djurleite, [chalcocite?], dolom, elyite, galena, goeth, [gold? prob not], hemim, hydrocer, hydrozinc, landark, laagite, leadhill, linar, macpherson, malach, metthedd, motttram, ["psilomel" = romanechite], ["plumbogummite" prob = "chr-colla"]; pyrom, nimet?, vanadin (1 spec), qtz, quettite,

RED GILL M., Caldbeck, Cumb. (VI)

redgillite, scotlandite, serpier, silver, sphaler,
sulphur, uscannite, wroewolfeite,
Unident Pb-Cu-~~SO~~SO₄, Cu-Pb-silicate.

Bridges & Green (2008) JRS, 11, 48-50, Supergene baryte

11" 82?

NY ~~235~~ 153?
238 152

RIGG HEAD, Borrowdale Cumb.

WT Shaw Coll. at "Grove House Gallery" Keswick
(1984) has azurite - "trial edit,
Rigg Head." [NOT in OS gazz]

cf "Rigghead Quarries", Borrowdale, at
NY ~~235~~ 153 (OS $2\frac{1}{2}$ " map). Shows
a level, too!

cf Old level in LINGY BANK at 249 155

BMSN (2000) 55, 10 RIGG HEAD Q. 238 152. D. Green
→ BMS coll. 2172, beaverite; 2176, azurite.

RSN(2001) 32 19 D. Green. RIGG HEAD Q's;

Borrowdale - veins with calcedonite,
linarite, beaverite.

ROBIN HOOD MINE, Bassenthwaite, Cumb (I)

TMH (1868), 53. Antimonite (stibnite)

RMRGB (XV) (Aesb) (1920) p 54. According to Postlethwaite ("Mines & Mining in the Lake District", 1913) antimonite has been found at Robin Hood Mine, Bassenthwaite; at Wanthwaite Mine, & at Carrock Fell. When railway between Threlkeld & Troutbeck Stns was being doubled in 1895 a small piece of antimonite of 5-6 lbs was found in boulder clay.

p. 53 ^{see} ~~Sb~~ Sb works in Skiddaw Slate nr foot of Bassenthwaite Lake of 1842 note are not now visible, but in railway construction ~~in~~ in blue drift clay at Troutbeck Stn a solid lump of antimony sulphide was found, weighing 1 cwt,

with no matrix.

(Eastwood NF (1959), 173. Acc'g to Postlethwaite [QJ Geol Soc Lond. 49, 532 (1893)] ca 20 tons Sb ore got here ca 1840, but no trace of mine or mineral appears to have survived.

RSWB et al, 12/8/62. Vol II pp 105-106. Barren quartz(!).
? adits at 225329 and 228 329₅. Opencasts at 230 330₅ and 231/331.
S. Clark, Priv Comm 5/82. Spec → RSWB. (82-61) v.g. stib + qtz in opencast at 231 331

WFD & NT (1948) Level just behind a hedge opp. Robin Hood Farm [228 328] - ? open but covered in refuse. No dumps. On site of an old shaft we coll. stibnite in quartz (1947). Cervantite; aphrosiderite [Hey: a chlorite]

ROBIN HOOD M., Bassenthwaite, Cumb (II)

George Wilson Pers Com 10/84 Stibnite in quartz,
dickite, gold.

RSWB, D. Hacker + George Wilson 10/84 Stibnite
? dickite in quartz; minor chalcopyrite,
Cu staining In ~~stop~~ debris under
grass in ^{barr}en quarry at 231 331. Mine
site below now caravan site
George Wilson has been in short
barr

en trial adit. On one spec,
broken in two - colourless radiating needles
? On some, small lustrous
brown grains ?

Ward JC (1876) "The geol of the N part of the Eng. Lake Dist"

Mem Geol Surv. G.B.

Postlethwaite J (1893) Q.J. Geol Soc Lond. 49 531-5 "Notes on an
intrusive sheet of diabase & ~~ass~~ rocks at Robin Hood, near
Bousen~~thwaite~~thwaite"

1182

Ny 2514

ROSTHWAITE, Borrowdale, Cump.

JFN green MM (1915) 207-17

→ 5mm or more, at
in the lake dist.,
Rosthwaite

Almandine xls
many horizons
eg near

1" 82

Around NY 302 345

ROUGHTON GILL MINE, Caldbeck, Cumberland (I)See also BALLIWAY Rigg; TOD GILL; SILVERGILL M; MEXICO M.SRMRGB 30 (1925) Two lodes along faulted margins of
hypersthene gabbro of Balliway [= Balliway] Rigg
& surrounding Borrowdale.AWOK, priv comm.✓ Main dumps: 303 345 [?"SILVERGILL M."
Tod gill dumps 304 345 - plumbogummite
mineralite. [qv] (Also on main dump - R. Sutcliffe)

Balliway Rigg. [qv] many minerals; vein exposed

T. Eastwood N-F (1959) 172, also 163 ff. Umber mined, ca 1890TMH (1868), 53. (Silver-lead, copper mine). Aurichalcite,
brewsterite, brochantite, smithsonite.

caledonite, chrysocolla, linarite, malachite,
melaconite, mimetite, pyromorphite,
hemimorphite, chalcoprynite.

RSWB et al. 12/8/62, Vol II pp 106-7; Vol IV, pp 136 (11/7/64), 172 (7/5/65)
175 (8/5/65).

MAIN DUMPS & stream bed below dumps to ca. Old Bell Pit:
good chrysocolla; good malachite; ~~quartz~~ matrix;
platy baryte; sphalerite; galena; some calcite;
chalcoprynite; pyromorphite, some superb;
trace linarite; cerussite; psilomelane,
hemimorphite; botryoidal dark green ? cornwallite
or pseudomalachite

ROUGHTON GILL MINE, Caldbeck, Cumb. (II)

T. Eastwood N-F (1959) 163-4. V. old. Reopened 1820-1878,
1888-1894. Levels at 30, 60, 90 fm.

SOUTH LODE, worked over $\frac{3}{4}$ ml from adit near old dressing-floors, as a x-cut 120 fm 522° E to vein, on which it turned SW for 250 fm. From this level a sh. sunk 20 fm, & much stoping for over 300 fm. At 300 fm SW of adit x-cut junction, lode swelled to 30' wide for 30-40 fm - probably due to x-faults. This bunch mostly calcite with galena towards SE wall & malach & chalcopy towards NW wall.

60.-fm level starts as x-cut for 70 fm just S

of the crop of N. LODE; driven 300 fm along the vein [SOUTH LODE] & goes 110 fm further SW than the 90-fm level.

30-fm levels begins midway between NES LODES & there are higher levels on Iron Crag & in Blea gill & Clints gill

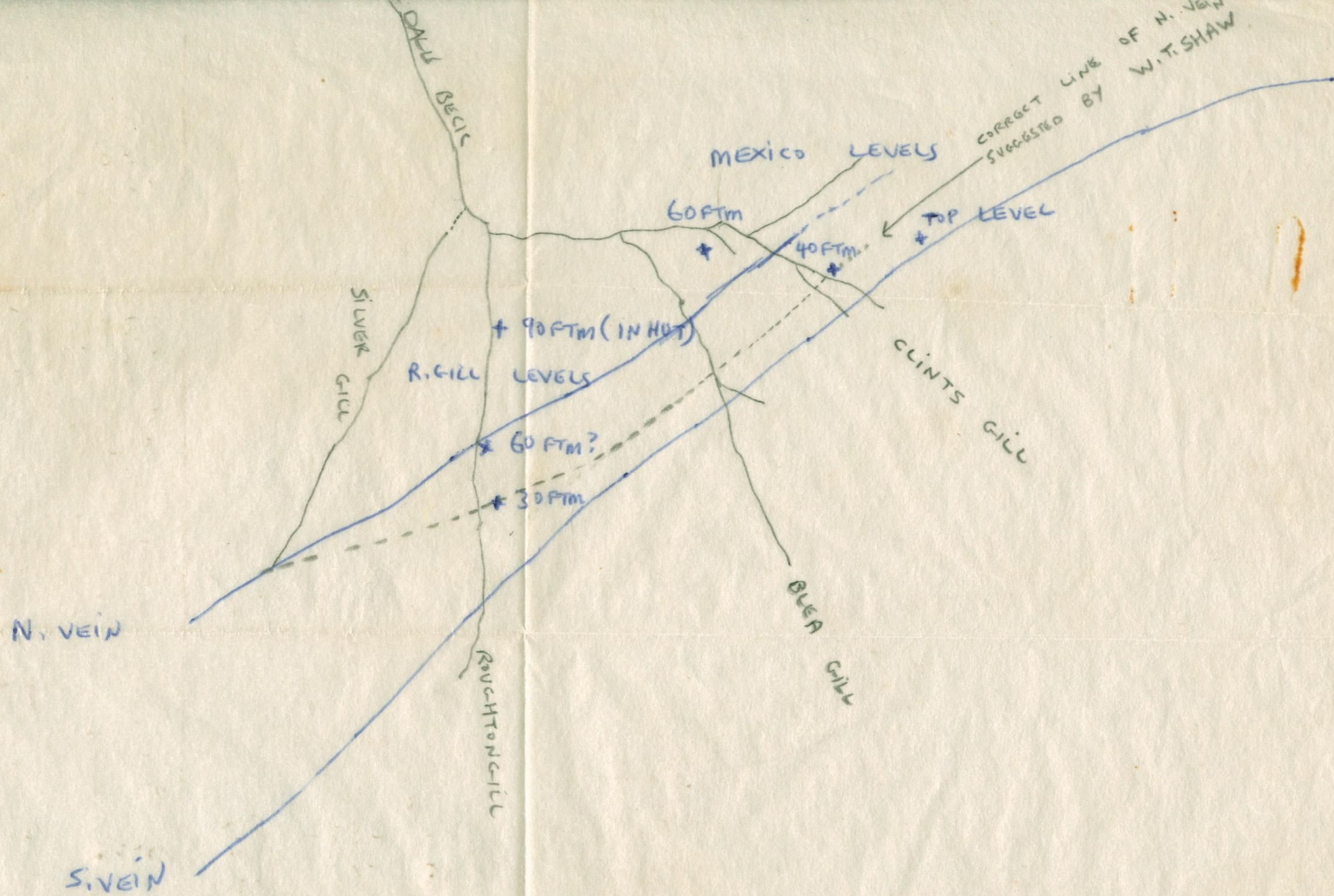
N. LODE is similar to S. Lode; malachite & manganese at outcrop; galena & blende more abundant in depth. Less important than S. Lode.

WFD & NT (1948) galena; anglesite rarely; cerussite common, xls $\rightarrow \frac{3}{4}$ " ; v.g. pyromorphite, green, yellow, brown, orange - long, short, fibrous tufts, spherulites; mimetite - brownish-red, in the MEXICO section;

ROUGHTON GILL MINE, Caldbeck, Cumb. (III)

Linnaite, uncommon; no calcdonite found by us;
"plumboreisinite (plumbogummite)", blue mamill.
coating with yellow pyromorphite - on dumps on
the extreme S side; crocoite - a spec. in
the Tullie House Mus. in Carlisle has one spec.
labelled "Caldbeck Fells" - no other trace found.
As the spec. is finely x-lised, loc. suspect.
Chalcopyrite; malachite; brochantite; atacamite;
chrysocola; no tenorite found by us; copper

-pitch"; sphalerite; hemimorphite, white to deep blue mammillated often w. chalcedony, & white tufts; smithsonite, v rare - pale blue chalky in small cavities, also mammillary; amichalcite esp. at extreme N end of dumps; baryte; haematite with ochre & limonite; goethite? shiny black botry., often w. pyrom.; psilomelane, black botry, duller than goethite; calcite, nail-head; aragonite, rare; tufts on "Iron Crops"; dolomite, dark brown, massive; quartz.
↳ [?ankerite]



There is not 100% agreement among the old mine records, geol. maps, and surface evidence.

R. GILL. 90FTM level. Supplies local water board; bared/gated, 60FTM. available info appears to be incorrect as to location. 30FTM. blocked upon reaching stops.

MEXICO - top level open; 40FTM. am excavating at present; 60FTM. blocked after $\sqrt{6''/\text{mile}}$ shot distance.

ROUGHTON GILL MINE, Caldbeck, Cumb. (IV)

RWB 3/72

- (1) on W side of Blea gill, nr. NY 306 343, quartz vein outcrops, with ochreous "limonite" and in ~~the~~ joints in shaly rock, pale blue-lilac botry chalcedony coatings
- (2) Dumps & opencast or collapse with vein exposure, near NY 306 345, between Blea & Clints gills (Mexico Mine 60 fm level?)
Pyromorphite or mimetite, on quartz
- (3) Balliway Rigg area above waterfall.
Vein of goethite (?) with botryoidal pyrolusite/psilomelane, black, occas. iridescent, outcrops on E side of gill near NY 302 339;

On dumps nearby, on W side of gill
quartz matrix some with pale blue
botry → x-limed hemimorphite also some
long clear blades, with malachite, traces
yellow pyromimetic

RSWB 1/6/75 Azurite one spec. - a small (2mm) xl
cluster in vugh in quartz with
malachite. One spec. of linarite
anglesite → (Diss. HCl with effervescence)

W.T. Shaw (1970) Map, p 37. Section p 41. History,
descrip., pp 40-44.

30 fm level - lead, zinc & iron pyrites

60 fm crosscut met rich galena with quartz,
phosphate & carbonate of lead in 1840's.

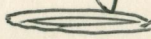
90 fm level, driven to E as far as

ROUGHTON GILL MINE, Caldbeck, Cumb. (V)

Mexico mine. — no workable ore ^{in this section} ~~here~~
but almost always a little phosphate
ore.

G. Schöttler, Lapis 4 [2] 26 (1979) "Roughtongill
mine, Cumberland" [MA 79-3086]

Rosasite, cerussite, malachite,
chrysocolla, hemimorphite, quartz,
chalcopysite.

RGB 82-121 IRON CRAB. ³⁰⁵³⁴² Pyromorphite
(traces As) (IR). pale green  → ~ 8mm

MP Cooper, Priv. Comm 26/8/86 ^{25/8/86} IRON CRAIG

Moltramite (BM, X-ray) tiny but excellent
green translucent xls.

Russell Soc Newsletter 20 (1990)

(Under "Judkins Q'y, Warwickshire - q.v.)

Unident Ca Cu phosphate (?), small
pale-blue-green prismatic crystals found
on main dumps by members of the
Micro mount Soc. in 1989.

Rothwell & Mason (1992) UKJMM II 30-40 Wulfenite:

(a) Cherry red plates on qtz, 90' fm lev dump 303 345
[MPC 1990, ident vts.]

(b) Small orange plates in debris nr S vein outcrop in higher
R. Gill [GM. Leppington, priv comm]. Possibly dumped silver-gill
material?

ROUGHTON GILL MINE, Caldbeck, Cumb. (VI)

R. Soc. N. (1994) 25
Roughton Gill, Caldbeck Fells, Cumbria -
Saturday 9 April 1994

Leader: Dave Charlton; Reporter: James Farquhar

Roughton Gill is the largest and best known mine in the Caldbeck Fells and was in production from late Elizabethan times right through to the late 19th Century.

Our meeting place on this occasion was the hamlet of Fellside. From here we were all pleased that the weather had taken a considerable turn for the better, it being cool but sunny, with only occasional snow showers throughout the day. Our trek took us south, crossing Ingray Gill, Hay Gill and Birk Gill, passing Brae Fell Mine, then following Dale Beck south-east to Roughton Gill itself.

Most collectors will know that there are many sites at this mine where fruitful searches can be made; we on this occasion were advised by our leader that the large dump was as good a place to begin as any. In the four and a half hours of collecting time, the most significant find was no less than five examples of blue hemimorphite, which caused much comment, but amongst other minerals collected were tsumebite, rosasite (?) brochantite and anglesite.

(??)

BMS News (2/95) 4013 "S. Rust's recently coll corkite from Roughton Gill tips"

RSN(1997) 31 14. IRON CRAG: pyrom., conkirk

BMSN(1989) 27, 13. M Leppin specs → coll 805, 806.

Mattheddleite & leadhillite from

"higher ROUGHTON GILL". (BALLIWAY RIGG, qv)

RSN(2001) 32 20. D. green. Scotlandite & lanarkite

- "higher ROUGHTON GILL" (? = Balliway Rigg qv),

Bridges & green (2008) JRS, 11, 48-50. Supergene baryte

ROUGHTON GILL MINE, Caldbeck, Cumb. (VII)

BMS News (9/95) 42, 3 Mike Leppington: IRON
CRAGS:- corkite-beudantite. ROUGHTON
Gill dump:- brochantite with tsumebite.
A. Castleton:- dumps of R.G. mine - pyromorphite
on plumbogummite: "HIGHER R. GILL"-
wulfenite [Is this Ballway Rigg?]

A. Tindle, T. Bridges, D. Green (2006) UKJMM 27, 48-50
"The compos'n of tsumebite from R.G.M., Cald. Fells,
Cumbria".

Apple green spherical aggs of tsumebite to 1mm
analysed. Rich & variable As content,

some over 50% atom substit, therefore =
ceresotsumebite (rims a few tens of micro-m
thick on tsum. cores). The ts is assoc
w. well-x'd brochantite & slightly corroded
cerussite.

1" 82

NY

239 368

RUTHWAITE MINE, Ireby, Cumb.Postlethwaite (1913) 140.

On margin of Carb. Lim
at Ruthwaite nr Ireby, Cumb, a v fine deposit
of barite 8-9' wide opened up ca 25 yrs ago.
but being at the bottom of the valley &
requiring a good capital for necc. sinking
ops., not yet been fully developed

T. Eastwood N-F (1959), 166.

Barite in NW-SE vein. Workings
for ca 600 ft. Above the 90 ft. level much of the Ba
is of fair quality apart from pale pink colour.

SADDLEBACK [OLD] MINE, Mungrisdale, Cumb(I)
See also BANNERDALE; BANNERDALE LEAD MINE

TMH (1868) 54. SADDLEBACK MINE: Baryte; garnet;
chiastolite; manganite; mica; mimetite;
tourmaline.

OS 6" map shows "Old mine" at 3315 2870

Postlethwaite (1913) SADDLEBACK OLD MINE.

TGPZ, Priv Comm., 7/73, 11/73: Saddleback Old mine
is the one in the upper valley of the
Glenderamackin stream. "Old mine" at

3315 2870 has nice botry. psilomelane, and is on a vein along course of stream, with another pair of levels at 334 284 (with traces chalcopryite & green Cu min's), and a barren level at 3435 275 (on wrong vein?). Arthur Bennet has found ?minium, brick red powdery, on galena, from a sheepfold near the mine, which was probably a mine building.

(The 334284 levels) - From which TGP 2 & 75 found small white botry. aggreps of ?mimetite (provis. ident RSWB) - chalcedony also present

BMSN(2004) 68 p 31 Pyromorphite.

SADDLEBACK [OLD] MINE, Murrigisdale, Cumb (II)

D. Green et al (2005) J. Russ Soc. 8 [2] 66-70. Trial below
Foule Crag, at NY 332 287. Galena, includ.
supergene, cerussite, pyrom.

I. Tyler (2003) History topog. "Carrock &
the mines of Skiddaw" Blue Rock Public's.

SADDLEBACK (OLD) M., Mungrisdale, Cumb (III)

M. Wolfe (2006) UK JMM 27, 8. "Mineral News"

From SADDLEBACK OLD MINE - ~~only~~ little more than a trail in the glendaramackin valley: Small well-xld specs of pyromorphite & pseudomalachite, also kinsdalite epimorphs after pyromorphite.

Bridgman & Green (2008), JRS, 11, 48-50. Supergene baryte

S. Komura, JK Koenzi

Jaes, 1976, 98, 7599-7607

1" 82

NY 1829, 1929

SALE FELL, Thornthwaite, Cumb.

c

Quartz veins cross Sale Fell

1" 82

NY 251 185

SALT WELL MINE, Above Derwent, Cumb.

Postlethwaite (1913) $\frac{3}{4}$ ml S of BRANDLEY VEIN crosses
GOLDSCOPE VEIN & COPPER PLATE VEIN ($\frac{1}{2}$ mile
apart). Cu vein. Not much worked. Trial
below Manesty YEWTHWAITE & BLACK CRAG VEINS
also cross the valley & the N-S (lead) veins

1" 83

NY 332 362

SANDBED MINE, Caldbeck, Cumb. (I)
See also DRIGGITH MINE, DUMPY STONE

AWGK MM 501 (1957): Rosasite, from upper level.

RSWB TG 6/6/62 Vol II, 67: Dumps around main plant;
Baryte; wad; malachite; cuprite, var tile ore;
?azurite; ?linarite; ?caledonite.

RSWB (3/67) 5 73. Malachite on quartz

R. Sutcliffe (7/69) Priv. Comm. Tetrahedrite

T. Eastwood N-F (1959) 165. On same vein as
Driggith [Roughtongill S. Lode], 4-5 ft wide, mostly
quartz.

90 fm level at 1350' OD driven ca 1000 ft SW,
mostly stopped to surface.

60 fm level begins at ca 1500' ~~min~~, above 90 fm level forehead, & runs at least 1600 ft SW, communicating at ca 1500' with the 30 ft level & air-shaft of Driggith M. - which level was entered by a long X-cut from Driggith Beck. Here too, stopped to surface.

Dumps have baryte, quartz, blende, trivial amounts Cu & Mn minerals.

WFD & NT (1948) "SANDBEDS (OLD) MINE": Blende, galena; chalcopyrite; pyromorphite, small xls; smithsonite, pale-blue coating; tiny xls linarite & caledonite; malachite, good xls; fine pale blue hemimorphite, rare (NT); barblonite, green botry (BM X-ray)

SANDBED MINE, Caldbeck, Cumb. (II)

RSWB, coll 7/3/76. 76-45. Bayldonite, [1R]
green xline crust on quartz

W. T. Shaw (1970) Map, p37. Underg'd photo p71.
History, description p70-74.

SANDBEDS E MINE p70-72. ~~✱~~ Baryte lode
outcrop discov 1927. Not worked until
90 fm X-cut driven (1946) S 870' to it from
beside mines road @ horiz. of Drigg. 90 fm. L.
Driven E & W on lode; rise to surf. at junction.
E drive in ore all 1060' to emerge in Blea Gill.
W driven 735' to Sandbeds gt X-course.

100 fm level from foot of hill W of Blea Gill.
X-cut 40' to lode, driven W 1780' of which 870'
stopped to 90 fm lev. but generally poor -
at base of baryte zone.

Howthwaite Level. [(359) 3395], on S side of
track at 1125 ft OD. Most E working. Driven
W 480' on big quartz lode but no workable Ba.
In parts of E mine loose glacial fill
reached 50' below surface - troublesome in stopes.

SANDBEDS W. MINE.

Trial X-cut in 1952 at Drigg. 60 fm lev.
towards Pottsgill unsuccessful

Discovered 1956 when "E Sandbeds"
60 fm X-cut (of Driggith) extended, to

SANDBED MINE, Caldbeck, Cumb. (III)

meet baryte lode, 570' out of 1130' total stopped.
~ 300' W of X-cut much quartz, Mn-soot
[wad] & dolomite, some v. dark, w. ~ 12% Mn,
& only small pockets baryte (which were
water clear!), for 300 ft. V.g. Ba in Mn-soot
for ~ 100' after 900 ft. A X-cut @ 120', unsucc.
Warrow Dumpy Keir met, tried for 115' W
& 20' E - a little Ba, much Mn-soot. A
barren 2' NE-SW quartz lode also cut.

50 fm level driven W on lode. 860 ft out of
1370 ft stopped.

40 fm level, on lode, 850' out of 1350' stopable.

30-fm level, on lode. 650' of 1100' stoped to surface. Branch vein at 550' to N followed 330' where thin. NE-SW quartz lode at face.

20 fm level, for 525' to the quartz lode with specks arsenopyrite & marmatite [Fe-sphalerite]. To W, a baryte lode, stoped a little, but poor. Most W point - 400' to go to nearest Potts gill workings.

67-fm X-cut from lowest point still allowing water supply to Hesk. Nuomarket 420' with split baryte lode. Broke into a stop of E mine.

90 fm level, to 600' W on Ba vein from where lev to Drigg. leaves the vein. Stoped. A rise in

SANDBED MINE, Caldbeck, Cumb. (IV)

a fine pocket of baryte with vughs
line with "beautiful crystal clear"
baryte.

Stanley, CJ & Vaughan DJ, MM (1981) 44 257-60

From Driggith V. at Dr. M & at Sandbeds
at 3320 3620: Bournonite inclusions in

argentian tetrahedrite; and intergrown w.
nat. antimony, in galena; ident. in
polished sections. 19 minerals: Quartz,

baryte, calcite, chalcedony, pyrite,
arsenopyrite, galena, sphalerite,
chalcopysite, bourn; Ag-tet; Nat Sb;

the tetrahedrite on quartz & as grains
in galena.

24 minerals: Djurleite,
covellite, goethite, "limonite", nat. copper,
azurite, inglesite, pyromorphite,
psilomelane.

Thimmaiah, T. (1956) PhD Thesis Univ Coll London
"Mineralisation of the Caldbeck Fells area, Cumb."

Bornite

D. Charlton

Birkbottom, Spec → RSWB 10/92 [RSWB 92-158]

Connellite (?) "typical" blue globular
clusters on gozzan - 90-fm level
dumps

SANDBED MINE, Caldbeck, Cumb. (V)

M. Rothwell, BMS Newsletter (1994) 39 18

(40) Ramsbeckite has been found at
"SANDBEDS" MINE ~~near the DRIGGITH M~~
15 to 2mm w. schultenbergite & langite [J. Russ Soc (2001) 9-11]
(2) 86-87]

R. Soc. N. (1994) 25
The Caldbeck Fells, Cumbria -
Saturday 9 April 1994

Leader: Mike Leppington

A party of thirteen met at Calebrack to visit Sandbed Mine. The weather although cold and windy stayed dry up to lunchtime whilst the group foraged over the dumps. A reasonable variety of minerals was found (adamite?)
? aurichalcite, bayldonite, brochantite, cadmium sulphide, cerussite, possible cinnabar, galena, hemimorphite, linarite, malachite, pyromorphite/ mimetite and sphalerite) which was acceptable to the collectors of micro minerals in the party. The

cinnabar, once confirmed will be a first for this location. The one disappointment was that no erythrite was found.

RSN(1998) 33, 16 "SANDBEDS M."

Adamite; much
hydrozincite.

RSN(2000) 37, 10. 7/5/00. H. Critchley "visually ident":
Ceruss, aurichalc, beudant, baryte, hemim,
caledon, scorodite w/ zincite, bayldonite,
arsenopyrite, sphal. quartz, brochant.

BMSN(01) 59 12. R. Belson had excellent erythrite
from "SANDBEDS M.", acic. pink xls "richly
covering areas on the matrix". [SANDBEDS GILL
MINE??]

RSN(103) 42, 29-30. Visit. Min's as ~~above~~ above
+ ? ankerite (weathers brown); ? bindheimite;

Thompson N (1997) UK JMM 18
from "Sandbeds Gill" erythrite annab alol
238 289

SANDBED M., Caldbeck, Cumb.

(VI)

T. Neall, A. Tindle, D. Green (2006) UK JMM 27, 45-47

"The 1st Brit occ of arsendescloriz @ Sandbed M,
Caldbeck Fells, Cumbria"

Pale green crusts arsendesclorizite (1st
Brit) with Ca-rich mimetite. From 60-fm
(Ph) lev. dumps at NY 331 360. Occupies
hairline fractures in W'therm alt'd wallrock.
Boat-shaped xls under SEM, not resolved by opt.
micro. To ~ 5 μ m. Looks like the duftite &
adamite.

RSN('06) 48, 15. D. Green Field trip. Usual + erythrite
philipburgite, adamite (SEM), mimetite, anglesite,

~~Organometallics, 1981, 1, 154~~
bayldon, brianyoungite, broch, caledon,
celars, hemimorph, smithsonite.

RSN('06) 49 32. As above + aurichalcite ("looked like
agardite"), powdery seignite, carminite, scorodite,
barium pharmacos in scree above main dumps.
Arsenodescloiz - pale green smudges

RSWB et al (2009) J. Russ. Soc. 12, 3-9.

Zincolivinite. Adamite rare, mostly
at MOUTHWHITE TRIAL

1" 82

NY 2382 2896

SANDBEDS GILL ~~TRIAL~~ ^{TRIAL} Underskiddaw, Cumb.

Thomson, N (1997) UKJMM 18

from SANDBEDS GILL trial NY 2382 2896
gal, cup, qtz; symplectite, annabergite,
erythrite

Green, D, et al (2003) J. Russ. Soc 8 (1) 16-17

Also parasymplectite, minute steel-blue to
grey blades in cavs in vein qtz, also
intermeds to exy e annab.; often ψ by
white fine-grained sodium pharvacosiderite.
Also olivine

SCAFELL,

1" 82
Cumb.

Cent on NY 21 07

TGPZiemba, Priv. Comm. 8/10/72. graphite

- a small lens at Lords Rake, at
210 068. A spec. sent to Rsub.

Mr Shaw has a piece of well-crystallized
green fluor spar "from somewhere on Scafell,
obtained by Lindsay [? greenbanks]"

TGPZ, Priv. Comm 19/11/73. Large calcite veins
common in the Sca Fell area particularly
up Skew Gill, at the head of which a

small quartz vein [2 ins] carries much massive
chalcopyrite. Traces pyrite & chalcopyrite
in qtz frequently evident in Skew Gill &
Piers Gill, esp. near waterfall in great
gully of Piers Gill. Big chalcopyrite
vein here [verbal, 11/73].

1" 82

NY 151 172

SCALE FORCE, Loweswater pH, Cumb.

"The Lake Dist." (1982) (Cumb. Geol. Soc. Field notes) 76
Small iron mining trial at Scale
Force

182 NY 2020; 2120

SCAR CRAGS, Above Derwent, Cumb.

See also COBALT MINE; CAUSEY PIKE

TGP Ziembra, Riv Comm 26/3/72. School, filling
minute crevices in "Blake Fell Mudstone", and
as crusts, in a bleached gully at
NY 208 206; very little in screens
directly below, but reasonably abundant
in screens to E, in the valley bottom, at
NY 214 204. Arthur Bennet has found
small amounts in washouts in the fellside
at 204 204. Narrow veins of

pyrolusite are fairly widespread over
the Scar Crags, some of the veins
have minute cavities lined with
pale lilac/grey ?chalcedony.

1" 82

NY

312 359
314 358

SHORT GRAIN CROSS-CUTS, Caldbeck, Cumb. (I)

AWGK Priv Comm (1960): Cross-cuts in Short Grain at 312359 and 314358, have baryte.

MPCooper, Priv. Comm (Telephone) 12/12/87. Found here personally, mattheddleite (SEM checked),
✓ hydrocerussite (visual), linarite (visual)
✓ cedonite (XRD), susannite (vis),
leadhillite (vis). ✓

MPC DI Green & RSWB (1988) UK Journ. Mines & Min. 1 [5] 21
A few spets mattheddleite from old trial on N side of gill;
minute, v. etched xls in small cavs in baryte one

occup. by galena. Ass. with susannite, leadhillite
calcedonite and cerussite.

Max M Wirth (1991) Spec → RSWB (Micromount) 91-39

Unk bright green mineral, small equant
x's on quartz [Cu, AsO₄ No Pb, No CO₃]
FTIR 5/91 = Arsenatari pseudomalachite P/A 2/21

A. Woodburn BMS Newsl (1997) 47, 4. Minute wires
nat. silver in a qtz vug at SHORT GRAIN NORTH

D. Green et al (2008) JRS 11, p 11 - cesarolite

(RSWB, JN (8/9/10) Copper with lead

R. Starkey (1998) BMSN 50 9-13 Tim Neall found
scotlandite at Short Grain in 1993.

RSN (105) 46, 35. Also chalcophy; pyromorphite.

phosphatite cornwallite

SHORT GRAIN x-cuts, Caldbeck, Cumb. (II)

RSOB et al (2009) J. Russ. Soc. 12, 3-9

Zincolivenite

T Neall & D I Green (2009) J. Russ. Soc. 12, 45-61. "The Mineralogy of Short Grain Low Level, Caldbeck Fells, Cumbria"
Descrip, geol, mineralis'n, photos, map.

Acanthite (v. rare); anglesite xls $\rightarrow$ 7mm; ψ 's after
ankerite or dolomite (?); arseniosiderite (tiny red-brown
red scaly); arsenopyrite; bariopharmacosiderite
(drusy, yellow cubes); baryte (1 $\frac{1}{2}$ & 2 $\frac{1}{2}$); beudantite
(minutely drusy yell $\rightarrow$ brown); bindheimite (earthy);
brochantite, calcedonite (good); carminite (red-
brown scaly, mixt w ars' siderite); cerussite;

cesarolite (uncommon; dk brown powd, botry, scaly, w
irid. tarnish); chalcopy; chenite (blades $\rightarrow$ 1 mm);
"chrysocolla"; cornwallite; covellite (rims galena);
cuprite (rare); duftite (drusy yell-green globes)(?);
elyite (v. rare, with chenite; good $\rightarrow$ 0.4 mm);
galena; goethite; haematite; hydrocerussite;
lanarkite $\rightarrow$ 0.4 mm; langite (?; ϕ -hex);
wroewolfeite (?; blocky); leadhillite (with
susanne macphers.); linarite (common but not
v. good); macphersonite (biax interfer. figure);
malachite; mattheddleite; mimetite;
mott ramite (f. common; yell $\rightarrow$ green $\rightarrow$ brown crusts);
phosphohedyphane (white powdery crust in thin
layer betw. mimet & pyrom); plumbojaros. (earthy);

SHORT GRAIN X-cuts, Caldbeck, Cumb. (III)

[Low level, cont'd]

pyrite; pyromorphite (more common than mim.);
quartz; scotlandite (various habits, ~20 specimens);
Silver (tiny foils, sprays; post collection tends
→ acanthite); sphalerite (rare); sulphur;
susannite (quite common; acute rhombs or prisms w
△ termin's, c'tess → pale blue, → 4 mm or grey prismatic
→ 10 mm bridging cavs; uniax interference figs);
tenorite (?); UNIDENT; - black Cu sulphide; lead-Cu
SO₄ (pale lilac blue fibr); amorph Fe silicate; As sulphide;
a Cu mineral (silky brown translucent fibres).

1" 82

NY ^{Nea} 2 99 342?

SILVERGILL MINE Caldbeck, Cumb. (I)

See also ROUGHTON GILL M

Postlethwaite (1913), p 130. Proprietors of Roughtengill Mine worked & held this mine.

p 74 (facing) Map shows "Silvergill Mine" a little to the S of Red Gill Mine - but N. of Roughtengill Mine!!

Min Mag 31 501 (1957). Middle level, on North Vein - Rosasite

WFD & NT (1948): At site of an old shaft on the high ground ~~above the head of the~~ above the head of the gill, traces linarite, chalcoprysite, malachite, cerussite

W.T. Shaw (1970). Map, p37. Part of ROUGHTON
GILL M's [q.v.]. Highest level = the "GOLDEN
BUG" is extremely ancient. Old 20 fm
level; 60 fm level being driven in 1853 in
3-12 ft wide lode of quartz with calcite
some galena & a little copper [one].
Closed 1878. Explored for umber &
baryte 1888-1894, but nothing done
underground.

S. Clark (5/82) told of excellent linarite on
galena & sphalerite in a level (tight squeeze)
by stream. Difficult to get out.

SILVER GILL M., Caldbeck, Cumb. (II)

Rothwell & Mason (1992) UKJMM II 30-40.

Wulfenite from 3 dumps in Silver Gill,
as dipyram and plates. ass. with
pyromorphite, malachite or cerussite

(a) Around a shaft collar at summit, 297 339
[ident. microprobe]

(b) In a lev. $\sim \frac{1}{2}$ way down the gill, on
the NW side (The "golden Hugh", at 298 341)
[ident. microprobe]

(c) From an old ore bin $\sim \frac{1}{2}$ way down on
the NW side, at 299 342 [XRD, BM(NH)].

Bridges & Green (2008) JRS II 48-50. Supergene baryte

sulphur, susannite, wroewolfeite, wulfenite.
Redgillite is new species $\text{Cu}_6(\text{OH})_{10}\text{SO}_4 \cdot \text{H}_2\text{O}$, pale green
rad crust of laths to 0.1 mm

BMSN(1990) 285 M. Leppington. Wulfenite & thin
sq. plate; langite xls. (To BMS coll 851-859)

BMSN(1989) 26 8-9. Old ore pile buried in scree
~ $\frac{3}{4}$ way up gill - found 1988. Langite,
wroewolfeite, linarite, posnjakite,
wulfenite.

D. Green, T. Bridges, M. Cooper, N. Thomson. ~~2005~~ (2005) J. Russ Soc.
8 [2], 85-97 "A review of the supergene
mineralisation...". Details, photos Anglesite, aerich,
baryte, bechererite, beudant, bindheim, brochant,
caledon, ceruss, ch'colla, cinnabar, connellite (?) copper,
covellite, cuprite, fraipont, goeth, hemim, hydroceruss,
jaros, lanark (1), lang, leadhill, linar, mal, mimet,
posnjak, pyrom, ramsbett, redgillite, rosas, schulenk, smiths

1"76

NY 586 607

SILVERTOP QUARRY, nr. Brampton,Cumb.OS 1"76 Brampton, NY 5861. No "Silvertop" seen nearby.Russ Soc Newsletter (1990) 20

In the afternoon we moved on to Silvertop Quarry near Brampton. This small quarry is well faulted and the faults are mineralised. Baryte dominates, some of this being stalactitic, similar to that found around Dirlow Rake near Castleton. Galena octahedra, aurichalcite, and with Norman's help, cinnabar were all found.

BMSN (1998) 30 15 BMS coll No 1972 Pyrite

TF Bridges & B Young (1998) JRS 73-14. Cinnabar, earthy coating → 10cm across (!!). w. aurichalcite & 'dry-bone' smiths. (Young et al (1989) MM 53 388-390) | P.T.O.

last number
RSN(1994) 24
Celebration put to one side the group turned its attention to the importance of Silvertop Quarry [NY 586 607] as a mineralogical site. The regional setting of the quarry, in the Four Fathom Limestone, almost astride the Stublick Fault was outlined together with a number of rather speculative comments on the potential significance of the barium, lead, zinc and mercury mineralisation exposed here.

A close examination of the face of the western portion of the quarry showed a great abundance of baryte, much of it resembling the 'cawk' variety of Derbyshire, an unusual form in the north of England. Some excellent, though rather weathered, octahedra of galena were recovered from small 'flat'-like bodies along a few bedding planes in the limestone. A careful search in one part of the face revealed an abundance of comparatively rich but awful-looking cinnabar as patches resembling dried tomato soup!

Underskiddaw.

1" 82

Ny 2629

SKIDDAW, A Cumb.

TMH (1868), 55: Lr. Sil. Epidote; chiastolite.

SMALE GILLS VEINS, Caldbeck, Cumb.

See also BRAEFELL M., RED GILL M.; OLD BELL PIT

W.T. Shaw (1970), p 60.

DRY SMALE GILL: Strong EW quartz vein w. lead
 & copper ores, discov. by ancients. Not
 exposed now. Level at foot of gill, just
 below small sheepfold - collapsed but water
 exits. Linazite & chrysocolla on dump.
 [?= OLD BELL PIT, q.v.] A run-in rise from this
 level just below the
 Red Gill road. 30 yds above road another
 level - quartz only on tip. 2 more levels
 higher up gill - no ore in either.
Ankerite & quartz on upper dump.

WET SMALE GILL - NW quartz lode tried
~ $\frac{1}{2}$ way up gill - no ore seen. Several more
trial pits across Brae Fell. Just
above where the old water race from Red
gill mine leaves Wet Sm. g., a wold level
to S in bank - tips have small pieces
banke, a little malachite

1" 83

NY 45 24

SOULBY FELL, Dacre, Cumb

WFD ENT (1948) A spec. of carnelian, which
had worked out of basement conglomerate
found by a farmer, & given to one of us.

1" 82 NY 204 383

STANGERHILL QUARRY, Blennerhasset, Cumb.

1" 82

NY 235 and 228 213 212

STONEYCROFT (Cu) SMELTING MILL(s) Above Derwent, Cumb.
See also STONEYCROFT MINE

RPH Lamb, spec → RSWB (8/96). 96-109 Slag
with small blueish-green ^{equant} hexag. looking
crystals spangolite, with deep blue
fibrous conellite. The Cu smelting mill.

JIW - Two mills, not well known, one above
the other

JPHL - That is so, one for Cu (other Pb?).
The Cu one is on the S side of a
steep gully well above the mine; the
?Pb mill is near the reservoir,

about 300 m below it - little is
known about it. - at 228 212.

BMS N. (1977)	46 9.	BMS Gal.	Elyite.	(A. Cartleton)
<u>4</u>	<u>47 2</u>	<u>11</u>	<u>Cuprite;</u>	<u>spangolite (?)</u>
				(Pres A. Cartleton)
<u>RSWB, JIW (8/96)</u>				
<u>Copper, with <u>cuprite</u>.</u>				

1" 82

NY 231 212

STONEYCROFT MINE, Above Detwent, Cumb.

See also NEWLANDS, BARROW M; STONEYCROFT
CU SMELTING MILL

SWINBURN GILL, Caldbeck, Cumb.

Green et al (2009) J. Russ. Soc. 12, 33-45.
AWGK's ^{1st} gold ^{1st} "from ^{1st} Swinburn gill"
dubious.

THIEF GILLS, Caldbeck, Cumb.

See BALLIWAY RIGG.

THIRLS POT TRIAL, St. John's Castlerigg, Cumb.

W.T. Shaw (1970) p75. Small copper trial at
Thirlspot; Elizabethan, never reopened.
OS 6" map: "Old copper mine" at 322 179

~~W.T. Shaw~~ ~~W.T. Shaw~~ W.T. Shaw Coll. At "Grove
House Gallery" Keswick (1984) has bornite
with chrysocolla - "Elizabethan mine,
Thirlspot"

THORNTHWAITE MINES, Thornthwaite, Above Derwent, Cumb.OS 6" map: Lead & zinc mines.

Postlethwaite (1913). Five N-S veins & two NE cross-veins.
galena; cerussite; blende; pyrite. LADSTOCK MINE
 oldest; THORNTHWAITE MINE reopened 1848;
 RACHELWOOD MINE; BECKSTONES MINE.

Eastwood N.F. (1959), 157. Four lodes, W $\rightarrow$ E: LADSTOCK W; LADSTOCK E;
 RACHELWOOD; THORNTHWAITE.

Quartz; dolomite; pyrite (some ∇ after galena); galena;
blende. Vein may continue ca 1 mile N, beyond Barf.
 Closed, 1921.

WFD & NT (1948): Blende; galena; cerussite;
pyrite (fine little groups of xls. which weather
out of a small dump beside the main road)

W.T. Shaw (1970) 106-108. Ancient. Reworked
1873-1921. Main Shaft at 280' OD on W
side of main road ~ 200 yds S of MS 4 from
Keswick. Levels off at 10, 17, 23, 37, 47, 65, 85 fms.
An old trial at foot of Barf Mt
gave a little lead [≠ Beckstones Mine]

1" 82

NY 15 39

W

THREAPLAND, Plumbland, Cumb

Total for copper. ~~at 2.17~~

1" 82,83 NY 32 x 24 y

THRELKELD GRANITE QUARRIES, Threlkeld, Cumb

WFD & NT (1948) when working, aragonite &
schorl [tourmaline] xls found

THRELKELD MINE, Threlkeld, Cumb. (I)

See also WOODEND MINE; ~~Gate~~ GATEGILL M.

OS 6" map shows several levels & a shaft assoc. w. this mine

R.T. Eastwood NF(1959)154 Section shown. Closed in 1928

Two veins, 200 yd apart at S end of mine - may intersect to N. Main adit = WOODEND or HORSE LEVEL nr road at ca 700 ft. Irregular course ca 1 mile. E. vein in GATEGILL V. seen in gate gill. Intersects Woodend nr NEW SHAFT, midway along W. Level. G.V is mainly galena vein with but little blende.

[Does GATEGILL V = "GATEHILL MINE" of Postlethwaite? (q.v.)]

J.R. Foster-Smith NF(1959), 224. Visited mine in 1937 when WOODEND LOW LEV. being reopened. Some ribs of pink baryte. Isolated xls galena.

WFD & NT (1948) Including WOODEND, GATEGILL, etc.
V. little worth collecting now. When working,
nice groups galena & blende xls, also
chalcoppyrite; malachite; cerussite;
pyrite; baryte.

W.T. Shaw (1970) 103-104. Old mine restarted
1909 & 1913 at Horse Level, abandoning lower
workings. Extended into big new dreshoot,
stopped up ~ 23 fm to Smithy Level & above.
Fall in Pb price closed workings in 1928, finally
abandoned during World War 2. Face of
level ~ 1700' below surface & beyond summit
of Saddleback. In old 30-fm level stopes

THRELKELD MINE, Threlkeld, Cumb. (II)

blende exceeds galena, also much
iron pyrite, making gravity separ'n
imposs - but flotation should work.

11 82

NY 304 345

TOD GILL, Roughton gill, Caldbeck, Cumb.

See also ROUGHTON GILL MINE etc.

AWGK priv. comm. Plumbo gummite; mimetite.
gold

RSIOB, 11/7/64. Vol IV p. 136. Pyromorphite or mimetite,
 yellow-orange -
 pale green xls, in plenty, rather weathered.
 Dumps mainly fines

BMSN (1989) 26

TROUTBECK STATION, Troutbeck, Hutton, Cumb.

SRMRGB, XV, As/Sb, (1920) p. 53 "... in railway construction, in blue drift clay at Troutbeck Stn, a solid lump of antimony sulphide was found, weighing 1 cwt, with no matrix"

p 54. "When railway between Threlkeld & Troutbeck Stn's was being ~~thru~~ worked in 1895 a small piece of antimonite [= stibnite] of 5-6 lbs was found in boulder clay" — Postlethwaite, "Mineral Mining in the Lake Dist" (1913).

Ward JC (1876) "The Geol of the Nⁿ part of the Eng. Lake Dist" Mem Geol Surv. G.B.

Postlethwaite J (1913) "Mineral mining in the Eng.
Lake Dist"

1" 82

NY 2617

TROUTDALE, Borrowdale, Cumb.

OS map shows "Old lead mines" at
Troutdale, at 261 176

1" 82 NY 27 21
WALLA CRAG, ^{st John's castle rigg} Keswick, A Cumb
See also FALCON CRAG

G. Mus: Epidote - "Willow Crag, Keswick"

G & L (1858) "Willow Crag, Wesm'l": Garnet

WFD & NT (1948) In Keswick Mus. are good x/s
beryl [AWGK: = quartz]. We have found
pieces of galena & abundant x-lised
epidote, in CAT GILL

Postlethwaite (1913) Beryl, epidote

1" 82

Ny 32 22

WANTHWAITE CRAGS, St. John's Castle Mgg, Cumb.
See also WANTHWAITE MINES; BRAMCRAG QUARRY

RSWB, TGPZ, PT, 11/6/72

TGPZ explored scree above Bramcrag
Quarry [ie near 32, 221] finding epidote
veins, with quite good xls, in dark grey rock
with pyroxene phenocrysts

1" 82 NY 32 22

WANTHWAITE MINE, St. John's Castlerigg, Cumb. (I)

Wanthwaite on 2½" map NY 32 318 230

AWGK, MM 31 814 (1958) At St. John-in-the-Vale, near Threlkeld.

Short note on mine ("practically no details known").

Stibnite; Cu minerals only in traces. From the S end of two veins — jarosite, minute xls on quartz, with pyrite, arsenopyrite, graphite. From N vein, natrojarosite

BM. Natrojarosite in goethite; adamite, vg, pale blue

False — is from Laurion

AWGK MM 32 423 (1960) Little-known mine. Two v's: [=Fishers Wifes Rake? 323 222]

Southern Vein. Faulted just Skidd Slates/Borrowdales, under Wanthwaite Crag; is mainly fault-breccia cemented by qtz, carbonates, sulphides. On

hanging wall, thick rib of quartz impreg. w. arsenopy., gal, blende, traces chalcopy. At outcrop, in situ, this ~~rib~~ rib has oxidised to iron-st'd skeletal qtz, cavities in which have now carminite w. large amts yellow $\rightarrow$ brown beudantite, w. scorodite (green & red-brown) & pharmacosiderite. Traces "cuboid" rhomb. beudantite, largely altered.

N. Vein, prob. fault'd boundary Skidd Sl/Threek. microgran., on Wanthwaite Bank & up to Clough Head has simil. primary mins, but in smaller amts. Yellow-brown pty & microxl beudantite with series to plumbojarosite on decomp gal ex a lower level on the vein on Wanthwaite Bank.

RSWB (4/67) 5 77 S vein expose dumps at 324224 at foot of crags: grotty. Much iron-stained quartz with decomp. pyrite, minor arsenopyrite. One spec pale greenish botry scorodite.
T Bridges RSN ('02) 44, 26-7. None of AWEK's, only scored, "limonite" jaros.

WANTHWAITHE M, St John's Castle Riggs, Cumb (II)

Young, B. (1987)
Synplesite

1" 82

NY 256 355

WATERBANK QUARRY, Ireby, Cumb.

11/82

NY 31 32

~~WET~~ SWINE GILL, Caldbeck, Cumb. (I)
WET

D. Hacker, Priv Comm 1982. & Specimen
cf RSWB 81-97, 98.

Füllöppite "checked by BM", grains
& needles in granular-looking quartz
veinstuff.

BM letter from AJ Easton, 31/7/81. E-probe
anal closer to füllöppite (proportions of
Sb, Pb, & S) but habit suggestive of
zinckenite of not dissimilar composition.
XR powder not conclusive.

NJ Fortey, JD Ingham, BRH Skilton, B Young & TJ Shepherd

(1984) Proc Yorks Geol Soc 45 [1,2] 59-65. "Antim. mineral'n at Wet Swine Gill, Cald'b. Fells, Cumb'a".

Vein found by JD Ingham in 1981, exposed only in bed & banks of gill near its head, at NY 3144-3215; no excavation; ~0.5 m wide, NE-SW, steep dip $\rightarrow$ SE. Wallrock hornfels

Major quartz, stibnite, berthierite, zinkenite, birdheimite, stibiconite; minor fäulöppite, semseyite, jamesonite, nat. antimony, arsenopyrite, sphalerite, senarmontite, sulphur; traces red films round Sb min's -? kermesite; traces Sb-As alloy?

Stibnite: tufts of needles $\rightarrow$ 4mm occas into the rare intergrain ^{vugs}

Zinkenite: patches to 15mm enclosing small bundles stibnite.

Berthierite: robust prisms $\rightarrow$ 2mm.



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DEPARTMENT OF MINERALOGY



Mr D Hacker
85 Vernon Drive
Stanmore
Middlesex

Your reference

Our reference AJE/MOC

Date 31 July 1981

Dear Mr Hacker

I regret the delay in replying to your enquiry. The identification of the dark material on your specimen by X-ray powder photograph was not sufficiently conclusive and therefore a specimen had to be prepared for examination by an electron microprobe. This showed that although the proportions of Sb, Pb and S agreed more closely with those of füllöppite (given in Dana), the habit is suggestive of zinckenite, which has a not dissimilar chemical composition to füllöppite. A problem has been that the mineral is disseminated in the quartz matrix.

Thank you for allowing us to keep the enquiry specimen.

Yours sincerely

A J Easton

A J EASTON

? Wet Swine Gill
or Dry

WET SWINE GILL, Cumb. (II)

Jamesonite: Straight or curved capill. xls w diam. $\diamond$ x-section
length 60-250 μm , width 2-20 μm - hair like groups
in coarse quartz.

Fü'löppite: dark grey met. patches of fibr. xls w. stibnite

Semseyite: tenuous coatings; rare minute inclusions in zinckenite

Nat. Sb: Rare isolated granules $\leq 20 \mu\text{m}$ in qtz.

Sphal: Minor isol. orange grains $< 50 \mu\text{m}$.

Arsenopy: Uncommon clusters of euhed As $\rightarrow 60 \mu\text{m}$ in one
polished section. Sb-rich cores.

Bindheim: Yellow to tanony crusts.

Jenarmon & nat S. rarer than bindh.

could be
min
claudeite
(v. infra)

BM S Newsl (1996) 45, 2. Gypsum ("selenite")

BMS News (1997) 46 10. BMS coll: Claudetite
pres. M. Leppington. ~~also~~ senarmontite

BMS Sympos Spec (1997) (RSOB 97-57) Kermesite ~~etc~~

CM Leppington & D I Green (1998) JRS I 36-37.

Austrian claudetite, gypsum-like xls $\rightarrow$ 3mm
& foliated masses $\rightarrow$ 5mm in cavs in vein-qtz
Resinous lustre. XRD + EDisp

BMSN (~~1999~~ 2000) 55, 10, 9: T. Neall $\rightarrow$ BMS coll
2155. Parasymplectite (XRD) "non-descript"
greenish bundles of needles. [Descr. in.
T. Neall & D. Green (2001). J. Russ Soc. I [2], 92-93. "Para... new to Brit

v. pleo
pale to
dark blue or
green rad.
eggs $\rightarrow$ 3mm

WET SWINE GILL, Cumb.

(III)

D. Green, T. Neall, A. Tindle. (2005) J. Russ. Soc. 8 [2] 101-102
Analyses of the fülöppite.

1" 82

NY 164 209

WHIN BEN TRIAL, Buttermere, Cumb.

"The Lake Dist." (1982) (Cumb. Geol. Soc., Field notes) 76
Prominent mining trial adit at 164 209
on lower slopes of Whin Ben.

"WILLOW CRAG," Keswick, Cumb.

See WALLA CRAG.

GM: ~~Epidote.~~

~~GrL (1858)~~

~~Garnet.~~

~~"Willow Crag, Westm'l"~~

NY 35 22

WOLF CRAGS, Matterdale, Cumb.

OS 6" map shows "Old Level" at 357 223
~~near~~ ^{at} base of Wolf Crag.

WOODEND MINE,

Cumb.

See also BLENATHRA MINES, Threlkeld; THRELKELD MINE.

Postlethwaite (1913): old; working up to 1863.

TMH (1868), 54: Silver-lead mine. "Wood End Mine, Keswick"
Blende; pyrite.

WYTHBURN MINE, Wythburn, Cumb.

See HELVELLYN MINE 3315

1" 82

NY 224 142

YEWCRAG QUARRIES, Borrowdale, Cumb

1" 82

NY 240 193

YEWTHWAITE MINE, Above Derwent, Cumb.

See also NEWLANDS; BRANDLEHOW Ms.

Postlethwaite (1913) N-S veins. Late 18th Cent.galena; pyrite; v. fine specimens cerussite.

T. Eastwood N-F (1959), 159. Abandoned ca. 1890.

80 fm to E → TRUSTEE'S LEVEL (Adit) furthest N & lowest; a little
 reached, in good condit.
 further S → LOW ADIT to 80 fm E from Yewth. Beck ca
 24 fm above Trustee's level. Smaller workings higher
 up hill.

Quartz; galena; blende (lower workings only).

WFD & NT (1948) Cerussite formerly, in bundles
 of fine xls, the size of a tennis ball,

but only poor specimens remain.

Galena; blende; pyrite.

Stanley CJ & Vaughan DJ, MM (1981) 44 257-60
Bournonite & nat. antimony intergrowths
in galena — polished sections from
NY 2400 1955