

EAST CUMBERLAND

(Alston Moor, etc)

1" 83

NY 65 39

AGLIONBY BECK, Ousby, CumberlandSee also KNAPSIDE MINE, HARD RIGG EDGE (= _{new})

KCD(1948) 160 The W-most exposure of the
 Gt Sulphur Vein is at the head of
 Aglionby Beck, where an attempt was
 made to work the limonitic
 outcrop. A tramway built to
 Hartside Cross, but the venture was
 unsuccessful.

104: Analysis of quartz-dolerite (KNAPSIDE MINE)
~~104~~ 113. Pyromorphite [See HARD RIGG EDGE]

T Bridges & B Young (1998) ~~the~~ Goethite, xline,
at 657 396 (as well as at HARD RIGG EDGE,
Dunham's "AG. BECK" at 6552 3876)

1" 84

NY 76 36

ALLEN'S CLEUGH VEIN, Alston, Cumb.
See also WINDY BROW V.

KCD(1948) 164 Vein, traced near Cocklake

[? "Old Level" of $2\frac{1}{2}$ " OS, at 758372] and in

Allen's Cleugh [OS $2\frac{1}{2}$ " - "Old Levels" at 765364 and 768361]

and a level 650' S of Tynehead Smelt mill

A little galena, strongly sheared into
"steel ore" on the dumps of the [sic] level
in Allen's Cleugh.

TF Bridges & B. Young (1998) JRS I 3-14

Malachite locally abund at 7650 3636
(& at nearby WINDY BROW); also azurite,
small xls.

1" 83
ALSTON MOOR, Cumb.

NY 73

G-M Spec: Cerussite; greenish stalactitic smithsonite.

TMH (1868), 52. Aragonite; baryte; barytocalcite; blende;
smithsonite; calcite; cerussite; chalybite;
azurite; dolomite; fluorite; galena; gypsum;
lead; ?limonite; minium; pyrite; rock xl;
pyrrhotite; selenite; hemimorphite; sulphur;
chalcopryite; witherite

Frege LeHorn (1858) p 19-20. Alston, Cumb: sulphur, occasionally,
with gypsum. The "crow coal" of Alston Moor
contains hardly any bitumen & resembles anthracite.

PTO

W. Phillips (1828) Witherite
+ (1844) Minium, anglesite, "Zn carbonate"

WFD & NT (1948) Alston area in general: Old records
[no refs.] without exact locs., give minium,
strontianite, hemimorphite, aurichalcite.

OS map shows "old iron mine" at 715 470 at Alston
adjacent to "quarry" and "lime works"

TF Bridges & B Young (1998) Minium (Phillips, 1844);
aurichalcite (WFD & NT); hydrozincite
saidtsonite (Phillips 1844) ("carb. of Zn")
anglesite (Phillips 1844), sulphur w gypsum
(GEL, 1858)

1" 83

NY

67.

357-6836

ARDALE HEAD MINE, Ousby, Cumb.

KCD(1948), 126. Fe. Situated over 2000' up

on Ousby Fell. Very remote. Open cut,
and adit, ~~the~~ mouth 600' to the SW, show
limonitised limestone. The ironstone is
a cavernous limonite with an unusually
high proportion of crystalline goethite &
possibly some red haematite. Small
amounts of baryte present. Other
similar deposits around, & small.

WFD & NT (1948) "Former workers [no refs.] record
turgite [Hey: = hydrohaematite] and haematite."

IF Bridges & B Young (1998) "Limonite", cavernous
w. ~~fine~~ goethite (Dunham, 1990 [N. Penn, 2nd
ed]) at 671357. Haematite

1" 84

NY 769 408

ASH GILL, Alston, Cumb

OS 6" map shows old lead mine by Ash
gill, at 769 408

1884 NY 759 405

ASHGILL FIELD MINE, Alston, Cumb.

KCD (1948), 156. Pb. On E side of the S. Tyne, worked Ashgillfield vein, crossed by Potato garth V. To S from intersection, a large flat 400' long, 150' wide. Wellhope knot vein, NE of the intersection also carried a 400' belt of flats. Another flat SE of junction between the Windshaw Bridge X-vein & Ashgillfield V, 875' NE of the Tyne. Access to flats by levels beneath Ashgill Force & one to NE from the Tyne. Galena, purple ? 759 405

fluorite, quartz, chalcedony, carbonates
in the flats.

AYLE BURN VEIN & MINE, Alston Moor, Cumb.

See under Kirkhaugh, Northumb.

1" 83

NY 728-9 456-7

BAYLE HILL MINES, Alston, Cumb.

KCD (1948) 148. Zn. $\frac{3}{4}$ mi SE of Alston
Bayle Hill V & Middle Fell Cross V's cross here.
Opencast & short levels. "Calamine"-ore.
[smithsonite]; calcite; aragonite.

T Bridges & B Young (1998) JRS Smithsonite
at NY 728 456; hemimorphite

T Bridges

1184

NY 755 426

BENTYFIELD MINE, Alston, Cumb.CD(1948) 172 Pb, Zn

Main level from Garrigill

Burn @ ca 1505' OD on Taylor Side V for 925'

Then joining main Bentyfield V. - for 1700'

Quartz; purple fluore; galena; sphalerite7.602 Ag. ton Pb⁺

1" 83

NY 66 42

BENTY HILL, Alston, Cumb.

OS 2½ in map shows old shaft at 668
422.

1" 83

NY 684 41

BIRCHY BANK VEINS, ^{elston} Ousby, Cumb.

See also VICTORIA VEIN

KCD(1948)150 Five veins cross Black Burn between Smiltergill & Rowgill Burns. Short levels & a hush on E bank of the burn, show quartz, with pyrite & marcasite. — part of gt. S. vein suite. Little if any galena. Similar near foot of Smiltergill Burn.

OS 6" & 2½" maps show the hush, at 684 410, also a number of "Old shafts" "Old Levels" & "Old Mines (Pb)".

BLACKBURN LEVEL, Alston, Cumb

= ROTHERHOPE FELL LOW LEVEL

See ROTHERHOPE FELL M; VICTORIA VEIN

1" 84 NY 740 472
BLAGILL MINE, Alston, Cumb (I) 73 47

Rayners Cat (1960): Barytocalcite [The classic loc.]

MM 28 47 (1947). Excursion. good barytocalcite on dumps.

RSWB, TB. 18/3/62. Vol. II, p. 24. Superb barytocalcite xls
lining numerous vughs in one large lump
of matrix. Plenty inferior stuff around.
II, 121 (19/8/62). quartz, galena, calcite. IV, 120 (5/64)

KCD (1948) 146. Pb, Ba-La, Fe. 4 main veins: SLOTE V
(v. old workings) - levels @ 1220' OD next to Coxley Hill
limestone Q; One beside road 300' N of High Spencycroft
(a X-cut 1000' NNE to vein); Bunker Hill L, a X-cut 600'

NE of High Spencycroft, to vein @ 775' - & on vein 1500' to ENE
Dumps of these have sect baryte; limonite; a little galena.
V. crossed by a small pyrite vein. THORNGILL (LOUGH)
V. is main vein - unproductive in Bunker Hill L., but W part
worked from Shop L. @ 1400' OB from 800' NNW of Far Hilltop,
reaching V @ 700' & going W for 1750' on it. Blagill Green
L.; from 1250' WNW of ~~the~~ Far Hilltop reached V. @ 1350'. Large
open cuts on both sides of Blagill Burn, the V. is exposed
W of the burn 7' wide, of limonite with a little galena
& sphalerite. Iron ore worked here & further W. Two
levels on SSW branch. In large open cuts E of the
burn, galena, limonite too. At 2,200' E of the burn
FISTAS RAKE intersects - galena in baryte calcite - 9-10'
wide, said to have flats. Main L's @ 1250' OB

BLAGILL MINE, Alston, Cumb. (II)

WFD & NT (1948). galena; baryte; witherite;
barytocalcite — "BLAYGILL MINE"

T. Ellis (1975) Ident RSWB. Aragonite, white
radiating small spherules on black
shale

B. Young (1985) PYGS 45 199-206. Minor
witherite; major barytocalcite — some taken
by farmer for hardcore use, to a dump at
Howgillside, at NY 751 401. Good xline
barytocalcite also found on dumps

from old workings 450 m W of Blagill
Burn, at 7355 4733 prob. in the Lough
Vern, N of "Far Hilltop".

B. Young (1987) PYGS 46 275-8. Greenockite
(XRD) on sphalerite containing ~1500
ppm Cd.

The monoclinic dimorph of barium calcium carbonate, barytocalcite, is remarkably widespread in the outer zones of the northern Pennine Orefield, locally in large quantities. This is especially so at Blagill Mines where it appears to have comprised the main gangue in the ENE-WSW vein known as Fistas Rake. The dumps from workings on this vein contain large amounts of the mineral and examples showing the distinctive monoclinic crystal form may be found lining vugs in compact crystalline barytocalcite. Until recently Blagill was one of the few known localities for this mineral.

Other minerals present on the Blagill dumps include witherite, galena, sphalerite, calcite, smithsonite ('dry bone' variety) hydrozincite and baryte. The latter here commonly exhibits the sharply pointed morphology characteristic of secondary development from a primary barium carbonate.

B. Young (1987)

BLAGILL M., Alston, Cumb. (III)

TF Bridges & B. Young (1978) JRS 7 3-14 / ^{ψ-after sphal} Greenockite;
aragonite, on dumps. Smithsonite on
old workings on LOUGH V., at 7420 4760. Baryte
ψ-after barytocalcite; chalky.

BLOOMSBERRY HORSE LEVEL, Alston, Cumb

See BROWNLEY HILL

1" 84

NY 779 457

BOUNDARY SHAFTS, Alston, Cumb.

OS 2½ in map shows "Boundary Shafts" at 779 457
on the boundary with Northumberland.

1"84 NY 748 367
BROAD MEA VEIN, Alston, Cumb

KCD(1948) 164 On the W side of the Round Hill Lst outlier [e nr 74 36] a little lead ore won from shallow sh's on Broad Mea V. (ENE); the NE Greenbanks V- may be contin. or branch - traced from L's @ the head of Josh's ~~gully~~ Hush on the NE side of Round Hill, where it has quartz; purple fluore; galena encrusted with cerussite ~~File no 8537~~
[at 748 367]

" " "184 NY 775 447?
BROMLEY HILL, Alston, Cumb.

See BROWNLEY HILL

Dana, p. 283. Alstonite (~~Bromley Hill~~) (= Bromlite). ~~Ca~~ (Ba, Ca) CO₃ in veins with galena.

TMH (1868), 52: "Brownley Hill, Alston Moor" (Pb^{Ag}) Alstonite; blende; galena.

NY 775 447 6" OS map: "Brownleyhill Dressingfloor."

Rayners Cat (1960) "Bromley Hill Mine, Nenthead" Blende (inc. Mus. spec's).

1" 84

NY 76 42

BROWN GILL, Alston, Cumb.

OS 6" map shows old lead mines and
shafts near Brown Gill in square 7642

MINE and HORSE LEVEL 1" 84 IN Y 775 447
78 44
BROWNLEY HILL, Alston, Cumb. (I)

= BROMLEY HILL ~~4~~ (q.v.).

TMH (1868) 52. Silver-lead mine. Alstonite [= bromite]; blende;
galena.

KCD (1948) 171 Zn This mine worked a series
of NE veins. Entered by 2 L's from Judham Gill
Bloomsberry Horse L. Through Carr's & Wellgill V's to
Judhamgill Burn Cross V., along which a drift
to the Brownley Hill V's. Brownley Hill High
L. @ 1426' OD Through the Burn X V. & going NNW
to Brownley Hill V. Extensive workings, both
? 1526'??

L's connect with all the V's. Galena;
sphalerite; qtz; chalcedony; fluorite in the
gt L's workings. (Forster, 1821, p. 289). Ba minerals
in the most NE sections - Sh's on main V
nr. county boundary found coarse white baryte
- at lower levels some carbonates incl. alstonite

A X-cut from the High L runs $\approx$ E 2350' from
the end of the workings in the Sun V. - from
this drift a X-vein known as Jug V. worked.
p. 96 Alstonite - orig. spec. said to come from Jug V.
p. 166 Brownley Hill Horse L = Bloomsberry Horse L; portal @ 1330'
Length 21,120 ft (in Cumb.) + 1400 ft (in Northumb.) - worked⁰⁰
Brownley Hill Veins, Wellgill, Giddamgill, Scaleburn V's.
p. 115 Gypsum efflorescences

BROWNLEY HILL MINE & HORSE LEVEL, Alston, Cumb (II)

Dana 6th Ed p283 Alstonite (= bromilite) in veins
with galena - "BROMLEY HILL"

Rayners Cat. (1960) "BROMLEY HILL M., Nenthead." Blende
(incl. Mus. specimens).

WFD & NT (1948) Alstonite in small quantity.
No trace remains

B. Young (1985) PYGS 45 199-206. Witherite ^{minor};
a few spec's barytocalcite found recently;
baryte on dump from High Level;

alstonite, type loc = Jug Vein (Walton,
pers. comm. in Spencer LJ Min Mag (1910)
15 302-311. Spec's in old colls ~ early
19th Cent.

B. Young, L. Greenbank & PHA Nancarrow Min Mag (1990) 54, ⁵¹⁵/₆
Underground explor of Jug Vein - no alstonite
found but "typical" alstonite with "typical"
associates found in situ in High Cross Vein.
Baryte, ankerite, calcite, pyrite, galena

OS 6" map shows Brownleyhill dressing floor at 775 447

BROWNLEY HILL M. & Horse Level, Alston, Cumb. (III)

D. Green & D. McCallum (1993) UKJMM 12 22-24. "Millerite from Brownley Hill mine"

Millerite from HIGH CROSS V. and WEST HIGH CROSS V. From High Cross vein, needles enclosed in calcite or free in ankerite cavities, growing out of galena xls. Also dissem. pyrite; minor alstonite, baryte, witherite. From West H.C. vein in calcite, spearing ankerite & pyrite. Some millerite coated w. supergene green gypsum (XRD). Fluorite in Jug vein.

BMS News 1 (9/95) 42, 3. D. Green. Alstonite, with hydromagnesite rosettes scattered over them.

[Bottinoite = $\text{Ni}(\text{H}_2\text{O})_6 [\text{Sb}(\text{OH})_6]_2$, (1992)]

A. Livingstone & P.E. Champness (1993) 57, 665-670

"Brianyoungite..."

New mineral, brianyoungite, a sulphatan relative of hydrozincite. XRD, IR, anal etc with gypsum on rubble lstone in ox zone of BROWNLEY HILL M., Coll u/g by B. Young also smithsonite & zn-analogue of ~~schusterite~~ ktenasite (Livingstone, 1991)

RSN (1998) 33, 19-20, 21. U'ground trip. Sphal, erythrite (a few tiny globs), fluor, calcite, qtz, anker, galena, pyrite, drag, alston, ba-calc, witherite, hydromagnesite, strontianite w. chalcocy, hydrozincite. "Bottinoite loc. passed" [v. sup]

BROWNLEY HILL M & L, Alton, Cumb. (IV)

TF Bridges & B Young (1998) JRS 7 3-14. Native sulphur, pale yellow xls to 1 mm in corroded galena in Middle V. flats. Supergene aragonite. Brian youngite (Wellgill Cross V). Hydrozincite, thick stalagm. crusts. Boltinoite, light blue sph aggs $\rightarrow$ 3 mm on galena (Clarke & Rust (1993) MM 57 543-4). Small xls anglesite. Gypsum efflor's, Ktenasite, (Zn analogue) (Livingstone (1991) JRS 4 13-15)

D Green & J Nudds (1998) JRS 7 31-33 Harmotome (XRD) (+ EDS), elong Marburg twins $\rightarrow$ 1.5 mm, partly alt $\rightarrow$ barite, in a quartz-lined cavity in

BROWNLEY HILL M. & L., Alston, Cumb. (V)

smithson, strontianite, sulphur,
ullmannite, witherite.

1"83

NY

710 444

70 43

BROWNSIDE MINE, Alston, Cump.

See also NEST MINES

KCD(1948) 147 Iron mine, small. Main vein crosses road 900' SE of Gill House. On W side of road a plantation conceals subsidene from collapsed ironstone flat. Vein has been followed SW from a level, mouth near the river.

OS maps show "Old level" at 706439 & "Old iron mine" at 710444, "Old level at

1" 83

NY 597 469

BURNED EDGE MINE, Kirkoswald, Cumb

E

see also CLINT Q's

1" 84

NY 752 360

7536
7537CALVERT MINE, (nr Tynehead), Alston, Cumb.

See also TYNEHEAD MINES; DOSEY MINE.

KCD N-F (1959), 135. Tried recently for fluorite.RSWB et al. II, 122 (19/8/62). Pyrite common, espec. in
criss-cross veins in quartz (gt Sulphur vein?).
calcite; blende; galena.KCD (1948) 164 Pb, F A L. $\frac{1}{2}$ ml SSW of Tynehead Smelt
mill, to the V. Poor. On dumps: Quartz, purple
fluorite; marcasite; sphalerite; galena.
A sh. on V. 3400' SW of Calvern Burn in recent
use.

RSN (2000) 37, 10: 8/4/00. From 7520 3599 coll.

ceruss, galena, qtz, chalced, purple fluorite,
apchal, pyrite.

1" 84

NY 78 43

CAPLECLOUGH HORSE LEVEL, Alston, Cumb.

KCD (1948), 178, 166 Pb, Zn. Portal 500' SW of
 Wenthead House, at 1430' OD, worked
 Brigal Burn, Capleclough, Middle Clough, Black
 Ashgill Veins. 20,950' long. Galena, blende

Ann Watson's "Gas Man" friend Priv Comm 3/82

Enterable; collected nice $\sim 1\frac{1}{2}$ inch
 white calcite blades, some sphalerite,
galena

1" 84

2 LEVEL

NY 787 429

CARR'S VEIN, Nenthead, Alston, Cumb.

B. Young (1988)

CARR'S VEIN, NENTHEAD [NY 7870 4292]

Extensive dumps and surface hushes bear witness to the extensive workings in both veins and replacement flats in the Nenthead area. Although several derelict mines are still accessible with care to experienced mine explorers surface exposures of mineralisation are today few. However a cliff in the stream bank below the entrance to Smallcleugh Mine provides an opportunity to examine part of a zinc and lead-rich replacement flat in the Great Limestone adjacent to the major NW-SE fault known as Carr's Vein. In common with most of the Nenthead flats the common gangue minerals are ankerite and small amounts of quartz and calcite. Fluorite is generally absent. Faults with this trend are a major feature of the upper Nent Valley. Whereas they locally carry some mineralisation they are most commonly barren. They have however clearly acted as major mineralising channels for associated with them are extensive flat deposits from which very large tonnages of both lead and zinc ores have been obtained. galena, sphalerite seen

TF Bridges & B. Yang (1998) JRS.

Hydrozincite in flats above CARR's
LEVEL, Nenthead NY 784 433.

NY 71 37

CASHBURN VEIN, Alston Moor, Cumb.

See also CORNRIGGS VEIN; CASHWELL MINE

T Bridges & B Young (1998) JRS. Brookcliffe,
CASHBURN V., at 7130 3768

CASHWELL MINE, Alston, Cumb.

KCD N-F (1959), 135 Recently tried for fluorite.

KCD (1948) 163 ft. 700' NE of SLATESIKE MINE [qv].
Four main adits. "Not much ore found."
To NE is DOUKBURN MINE [qv].

Cashwell mine has much fluorite, also
quartz, "carbonates", sphalerite, galena.

CASH BURN VEIN, trending N60°E crosses Cash
Burn 3/4 ml S of the GTS. vein. Tried for 1200'
—mainly quartz with traces of copper minerals
P.T.O.

CORNRIGGS VEIN, 1 ml S of Gr. S. Vein, crosses
Cash Burn. Trends N 60° E. Reached by a
level in the Slaty Hazle - has quartz and
malachite.

NY 702 4095

CHARLTON'S LEVEL, Alston, Cumb.

See GREENCASTLE VEINS

1" 83

NY 722 484

CLARGILL COLLIERY, Alston, Cumb.

NY 729 494

7350?

73 49'?

CLARGILL MINE, Alston, Cumb.

B. Young (1985) PYGS 45 199-206. At 729 494
Major barytocalcite.

Old shafts on OS maps also around 735
490 & old level & shaft in ~~at~~ 73 50.

CLARGILLHEAD MINE, Alston Moor, Cumb.

See also HIDDENHOLE MINE.

KCD (1948), 159. Cu, Pb. S of the G.T. Sulphur

Vein. Sir John's Vein & branches worked,
from levels in W bank of Clargill Burn.

Quartz & a little argentif. galena. Small
oneshoots. [Sir J's V. carries specks of chalcopyrite]

NY 707 407

CLEUGH HEAD LEVEL, Alston, Cumb.

See GREENCASTLE VEINS

1" 83

NY 595 465

CLINT QUARRIES, Kirkoswald, Cumb

E

See also BURNED EDGE MINE

COALCLEUGH MINE, "Alston", Cumb.

See COALCLEUGH MINE, West Allen, Northumb.

Rayners' Cat. (1960): Fluorite

1" 83

NY 720 479

COATLEYHILL QUARRY, Alston, Cumb.

See also BLAGILL M.

KCD(1948)146 Limestone quarry Levels nearby
to parts of Blagill M (q.v.)

1" 84 NY 770 388
COPPER SLITTS VEIN, Alston, Cumb.
See also WINDY BROW VS; HOLE PASTURE V.

KCD(1948) 157 1000' SE of Hole Pasture V. Small
opencuts - vein contents not known.

T Bridges & B Young (1998) JRS. Malachite
& azurite, at 7698 3832 - see under
WINDY BROW

1184 NY 7137 7138

CORN RIGGS VEIN, Alston Moor, Cumb.

See also CASHWELL MINE

KCD (1948), 162. At head of Cash Burn,
1 ml S of the gt Sulphur V. Reached
by a level, vein had quartz & malachite.
 $\frac{1}{4}$ ml to N, is CASHBURN VEIN, of quartz
with traces Cu minerals.

T Bridges & B Young (1998) JRS 73-14. Quartz-
chalcocite veinstone on dumps of old dressing-floor
at 7178 3724 yielded nat. copper $\rightarrow$ 2 mm, ✓
Cuprite also. Azurite, good xls $\rightarrow$ 2 mm &

xl crust on qtz from old dumps at 71783724
Malachite, earthy & xl. crusts, on qtz-
chalcoppyrite vein stone. Brochantite

1"84

NY 741 426

COWPER DYKE HEADS MINE, Alston, CumbKCD (1948), 155. F, Pb Adit "portal 1000'

SE of High Hundybridge level, $\frac{3}{4}$ mi NNW of
 Garrigill village green". It is probably the level
 shown on OS 6" map at 741 426, & High Hundybridge
 level, the one at 737 429. galena, calcite,
fluorite. Explored for zinc.

COWPER DYKE HEADS SUN VEIN - small vein
 on NE side of Old Groves Cross vein, ca 1100' SE of

Cropper Dyke Head V. Tied by X-cut
adit 750' NE of Garrigill Burn Bridge
at 1495' OD. Dump has l'st, with coarse
purple fluorite, blende, pyrite, limonite,
quartz

1" 84

NY 786 427

COWSLITTS V's, Nenthead, Cumb.

T Bridges & B Young (1998) JRS. Smithsonite
"dry-bone" in old workings. Also ψ -s
after sphalerite.

1184

NY 733 4295

CRAIG GREEN MINE, Alston, Cumb^{ts}

7243

7242

KCD (1948), 154. Pb

94. Massive, banded-fibrous aragonite

Main access level on Sun Vein on NE side of road 1200' SE of Howhill House, in shale.

galena, massive aragonite, purple fluorite,
quartz, limonite replacing an iron carbonate.

OS 6" map shows also "old lead mines" nearby
at 726429 & 729433

1" 83

NY

69 35 7035

68 33, 6933

71 35

CROSS FELL MINES, Alston Moor, Cumb. SLATESIKE; DOUKBURN; CASHWELL; ARDALE HEAD M; HUNTER'S V. M; SWATHBECK M;

SAMRGG XXV Pb/Zn (1923) p 98. Fluorite, noted for its deep purple-blue colour; quartz; calcite; galena; some blende.

Dunham, "Fluor" (1952) p 62. On NE slope of Fell @ over 2000'. Workings on W Cross Fell or Douke Burn Vein, followed $2\frac{1}{2}$ miles from Fallow Hill to Crossgill. Pb; fluorspar fairly abundant on dumps, espec. @ Cashwell Level mouth & near the opencut in the gt. Limestone.

11 84

? NY 739 389
Also 737 395?CROSS GILL, Alston, Cumb. (I)

SRMRGB XXV Pb/Zn (1923), 95: Some copper ore from recent trials by Cross Gill with much quartz and spathe iron. Also a trial in 1882 alongside Dog Burn, nearly 2 miles to NW [?]

OS 6" map shows "Old Copper Mine" at 738 388, and other mines & levels elsewhere on the gill.

KCD (1948) 164 At head of Cross Gill @ ca 2000' OD a N-S vein, along which stream runs. - shallow workings with purple fluorite; quartz; limonite; galena. ~~730, 364, 5~~ [730, 364, 5 - 729, 359] (P10)

pl60: Where Gt S. Vein crosses Cross gill, sulphides are exposed - N part of lode, at least 100' wide, of E-W fractures, in one of which a shoot 6-11' wide exposed on E side of gill. S part monoclinal, with quartz, ~~coarse~~ sericite & iron sulphides. Sh's & a drainage level. One sh. @ 1511' OD, near gill. A Cu trial, no ore found, where V. crosses gill.

157. 13/4 mi SSW of confluence with Tyne, a NE vein tried on both sides of the burn, by L's in the Copper Hazle sandstone. Quartz vein stuff with iron sulphides, a little chalcocite, & some malachite.

CROSS GILL, Alston, Cumb (II)

RAI xer, CJ Stanley, & DJ Vaughan, Min Mag (1979) 43, 389-399.

On Gt Sulphur vein, at NY 740 390 :-

Euhedral zoned gersdorffite xls (5-10 μ m),
cubic habit, in quartz, with anhedral
chalcoprynite & pyrite; galena & marcasite
Weathering:- cupy $\rightarrow$ covellite & limonite;
galena $\rightarrow$ anglesite & covellite or cerussite
& chalcocite; gersdorff $\rightarrow$ limonite

OS 6" map shows also "old lead mine" nearby
at 737 395

IF Bridges & B Young (1998) IR 57 3-14

Nat copper

at 7394 3832 on outcrop of gt. S.V. XRD of
qtz veinstone from 7394 3833 revealed presence
of bismuthinite + a little bismite (C. Stanley
pr. comm, 1987). Erythrite at old workings.
Brochantite at 7394 3832.

1" 83

NV 6543, 6544, 6644

DAFFENSIDE CLEUGH, Alston, Cumb.

OS maps show old lead mines, shafts in
6544 & 6644 & old shaft at 655436
all near Daffenside Cleugh

DOG BURN, Alston, Cumb.
? = DOUG BURN MINE, qv.

SRMRGB ~~xxx~~ Pb/Zn (1923), 95: Some copper ore from
a trial in 1882 alongside Dog Burn, nearly
2 miles to NW (of Cross Gill workings).
[would be ~ NY 70 40 - no "Dog Burn" here
but Cleugh Head level 707 407 etc]
or Currack level 711 405]

1" 84

NY 75₄ 35

DOSEY MINE, (nr. Tynehead), Alston, Cumb.

See also TYNEHEAD MINES; CALVERT MINE.

KCD NF (1959), 135. Tried recently for fluorite.

KCD (1948) 165 Worked from level 1me S of Tynehead Smelt Mill. Vein worked for 400' also surface shafts. Quartz; purple fluorite; galena; sphalerite.

RSN (2000) 37, 10. 8/4/00. Dump at 7541 3565:
(galena, cerussite, quartz, chalcedony, fluorite, sphalerite, pyrite) Reported as "similar suite" to those found @ Calvert M.

1" 83 or 84

ca 73 37

DOUG BURN MINE, Alston, Cumb. 7235, 7236
See also CROSS GILL 7336

? = DOG BURN - "copper ore"

KCD N-F (1959), 135. Recently tried for fluorite.

KCD (1948), 163. NE of CASHWELL MINE [qv]. Worked
from levels. Vein has fluorite, quartz,
galena, sphalerite, "carbonates"

1" 84

Around 77, 43₂ (NY)

DOWGANG MINE, Alston, Cumberland

See also SCALEBURN MINE

KCD (1948), 174-5. F, Zn, Pb. The great hush
WSW of Nenthead, is Dowgang Hush. Main
shaft at intersection of Dowgang Burn with
the Hush (ie at 776 431). Drained by branch
of Capleclough Horse Level. Rich lead
ore but only in small quantity. Small
flats in the NE, beyond Patterdale vein,
where vein known as Scaleburn vein [qv Scaleburn
mine)

1" 83

NY 690435

DOWHILLS QUARRY, Alston, Cumb.

1" 84

NY 72 41, 7242

DRY BURN, Alston, Cumb.

OS 6" map shows old lead mines & levels
along Dry Burn, at 722 417, 722 418
723 429

1" 84

NY

760 454

EDEN BRAES LEVEL, Alston, Cumb.

OS 6" map shows old lead mine at 760 454

1" 84

NY 73 45,

FARNBERRY MINE, Alston Moor, Cumb.

See also HOLYFIELD M.

TMH (1868) 52: "Calamine"

KCD (1948) 113, 149 Zn. Massive green smithsonite
on dumps of Farnberry & Holyfield M's, with small
amounts hemimorphite.

Entered by a X-cut N, reaching the V. @ 675'
-worked to 450' NE in the vein. Also unsucc.
trial level driven 1500' SE. Dumps are
mingled with those of Holyfield M

T Bridges & B Young (1998) JRS. The smithsonite
of KCD

FLETCHERAS MINE Alston, Cumberland.
See HIGH HUNDYBRIDGE LEVEL.

~~KED (1948)~~, 4. Pb.

1" 84

NY 772 417

FLINTY QUARRY, Alston, Cumb.

FLOW EDGE, Alston, Cumberland
~~Mass.~~

See also FAIRHILL (DUR.); MIDDLE FELL; HUDGILL-
BURN M.

W. Phillips (1823) FAIRHILL & FLOW EDGE - cerussite (black)
(^{"Dur"})
[Ref to in Bridges & Young (1995)]

KCD (1948) 150 (Pb) Flow Edge mine, on Flow
Edge vein, entered by a level starting
3000' SE of Naltrass Gill Bridge. A rich
oneshoot ca 900' long was found. Quartz,
aragonite, galena, a little blende

1184

NY 7445 467

FORESHIELD, Alston, Cumb.

KCD(1948), 149

Level from the Nent 1750'

WSW of Foresfield, driven on Hudgill

Cross Vein to Bayle Hill V. On dumps
very coarse sphalerite with siderite

1" 84

NY 75 47

FORESHIELD BURN, Alston, Cumb

OS 6" map shows old shafts near
Foreshield Burn, at 751 472, 754 471 &
749 468

GALLIGILL SIKE MINE, Alston, Cumb. ^{76 44}

KCD (1948), 87, 169. Pb. Worked ~~two~~ veins in Galligill Burn: Galligill Sike and Galligill Sike Middle Veins. Main entrance a level driven into the latter vein - x-cut to main vein; also a level at the horizon of a coal, to both veins. A belt of small flab in the Gt. L'st. Galena with relatively high Ag content for the area (11.7 oz/ton 1854-1870).

1483

NY 646 416

GAMBLESBY FELL VEINS, Gamblesby, Cumb

KCD (1948) 125 Immed. S of Hartside Cross,
faults with baryte, eg 300' & 600' S of
the Helm Wind Café; also, 1000' E of H. Cross
a fault crosses the main road - where
an opencut on N side of road shows
limonitised limestone.

GARRIGILL MINES, Alston, Cumb.

See TYNE BOTTOM M; WHITESIDE M; CRAIG GREEN M.

TMH (1868), 52: (PbAg) Blende; calcite; dolomite; marcasite; pyrite.

Raynes Cat (1960) Calcite, var. nailhead spar.

Ron Brown, Gems, 1973 5 [1], 2-5. Pyrite in
"cuttable quality" on riverside heaps

OS map shows mines opposite Garrigill
abound 74 8 419

1" 83

NY 6846

GILDERDALE VEINS, Alston, Cumb

See under N'UMB \ and Northumb.

On border of Cumb/N'umb.

184

NY 767 446

GRASSFIELD MINE, Alston, Cumb.

See also GREENGILL HUSH

KCD (1948), 170. Pb, Zn. Main level at 1332' OD midway between Grassfield & Hayring, reaching Grassfield Vein at 625 ft. Main workings on vein extended 2100' SW to West Cross V. Other workings reached from two levels, one at 1225' OD opposite Nentsberry Mill, other at 500 ft ESE of Nentsberry Bridge. On dumps, quartz, ankerite, limonite, sphalerite, smithsonite, galena.

OS 6 in map shows old shaft & levels in 7644

T. Bridges & B. Young (1998) JRS. Cerussite
("earthy carbonate of Pb") (Dunham, N Penn ~~1990~~ 1990 2nd ed)

1" 83

Around

NY

7040

GREENCASTLE VEINS, Alston, Cumb.69 40
69 41

KCD (1948) 153-4

A series of NE veins

carrying quartz, pyrite, marcasite, cross
Black Burn SE of Swinnergill foot.Greencastle V carried some fluorite 600'
N of the tarn [ie 698 402]. Levels to veins:

CHARLTON'S L, S from Red Sike @ 1475' OD

[702 4095]; CLEUGH HEAD L @ 1500' OD driven

3000' SSE from Rotherhope Cleugh [707 406];

ROTHERHOPE FELL HIGH L [700 4155] which reached

Greencastle Vein, found nothing worth
working; STONE CURRAEK L., 1900' ESE of
Clough Head L., also unsucc.

GREENGILL HUSH, (Nenthead) Alston, Cumb.

See also BENTYFIELD M., GUDHAMGILL M.; GRASSFIELD M

KCD(1948) 172. Pb, Zn On Bentyfield-Gudhamgill V,
NE of the watershed. Probably reached
from a branch of Grassfield Horse L. Disappointing
results.

1884

NY 78 45

GUDHAMGILL MINE, Alston, Cumb.

See also BROWNLEY HILL MINE; SCRAITHOLE M. (Numb)

KCD(1948), 172, ~~383~~, 101. Zn, Pb. Developed,
with BROWNLEY HILL MINE, from the BLOOMSBURY
HORSE L. On Gudhamgill Vein, productive
from intersec. with JUG VEIN to the County
boundary. Vein workings & extensive
flats, commencing 700' NE of Jug V. In flat,
sphalerite, galena & vugs common, with
amber fluorite; blende; galena; & quartz xls
101 Ankerite in flats.

1"84

NY 767 450

HAGGS MINE (Nentsberry) Alston, Cumb. (I)

See also NENTSBERY MINE; OLD HAGG'S MINE; NENTSBERY
HAGGS HORSE L.

KCD (1948) ^{also 190} 169 Nentsberry Hagg's V., one of a series
of 5 weakly mineralised NE V's on the NE
side of the Kent Valley. Nentsberry
Hagg's Horse L. driven on this vein for the
first part of its course. Narrow stopes
for 1230 ft from portal. At 1180' there is a
dump believed to connect with a branch from
Nentforce Level. Portal at 1250' OD
galena; sphalerite; "calamine" [prob. smithsonite]
quartz; siderite; ankerite; limonite.

R. Sutcliffe 4/70. Specimen to RSWB - calcite pseudo-after
?-alstonite, with sphalesite, & dolomite ("from
Borman's Flats")

WFD & NT (1948) Galena*, brilliant xls blende,
with witherite & baryte in excellent xls.
Calcite, nailhead, not common.
Dolomite xls, & witherite growing with the blende
make pretty combinations. Witherite altered to
baryte as dainty coral-like groups of snowy
white xls. Rarely, traces erythrite on nodular
witherite. Smithsonite, formerly in small amount.
Specs of witherite from the Admiralty Concessions
area in the mine, coated w. minute xls. of
barytocalcite (X-ray, BM)

HAGGS MINE, Alston, Cumb. (II)

Les Jackson of Carlisle Priv. Comm & specs to
RSWB (83-123, 83-124) 11/83 L.J.

penetrated underground to 2nd Sun
Vein where found at one place
superb withenite crystals ψ -hexag
shape with flat terminations,
arranged radially. xls $\rightarrow$ $\sim$ 8 cm long
and $\rightarrow$ $\sim$ 4 cm across, partly sprinkled
with micro baryte crystals. A
little lower down from this place
found superb baryto calcite, xls

~~Esjacks.~~

→ 2cm (2 more?) many transparent, brown-amber to off white, either in parallel growth or in plate-like aggregates to >1cm across studding ~~matrix~~ (standing up from) matrix. Some specimens ~ 20 cm across!

N. Thompson, spec → RSWB for ident, 3/87 (87-12)
Serpiente (IR) blue sheaves under
gypsm.

UKJMM(1993)12,27 ADMIRALTY FLATS - alstonite, with
clear baryte xls >> 20 cm, etched but well-terminated.

HANDSOME MEA MINE, (Nenthead,) Alston, Cumb.

See also SMALLCLEUGH !

Rayners' Cat. (1960): Blende, with galena, & chalybite.

KCD (1948) 67. Only mentions Handsome Mea Cross Vein, S of Rampgill Vein.

See map facing p 168 which shows Handsome Mea V., reached from Smallcleugh L. (qv)

WFD & NT (1948) Gypsum, var. selenite, finely xlied, usually on blende, also in fine xls.
Dolomite, handsome nodular groups of xls also interbedded w. gypsum. Fluorite uncommon
Pyrite, galena, calcite in xls. Siderite xls

abundant. Peculiar quartz stalactites
covered w. xls dolomite, galena & pyrite.

1" 183

NY 653 387

HARD RIGG EDGE, Melmerby Fell, Melmerby Cumb.
See also AGLIONBY BECK [= AGLIONBY BECK 7/KCD]

RSWB 85-75 Pres D. Hacker (Coll 5/85)

good pyromorphite, rich on matrix
from nr NY 653 387 near head
of Aglionby Beck, on Melmerby Fell.

B. Young, J. Russell soc 1 (3) (1985) 81-2.

Pyromorphite bright green $\rightarrow$ $< 3\text{mm}$
at Hard Rigg Edge, Melmerby Fell

T Bridges & B Young (1998) JRS 7 3-14. goethite,
some xline, at 6552 3876; pyromorphite
xls $\rightarrow$ 2mm, in crusts $\rightarrow$ 10cm!

1184 NY 778 392
HARD SIKE VEIN, Alston, Cumb.

KCD(1948) 157 2000' SE of LITTLE GILL vein [qv]
Line of shafts & closed level. Mineralisation
weak. cerussite on dumps

OS map shows "Old lead mine" at 783 386
but no mine & near 2000' SE of Little
Gill thrust [ie ~ 778 392]

1" 83

643 4295

HARTSIDE MINES, Kirkoswald, Cumb.

KCD N-F (1959), 139. Prospected by a crosscut adit post-war.
Some reserves remain, but reopening not
justified at present. Baryte

RSWB & TBG, III, 47-48 (23/3/63) Platy baryte in
ironstone - distinct xls rare & small. Some
Cu staining.

KCD (1948) 124; 343 Ba. A series of baryte
veins worked by open cuts & from
HARRISON ADIT, portal @ 1600' OD in Loo Gill

Another L. @ 1695' OD 1 mi NNE of Hartside Cross
(Now collapsed) to Daffenside V.

Baryte; limonite!!

The most 'N vein - Rowton Beck V, worked by
opencast & 2 L's. - has coarse-grained baryte
with tiny bands limonite, traces galena &
malachite.

WFD & NT (1948). Umber, ochre; baryte (worked
"until a few weeks ago"). Near Kenwick,
chalcopryte (see RAVEN BECK)

OS map has mines, levels also in 6343, 6443
& old coal level at 643 429. & lead mine
at 6505 4195 with coal mine nearby

HAY GILL MINE "Alston", Cumb.

See under Caldbeck PH

TMH (1868), 52: (Pb) Malachite; melaconite;
chalcopyrite.

NB There is a Hay Gill Mine, Caldbeck, Cumb; at
307360. (See sep. card).

No mention in KCD (1948) Indices

1" 84

ca 77 37 ?

HIDDEN HOLE MINE, Alston Moor, Cumb.

See also CLARGILLHEAD MINE

KCD (1948), 159, Cu, Pb. S of the Gt. Sulphur
Vein. Sir John's Vein, & branches worked
from levels in W bank of Clargill Burn.
~~Quartz~~ Quartz & a little argentif. galena
[Sir John's Vein carries specks of chalcopyrite]

1884

NY 739 428

HIGH HUNDY BRIDGE LEVEL, Alston, Cumberland
See also COWPER DYKE HEADS MINE

KCD(1948), 155. Pb, Zn. Level to Fletcheras
Vein (very anciently worked). Adit at 1410 ft OD
in the plantation 400 ft S of High Hundybridge
House. Much sphalerite in tailings,
some on sandstone.

KCD(1948) 4 Fletcheras Mine - lead ore

HIGH NEST MINE, Alston, Cumb.

See NEST MINES

1" 84

NY 765 458

HIGH RAISE LOW LEVEL, Abton, Cumb

See NENTSBERY M.

1" 84

NY

768

390

768

389

HOLE PASTURE VEIN, Alston Cumb.

See also WINDY BROW V's; LITTLE GILL' M; COPPER SLITTS V.

KCD(1948) 157 Vein N60°E trend in l'st from a level 2750' SE of the 6th milestone on the Alston-Middleton road; also reached by a long X-cut from Little Gill M. A little fluorite; quartz; limonite; galena.

1" 84

NY 733 450

HOLYFIELD MINE, Alston, Cumb.
 See also NATTRASS M., FARNBERRY M.

RSWB, TBG. III, 48 (23/3/63). Open flooded level.
Aragonite, white mammillary, quartz on
 ironstone, small weathered globules smithsonite,
calcite, a little galena. No fluorite seen.

KCD (1948) 87, 113, 149 Shallow, oxidised deposit,
 with above-average Ag values. Massive,
 green smithsonite, small amounts
hemimorphite. 2 main veins: old V. - from
 level 500' E of Nattrass. Sun V, from level

starting close to Farnberry L., with small
flat. Galena; cerussite; "calamine";
aragonite; calate. "Calamine" [smithsonite]
common on the dumps.

WFD & NT (1948) "FARNBERRY MINE (HOLYFIELD WORKINGS)"
Extensive digging in 1949 gave plentiful
mammillated smithsonite, yellow to
greenish, also small, bright yellow xls.
mm

IBridges & BYoung (1958) JRS. The smithsonite
of WFD & NT. Same polished as "bonamite"

1" 83 NY 68 44x
67 44
68 45
69 45

HORSE EDGE MINE, Alston Cumb.
See also PARK MINE; GILDERDALE (Numb)

KCD (1948), 144. Fe, Umber. Horse Edge vein proved by trenches along 1000' on the SE side of Horse Edge [NY 685450]. Limonite, with a little barryte, & traces galena. To the SW vein proved from an old level 820' long, driven as a lead trial from the Gilderdale side of the ridge [W side] - hard ironstone is present on the dump.

OS maps show old lead mines on & near
Horse Edge, at 679 445, 681 448; ~~680 448~~
old levels at 688 456, 694 457.

TF Bridge & B Young (1978) goethite var
"limber" ("limonite") worked eg at 685 446.

HOWGILLSIDE

Alston, Cumb.

B. Young (1985) PYGS 45 199-206. The
barytocalcite found on a dump
at 751 401 brought by farmer
from BLAGILL M (q.v.)

1" 83

NY 729 434

HOWHILL QUARRY, Alston, Cumb.

1184

NY 752 457

2nd LEVEL

(I)

HUDGILL BURN MINE, Alston, Cumb

RSWB et al. II, 121 (19/8/62). Calcite looking like
aragonite (botry, finely fibrous - checked by IR)
quartz, galena, traces cerussite, chalcopyrite.

KCD (1948) 87, III, 113, 168 Lead shows relatively
high silver-values. Ore oxidised. Post-
mineralisation caverns, described by
Sopwith (1833). Supergene minerals include
cerussite & anglesite & massive white
hydrozincite.

Discovered 1812-14 under "romantic circumstances"
(Sopwith, 1833 "An Account of the Mining District of Alston Moor...."
pp 122-124). Too main v's, with abundant
cerussite - blasting unnecessary! A small
flat found. Trials from EDEN BRAES L (1185' OD)
from W bank of the Nent 1400' SSE of Nenthall, unsuccess.
The HORSE L. $\frac{1}{3}$ mi N of the mine runs SSW & gives
branches to veins. Big dumps, with quartz,
aragonite; ankerite; siderite; calcite;
hydrozincite; "calamine" [Prob. = smithsonite] &
cerussite. Gangue minerals not abundant.
Not much unoxidised ~~quartz~~ ~~pyrite~~ ore.
p 166 HUDGILL BURN L. (1346' OD) from $\frac{1}{2}$ mi WSW of [? WNW]
Nenthall ~~for~~ worked these veins. Length - 13,350'
See map facing p. 168

HUDGILL BURN M. & Lev., Alston, Cumb. (II)

RSN (1988) 33 21. U'gr. trp. Recently opened
up, from NY 751 455. Qtz-cemented
breccia with smithsonite, cerussite, some
galena.

TF Bridges & B. Young (1998) JRS. 3 3-14. Cerussite
in Middle Fell area eq at H.B. Mine; massive
hydrozincite (KCD); smithsonite ("dry-bone" ore);

1"83

NY 75 36

JOSH'S HUSH, Alston, Cumb.

See BROAD MEA VEIN

KNAPSIDE MINE, Ousby, Cumb.
See also AGLIONBY BECK

KCD (1948), 126. Pb. Knapside Vein is a SW branch continuation of the Gt. Sulphur Vein. 3 levels: (i) 2020' OD on footwall side of vein $\rightarrow$ NE; (ii) 1950' OD $\swarrow$ a X-cut entering vein from S; (iii) 1750' OD NNW to vein @ 750' from portal. These workings not accessible, no plan. Dumps show siliceous limonite and quartz, with little galena.

350' to the SE a parallel vein feebly mineralised with limonite, in places stained with malachite

At Bakewell Shew 10/96. good Pyromorphite,
~~rich~~ rich coatings of yellow-green xls
on matrix - "KNAPSIDE VEIN, Alston Moor"

LEEHOUSE WELL MINE, Alston Moor, Cumb.

See also MID LEEHOUSE WELL MINE

KCD (1948), 158. Cu, Pb. Adit to Sir
Johns Vein, one from 500' WSW of Eynehead
School, one 300' ENE of School. 640 tons
Cu concentrates obtained in 1823-34,
from 700' of ground. [Vein has
quartz, ankerite, pyrite, & chalcopyrite].
Also 327 tons Pb. [i. galena?]

1184

NY 780-2 3956

LITTLE GILL HUSH, Alston, Cumb.

See also HOLE PASTURE V.

KCD (1948) 157 Pb LITTLE GILL MINE on Little
gill v, which crosses Little gill 1 ml S of
its confluence with Ashgill Burn. A
level from Little gill Force reaches vein
at 500' & continues to 2000' on it. Another
level 2875' long driven NE. Galena;
quartz; siderite; limonite; a little
sphalerite.

LONGCLEUGH MINE, Nenthead, Alston, Cumb.

NOT = LONGCLEUGH M, Ninebanks, Northumb.

~~Long~~ KCD(1948) 181.

extends 1650'
& Zinc ones.

Longcleugh Vein oneshoot
W from Carr's Vein. Lead
Section, p 179

1" 83

62 40

LONG CRAGS, ^{glassonby} ~~Gamblesby~~, Cumb.
See also SAILRIGG Q'y.

Ron Brown, Gems, 1973, ⁵ [1], 2-5. Calcite,
banded amber & yellow, "onyx", easily worked,
in quarry below Long Craggs on the A686
midway between Alston & Penrith.
[= SAILRIGG Q'y, q.v.]

LONG KATELOCK LEVEL, Alston Moor, Cumb.
See also SLATESIKE MINE (?)

KCD (1948), 163. Cu, Pb.

of the summit currick of
SSE in shale to reach
by SLATESIKE MINE [qv]

Portal 4,600' NE
Cross Fell. Runs
veins, worked

1" 83

717 467

MANOR HOUSE MINE, Alston, Cumberland.

See also PARK MINE

KCD (1948), 145. Ba, Umber, Fe, Working
the PARK MINE veins [qv], E of the S. Tyne.
Entrance next to the [Alston] Railway Stn.

Limonitic.

1" 84

NY 77
or 7634
33METALBAND SHAFT, Alston, Cumb

KCD (1948) 277 Shaft on N side of Tees,
2600' E by N from Troutbeck Foot, worked
Metalband old & Sum veins, with quartz,
purple fluorite, galena, sphalente, limonite

NY 7860 428.
Cumb

MIDDLECLEUGH VEINS

See SMALLCLEUGH M.

B. Young (1985) PYGS 45 199-206. "From
MIDDLECLEUGH SECOND SUN VEIN (at
NY 7860 4284) & Rampgill V" in the
grindstone sill, "barytes (barytocalcite)"
according to Wallace W (1861) "The Laws which
regulate the depos'n of lead ore in veins; illustr. by an
examin'n of Alston Moor". Does he mean
barytocalcite or baryte?

1"84

NY 74

MIDDLE FELL, Alston, Cumb

See also FLOW EDGE; HUDGILLBURN M.

T Bridges & B. Young (1998) JRS.

cerussite (NE slopes); smithsonite

1"84 NY 75, 397

MID LEEHOUSE WELL MINE Alston Moor, Cumb

See also LEEHOUSE WELL MINE

KCD (1948), 159. Cu, Pb Near LEEHOUSE

WELL MINE. A shaft, sunk on vein in 1912
[Sir John's Vein] to a drift with a good
pocket of lead ore, with quartz, fluorite,
carbonates, galena, traces chalcopryite.
Reopened 1920-1921.

OS 2½" map Well at Mid Leehouse @ 755 397

NY 7264 4766

MOUNTHOOLY PLANTATION, Alston, Cumb.

B. Young (1985) PYGS 45 199-206.

Major witherite, at 7264 4766.

NATTRASS MINE, Alston, Cumb.

See also HOLYFIELD MINE

KCD (1948), 87, 150. Pb A shallow oxidised deposit, with above-normal Ag-values.
 $\frac{1}{2}$ mile E of Nattrass Bridge. Main workings = Redgroves Hush, a large opencast. 3 main veins. Underground workings from Nattrass Level. galena; quartz; calcite;
some secondary zinc minerals.

OS Map also shows nearby old level at 732 439

TF Bridges & B. Young (1998) JRS 7 3-14. Cinnabar
at 735 448. (Young et al (1989) MM)

1183 → 84

NY 781 46 ?

or 74

NENT FORCE, Alston, Cumb.

GeL (1858), 30.

Aragonite - "capital specimens recently at Nent Force, Alston." "Beaut. delicate transparent xls" - Alston

KCD (1948) 165 NENTFORCE LEVEL explored the Nent Valley in depth. Portal @ 890' OD at Alston - runs 26,090' (4.94 ml) to Kenthead. Portal starts at Nentforce waterfall [748.5 467.5 ?], ends at Brewery Sh. on Scaleburn V. (See map facing p. 168). Was navigable by boat for 13325' (to Lovelady Shield) where there was a vertical

rise of 210'.

Found that
the valley

Started by John Smeaton, in 1776

few veins carried ore beneath

NENTHEAD MINES, Alston, Cumb. (I)

See also RAMPHILL MINE, SMALLCLEUGH LEVEL, CAPLECLOUGH MORSEL,
SCALEBURN M.; DOWDANG M. etc BROWNLEY HILL M

TMH (1868), 53: (Pb^{Ag}) Blende; calcite; cerussite; dolomite;
fluorite; galena; pyrite; hemimorphite;
chalcopryrite.

GM Spec's: "Nenthead, Cumb." Aurichalcite; galena; blende;
dolomite; pyrite; calcite.

Rayners Cat (1960). Ankerite, with blende & quartz

Bull Inst Mine Metall (1947, April) Dawson: Wartime treatment of Pb/Zn
dumps at Nenthead.

Rudler (1905) Aurichalcite

KCD (1948) Not listed as a mine. Is an area rather than a mine.

p181 Minor veins at Nenthead: Two traced from levels W of Rampgill tailings dump at 1430' OD. The small dumps have quartz, limonite, galena, cerussite, smithsonite. Cowhill Level runs SSW from the Nent & worked some veins

Nenthead X-veins. discussed p181-185.
sphalerite, siderite, galena, quartz, fluorite mentioned.

NENTHEAD MINES, Alston, Cumb. (II)

RAI xer, CJ Stanley & DJ Vaughan, Min Mag (1979) 43, 389-395

Euhedral, zoned gersdorffite x/s (5-10 μ m),
cubic habit, in quartz with anhedral
chalcopysite & pyrite; galena & marcasite
Weathering alters cupy $\rightarrow$ covellite & limonite,
galena $\rightarrow$ angles + covell or ceruss & chalcocite,
gersd $\rightarrow$ limonite.

At NY 790 436

T Bridges & B Young (1998) JRS. Minium, vivid
orange-red crystalline on Pb slag from
NENTHEAD SMELT MILL (at 7834 4330), L.K. Gurney
(1990) ident XRD. ~~ABMMA~~

Hemimorphite - NENTHEAD FIELD M's NY 7774
4374. Gypsum (the NENTHEAD MINES).

T. Bridges & H. Wilkinson (2005) J. Russ Soc 8 [2]
"Epimorphs of quartz after fluorite from Rampgill,
COALCLEUGH & BARNEYCRAIG mine system,
Nenthead, Cumbria, England - an update."

NENTHEAD FIELD M's, Alston, Cumb
[AT NY 777 437]

See NENTHEAD MINES

NENTS BERRY MINE, Alston, Cumb. (I)

See also HAGGS MINE; NENTS BERRY HAGGS HORSE L. WELLHOPE M

Rayners Cat (1960). Baryte; galena.

OUN specs. Witherite, invested in baryte. Pres. AR (1935).

SWB, TG. 18/3/62. Vol II p 23-24. Quick look at some dumps:
Baryte with green stains reminiscent of
Grassington Moor rosasite & aurichalcite!

KCD N-F (1959), 136. Recently worked, but rehabilitation
not justified at present. Galena; blende;
witherite abundant, especially on First Sun Vein.

KCD (1948) 170, 190, 343, 27, 72, 74, 84, 95, (Pb, Zn).

galena; witherite from Treloar vein stopes,
E of Liverick Vein; xls showing pseudo-prism faces.
Worked by Nentsberry Hagg's Horse L. [qv]. Main
veins are Sun V & High Raise V. Sun V
has sphalerite, galena, ankerite, baryte &
a little witherite. High Raise V
orig. worked from High Raise Low Level from
Borion Gill, 2,300' E of Nenthall [NY 765 458]
The Horse L connects with it by rises in
High Raise V. which has galena, blende,
quartz, baryte, calcite, dolomite ["pearl spar"]
& parts are rich in witherite.
Between the wars, continuation of

NENTS BERRY MINE, Alston, Cumb (II)

The mine into Northumb. reached a rich complex of veins with much galena ~~*~~, sphalerite, with pyrite in an ankerite-quartz gangue with some barium spars [baryte, witherite]. Dupont V, to NW had large calcite xls in open vuggy ground with patches of witherite. Witherite most abund. from Treloar V.

Wellhope Low L (N'umb) [see WELLHOPE M.] had cut 1st & 2nd Sum V's & Treloar V in the last cent. but prob abandoned before reaching the rich Pb overshoots to the SE

p169 At Nentsberry, a series of fine weak
NE veins worked from short levels
starting near the road. Minerals
include galena, sphalerite, "calamine"
[? smithsonite], quartz, siderite, ankerite,
e. limonite.

B. Young (1985) ~~at~~ PYGS 45 199-206. ~~at~~ ^{AT 766 450} 766 450.

Major witherite; minor barytocalcite;
alstonite rare. Alstonite obtained by
A. Russell in 1931 from Cox's Vein (~~766 450~~).
Spec's in BM & other colls but unpublished.
Barytocalcite xls lining vugs in witherite from
Second Sun Vein.

NENTS BERRY MINE, Alston, Cumb. (III)

Russ. Soc. N'letter (1994) 25. AT FIRST

SNN VEIN, ktenasite & serpierite

JW 11/96 Spec → RSWB. From a "new" cavity
in Admiralty Flats reached from NENTS B.
HAGGS LEVEL, sphalerite xls with
baryte + witherite pseudomorphs after alstonite
xls (FTIR 12/96)

T Bridges & B Young (1998) JRS 3, 3-14. Hemimorphite
NY 7557 4804;

T. Bridges (2009) J. Russ. Soc. 12, 61-64

"Lady's slippers" epimorphs of siderite
after barite or unident. also quartz
epimorphs; pyrite

NENTS BERRY HAGGS HORSE LEVEL,

See also HAGGS MINE etc
NENTS BERRY MINE

Alston, Cumb.

KCD (1948) 169, 166. Portal $3\frac{1}{4}$ ml SE of Nenthall

at 1250' OD. Length 11440' (Cumb) + 9350' (N'umb).
Worked Nentsberry Haggs, Wellgill, High Rise,
Treloar, Dupont, Cox, Liverick, 1st & 2nd
Sun Vens

p192: Further description. Wellhope shaft
sunk in 1925 to the level near
intersect. of High Raise & Dupont V's.

JTW 11/96, Spec → R508 From a "new" cavity in ADMIRALTY
FLATS, reached from N. Hagg L, sphal xls w.
(baryte + witherite) - ψ - after alstonite xls (IR)

T. Bridges & B. Young (1998) JRS 7 3-14 Rare traces
erythrite on witherite (NY 7661 4503) (WFD & NT).
Gypsum xls. Schulenbergite, blue-green
earthy crust from small slope on HIGH RAISE V.
(S. Rust, 1997, UKJMM 18, 15)

B. Young & T. Bridges (1984) Trans Nat Hist Soc N'umb'a 52 24-26
"Harmotome from Northumberland". Harmotome,
WELLHOPE Sh., NENTSBERRY HAGGS M.

NEST MINES, Alston, Cumb.

See also BROWNSIDE MINE

KCD (1948), 148. Fe. On E bank of the S. Tyne,
1½ ml S of Alston. Low Nest level, 965' OD
gave access to flats in the Sear Limestone.
No plan remains. Iron ore on dumps includes
limonite boxworks with cores of unreplaced
limestone; some greasy haematite in the
hard limonite. High Nest mine, 1000'
SW of High Nest [ie near NY 717 443] is an old
opencast on a flat

T Bridges & B Young (1998). Haematite.

NY 57 50

NEWBIGGIN FELL

Cumb.

TGPZ, Priv. Comm. 6/72

Baryte, including large clear xls; like those from Silverband mine, in the southernmost of two small quarries in the Scar limestone, at NY 571 502, with traces chalcopysite and malachite

OGILL BURN, Cumberland

= Hudgill Burn? NY 7545

GeL (1858). Calcite, dolomite

NY 76 45

OLD HAGG'S MINE, Cumb.

See also HAGG'S MINE, Alston.

GeL (1858) Calcite, dolomite.

1" 83

NY 703 458

PARK MINE, Alston, Cumberland

See also MANOR HOUSE MINE; GILDERDALE (N'umb)
HORSE EDGE M.

KCD (1948), 145. Fe. On NE side of Park Fell,
in Park grove & Blackhouse plantation.

Baryte, ironstone.

Other workings nearby, eg on SW side
of Park Fell, also on SE side of HORSE EDGE,
also of limonite with a little baryte & traces galena. (9v)

PENTHEAD MINE, Alston, Cumb."

arts. [= NENTHEAD? q.v.]

B. Gazette: Lead mine near Alston, Cumb.

#1"84

NY 78, 436

RAMPGILL HORSE LEVEL, Alston, Cumb.

See also RAMPGILL MINE, etc.

KCD(1948) 166. Portal at 1432' OD, 300' SW of
Nenthead House [ie ca NY 78, 436]. Worked
Scaleburn, Rampgill, Rampgill Cross,
Smallcleugh, & Middlecleugh Keins.
18480 ft long (in Cumb.).

RAMPGILL MINE, Nenthead, Alston, Cumb.

See also NENTHEAD MINES, SCALEBURN MINE, RAMPGILL HORSE L.

RSWB, T6. 18/3/62 Vol II p 21. Dumps at 78654355. Quartz;
galena; good xls blende; purple fluorite cubes.

KCD (1948), 175. Section, 173. Big mine. Levels:
from Firestone Bridge 787 435; Rampgill Horse
Level, at 1432' OD, almost to county boundary
[ie portal ? near 782 435]; Nentforce Level,
from Alston. A complex of veins, carrying
quartz siderite ankerite, calcite, purple
fluorite "abundant from Firestone Level";
barytocalcite reported (Wallace, 1861, p 149) in

Rampgill Vein at the Grindstone Sill horizon - no trace at lower levels. Grindstone Sill workings not shown on mine sections, & not been possible to confirm the occurrence. Galena (Ag 702/ton) blende. NOT mined for fluorite

B. Young (1985) PYGS 45 199-201. Wallace (1861) [Book] quotes "barytes (barytocalcite)" - which does he mean?

OS map shows Rampgill dressing floor at 779 437-8

T. Bridges & B. Young (1998) JRS. Supergene "witherrite-indic" baryte.

T. Bridges et al ('03) J. Russ Soc 8 (1) 389 Qtz epim after fluor

1" 83

NY 620 442.

RAVEN BECK, Kirkoswald, Cumberland.

G.S. 1" map, Old Series, shows a "copper vein"
crossing Raven Beck at 620 442.
OS 6" map shows old Mine (copper) at above
loc.

KCD (1948) 124 3 small veins. (i) 2 mi ENE of
Kenwick, near BM 1078.9 - pink baryte (ii) 2000'
to SW - 'the "Cu mine" of the 6" map - a little
pyrite & ankerite with malachite staining.
(iii) strings 1200' E of the first vein, with
baryte.

WFD & NT (1948) Near Renwick small Cu
veins bearing chalcopyrite prospected
many years ago.

P. Thomson & G. Hudson 3/71. 2 run-in levels & shaft.
Small grassed-over dumps. Malachite -
small xls in joints in sandstone

~~I Bridges et al (1983) J. Res. Soc. 8 (1) 38-39~~
~~Qz epim after fluorite~~

1" 84

NY 737449-742449

REDGROVES HUSH, Alston, Cumb.

See NATTRASS MINE

1" 83

NY 6144, 6145, 6245

RENWICK FELL, Kirkoswald, Cumb.

See also THACK MOOR; RAVEN BECK M.

OS map shows old levels at 615 448,
611 458 611 455 & old shaft at 613 452 &
Old levels at 621 453, 622 453, 624 450

ROTERHOPE FELL MINE, Alston, Cumb. (I) 6941
6942
7041

OSb" map: High Level 7004155, Low Level, 700427.

Rayners Cat (1960). Calcite; fluorite; quartz.

Dunham "F" (1952), 9 Mauve fluorite xls with yellow margins -
"formerly"
60-61 Fluorite; quartz; chalcedony;
galena; blende; pyrite; chalcopryrite
(traces)

KCD Priv Comm (11/61) Erythrite, better than from Tyne Bottom Mine,
in flats on N side of vein, & possibly
on dumps.

SRMRGB XXV Pb/Zn (1923) p96: Fluorite; galena; traces blende.

MM 28 ~~45~~ (1947) Descrip of excusion. Full descrip. Erythrite
noted, as pink encrustation. Chalcedony, fluorite

opal; quartz; galena; blende; ~~marcasite~~ marcasite; chalybite;
ankerite; calcite.

Blackburn level, 1834.

BM 1943, 14 § Linarite "Rotherhope Mine, Alston". (N. Thomson).

KCD, N-F (1959), 135. Worked for lead since war, now
abandoned. Fluorite.

GER (1858) Calcite

RSOB et al II, 123 (19/8/62) Not working. On dumps of
low level, at 700 428: quartz; fluorite; calcite; pyrite;
galena.

GR, 8/65. Working. GR et al not allowed onto dumps!

ROTHERHOPE FELL MINE, Alston, Cumb (II)

KCD (1948) (Pb, F). 17, 53, 58, 82, ~~85~~, 87, 99, 100, ¹⁰¹118, ¹⁰³151, 166.

Sericite extensively developed in the upper shaly limestone probably metasomatic from solutions from Whin sill rather than the mineralising soln's which gave rise to the fluonite-quartz-galena replacements.

Flat in the Tynebottom list - plan on p 82

Two main ore shoots - veins, with flats between. Minerals, in order of abundance: fluonite, quartz, galena, "carbonates", pyrite, marcasite, a little sphalerite, traces chalcopyrite.

In the flats the same minerals, with silica - mainly chalcedony - greatly predominating.

ROTHERHOPE FELL HIGH LEVEL [7004155] - See
under GREENCASTLE V's

Working level = BLACKBURN LEVEL @ 1035' OD,
from S bank of burn, 3/4 ml SW of
Blackburn Bridge. Runs ~~SE~~ SSE to
VICTORIA VEIN [9v] at 2900' then SSE to the
main vein at 4200'

Blackburn L = Rotherhope Fell Low L. [700427]

WFD & NT (1948) ^{pub 1951} ROTHERHOPE (RODDERUP) MINE: Was
a magnificent mine for xl specimens, esp. for

ROTHERHOPE FELL MINE, Alston, Cumb. (III)

fluorite, blue, yellow, green, colourless,
some etched, some with colour banding.
Calcite, nail head, some large xls. Siderite,
pyrite, galena, marcasite, quartz - all
in xls. Blende - spherical 'modules' in
the l'stone. Erythrite in small amount
in two places underground. Stalactites
growing in adit. Linarite on the old
top dump (N. Thomson).

TF Bridges & B. Young (1998) JRS 1 3-14. Amorph
cds. Erythrite (KCDunkham (1947) MM [Excursion]) v PRO

Linarite, from Top Lev dump (WFD & NT, 1951 for 1948)

RSN(2000), 37, 10. 8/4/00. Dumps at 7011 4284. Pyrite,
calcite, massive fluor (no xls).

1" 83

NY

627 401

SAILRIGG QUARRY, Glassonby, Cumb.

See also LONG CRAGG.

R. Brown Gems, 1973 5 [1] 2-5

banded amber & yellow

Calcite "onyx"

1"84

Ca NY 790 435

SCALEBURN MINE, Alston, Cumb.

See also DOWGANG MINE, RAMPGILL MINE

KCD (1948) 174 (Not in index!) Access
by Rampgill Horse level, at 1432' OD,
almost to county boundary. Sub-
levels above this. galena, blende,
purple fluorsite, quartz, "carbonates"

R. Bunting (1994) J. Russ. Soc 5 118-9
Witherite in some abundance along a 3-m
length of vein ~ beneath NY 787 444. Here
vein ~ 5 m wide w. a rib of withelite & barite

in a stop 5 m above the ~~base~~ level.

Some qtz, a little sphalorite. Baryte of
"witherite indicator" habit.

SCAR ENDS LEVEL, Alston Moor, Cumb.KCD (1948), 158.

Cu, Pb.

On Sir John's Vein.

Stands on N bank of Cross Gill, $\frac{3}{4}$ ml SW of Crossgill Bridge. Vein has quartz, ankerite, pyrite,chalcopyrite - Cu worked 1824-1826. Ca 1920,
a level driven SE, on opp. bank - minerals similar

SIR JOHN'S MINE, Alston, Cumb.

See also TYNEHEAD MINE
At Tynehead.

KCD (1948) (Pb, Pyrite). 159, 161. ~~On~~ Followed Sir John's
V from E bank of Tyne to & beyond intersec.
with the Gt. Sulphur V. Reopened 1941 to
reach Gt. S. V. Main level, at 1380'0" ~~on~~
driven through boulder clay into ~~the~~ thin
sandstones & shales. Middle level now
collapsed, driven from Sidehead Sike. High
level from Sidehead Sike at 1558'0" also now
inaccessible — some lead worked from this
level, with 40 oz Ag ton⁻¹ Pb. (v. high for the area).

The gr S. vein averages 9.5% S, ~~the pyrite~~, in
quartz, as "iron sulphides" [pyrite, marcasite]
An attempt to work for gold - see
the remains of the crusher & gold
pan at the entrance - was quite
unsuccessful.

TF Bridges & B Young (1998) JRS 7.3-4. Nat copper
within coatings < 1mm across on ch'py-qtz
veinstone. at 7614 3782.

SLATESIKE MINE, Alston, Cumb.

See also LONG KATELOCK LEVEL

KCD (1948) 163.

Series of crosscut adits to vein
 found little ore. ~~At~~ A level from Slate
 Sike, 2825' long to an oreshoot - on dumps,
fluorite, quartz, siderite, limonite, traces
galena.

^{note on q} A map in geol Survey says
 that "brown haematite" 4' thick was found.
 [? goethite]. 700' to the NE lies

CASHWELL MINE [qv].

J. Hudson 3/71. Fluorite - purple cubes, up

to $1\frac{1}{2}$ -2" not transparent - small ones
 $\frac{1}{2}$ " can be clear. galena.

1" 84

NY 785 432

MINE and
SMALLCLEUGH HORSE LEVEL, Alston, Cumb. (I)

KCD (1948) 166, 67, 115. Portal @ 1580' OD, (p166)
 2000' SE of Nenthead House [ie ca NY 785 432]
 worked Smallcleugh, Handsome Mea, Longcleugh,
 Middlecleugh Veins. Length: 22,430 ft.
Epsomite & melanterite found in the
ankerite-rich flats at Smallcleugh.
 178, 180-181. Veins worked "Smallcleugh Level
 at 1610-1620' OD" (p180). galena, sphalerite,
fluorite.

RSWB Coll (69-313 & another); coll & pres. B. Cooper.

Sphalerite xls, with pyrite, calcite, minor
smithsonite, traces native sulphur (small
xls, melt & burn $\rightarrow \text{SO}_2$), gypsum. According to B.
Cooper, Eric Richardson has the mineral rights.
Vast area of workings.

TBP Ziemba, Riv. Comm 5/72 * fine large spec
of smithsonite recently obtained

S. Uttley (1987) "Rock Bottom" 2 27. "Smallclough
melanterite". Melanterite blue to green with
limonite crusts, usually stalact or fibrous crusts,
in Hetherington's X-cut; flat above Wheel Flat, & roadway
on First Sun Kern (all adjacent loc's).

Also gypsum
pyrite, epsonite
halotrichite

SMALLCLEUGH MINE, Alston, Cumb (II)

A. Livingstone, T.F. Bridges R.E. Bevins (1990) J. Russ. Soc. 3 (1) 23-4

Namuwite & schulenbergite (both xrd) (and anal.)
from specs. from Middlecleugh First Sun Vern.
Also serpierite with devilline (Bridges 1987, Proc Yorks Geol Soc 46 169), epsomite (Dunham, 1948).

The schulenberg is in pearly, blue-green trig. xls w perfect basal cleav., w. sharp or rounded corners.

The namuw is pearly sea-green flat triang plates $\rightarrow$ 200 μ -, in sheaves & curved. Hex xls rare.

Russ Soc N'letter (1994) 25 Recently, excellent
micro-calcite on pyrite xls on calcite from
WHEEL FLAT, Smalcleugh M.

TF Bridges & B Young (1998) JRS 7 3-14.

Briden youngite in MIDDLECLEUGH FIRST SUN V.
Hydrozincite; annabergite, thin crust in
"WHEEL FLATS" (Bridges, 1983, JRS 1, 18). Traces
devilline w. serpierite; epsonite
efflor. on walls. (Dunham, 1948). Gypsum
efflor., also xls in HANDSOME MEAT section
Zn anal. of ktenas (Livingstone, 1991, JRS 13-15).
"Ktenasite" (XRD) MIDD. FIRST SUN V. (S. Rust - could be
the Zn-analogue (no anal). Melanterite, namuwite, schulenb.
Serpier.

1" 83

NY 674 390

SMITTERGILL HEAD MINE, Ousby, Cumb.

TMH (1868), 55: (Pb^{Ag}) Blende; galena; pyrrhotite;
quartz.

KCD (1948) 160 ^{on Gt. Sulphur V.} Pyrite mine, galena, sphalerite
in coarse xls; iron sulphides, quartz,
purple fluorite, carbonates. Perhaps the
SW continuation of Rotherhope Fell Vein
meets the Gt S. Vein near here

Map shows "Old lead mine" further S, at 673 371
also.

TF Bridges & B. Young (1998) ~~JRS~~ 3-14. Sulphur, thin
powdery crusts at 6720 3895.; small amts
pyromorphite. ~~Hydroxide~~ Linarite (young,
1985, JRSoc 1 81-82)

NY 211 405

STONE CURRAEK LEVEL, Alston, Cumb.

See GREENCASTLE VEINS

1" 84

NY 758 38₂
761 381STOWE CRAG MINE, Alston Cumb

See also TYNE HEAD MINES Alston, etc.

Priv Comm (11/61)KCD. A "Cu mine" on 6" map near Tynehead is prob.
This mine

KCD (1948) 159 ~~from~~ In Petergill, 1500' NW of Tynehead Farm [i.e. NY 758 38₂] Sir Johns V. exposed, with ankerite, quartz, pyrite, & chalcopryite. A level from Petergill forming part of Stowe Crag Mine, reached the vein as a X-cut & another level from the W bank of the Tyne near

761381] Douthgillfoot followed Windy Brow vein, here with much calcite, to Sir Johns Vein.

PTO

From these workings 856 tons Cu ore obtained
in 1823-1836 & 20 tons Cu ore 1870-1871

1"83

NY 7215 485

TAYLOR'S GROVE MINE, Alston, Cumb.

KCD (1948) 143 TAYLORS GROOVE VEIN,
developed by a level & shaft, 1200 ft
NNE of Newshild. Wallace (1890, pp185-6)
said Pb deposit uneconomical. On small
dumps, witherite, baryte, sphalerite

B. Young (1985) PYGS 45 199-206. Major
witherite; major barytocalcite - TAYLORS
GROOVE MINE.

1"83

NY 60 46

THACK MOOR, Kirkoswald, Cumb.

See also RENWICK FELL

OS maps show old shaft at 609 461 &
old level at 608 460

1"

NY

THORTER GILL, Alston, Cumb.

Daily Telegraph, 9/10/96 p 8 Landowner of
THORTERGILL valley & gorge (with waterfall)
wins award for removing all traces
of old lead mines dumps etc
except for one level which leads
to extensive workings.

[Could not find it on 2½" OS maps or in
KCDunham (1948)]

1" 76 Centred ~ NY 6185 5915
[ZINC SMELTING]
TINDALEFELL "SPELTER" WORKS, Tindate, Cumb (I)
cf SILVERTOP Q.

RPH Lamb, spec's (96-106) → RSWB (8/96).

Hydrozincite (FTIR 20/8/96) typical white
pearly with pale blue fluorescence in
UV(SW), with briaryolengite (FTIR 20/8/96)
looking like the hydrozincite but with
a pale greenish fluorescence in UV(SW),
rich on greyish crystalline ?
(FTIR, 20/8/96 → unident hydrated
sulphate)

On 1" map, (coal) mine shown at NY 615 596

RHIL, Riv Comm 10/96 "Spelter" here is the old meaning
= zinc smelting (distillation), not alloy forming.

RSWB & JIW 29/8/96. Big excavation with
much cindery material of various colours.
A number of white lumps coll. & examined.
UV fluorescence most useful, all with FTIR* -
1. Blue fluor. (SW only) = hydrozincite (~~zincite~~) (4/9/82)
Cream porcellaneous with cream fl. (LW) = hydrozincite
Yellow fl. (SW strong, LW weak) = near brian youngite
Red fl. (SW stronger than LW) = calcite.
Weak mustard fl. (SW > LW) = NOT^{yet} sampled for IR
Brill. green fl (LW only) ass w the brian youngite
= [~~zincite~~? (near) zincite] - Is off-white
polyxl. massive.

TINDALEFELL SPELTER WORKS, Tindale, Cumb. (II)

A. Natrass, spec's → RSWB for ident, (7/99).

Hydrozincite, brianyoungite as above, +...
Linarite (1 spec) superb micro spray with
brochantite; excellent pale blue bladed
serpierite (FTIR); c'less fibrous "natrolite-
like" ettringite (FTIR) not or v. weakly
fluoresc (uv, sw). White "flos-ferris-like" on
ferruginous slag! FTIR indicates brianyoungite + ($444 > 521 \text{ cm}^{-1}$) → zincite? The
filaments are approx hex in X-section &
have translucent adam. cores. Brown
thin hex plates on ferruginous

FTIR

slag (goethite-rich): FTIR: v. weak abs from goethite + a phase abs @ $\sim 1118 \text{ cm}^{-1}$, but sample impure - major phase non-absorbing [which could be the brown plates! Magnetic & black impurities/y].

Lepidocrocite (FTIR, 8/99) brown fibrous like looking like goethite (& mixed with minor goeth.) Curious dark sub-met tetrahedra w strong clear 11^{th} face, sometimes with yellow-brown-orange outer zone: efferv ~~with~~ with NaN_3/I_2 but on matrix, so may be a sulphide - a slag component rather than a weathering product?

TINDALEFELL SPELTER WORKS, Tindale, Cumb. (III)

- RPHL, spec's lent to RSWB for ident, (8/99)
No 557 - curious sub-met tetrahedra as above (II back, bot)
- 560 Brochantite, small xls ~~like~~ [microchem] & individ large rectang xls [m'chem, FTIR 9/99], with devilline, green pearly plates [m'chem, little Zn].
- 562 Gypsum - soft & distort-able. Typical habit.
- 568 ? Leadhillite group, small brk. class hex. plates, with green pearly platy compact Schulenbergite (m'chem. some efferv. w. HCl; Cu + much Zn, no Pb), & pearly white hydrozincite (m'chem. Efferv. + much Zn).
- 569 Small ?brochantite xls on & near

? chalcopyrite is a sub-met phase with
good bright cleavages which efferv. w. NaN_3/I_2
so prob a sulphide (NOT galena - wrong colour)

570 $\Delta \rightarrow \square$ dark sub-met, prob = the tetrahedra
(v. supra, eg 557)

(garrigill), 1" 84

738 419.
738 417

TYNE BOTTOM MINE, Alston, Cumb. (I)
See also GARRIGILL MINES

TMH (1868), 53: (PbAg). Erythrite

KCD PrivComm (1961). By Garrigill Village. "W" bank & walk N. Dump
opposite village. Erythrite on/in calcite
stalactites in level. May be flooded.
Erythrite also from Rotherhope Fell Mine (g.v).

AW&K, priv comm. Erythrite; hydrozincite.

RSWB et al II, 121 (19/8/62). Calcite; quartz; galena;
blende; trace chalcopyrite; pyrite &/or marcasite;
?jarosite; erythrite, coatings incl mico-needles,

also erythritic calcite; hydrozincite; traces
? linarite brochantite (IR-GR)

BM(NH), Letter from RJDavis () "Ladywell unknown" ident.
from an enquiry specimen. [= wroewolfeite]

KCD (1948) (Pb, Zn) 177. On W bank of the
Tyne, N of Garrigill, worked flats assoc.
with 'Browningill V.', in the Tyne bott. L'st.
Mineralis'n sim. to that in Ty. L'st @
Rother Hope Fell M. Limestone replaced by
chalcedony & quartz, with dissem. xls of galena,
marcasite, pyrite. Purple fluorite, quartz,
ankerite & calcite in vughs. Erythrite in
post-mine stalactites prob derived from some primary Co
mineral in the ore.

TYNE BOTTOM MINE, Garrigill, Alston, Cumb. (II)

WFD & NT (1948) Mauve fluorite; calcite;
marcasite (decomposing badly on dumps).
Malachite, & chrysocolla - encrusting.
Linazite, small amounts, also brochantite
small brilliant xls (found 1950). Erythrite
plentiful - ? dump growth, as cementing.
Selenite [gypsum] on erythrite.

Spec. coll by B. Cooper & IR (RSWB, 7/74)
= Aragonite, white micro-needles (looking
like pharmacolite), with erythrite
(RSWB 74-169).

RAI xer, CJ Stanley & DJ Vaughan, Min Mag (1979) 43 389-395

glaucofite & gersdorffite, overgrowths on
arsenical marcasite (1-2 cm x 0.2 cm laths)
in qtz-calcite-ankerite gangue.

Early pyrite w. minor pyrrhotite. Chalcopy,
v. minor arsenopyrite

Weathering:- pyrite → limon. gersd →
erythrite, esp. along cleavages.

N. Hubbard, Priv. Comm (4/82). Someone found
white radiating crusts pharmacolite
and picropharmacolite (?) ass. with
the erythrite.

TYNE BOTTOM MINE, Garrigill, Cumb. (III)

RSWB, Min. Record (1982), 13, [3], 167-170, 174.

"Wroewolffite in Britain". galena,
sphal., chalcopy; ~~marcas~~ pyr; marcas; in
quartz, chalcedony, fluorite, calcite
ankerite. gypsum, aragonite, erythrite,
hydrozincite, malachite, chrysocolla,
linarite, brochantite, wroewolffite (BM,
X-ray)

S. Rust (1987) "Rock Bottom" 2, 21-2 "Post-mining
minerals of Tynebottom mine, Cumbria". AL 7382417
Erythrite, thin crusts, xls rare; brochantite;



devilline, rare light green laths; serpierite,
v rare divergent light-blue eggs of sword-like
xls . Linairite, v. rare; anglesite;
wroewolfeite; malachite; gypsum; iron
oxides; secy baryte minute clear tabular
xls, singles & rosettes; "Unknown T2" minute
hexag thin platelets, transpar greenish blue,
perhaps = langite; aragonite; hydrozincite;
chrysocolla.

1xer RA, Stanley CJ. Proc Yorks Geol Soc (1987) 46 133-9. "A silver-
nickel-cobalt mineral assoc'n at T. Mine, Gar. nr Als. Cumbria"
Minute amts of new mineral AgFeS_2 , lamellae - 15μ in cupy.
unnamed. Also another, AgFeS_4 in argentopyrite

TYNE BOTTOM MINE, Garrigill, Alston, Cumb. (IV)

RSN (1997) 31, 10. Flats entered via wet & muddy tunnel. Obtained quartz (bipy → 2cm), galena; nat copper (micro-xls), erythrite, marcasite, linarite, devilline, brochantite, serpierite & a green glob mineral, poss. annabergite (?).

RSN (1998) 33, 21-2. U'grd, from NY 739 418.
Usual minerals. Wet & muddy.

TF Bridges & B. Young (1998) IRS 3-14. Native sulphur, in flats of DRYBURN WASHPOOL V.;

amorph Col S; supergene aragonite; calcite stalact
post-mining, often pink w. ind. erythrite or blue by
unid. Cu min's. Chrysocolla (RSWB, 1982; ~~WFD~~
& NT). Bleedantite, a minute greenish-yell
mamill crust XRD (BMNH) (I. Dossett). Erythrite,
(Phillips (1844) p449 "An Elementary Treatise on Mineralogy")
Anglesite; brochantite (WFD & NT; RSWB, 1982)
Devilline, crusts of blue-green platy pearly xls
→ 1 mm (Bridges, 1987; Proc Yorks Ge. Soc 46, 169)
also descr. Serpierite, xl crusts & red blue laths
→ 2 mm. Gypsum. Linarite → 0.5 mm &
Wroewolfeite → 0.5 mm (RSWB, 1982)

RSN (1999), 35, 12. U'gr'd. Erythrite, sulphur, devilline,
annabergite, brochantite, malachite, ?cobaltocalcite,
marcasite, pyrite, chalcopyr, calcite, galena,
Smolianinovite

TYNEBOTTOM M., Garrigill, Alston, Cumb. (V)

D. Green et al (2003) J. Russ. Soc. & (i), 16-17
A dk green egg of poor, rounded blades to
1 mm = intergr symplecite + parasymplecite

1" 84

NY NY 76 38

TYNE HEAD MINES Alston, Cumb.See also STOWE CRAG MINE, Alston, SIR JOHN'S MINE; CALVERT MINE,
DOSEY MINE. WINDY BROW V's.TMH (1868), 53: (PbAg) Malachite; olivenite; "redruthite" (ie
chalcocite); rock xl.SRMRGB XXV Pb, Zn (1923), p. 95: Traces of Copper mins in
waste heaps at Tynehead Mine by the riverside.
N. Windybrae vein in valley bottom just below waterfall
in Clargill Burn carries chalcopryrite in quartz
& dolomite. A. trial drift here. Traces gold
reported but anal. of some of the ore did
not confirm.GeL (1858) 320. Olivenite.

P.T.O.

KCD (1948) 164-5 In the gap between the head of the
S. Tyne & the Tees, a series of NE V's on E side
of valley, with coarse quartz & purple fluorite,
small amounts galena traces sphalerite.
DOSEY V; ~~mine~~ explored from L. 1 mi S of Tynehead
Smelt mill; 400' of workings on V. TYNE BOGS V.
worked for 400' from a L. 500' further S.
BOWMAN'S SPRING V, 500' SE of Tyne Bogs V, worked
from a sh. MIDDLE & FAR TYNE GREEN V's
both worked for > 2000'; LADIE'S V.

WFD & NT (1948) "The records give" [no refs] :- malachite,
olivine, small xls.; chalcocite; chalcopyrite
TBridges & BYoung (1998) JRS. Discusses the olivine of GEL (1858)

1"83

NY 68-94 10-1

VICTORIA VEIN, Alston, Cumb.

See also BIRCHY BANK VEINS; ROTHERHOPE FELL M.

KCD(1948) 150-1. Victoria Vein, formerly worked at Rotherhope Fell mine carried fluorite, ankerite & galena & was worked SW of Blackburn Level. The NE a drift from B. Level proved only traces galena & blende. A boring from the level showed quartz

calcite & a little galena & blende, &
deeper down silicified Tynebott. L'st
w. ankerite & calcite but no galena.

Is this the line of shafts on OS 2½"
map to NE from "Old Level" at 685405 -
?? Blackburn Level ??

1" 84

NY

777 443

WELLGILL DRESSING FLOOR, Alston, Cumb

See also BROWNKEY HILL M.

OS 6 in map shows Wellgill dressing floor at 777 443

1" 84

NY 780 414

77 41

WELLHOPEKNOT MINE, Alston, Cumb.

See also ASHGILL FIELD MINE

KCD (1948) (Pb) 182. Entered by a level in shale above the Gt. Limestone. Worked an oneshoot 950 ft long on the main Black Ashgill Vein and a strong SSE branch vein (branching off 1400' SE of Caplecleugh V)
WELLHOPEKNOT VEIN p156 (map facing p168)
mainly worked in Ashgillfield Mine [qv]
where it is called Ashgillfield Vein.

WHITESIKE MINE, Alston, Cumb.

See also BENTYFIELD M.

KCD(1948) 156 Pb.F., 177

The Whitesike or
Browngill L., @ 1430' OD driven on Old
Groves Cross Vein S of Garrigill Burn. This
level the main entrance to the mine
The L reaches Browngill V 2200' from portal
Other levels also on this latter vein
(the important one) Big dumps, with
fluorite; quartz; siderite; sphalerite;
galena. 7 oz Ag. ton Pb⁻¹

1" 84 NY 764 38,
WINDY BROW VEINS, Alston, Cumab.
= WINDY BRAE

See also COPPER SLITTS V; HOLEPASTURE V; TYNEHEAD M
ALLEN'S CLEUGH.

KCD (1948) 157 Windy Brow N. V. 350' SE of Copper
Slits V. - little ore. Windy Brae V; lowest
working a level 600' ENE of Tynehead Fm.
On damps; quartz; ankerite; pyrite;
a little chalcopryite. Worked in
the l'st from another adit, with
galena & a little fluorite. Two trials
in Little Gill tried to find these veins.

B. Young, T. ~~Re~~Higginson & T.F. Bridges. "Rosas aurifer. from
the N. Penn. orefield" Trans. Nat. Hist. Soc. of Northumbria
(1985) 54, 31.

Aurichalcite in some
abundance ~~from~~ on dumps from an old level
at NY 7698 ~~3812~~ 3812. Pockets and
rounded aggs to 5mm in gozan w. specks of Cu₂P₂
& coating joints & fractures. A little
malachite, traces azurite & "dry-bone"
smithsonite.

T Bridges & B. Young (1978) JRS. Aurichalcite; malachite
loc. abund on Copperslitts V. at 7696 3834 also
azurite