

STAFFS

ANALCITE

STAFFS

Pouk Hill

Anglesite

Staffs

Ecton

Waterbank Sh/M

ANHYDRITE

Staffs

Fauld
Draycott

Ankerite

Staffs

Silverdale Colly

Apatite

Staflf

Red st Colly (rock
constit)

"ARSENICAL PYRITES"

STAFFS

Botstone

Arsenopyrite

Staffs

Ecton

AUGITE

STAFFS

Pouk Hill

AURICHALCITE

STAFFS

Ecton

Clayton level, Ecton

Dutchmans level, Ecton

Good Hope mine, Ecton

Salts level, Ecton

Waterbank shaft, Ecton

Mixon - [?]

Bag M. Ector

Vivian's V. Ector

The Lum, Ecton

AZURITE

STAFFS

Breaston Hill

Ecton

Bag mine, Ecton

Dutchmans level, Ecton

Salts level, Ecton

Waterbank shaft, Ecton

Wooton

Deep Ecton Sh, Ecton

BARYTE

Bearstone (Shrops)
Bincliff mine
Breaston Hill
Clent Hills
Dudley Port
Hays Brook mine
Highfields mine
Mow Cop
"Ponck Hi ll"
Pouk Hill
Stoke-On-Trent
Ecton
Bag mine, Ecton
Clayton level, Ecton
Dutchmans level, Ecton
Alton

STAFFS

Waterbank mine, Ecton
Whey(Hurts) level, Ecton
The Rookery mine

BITUMINOUS MINERALS.

eg BITUMEN, PITCH

STAFFS

Caldon Low

Mixon

Waterbank Shaft, Ecton

Birch Hill (anthracite)

Clayton level, Ecton

Ecton mines.

[N. Staffs coalfield-coal]

BORNITE

STAFFS

Ecton

G Bravoute

Staffs

Ecton

Red & Gully (not marked)

Boxon ("minding" sphere)

Ecton

Brochantite

Staffs

Mixon

Ecton

Waterbank M, Ecton

CALCITE

Bincliff mine
Clent Hills
Council Quarry, Caldon Low
Dale mine
Hays Brook mine
Highfields mine
Mixon
Pouk Hill
Ribden Clay Works
Ecton
Bag mine, Ecton
Clayton level, Ecton
Deep Ecton level
Dutchmans level, Ecton
Good Hope mine, Ecton
Salts level, Ecton
Madeley Coll'y.

STAFFS

Waterbank Shaft, Ecton
Whey (Hurts) level, Ecton
Wednesbury
New York M
Hill House M
Dudley
Vivian's V., Ecton
Deep Ecton Sh, Ecton
The Lum, Ecton
Birchenwood Brickwks
The Rookery mine
Silverdale Coll'y

CELESTINE

STAFFS

Clayton level, Ecton
Waterbank shaft, Ecton

Ecton mines

CERUSSITE

STAFFS

Mixon

Ecton

Waterbank M., Ecton

4

Chalcanthite

Staffs

Ecton

is silica
CHALCEDONY

STAFFS

Pouk Hill

Lichfield (agate)

Bent Hills (jasper)

Chalcoote

Shaft

Eaton

Deep Eaton Shaft

CHALCOPYRITE

See also "Copper Ore"

Botstone

Hays Brook mine

Highfields mine

Mixon

Wednesbury

Ecton

Clayton level, Ecton

Deep Ecton level

Dutchmans level, Ecton

Salts level, Ecton

?Froghall

Waterbank me, Ecton

New York M? "sulphide

Ridgely M S of "Cu"

STAFFS

Vivians V, Ecton

Deep Ecton Sh., Ecton

Birchenwood Coll'y

Chatterley Whitfield Coll'y

Longton

Madeley Coll'y

Talk o' th' Hill Coll'y

Silverdale Coll'y

CHLORITE

STAFFS

Clent Hills

Chrysocolla

Deep Ecton Shaft

Ecton

COPPER, NATIVE.

STAFFS

Fenton Park
Ecton

Copper mins, ~~made~~ unspecified

"COPPER ORE"

STAFFS

Bearstone (Shrops)

Berresford

Butterton

Dale mine

Elkstone

Hill House mine

Huntington Coll., Cannock

Mixon

New York mine

Ribden mine

Rilidge mine

Rushton Spencer (??)

Shore Hill, Cannock

Warslow

Wire-Mill, Alton

?Froghall

Waterfall

Chadwick V, Ecton

Covelline

Staff

Waterbank shaft, Ecton
Clayton level, Ecton

Crandallite

Staffs

Red Street Colly.

CUPRITE

STAFFS

Ecton

Cyanotrichite

Ecton

Staff

Deville ne
Ecton

Staff

Dolomite

Staff

Red St Colly (rock consist)
Clayton level, Ecton
Ecton

FELSPARS, *misc*

STAFFS

Clent Hills

FLUORITE

Mixon

Ecton

Bag mine, Ecton

Clayton level, Ecton

Dutchmans level, Ecton

Waterbank shaft, Ecton

Vivian's V Ector

STAFFS

GALENA, "LEAD"

Berresford
 Bincliff mine
 Butterson
 Caldonlow Quarries
 Cow-Close mine
 Dale mine
 Elkstone
 Fair Oak Coll., Cannock
 Fawnsfield
 Golden Hill
 Hays Brook mine
 Highfields mine
 Huntington Coll, Cannock
 "Kidcrew" [= KIDSGROVE, Ches.]
 Mixon
 Ribden mine
 Birchenwood Brickwks
 Birchenwood Coll'y

STAFFS

Shore Hill, Cannock
 Thawswood-Dale mine
 Ecton
 Dutchman's level, Ecton
 Salts level, Ecton
 ?Froghall
 Wednesday
 Waterbank mine Ecton
 New York M
 Rulidge M
 Quarry V, Ecton
 Chadwick M, Ecton
 Clayton level, Ecton
 Vivian's V Ecto PTO

Galena

The Rookery mine ("lead")
Trubshaw Coll'y ("lead")

Goethite

("LIMONITE") [~~See GOETHITE~~]

STAFFS

Mixon

Dutchmans level, Ecton

Ecton

GOLD

STAFFS

?Ecton

Gorceixite

Staffs

Red St. Colly (error for crandallite)

Greenockite

Staffs

Clayton level, Ecton

GYPSUM

STAFFS

Highfields mine

Clayton level, Ecton

Whey (Hurts) level, Ecton

Fauld (Alabaster)

Tutbury (Alabaster)

Draycott in the clay

Marchington

Ecton

Birchenwood Brickw'ks

HAEMATITE, (IRONSTONE)

STAFFS

Gateham Grange

Narrowdale

Old Park Hill, Waterhouses

Ribden Clay Works

Wednesbury

Eaton

HALITE

STAFFS

Shirleywich

Draycott in the Clay
Stafford.

Hemimorphite

Staffs

Clayton level, Ecton

Ecton

HYDROZINCITE

STAFFS

Clayton level, Ecton

Salts level, Ecton

Waterbank shaft Ecton

Mixon (?)

Ecton

Illite

Staff

Red SR Coll'y (rock constit)
Eaton

Iron minerals, unspec.

Staffs

Cannock Chase ("ironstone")

Birchenwood Brickworks ("ironstone")

Longton ("ironstone")

Silverdale Colly ("ironstone")

JAROSITE

STAFFS

Hays Brook mine

Kaolinite

Stapfs

Red str. Coll'y (rock constnt)

Langide

Staffs

Waterbank mine Ecton (?)

Ecton

LAUMONTITE

STAFFS

?Pouk Hill

Leadhillite

Staffs

Ecton

Waterbank M.

Linamite

Stafls

Waterbank mine, Ecton (incl se-an)

Bag mine, Ecton

Ecton

MALACHITE

See also "Copper Ore"

Fair Oak Coll, Cannock

Maer

Mixon

Mucclestone

Ribden mine

Ecton

Bag mine, Ecton

Dutchmans level, Ecton

Salts level, Ecton

Waterbank shaft, Ecton

Ridgely M } "carbonate"

New York M } "Cu"

Hill House M(?) ("green Cu ores")

Wootton

STAFFS

Vivian V Ecton
Deep Ecton Sh, Ecton

Marcasite
Ecton

Staffs

MESOLITE

STAFFS

"Ponck Hill"
Pouk Hill

Millerite

Staffs

Clayton level, Ecton
Ecton

Minimum

Staff

Ecton

Morenosite

Staff

Clayton level, Ecton [7]
Ecton

Namuwite

Staffs

Waterbank M, Ecton
Ecton

Olsacherite $Pb_2(SO_4)(SeO_4)$ staffs

Waterbank Sh/M, Ecton

Osbornite (TiN)

Staffs

Oak Farm (or Oakfarm?) [Artefact]

Otaquite

Staffs

Waterbank M., Ecton (Zincan)

Posnjakite,

Staffs

Ecton

Waterbank M, Ecton

PREHNITE

STAFFS

Clent Hills
"Ponck Hill"
Pouk Hill

PYRITE

STAFFS

Botstone

Clent Hills

Fenton Park

Pouk Hill

Warslow

Ecton

Wednesbury

Red St. Coll'y (Crock constituent)

Mixon ("mundic", "sulphur")

Birchenwood Brickworks.

Pyrolusite

Ecton ("wad")

Staffs

QUARTZ

STAFFS

Clent Hills

Dale mine

Gateham Grange

Upper Fleet Green

Ecton

Red St Colly (rock constub)

Ramsbeckite

Staff

Waterbank M, Ecton
Ecton

ROSASITE

STAFFS

Clayton level, Ecton
Waterbank shaft, Ecton

Vivian's V Ecton
Ecton

RUTILE

STAFFS

Bromford

SAL-AMMONIAC

STAFFS

Bradley, Cheadle

Schmiederite

Staffs

Waterbank M, Ecton (?-or Se-linamite)

Schulenbergite

Staff

Waterbank M, Ecton
Ecton

SERPIERITE

STAFFS

Clayton level, Ecton
Waterbank mine, Ecton
Mixon
Bag mine, Ecton
Ecton

SMITHSONITE

STAFFS

?Mixon

Ecton

?Clayton level, Ecton

?Dutchmans level, Ecton

Waterbank shaft, Ecton

Thawswood-Dale mine

Bag M

Vivians V Ecton

Si desite

STAFFS

Ecton

Spangolite

Staffs

Ecton

Waterbank M., Ecton

SPHALERITE, "ZINC"

STAFFS

Golden Hill

Hays Brook mine

Mixon

Mow Cop

Thawswood-Dale mine

Ecton

Deep Ecton level

Dutchmans level

Waterbank shaft, Ecton

Wednesbury

Clayton level, Ecton

Vivian's V. Ecton

Birchenwood Brickworks

Fenton

Longton

Silverdale Coll'y.

Strontianite

Staff

Ecton (?)

"Sulphur"

See pyrite

Staff

Talc

Ecton

Staff

Tenonite

Staffs

Ecton

Tyrolite

Staffs

Ecton (?)

VIVIANITE

STAFFS

Minster Pool, Lichfield

WITHERITE

STAFFS

Mixon

Wulfenite

Staffs

Ecton

Bag mine, Ecton (?)

Waterbank Sh, Ecton

The Lum, Ecton

Zaratite

Ecton

Staffs

Zincolivenite

Staffs

Eaton

ZIRCON

STAFFS

Red St Coll'y (rock constituent)

Unidentified minerals
Silverdale Coll'y

Staffs.

1" 120

SK 07 42

ALTON, Staffs.

See also WIRE-MILL MINE.

CC Moore, Proc Lir. G. S (1898) 241 quotes W.W.

Watts (no ref.) :- baryte in Trias at
Peakstones Rock [SK 0515 4220] Alton, Staffs.

ASHOLME MINE, Waslow, Staffs.

See COW-CLOSE MINE

BEARSTONE, "Staffs."

See under SHROPSHIRE

1" III

SK/1258
Riv. Dove!

BERRESFORD,

Staffs.

JS Neil "Brit Mins" (1907)
area: copper & lead.

In the Manifold Valley

OS 1" map shows "Beresford Dale" as part of
Dovedale just S of Hartington, just
under 2 mls from Eton.

SK15 117538

Glam

BINCLIFF MINE, ~~Wetton~~, Staffs.

See also HIGHFIELDS MINE

Farey (1811): S of Wetton, Staffs, in "4th Limestone". Lead.

OS 6" map. Lead mines. A number of shafts & adits shown.
Near HIGHFIELDS MINE q.v.

JS Neil "Brit Mins" (1907) Baryte; galena.

RSWB, TBB, JRK. 2/64 IV, 60. Adits (one ^{plam pbl} explored)
dumps. Baryte, cawke; calcite, dog-teeth;
a little galena

SP 0 9

BIRCH HILL, Walsall, Staffs.

TMH(1868), 68. Anthracite, in coal measures.

1" 110

SJ 855 542

BIRCHENWOOD BRICKWORKS Q'y, Kids Grove, Staffs.

See also BIRCHENWOOD COLL'Y

L. Burch (1998). RSN 33, 25-27. Shale quarry,
closed 1994, has 2 coal seams, sandstone,
ironstone seams & nodules.

Galena, cubes $\rightarrow$ 3mm in fractures in sandstone,
some w. gypsum crusts looking like cerussite.
Assoc w. Sphalerite, traces calcite with pyrite.

Sphalerite; black xls in sandstone & up to
4mm in 2 beds of ironstone above the sandstone
with galena; also $\rightarrow$ 3mm in a few ironstone
nodules.

Gypsum in ironstone nods, & on galena.

BIRCHENWOOD COLL'Y, KIDSGRAVE, STAFFS.

See also BIRCHENWOOD BRICKWORKS Q'y.

L. Burch (1928) RSN 33, 25-27. Coll'y 1837-1932

Galena in roof of coal seams, in a vein (4.5 cm thick) be as a nodule.

✓ A. Scott (1927) ["Notes on Min'y of N Staffs"] reports chalcopryte in the Seven Foot Benbury Coal.

BOTSTONE, Staffs.

86. — ??? ? ?

? Butterton (Ecton), ^{Bearston}
Breadston

R. Garner, "Nat. Hist. of Staffs", (1844), pp 238 ff: Copper pyrites —
iridescent var. of great beauty.

Iron Pyrites; in coal... Stalactitic, & in large masses
at Botstone, 1839.

Arsenical pyrites, Botstone.

BRADLEY, Cheadle, Staffs

~~Stratford?~~

SK 05 41
SK 06 41

TMH (1868), 68: NRS & Coal-measures: Sal-ammoniac. (!)

09 gazz Bradley, Staffs SJ 87 17
✓ NOT near Cheadle - SW of Stafford

1" 09 Bradley-in-the-Moors SK 060 415

Breaston SK 4533 ??

BREASTON HILL

Staffs.

See also BEARSTONE [=?] BOTSTONE [?]

JS Neil, "Brit. Mins" (1907).

Baryte; azurite.

G & L (1858), 65
p. 313.

Baryte well x-lised, at Breaston Hill, Staffs.
Azurite Breaston, Staffs.

(R. King suggests this loc = Beeston Hill [Ches] - ??)
[NB Beeston Tor, nr Highfield mines, in
Manifold Valley [qv]]

BROMFORD

Staffs.

JS Neil "Brk. Mins." (1907).

Rutile [!]

SK 05 . 0756

BUTTERTON, Staffs

J.S. Neil "Brit Mins" (1907)

Copper & Lead.

CALDON LOW, Waterhouses, Staffs.

See also CALDONLOW QUARRIES; COUNCIL QUARRY.

J.S. Neil, "Bak Mins;" (1907)

Bitumen

SK04 07x 48y
CALDON LOW QUARRIES, Waterhouses, Staffs.

Giant quarries on Caldon Low.

See also CALDON LOW; COUNCIL QUARRY.

RSWB 14/1/62. Acc'g to workman: Blasted back $\frac{1}{4}$ mile since
he's been there - no Cu, some lead.

" 119, 120 SJ 91 SK 01
CANNOCK CHASE, Staffs.

Coalfield with ironstone

Staffordshire RSN(1994) 224

(July, '93). Mine workings dating back to medieval times have been discovered by archaeologists surveying **Cannock Chase**. The coal and ironstone workings, discovered in the Beaudesert area, are thought to be very rare and among some of the finest examples found anywhere in the country.

Staffs. C.C. planning and economic development department archaeologists identified the workings earlier this year. More than 700 different workings ranging from shallow pits to the remains of shafts and coal seams have been discovered. They demonstrate the historical development of mining techniques. The need for protection from forestry operations has been recognised. The considerable archaeological significance of the site means that they should be preserved because of their recreational value as a natural museum.

~~CHARTLEY MINE, Draycott, Staffs~~

See DRAYCOTT-in-the-CLAY

1" 110

SJ 884 534

CHATTERLEY WHITFIELD Coll'y, Tunstall, Staffs.

- L. Burch (1998) RSN 33, 25-27. A. Scott (1927)
["Notes on the min'y of N Staffs", N Staffs Field Club
Trans & Ann Rept 61, 89-90] reports chalcopyrite
in the Cockshead Coal.

CLINT HILLS,

Staffs.

50 93 80

50 9 7
9 8

JS Neil, "Brit Mins" (1907)

prehnite; chlorite; calcite; Felspar; quartz; jasper;
baryte; pyrite.

COUNCIL QUARRY, Caldon Low, Waterhouses, Staffs

RSWB 14/1/62. Loc 254. Just S of Caldonlow Quarries
(q.v.). Haematitic calcite; Pink haematitic
stalagmitic calcite, & stalagmites in cleft
in SW corner, not far from road.

COW-CLOSE, or ASHOLME MINE, Warslow, Staffs.

Farey (1811): In Shale & "Shale Limestone"; lead; ore in shale.

DALE END MINE LEVEL, Warslow, Staffs.
[=DALE MINE ?] [=DALE MINE LEVEL, at 09455845?]

Photo of Dale End Mine level, Ecton, in PDMHS coll.

DALE MINE, ~~Ecton~~ Warslow, Staffs. SK05 ~~093587~~
0925588g
See ~~at~~ DALE END MINE LEVEL Level 0945584g.

SRMRGB XXVI "Pb/Zn" () p82.

PLAN in RSWB coll

RSWB 8/5/60. See Field report, p67 Calcite; quartz.

OS 6" map: Lead mine.

Farey (1811): In Shale & Shale limestone: Much lead, ore in shale, some copper.

N Kirkham "Ecton Mines" Map. shows level "Dale Mine Level" at
0945584g beside road bridge.

Another level shown at 09705871.

Descrip, p16-17.

Mem GSN Derks (1887) 152. Plentiful ore, from a pipe

running a little W of N, & dipping this way ca 25° .
Outcropped ca 16 fms S of the FOOTWAY SHAFT,
(near a tributary stream of the Manifold). Pipe
at 42 fms @ No 1 ~~shaft~~ ENGINE SH; 104 fms @ NEW SH.
An adit entered No 1 SH @ 32 fms.
Galena nearly solid in pipe, closed ca 1873.

DRAYCOTT-in-the-CLAY, Staffs.

See also FAULD; TUTBURY

SRMRGB III (1918) 32 Draycott mine, at
 D-in-the-clay, $1\frac{1}{4}$ ml S of Sudbury Stn (Derbs).
 8ft seam of gypsum. Strata as in the
 Fauld mines [qv] nearby. Anhydrite is
 abundant, generally along bottom or
 middle of seam.

TT Wynne Trans Inst Min Eng (1907) 32 171-192.

Descrip. ~~near~~ Chartley mine near the
 present salt wells near the station [? 1630]

1" 130

50 99

DUDLEY, "Woods" Staffs

See also DUDLEY CASTLE MINE, Staffs., DUDLEY PORT, Staffs.

TMM (1868), 70. In Coal-measures. Calcite; coal.

lⁿ 130

50

946910

DUDLEY CASTLE MINE, Staffs, [nr DUDLEY, Worcs.]

Brit Caving? Is at 946910.

50 96 91

1" 130
DUDLEY PORT, Staffs.

BM: vg clear yellow barite.

? From digging of canal

ECTON

Staffs

See under WETTON

ELKSTONE, Warslaw & Elkstones, Staffs.

J S Neil "Brit Mins" (1907) - Copper & Lead.

[NB see NEW YORK; RILIDGE; & HILL HOUSE MINES]

SK 00 16?
FAIR OAK COLLIERY, Cannock, Staffs.

SRMRGB XXX "Cu..." (1925) p.21: galena; malachite.

.... "Oxidised copper ore", & galena

Fairoak Lodge SK 0016

FAULD, Staffs (Hambury)
See also DRAYCOTT; TUTBURY.

TMH (1868), 68. Alabaster

H. Conke Riv Comm 8/69 Working gypsum mine,
visited. Seam of gypsum (massive) and one
of blue anhydrite (massive).

SRMRGB (III) (1918). 30. ^{2 Mines} ① 2 ml SW of Tutbury Stn.
Nearly horizontal seam of granular gypsum, seen at
outcrops as mass of 'marl filled' with
fibrous veins. Small amt. of anhydrite
found, usually towards middle of the
seam. Fibrous gyps in roof, floor "and
in bad places".

Mine (2) $2\frac{3}{4}$ ml SW of Tutbury Stn, & $\frac{1}{4}$ ml NW of
Hanbury Church. Seam a continuation
of that in the other mine, but anhydrite
more abundant here.

T.T. Wynne, Trans Inst Min Eng (1907) 32 171-192 "Gyps
& its occur. in the Dove Valley".

Full descrip with photos etc. of the
two mines (& others). Also gyps. on
the small hills near Castle Hayes
[i.e. vague area ca 1 ml SE-SSE of Fould]
& at Chartley mine near present salt
wells near the station [? Sudbury Stn, SK16 30]
Gyps in Dove valley from Marchington [1330]
to Tutbury [2128]

FAWNSFIELD, Staffs.

SK 0763?

?

R. Garner, "Nat. Hist of Staffs" (1844) pp 238ff: Galena, in
coal measures.

? Fawfieldhead, SK 0763 (nr Longnor)

1" 110
FENTON ~~PARK~~ Staffs SJ 89 44

Fenton, Staffs = SJ 8944

R. Garner: "Nat. Hist. of Staffs." (1844), pp 238ff: Native copper
in a fault at "Fenton Park."

J. S. Neil "Brit. Mins" (1907)
at "FENTON PARK"

Native copper; pyrite.

L. Burch (1998) RSN 33, 25-27. "A fine group of
sphalerite Hs coll. from FENTON COLL'y
some 40-50 yrs ago is believed to be in a
private collection."

FROG-HALL, A Staffs.

P. Smith (2/61): Copper mines. "Near Mow Cop" (See sep. card).

P. Smith (7/61): "Not very near Mow Cop. — between There and Eton — somewhere SE of Leek"
In some old mineral returns for Eton, includes "Froghall, Staffs" — so many tons of galena & copper pyrites.

OS 2½" map SK 04 shows "Brass & Copper works" at Froghall — termination of "track of old railway" from Caldon low — Ribden area (& possibly Eton). Many coal shafts between

Froghall (which is at 0248) and Ipstones, $1\frac{1}{2}$ m to the N, at 0250. A short distance NW of Froghall are "Ironstone Mine Levels" at 018480.

The Edon returns may be referring to treatment of the ore, rather than to its mining.

1" III 115570 SK15
GATCHAM GRANGE, Alstonefield, Staffs.
= GATEHAM GRANGE

SRMRGB IX "Fe..." (1919), p25: "Geol Survey 81 SE map of 1867 shows an ironstone lode at Gatcham Grange, $2\frac{1}{4}$ miles SSW of Hartington" (Derbs).

OS6" map: Gateham Grange at SK15 1155695. No workings shown. Nearest are "Old Shafts" on Welton Hill, ca. $\frac{1}{4}$ m to the S, at 113563

Farey (1811) p442-3: Quartz xls, in reddish soil, on 4th Lime, at Gateham, W (Welton Pasture) Staffs

SJ 85 53

GOLDEN HILL,

Staffs.

(= Goldenhill, in Stoke-on-Trent Boro'?). 85 53

R. Garner, "Nat Hist of Staffs" (1844), pp 238 ff: galena in coal
measures, also blende.

Fawfieldhead SK05 089599

HAYS BROOK MINE, ~~or Ecton~~, Staffs.

SRMRGB XXVI "Pb/Zn" (1926) p 82: Sunk through Yoredale Shales to top of limestone. Lead ore in shale.

Mem GSN Derby (1887) 152. (Same as SRMRGB, v supra)

Facey (1811): "Haybrook-gate, in Warslow, Staffs, in shale & shale limestone; lead; ore in shale.

GS Old Series 1" map (1852) shows HAYS BROOK MINE at above map ref.

RSLOB 21/5/61 Line of old shafts visible by road.

14/10/62 Vol II p. 151 Shale matrix. Baryte (some clear plates); calcite; blende some with "calamine" coatings; some chalcopryite; a little galena; no Cu secondaries seen; some powdery yellow-brown stannite. (P)

jarosite (IR)

SK 15 119 536

HIGHFIELDS MINE, Ilam, Staffs.

See also BINCLIFF MINE.

OS 6" map: Near BINCLIFF MINE (q) Map shows numerous shafts & adits. Lead mine.

GS Old Series 1" map (1852) Shows as HIGH FIELD MINE

RSWB, TBG, JRK, 2/64. IV, 59. Old, rather barren, rather grassed-over dumps, shafts. One large open shaft. Large adit at 116534 near river level, with ^{rather} barren dump.

Calcite; baryte, galena, haematite stains, traces chalcopyrite; gypsum needles on shale.

HIGHMOOR MINE, Onecote, Staffs.

See also MIXON etc.

JARkey & L Porter, Bull PDMHS 1970 4 [4] 256-280

p272: At N edge of l'st/shale boundary. Now only a large isolated mound on opp. side of R. Hamps to Royledge Fm., w. a small overgrown adit entrance ca 12 in wide & a l'st lintel, at base of mound, discharging water into river. Hillock contains l'st indicating that adit reached l'st. Another isolated dump ? on same adit 200 yds SW nr Highmoor Fm. No documentary or printed refs to confirm naming of this mine & nothing known of its history.

HILL HOUSE MINE, Warslow, Staffs.

See also MIXON etc.

SKMRGB xxx "Cu..." (1925), p. 27: Copper mine in same inlier as Mixon.

Facey (1811): "Hill-house, Mixon, Staffs, in shale limestone, copper."

Mem G S N Derbs (1887) 158 Cu mine, ~~same~~
~~character as~~ Mixon ~~but less deep.~~
[~~in sulphide & carbonate of Cu, some galena~~]

JA Rokeby & L Porter (1970) Bull PDMHS 4 [4] 256-280 p 273-4
At SK 054 586. ~~But~~ Now seen only as collapsed
adit discharging much water, above a
pronounced hillock of l'st & shale. Disturbed
ground seen due W of mine, by roadside -

[? malachite]

calcite & green copper ores found here in
1924 by J.C. Ferguson. Only historical data
that of Farney (1811).

1" III

LEVEL: SK 0970 5872

HOLLY BANK MINE, Watslow, Staffs.

See also ECTON MINES, DALE MINE

Level to N, at 0970 5872

SJ 97 12

HUNTINGTON COLLIERY, Cannock Chase, Staffs.

SRMRGB xxx "Cu..." (1925), pp 5, 21: Copper ore in pebble beds in colliery,
also lead ores (p 21).

"KIDCREW," "Staffs"

R. Garner, "Nat Hist of Staffs" (1844), pp 238 ff: Galena in coal measures.

Andy Lawton Priv Comm 12/93. "Kidcrew" is old potteries dialect for KIDSGROVE, (CHESHIRE, SJ 8354, qv.)

SK 1209

LICHFIELD, Staffs

See also MINSTER POOL

W. Phillips "Intro to Min" (1819), 18 Nodules of agate in a decomp.
slate occur in the gravel nr. Lichfield.

1" 110

(cont on SJ 91 43

LONGTON, Staffs.

L. Burch (1998) RSN 33, 25-27. The Deep Mine
and Pennystone Ironstones in the
Longton area reported to contain
xls of sphalerite & chalcopyrite
(Gibson (1905) Mem GS "gal of N. Staffs coalfield")

" 110

SJ 78 45?

~~MADELEY~~ MADELEY Coll'y, Madeley, Staffs

NOT = MADELEY, Shrops (SJ 6904).

L. Burch (1998) RSN 33 25-27. A. Scott (1927)

["Notes on the Mineralogy of N. Staffs" N. Staffs Field
Club, Trans & Ann Rept 61, 89-90] reports
chalcocynite in a thick calcite vein
in the Bullhurst Coal.

MAER, Staffs.

$6\frac{1}{2}$ m SW of Newcastle-under-Lyne
(Not far from Macclesstone - see sep card).

R. Garner "Nat. Hist. of Staffs" (1844), pp 238 ff: green
carbonate of copper (ie malachite), combined with
sandstone.

1" 120

SK 1331

MARCHINGTON, Staffs

See also FAULD etc.

TT Wynne (1907) Gypsum

SK 11 09

MINSTER POOL, Lichfield, Staffs

See also LICHFIELD

R. Garner: Nat. Hist of Staffs (1844) pp 238 ff: "Phosphate of iron"
(vivianite?) in the mud of the Minster Pool, Lichfield,
Dr. Wright.

MIXON, Staffs. Onecote, (I)

Copper Mine.

See also RILIDGE, NEW YORK, HILL HOUSE, HIGHMOOR, STRAGDALE
SRMRGB XXX "Cu..." (1925) p. 27. In Carb. lim. inlier NEW MIXON HAY.

RSWB 8/5/60. See Field report, p. 67, Loc. 223: Chalcopyrite; fluorite;
calcite var. nailhead spar. Purple floor assoc. w. sticky black hydrocarbons;
pitch; galena; blende; ? smithsonite; & malachite ? etc? assoc. w.
limonite. Brochantite, green xls; serpierite (Zn-poor), blue blades;
non-fluorescent zinc carbonate, white needles

L. Garner "The Nat. Hist. of the County of Staffs" (1844) pp 238ff: Calcite "in
 three sided pyramids, shortened with three upper faces, the
 sides somewhat convex." Witherite ("carbonate of barytes"),
Cerussite ("carbonate of Pb"); blende "abundant",

Farey (1811): In Shale Limestone, Copper, lead.

J S Neil "But Mins" (1907) "Mixer", Staffs: chert; galena;
chalcopyrite; blende; calcite.

TMH (1868), 68. "Mixon". (Cu). Blende; chalcopyrite.

P. Thomson 4/68 Rib Comm. Celestite

Mem. GS N. Deeks (1887) 158. Abandoned 1858.
Workings started in Y. Shale, carried down
into l'st, to over 100 fms. Ore was "sulphide
and carbonate of copper", some galena.
The large pumping engine taken to RIBDEN M.

MIXON, Onecote, Staffs (II)

JA Robey & L. Porter, Bull PDMHS 1970 4 [4] 256-280
Historical & mining details. Maps, section.
Nothing known of isolated shaft mound
[near 036579] or of level to E from
near New Mixon Hay [qv]

Mixon mine. Ore mostly in l'stone, in
veins and saddles. N veins richer in Cu ore,
S veins in ~~the~~ galena. Main vein - the lumb
or lumb - 4-5 yds wide with chalcopryte
galena, blende (Gamer 1844) with ore in
rich bunches. Also saddles, axes N-S, &

5 ft "counter lode" with fluorite^{spar}, [clay] prism, shale,
carbonate of lime, [pyrite] mundic, & copper (with some
traces of lead) (? = serpentine)

Chalcopyrite. FeS (1964) report aurichalcite
Strahan (G. Surv. 1887) recorded carbonate of copper.
Also galena; witherite cerussite, blende, calcite
"with particles of metallic matter ~~therein~~ within".
The 1829 agent reported spar sulphur [pyrite]
& brown hen [limonite]. The 1853 prospectus
reports mixed oxides & sulphurets the latter predomin.
in depth.

1st ref. to in 1730. ~~Not before known~~
Last worked 1853-1858 as "MIXON GREAT CONSOLS
COPPER MINE."

MIXON, Onecote, Staffs. (III)

Stuart Davis, Bull PDMHS (1973) 5 [3] 159-160

"Mixon mine-level in South Shaft".

Little sign of mineral veins: a few pieces of
one with both copper & lead sulphides were
picked up.

110
MOW COP Staffs-Ches. border.

Staff VI SS/8557

3 m SSW of Congleton, Ches.

Garner; Nat Hist of Staffs. (1844) pp 238 ff: Barytes abundant at
Mow Cop. Blende, "at Mow Cop, & other coal measures".

GS 6" map 6 NE Staffs shows baryte at one place. Lots of
shafts & levels.

M/c Mus. Pink massive baryte

L. Burch (1998) RSN 33, 25-27. Heavily veined
with baryte, worked commercially from a
shaft. Coarse, closely intergrown pink platy

K

SJ

72 37

MUCKLESTONE, Staffs.

B. Gazz: Mucklestone, (called Muxon), $4\frac{1}{2}$ m NE of Market Drayton
(Not far from Maer - see sep. card).

R. Garner "Nat. Hist of Staffs" (1844) pp ~~237~~ 238 ff: Green
carbonate of copper (i.e. malachite), combined with
sandstone; "Mucklestone".

SK15 1" ^{III} 124575

NARROW DALE, Alstonfield, Staffs

SRMRGB IX "Fe..." (1919) p25: "Geol Survey 81 SE map of 1867 shows ironstone ~~mine~~ lode at Narrow Dale, 1 3/4 miles S of Hartington, Derbs.

OS 6" map: "Narrowdale" at SK15 124575 below Narrowdale Hill.
No sign of workings on map.

1" III

SK 029 573

NEW MIXON HAY Onecote, Staffs

See also MIXON, etc!

OS 6" map shows "Old Level" on E side of
stream at 029 573 below New Mixon Hay

JARobey & L Porter, Bull PDMHS 1970 4 [F] 256-280

Open level from stream nr New Mixon Hay
driven ca due E in l'st for ca 500ft. No vein,
abandoned. Heading for Mixon mine but
80 ft higher! Ca 900 yds to NE is
an isolated shaft mound [ie near 036 579]
Nothing known of these workings.

NEW YORK MINE, Warstow, Staffs. SK 05 048 591
See also NIXON etc.

SRMRGB XXX "Cu..." (1925) p. 27. Copper mine in same inlier as Nixon.

Mem GSN Derbs (1887) 158 Cu mine, same character
as Nixon, but less deep. [ie sulphide &
carbonate of Cu, some galena]

J A Roper & L Porter (1970) Bull PDMHS 4 [4] 256-280 p. 273:
At SK 048 591. To S of ROYLEDGE [See RILIDGE]
& more extensive - tips over wider area. Mound
with adit at base close to E bank of R. Hamps.
Adit with lintel & much water flow; ~~access~~
access prevented by complete filling w. silt &
water. In hillock, shale, calcite, malachite

Dumps, sh's etc. to E of New York Fm & to NE
of Court House, with Cu minerals.
Earliest mention Foxey (1811). Also mentioned
1850, 1853, 1857 as being tried.

OAK FARM BLAST FURNACES, ? 50 90 90
Staffs.

G. Mus. Cat. "Cyanonitride of titanium" [artefact]
[=osbornite]
Stoke or Birm area? Camrock?

OS 1" 130, 131 Show "Oakfarm" at 50 900 902,
with "Works" at 905 907; ~ 3 ml W of
Dudley.

SK15 105535

OLD PARK HILL, Waterhouses, Staffs.

Farey (1811) p 402-3 Haematite for polishing $1\frac{1}{4}$ m ESE
of Grindon, in Staffs [ie Oldpark Hill]

PONCK HILL, Staffs.

(PROBABLY = POWK HILL, 1 m W of Walsall. See sep card) 50 99-99

Tooke, "Mineral Topography of Gt. Brit" (¹⁸³⁶~~1834~~), p. 50. Crystallised prehnite
with mesotype, in barite. "Ponck Hill, Staffs"

T.M. Hall, "Mineralogists Directory" (1868), p. 68. By a basaltic dyke:
barite; mesolite; prehnite. "Ponck Hill, Staffs"

Greg & Lettsom (1848) p 196. Prehnite by basaltic dyke at "Ponck
Hill" Staffs. with mesolite, barite.

POUK HILL

Staffs.

see sep card

1 mile W of Walsall. Is probably the "PONCK HILL STAFFS"
 of Tooke (), Hall (1868); Grege & Keltson (1848). Loc for Prehnite; baryte; mesolite.
Geol Survey 1" map 154: Small intrusive sill here.

6" OS maps: SO 99 NE. Shows brickworks & coal shafts on Pouk Hill.
 Staffs 63

J.S. Neil "British Minerals" (1907). "Pouk Hill, Staffs." Pyrite;
augite; prehnite.

Geol of Lichfield (GS) (1919) pp 198-200 W.Gibson. Descrip of Pouk
 Hill Quarry for igneous road metal. Petrological.

PTO.

W. Phillips "Intro. to Min." (1819), 36. "nr the surface of the basalt fault on
Pouck Hill, in Staffs, prehnite in distinct concretions imbedded
in baryte, & more rarely attached to mesotype.

RSWB. 13/7/62. Vol II, p. 81. Quarry in brown dolerite, black when
fresh. Some veining, with chalcedony & massive
white baryte. Some pinkish-red ? laumontite &
calcite. In vesicles, which are small, zeolites,
including chunky clear xls enalcite & acicular ~~mesotype~~.
?natrolite or mebolite

SK04 001493.

PRICE'S CAVE, Ipstones, Staffs.

RED STREET COLLIERY, Newcastle-under-Lyme, Staffs.

B.R. Young, Summ Prog. Geol Surv Gt Br for 1963, p79:

"Gorceixite" (Ba detected spectrographically) in a
~~basal~~ mudstone [Error for crandallite, v. infra.]

AA Wilson, GA Sergeant, BR Young, & RK Harrison, Proc

Yorks Geol Soc 35 part 3 No 17, pp 421-427 "The
Rowhurst tonstein, North Staffordshire, and the
occurrence of crandallite" . At Red Street
Coll'y, nr. Kidsgrove. The Rowhurst tonstein

a dark mudstone occurring in a split of the
Rowhurst coal, at SJ 8308 5143 consists
largely of pale brown pelly crypto-micro-x line
crandallite, with kaolinite, carbonaceous material,
minor apatite, pyrite, quartz, illite, zircon,
dolomite etc. Crand. orig ident (BR Young)
as goceixite, on spectrograph. detec. of Ba. Now
x-ray powder etc. → goyazite^{group}, nr. crandallite.
1st British loc.

SK 04

077473

RIBDEN CLAY WORKS, Wardlow, Staffs.

OS 6" map: Has "Old Shaft" by it, probably connected with
RIBDEN COPPER MINE (see Sep. card).

RSWB 14/1/62 Clay pit, with rounded pebbles. In
Limestone Quarry on W side of road, Loc 256.
Haematitic dog-tooth calcite & haematite,
some in large rounded lumps.

RIBDEN MINE, Cotton Staffs. SK04 075477
56" map: "COPPER MINE"

Near Clay Works, S of Coudon Low Quarries, Staffs 6" 14 SW? 1" (III) 075477?
SRMRGB XXX "Cu_{III}" (1925) p. 27: galena & copper ore.

Farey (1811): 9" 4th limestone. Lead, copper?

RSWB, 14/1/62. Loc 255. Good malachite xls in small loose bunches in fine red soil on grassed-over dumps. Haematitic.

Mem GSNDetbs (1887) 158. The large pumping engine from Nixon was brought to Ribden Mine. Accord. to Mr. W. Bowman, was worked a few years only, for galena & copper-ore.

RILIDGE MINE, Warslow, Staffs. SK ~~045~~ ~~594~~
047 593
See also MIXON, etc.

= "Royledge"? SK 05 045 594

SRMRGB XXX "Cu..." (1925), p. 27: Copper mine in same inlier as Mixon.

Farey (1811): "Riletch, NW. of Upper Elkstone, Staffs, in shale limestone, copper."

Mem GSN Derbs (1887) 158. Cu mine, same character as Mixon, but less deep [ie sulphide & carbonate of Cu, some galena]

JARobey & L Porter (1970) Bull PDMHS 4 [4] 256-280. p 272-273
At SK 047 593 = ROYLEGE, RILATCH, RILIDGE,
or RYLAGGE M. prob = the 2 sh's S of Royledge

Fm on 1889 OS map as "Old Copper Mine". No adit
known. Sh. & tip ca obliker. by ploughing.
Earliest mention = Fawcett (1841) - "Rilatch"
"Rylage Mining Co" sold Ca in 1841. Working 1850,
1853, 1855, 1857 - "Royledge copper & Lead Mine".

1" III

SK 1

5

ROBIN HOOD'S MINE, Ilam, Staffs.

According to Paul Foster Priv Comm 4/81,
"Robin Hood's mine", at a farm near
Ilam [Ilam: SK 1353], recently opened
up by cavers — has a ~ 350 ft
pipe (a 300 ft rope doesn't reach bottom)
sloping at $\sim 60^\circ$, with some
passages off.

The ROOKERY LEAD M., Kidsgrove, Staffs.
See also TRUBSHAW COLL'Y [?]

L. Burch (1998) RSN 33, 25-27. Dr Robert Plot
(1686) [Referred to in R. Hunt (1887) (Reprinted 1978)]
"A Historical sketch of British Mining" refers to
a working lead mine near The Rookery
[850 55₄], with calc [baryte] and
spar [calcite]. Burch has not found
the site, but baryte is abundant
in tips of old shallow coal workings
in the area.

RUSHTON SPENCER, Staffs.

SJ 9 6

S of Macclesfield. No indication of mines on 6" map.

Cu mins; analagous to Alderley Edge — "Zeke"
NB. NSR far from MOW col area. See sep. card.

SHIRLEYWICH, Staffs.

TMH(1868), 68. Rock-salt, in Keuper Marls

De Rance, Tr. M/C G. Soc. 1895 22 269-302 Refers
to rock salt [halite] in BH at Shirleywich,
Staffs [Not in OS Gazz.]

SHORE HILL, Cannock, Staffs.

? SJ 97 11

SRMRGB xxx "Cu..." (1925), p. 21. ca 1 mile N of Cannock: copper and
lead ores.

? = SHOAL HILL, SJ 97 11

1" 110

SJ 815 469

SILVERDALE COLL'Y, Newcastle-under-Lyme, Staffs

L. Burch (1996) RSN 33, 25-27. Sphalerite, ruby-red
x/s in a seat earth below Great Row seam; sphal
also on fracture surfaces in Burnwood Ironstone,
immed above Burnwood Coal.

Chalcopy, tetr. Hs $\rightarrow$ 3mm on white ankerite x/s
 $\rightarrow$ 5mm in fractures in grey sandstone nr. Great
Row seam.

Calcite, transp honey-brown Hs $\rightarrow$ 5mm in cavs
& fractures in Burnwood Ironstone.

Unident in cracks/cavs in Burnwood Ironstone; red
"semi-hemisphere" mostly $< 1\text{mm}$, surface with 11² ridges.
Ass. w. calcite & micro-black sphalerite Hs.

1" 119

Cent on.

SJ 92 23

STAFFORD,

Staffs

De Rance, Tr M/C G. Soc 1895, 22, 269-302. Refers
to rock salt [halite] in BH's at STAFFORD
COMMON [Not found on OS 1"] and at ENSON
MOOR [OS 1" 119 Enson Moor Farm, SJ 926 289]

57 84
STOKE-on-TRENT, Staffs.

See also more specific locs.

R. Garner: "Nat Hist of Staffs" (1844) pp 238 ff. Barytes, in sandstone occasionally spheroidal or earthy.

~~[NB Pentkott, in SW of Stoke. may = "Pondk Hill" of Tooke etc, though more probably = Cook Hill nr Walsall. ~~NOT~~]~~

See The Rookery M., Mow Cop.

STRAGDALE MINE, Warslow, Staffs.

See also MIXON, etc.

JARobey & L Porter (1970) Bull PDMHS 4 [4] 256-280. p 274:

In 1855 Mining Journal reported on STRAGDALE MINE - "A new trial, adjoining Mixon. An aditⁿ now being driven and it is said a lead lode may be intersected". Mr J. Wint of Manor Fm says that Stragdale Field is on E side of R Hamps directly opp. Mixon Mine; where a small area of disturbed ground can be seen. Nothing further known.
∴ Unsucc. trial

THAWSWOOD-DALE or THORNWOOD MINE, Stanton, Staffs.

OS 6" map: $\approx$ ~~the~~ "Old Shafts" in $\approx$ by THORSWOOD plantation, near Thorswood House, at 112 471?

Farey (1811): in "4th Limestone"; lead; calamine; lades.
 $\rightarrow$ prob. = smithsonite.

Workman at Caddonlow Quarries 14/1/61: "last man down Thorswood Mines Lead; zinc; no copper."

THOR'S CAVE, Welton, Staffs.

In Manifold Valley.

C. Porteus (1950) pp. 13, 84. Left high on the hillside. Bold entrance facing N. There are smaller caves close to; eg Fissure Cave, 30' to the S, explored 1920. Diggings in 1927, 1929 etc gave human & animal remains of up to Roman period.

1"110

ST 8_{~3}

5_{~3}?

TALK-O'-TH'HILL Colly

Staffs.

also CHATTERLEY WHITFIELD Colly, BIRCHENWOOD Colly.

L. Burch (1998) RSN 33, 25-27. A. Scott (1927)
["Notes on the min'y of N. Staffs" N. Staffs Field
Club Trans & Ann. Rep'ts 61, 89-90] reports
chalcopyrite in the ~~Cockshott~~ Coal
Seven Foot Banbury

? = Talke Pits 1"110 8252?

1" 110

SJ 857 553

TRUBSHAW COLL'y, Kids Grove, Staffs.

See also The ROOKERY M. [?=]

L. Burch (1978) 33 25-27. Ward (1842) "A History of the Borough of Stoke-on-Trent" reports that a lead vein traced in 1831 into vicinity of this coll'y; some "favourable specimens" found, but the speculator died & trial abund.

1" 120

SK 2129

TUTBURY, Burton-on-Trent, Staffs.

See also FAULD; DRAYCOTT

TMH(1868), 68. Alabaster, in Keuper Marls

UPPER FLEET GREEN, Fawfield head, Staffs.

R.J. King, Priv. Comm. (1960). Good, long xls of quartz, "looking like sphene" in sides of river banks; near upper Fleet green.

SK05 0858

WARSLOW, Staffs.

JS Neil "Brit Mins" (1907).

Copper; pyrites.

SK 08 51

WATERFALL, Waterhouses, Staffs

SRMRGB "30" (Cu) p27: A mine
between Waterfall and Grindon has
also given copper [ore].

OS 6" map. Only mine in this area is a
Staffs 14 series of "old shafts" centred on
SK 08205215, just N of Back-of-the-Brook, in
Waterhouses ph.

1" III

SK 0846, 0946.

WEAVER HILLS, Wardlow and Wootton, Staffs.
& RIBDEN, WOOTTON, THORSWOOD

GS Old Series 1" map shows mineral vein
NNE-SW in square 0946.

OS 6" & 2½" maps show "Old shafts"
in 0846 and 0946 in the vicinity
of this vein.

50 9 9

WEDNESBURY, Staffs.

TMH (1868), 68. Coal-measures. Haematite; chalcopryrite.

W. Phillips (1823). In interstices of clay-ironstone;
blende, galena, chalcopryrite, pyrite,
calcite

WIRE-MILL MINE, ALTON, Staffs.

See also ~~ALTON~~ of ~~WOOTON~~

Farey (1811): "Wire-Mill, Alveton Staffs" (nr Cheddle). in
"alluvial 'grit Rock'". Copper.

OS 6" map: No trace. "Alveton" seems to = "Alton" at 0742.

1" III

SK 10 45

WOOTTON nr Alton, Staffs

of WIRE-MILL MINE

(1991) Azurite and
malachite, patches in sandstone
from "Wootton near Alton, Staffs", One
spec seen at Warrington "Gem Fair" (10/1991)

WETTON, Staffs.

MINERAL SPECIES FROM ECTON HILL

June, 1994

The references given are the earliest found so far - BUT not thoroughly enough researched!

* Personally collected or identified from site, with first date.

ANGLESITE	Ecton Hill	A. Lawton's list, 1993
ARSENOPYRITE	Ecton	Critchley, 1979
AURICHALCITE	Bag mine	R. Starkey, 1981
	Clayton level	* 1962
	Dutchman's level	* 1960
	Goodhope mine	* 1961
	Gould/Hamnock	* 1970
	Lum, The	* 1962
	Salts level	* 1962
	Vivian's vein	* 1972
	Waterbank mine	* 1961
AZURITE	Ecton	Garner, 1844
	Bag mine	* 1961
	Deep Ecton shaft	* 1962
	Dutchman's level	* 1960
	Salts level	* 1962
	Waterbank mine	* 1961
BARYTE	Ecton	Hall, 1868
	Bag mine	* 1961 (also micro- material looking like wulfenite [q.v.l], 1975
	Birche's level	* 1963
	Clayton level	* 1962
	Waterbank mine	* 1961, Green and Strahan, 1887)
	Must be more widespread	
BITUMINOUS	Clayton level	* 1972
MATERIAL	Waterbank mine	* 1961
BORNITE	Ecton	Neil, 1907
BRAVOITE	Ecton Hill	A. Lawton's list, 1993
BROCHANTITE	Ecton Hill	A. Lawton's list, 1993. XRD
	Waterbank mine	BM(NH)
CALCITE	Ecton	Garner, 1844
	Bag mine	* 1961
	Birche's level	* 1963
	Clayton level	* 1962
	Dale mine	* 1960
	Deep Ecton level	* 1963
	Deep Ecton shaft	* 1962
	Dutchman's level	* 1960
	Goodhope mine	* 1961
	Gould/Hamnock	* 1970
	Lum, The	* 1962
	Salts level	* 1962
	Vivian's vein	* 1962

Ecton species 2

	Waterbank mine	* 1961
	Waterbank 80 fm level	* 1961
	Must be more widespread	
CELESTINE	Waterbank 80 fm level	* 1961
CERUSSITE	Ecton	Critchley, 1979
	Waterbank mine	BM(NH)
CHALCANTHITE	Ecton	Critchley, 1979
CHALCOCITE	Ecton	Critchley, 1979
	Deep Ecton shaft	* 1962
CHALCOPYRITE	Ecton	"Copper ore" Farey, 1811
	Clayton level	* 1962
	Dale mine	"Copper ore" Farey, 1811
	Deep Ecton level	* 1963
	Deep Ecton shaft	* 1962
	Dutchman's level	* 1960
	Salts level	* 1962
	Vivian's vein	* 1962
	Waterbank mine	* 1970
	Must be more widespread	
CHRYSOCOLLA	Deep Ecton shaft	* 1962
COPPER, NATIVE	Ecton	Garner, 1844
COVELLINE	Vivian's vein	* 1972
	Waterbank mine	* 1970
CUPRITE	Ecton	Garner, 1844
CYANOTRICHITE	Ecton Hill	A. Lawton's list, 1993. XRD
DEVILLINE	Ecton Hill	A. Lawton's list, 1993
DOLOMITE	Ecton	Critchley, 1979
	Vivian's vein	* 1972
FLUORITE	Ecton	Garner, 1844
	Bag mine	* 1961
	Clayton level	* 1962 c'less, pale yellow, traces purple
	Dutchman's level	* 1960 c'less, purple, pink
	Vivian's vein	* 1962 c'less
	Waterbank mine	* 1961 c'less, purple
	Waterbank 80 fm level	* 1962 c'less
	Must be more widespread	
GALENA	Ecton	"Lead ore" Farey, 1811
	Chadwick mine	Green and Strahan, 1887
	Clayton level	* 1972
	Dale mine	"Lead ore" Farey, 1811
	Quarry vein	Green and Strahan, 1887
	Salts level	* 1962
	Vivian's vein	* 1962
	Waterbank mine	* 1961; Green and Strahan, 1887
	Must be more widespread	
GOETHITE ("limonite")	Ecton	Critchley, 1979
	Dutchman's level	* 1960
	Must be more widespread	
GOLD	Ecton (?)	(Can't find the reference!!)
GREENOCKITE(?)	Vivian's vein	* 1962. Traces of bright yellow powdery; goes red when hot; could also be hawleyite or amorphous!

Ecton species 3

GYPSUM	Birche's level	* 1963
	Clayton level	* 1962
	Must be more widespread	
HAEMATITE	Waterbank 80 fm level	* 1961
	Must be more widespread	
HEMIMORPHITE	Clayton level	* 1962
HYDROZINCITE	Ecton	Ford & Sarjeant, 1964
	Clayton level	* 1962
	Salts level	* 1962
	Waterbank mine	* 1970
ILLITE	Ecton Hill	A. Lawton's list, 1993
LANGITE	Ecton Hill	A. Lawton's list, 1993. XRD
	(?) Waterbank mine	* 1969
LEADHILLITE	Ecton Hill	A. Lawton's list, 1993
LINARITE	Bag mine	* 1975
	Waterbank mine	* 1970
MALACHITE	Ecton	Neil, 1907
	Bag mine	* 1961
	Deep Ecton shaft	* 1962
	Dutchman's level	* 1960
	Salts level	* 1962
	Vivian's vein	* 1962
	Waterbank mine	* 1961
MARCASITE	Ecton Hill	A. Lawton's list, 1993
MILLERITE	"Clayton level"	(Waterbank 80 fm level)
		Starkey, 1983
MINIUM	Ecton Hill	A. Lawton's list, 1993
MORENOSITE	"Clayton level"	(Waterbank 80 fm level)
		Starkey, 1983
NAMUWITE	Waterbank mine	Rust in Livingstone et al, 1990
OTAVITE (Zincan)	Waterbank mine	Rust, Priv. Comm., 1993
POSNJAKITE	Ecton Hill	A. Lawton's list, 1993. XRD
	Waterbank mine	BM(NH)
PYRITE	Ecton	Neil, 1907
	Clayton level	* 1972
	Surely more widespread	
PYROLUSITE	Ecton ("Wad")	Critchley, 1979
QUARTZ	Ecton	Garner, 1844
	Dale mine	* 1960
RAMSBECKITE	Waterbank mine	Rust, 1992
ROSASITE	Clayton level	* 1962
	Vivian's vein	* 1962
	Waterbank mine	* 1961
SCHULENBERGITE	Ecton Hill	A. Lawton's list, 1993. XRD
	(?) Waterbank mine	R. Starkey, 1987
SERPIERITE	Bag mine	* 1975
	Clayton level	* 1972
	Waterbank mine	* 1969
SIDERITE	Ecton Hill	A. Lawton's list, 1993
SMITHSONITE	Ecton	Garner, 1844
	Bag mine	R. Starkey, 1981
	Clayton level	* 1962
	Dutchman's level	* 1960

Ecton species 4

	Vivian's vein	* 1962
	Waterbank mine	* 1961
SPANGOLITE	Ecton Hill	A. Lawton's list, 1993
	Waterbank mine	BM(NH)
SPHALERITE	Ecton	Garner, 1844
	Clayton level	* 1962
	Deep Ecton level	* 1963
	Dutchman's level	* 1960
	Vivian's vein	* 1962
	Waterbank mine	* 1961, Green & Strahan, 1887
STRONTIANITE(?)	Ecton Hill	A. Lawton's list, 1993
TALC	Ecton Hill	A. Lawton's list, 1993. XRD.
TENORITE	Ecton	Serjeant, 1957
"WAD"	Ecton Hill	A. Lawton's list, 1993
WULFENITE	Ecton Hill	A. Lawton's list, 1993. XRD
	(?) (Bag mine material*, coll 1975: thin, nearly colourless, bevelled micro-plates of octagonal outline: microchemically tested; could not detect molybdate (or tungstate), is probably baryte)	
	The Lum	Cooper, 1987, see Rothwell and Mason (1992)
	Waterbank mine	R. Starkey, 1985 (Private communication - but note Bag mine material); Rust (1985), ident XRD [BM(NH)], see Rothwell and Mason (1992)
ZARATITE	Ecton Hill	A. Lawton's list, 1993

ECTON species list. (1994)^{TO}

SK05 0957, 0958 | Welton SK15 1057, 1058

ECTON MINES, Staffs.

(I)

SK05 097582
VIVIAN'S V. HAMNOCK M., PLATT M.
CLAY M., QUARRY V., ECTON V.

See also. SALTS LEVEL; DEE ECTON LEVEL; CLAYTON LEVEL; DALE MINE; APE TOR
ADIT; BAG MINE; BOWLER MINE; BROAD ECTON MINE; DUTCHMAN'S LEVEL; CHADWICK
MINE; EAST ECTON MINE; ECTON ENGINE SH; ECTON SOUGH; FLY MINE; GOOD HOPE MINE;
GREGORY MINE; WHELY LEVEL; STONE QUARRY MINE; WATERBANK MINE.

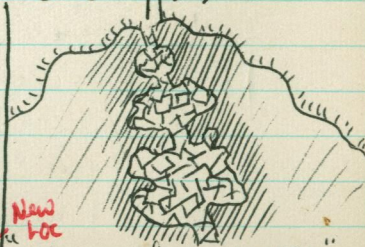
Rutley, 15th. Ed., p. 206, cuprite; p. 207, chalcopryite.

G.M. galena; barite; calcite; chalcopryite.

Mawe, J. "Mineralogy of Derbs", (1802). p. 109. Cu mines. (Diagram (!) facing p. 109)
"Is a stockwork. Probably v. early. Now worked to depth of 220 fathoms or 1320 ft
- one of deepest in Europe. Ore smelted at Cheadle (Staffs?) where
coals more plentiful."

RSWB, 8/5/60 See Field report p 68. loc 224 = Dutchman's Level.

Chalcopryite; blende; ? smithsonite; galena; fluorite (purple,
colourless & pink cubes) calcite (combin. nail-head + dog tooth)
malachite, azurite, barite, limonite, aurichalcite.



New loc
Diagram facing p. 109"

S.R.M.R.G.B. XXVI "Pb/Zn" (3); p. 82:

S.R.M.R.G.B. XXX "Cu..." (1925) ~~1925~~; p. 25:

Dunham Fluorspar (1952), p. 83: Fluorite.

Davies "Roman Mines in Europe" (1935) p. 159: Ecton cummer cannot be proved to have been opened before 17th Cent.

R. Garner "The Nat Hist of the County of Staffs" (1844) p. 238 ff. Fluorite, yellow & white; purple (1842). Ecton celebrated for its great masses of dog-tooth calcite some a yard or more across, containing chalcoppyrite. Calcite in large six-sided prisms. Smithsonite; azurite; "protoxide of copper"; quartz; native copper (Mr Attwood); iridescent var of chalcoppyrite of great beauty; blende "abundant". pp 512 ff. Ecton mine remarkable for depth - > 1500 ft & for

ECTONS, Staffs (II)

extent of excavations. Is a pipe mine. Bottom of mine "a gloomy excavation of great extent and very considerable height — 50-60' high.

Farey (1811): Ecton Pipe, nr. Warslow, Staffs, in "Shale Limestone" & perhaps "1st Lime". Copper; lead; slickensides; a shaft 440 yards deep!!; A railway tunnel into the hill & a water sough through it.

J S Neil "Brit Mins" (1907) chert; fluor; azurite;
copper; pyrites; erubescite; malachite; baryte;
galena; calcite; quartz.

Ref?

"Gold"

Bull PDMHS 1[3], 2, (1960). Preservation work.

RSWB, 4/61. ^{New Loc.} Celestite. See Waterbank Shaft.

N Kirkham "Ecton Mines" (1961) Has map. (see Plans File) Described.

TMH (1868), 68. (Cu, Pb). Baryte; blende; calcite; cuprite;
fluorite; galena; chalcopryrite.

GeL (1858), 308. Cuprite, lately, at Ecton

TDF & WASS, PDMI (1964). Native copper, in small quantities (no ref.)
Cuprite (WASS, (1956) J. Univ Sheff Geol Soc 2, No 4 pp 114-121.
Tenorite (CuO) (WASS (1957), ibid, No 5 pp 172-179). Hydrozincite

RSWB II 156-157 (14/10/62) III, 89-90 (26/5/63) Top of hill. Azurite, malachite,
calcite, aurichalcite,
chrysocolla, chalcopryrite, chalcocite.

ECTON
MINES (III)

(e) Salts
Level

(d) Deep Ecton
House

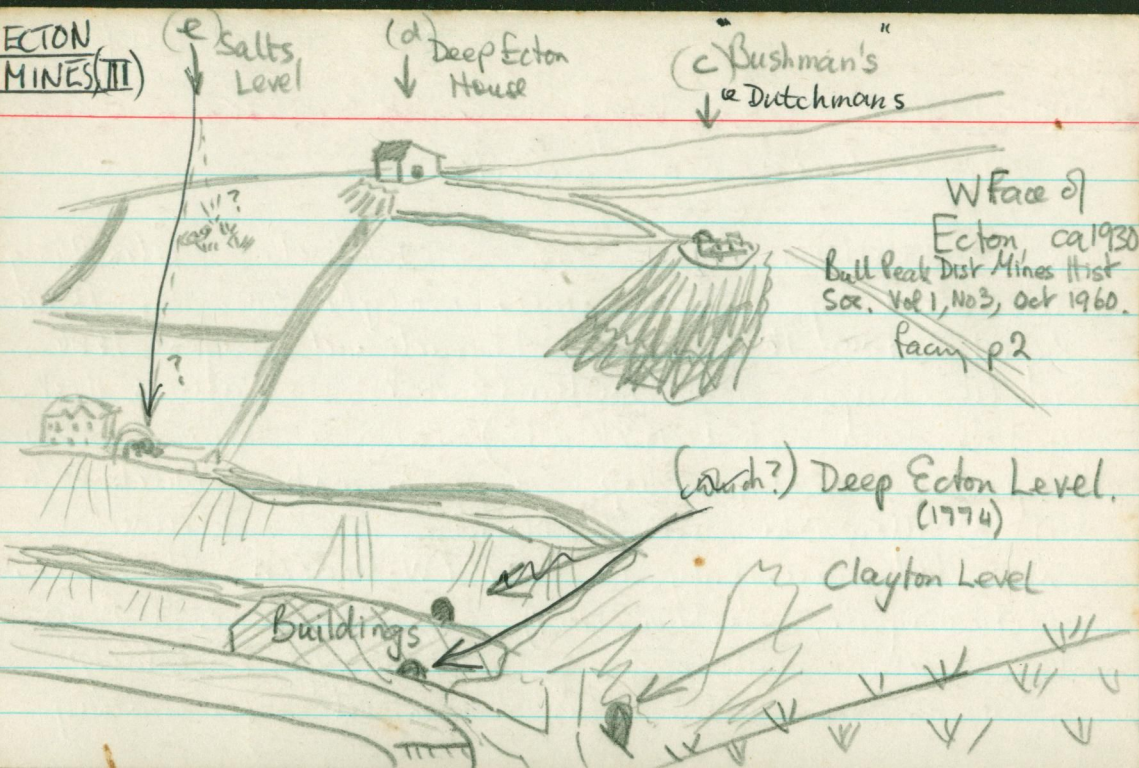
(c) Bushman's
Dutchman's

W Face of
Ecton, ca 1930
Bull Peak Dist Mines Hist
Soc. Vol 1, No 3, Oct 1960.
p 2

(arch?) Deep Ecton Level.
(1774)

Clayton Level

Buildings



Gould 04/65 \$783 | Ecton(III)

RSWB, PT (1/70) V 153. Dumps near SK 096578: (Gould + Hamrook)
Turichalate in calcrete

Mem GSN Detkes (1887) p156-158. Described. Blasting introduced by German miners brought over by Prince Rupert between 1636 & 1645. Abandoned before 1686 as Cu cheaper from Sweden (R. Plot, "The Natural Hist. of Staffordshire" Oxford 1686, p165) Plot also says:- veins all dip NE, 8-50 yds deep, ones of 3 sorts ① Black (the best) ② Yellow (the worst) ③ Mixed. Drained & re-worked successfully ca 1707 (W. Hooson, "The Miners Dictionary, etc", Wrexham, 1747). Rediscovered in 1739 by a Cornish miner who picked up a lump of ore on the hill. - Then worked for many

ECTON MINES, Ecton, Welton, Staffs (TV)

years, esp. vigorously in 1779-1780, $\therefore$ of demand for sheathing bottoms of ships of war. The Cu does not run in regular veins, but strikes perpendicularly down widening downwards like a bell - (W Bray "Sketch of a Tour into Derby & Yorks" 2nd ed. Lond (1783), p 147).

W. Efford
"Gentleman's Mag" vol. xxxix (1769) p 59: Entered by a straight, ca 400 yds adit, to vast hollow at least 250 yds high (up the sides of which a passage to hill summit & down to 160 yds below the level.

Declined by 1802 (see Maawe)
p 112

Farey (1811) p 352, 354 says the bulk Cu nearly exhausted but branch veins etc still produce Lead & Cu ore.

W. Bowman, present manager, says working ceased. Existing Ecton Company started work in 1883, pumped water out, and are mining some Cu & Zn ore ~~top~~ Galena in higher levels, of the veins, Cu ores in lower. Veins cannot be traced below river level as a rule, but pipes deeper - deepest now 150 fm below river (225 fm below Clayton Sh., on Summit). Some pipes lined, instead of filled, with Cu ore - usually large xls calcite sprinkled with chalcopyrite xls sometimes overlain by more calcite.

ECTON MINES, Ecton, Welton, Staffs. (V)

Sometimes needles of Cupyr. in bands in caliche.
Fluorite, baryte also. Cupyr e blende intim.
mixed in some of the pipes.

Mr R. Taylor, quoted by J A Phillips "A Treatise on Ore
Deposits" () p 194 - gives yields 1760-1768; 1776-1817.
Massive yellow ore, sometimes vitreous e black.
Oxides e carbonates also. It is said the
main pipes completely filled w. Cu ore, so
clean as to require no washing.

1 A Robey & L Porter (1972) "The Copper & Lead mines
of Ecton Hill, Staffordshire" (Pub. Moorland
Publishing Co & PDMHS.)

M.F. Critchley (1979) "A geological outline of The Ecton
Copper mines, Staffordshire". Bull. PDMHS 7 [4] 177-191
geology in some detail. Mineralisation. Plans of
Ecton mine (Salts Level); Clayton M., Bag M., Goodhope M.,
Waterbank M., with Dutchmans Level & Ecton
Deep Adit. "Recorded minerals: chalcopryite,
chalcocite, bornite, galena, sphalerite, calcite,
baryte, fluorite, malachite, azurite, cuprite,
tenorite, rosasite, chalconthite [sic], pyrite, arsenopyrite,
limonite, wad, dolomite, cerussite, hydrozincite,
celestine, smithsonite. Refer to WASSarjeant (1956) "The
mineralogy of Ecton Hill" J. Univ Sheffield Geol Soc 2 [3] 87-92

ECTON MINES, Welton, Staffs (VI)

RSWB (1983) Min Rec 14 [1] 15-24 "Min's of
the Derby Orefield". Minerals listed: Copper;
tenorite, chalcopyrite, arsenopyrite, fluoide,
hydrozincite, annichalcite, celestine,
linarite, serpierite, chrysocolla.

E Masheder & AH Rankin (1988) MM 52 47382 "Fluid
inclusion studies on the Ecton Hill copper
deposits, north Staffordshire".

Low T, high salinity brines rich in Ca, K.
Basinal brines prob derived from Cheshire basin,
bearing Cu. [Ca Na K Cl]. Sl. lower T than rest of

Derks one field. See Atkinson et al (1982)
Bull B.R.G.M. Section II No 2, 149-56

Hitkenhead N et al (1985) "geol of the country
around Buxton, Leek & Bakewell" Mem BGS.

Astrop R (1987) B.Sc Thesis, Mining geol. Imperial
Coll, Univ. of London

~~Kitching~~ Allen PM (1982) "Cu mineralisation in Gt Brit",
In Special Publ UNESCO-IGCP Projects 169 and 63,
No. 1 (Jankovic S & Sillitoe RH eds) SGA-Dept. Econ.
Geol., Belgrade Joint Publ. 266-76

ECTON MINES, Wetton, Staffs (VII)

Andy Lawton, Priv. Comm. (23/12/93)

Primary minerals: arsenopyrite; bornite (2Y? _{enrich});
bravovite; chalcopryite (XRD, BM); galena;
marcasite; millerite, pyrite (XRD, BM);
sphalerite; fluorite (XRD, BM); calcite
(XRD, BM); dolomite (XRD, BM); siderite;
(?) strontianite; baryte (XRD, BM); celestine;
illite; quartz (XRD, BM); talc (XRD, BM);
"bitumen".

Sec'y minerals: Chalcocite (2Y-enrich't?);
azurite; goethite (XRD, BM); "limonite"; "wad";

haematite (XRD, BM); minium; tenorite;
aurichalcite (XRD, BM); azurite (XRD, BM);
cerussite (XRD, BM); hydrozincite (XRD, BM);
malachite (XRD, BM); rosasite (XRD, BM);
smithsonite; zaratite; anglesite;
brochantite (XRD, BM); chalcantite;
cyanotrichite (XRD, BM); devilline;
gypsum (XRD, BM); langite (XRD, BM);
leadhillite; linarite; monnosite;
namuwite (XRD, BM); posnjakite (XRD, BM);
ramsbeckite; schulenbergite (XRD, BM);
serpiente (XRD, BM); spangolite;
wulfenite (XRD, BM); chrysocolla; copper;
hemimorphite.

ECTON MINES, Welton, Staffs (VIII)

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

Zincolivenite, a small spec. assoc
w. possible tyrolite found by Neil
Hubbard.

APE(S)TOR ADIT Ecton Mine Welton, Staffs
See also ECTON MINE, etc.

Photo in PDMHS Coll.

RSWB, 21/5/61 Field Notes p177. Completely bricked up after a few feet.

NK. "Ecton Mines" Map shows "Ape Tor Adit" at 100,586s.

Röbey & Porter (1972) = ~~A~~ ECTON SOUGH

BAG MINE, Ecton, Welton, Staffs.

RSWB 21/5/61. Notes, p 177. Open shaft, & dumps, with small quantities azurite; malachite; calcite; fluorite; baryte.

NK "Ecton Mines" Map shows "Bag Mine" at 102578

Memo S. N. Derbs (1887) 158. A shallow trial

H. Winstanley (1975) ^(ident. RSWB) Got down shaft to level, Mucky but some blue material eg RSWB 75-120 vg linarite with vg serpierite some thin nearly colourless bevelled plates  [? wulfenite] or more likely baryte

Evap → dry w. H₂O Not diss. No colour → baryte?

Roy Starkey, Priv. Comm 11/81. Descended
Bag shaft, got good aurichalcite
with brown smithsonite xls

RSWB. (1983) Min Record. 15-24. Serpierite,
linarite (photo)

SK 15 101,5797

BOWLER MINE, Ecton, Welton, Staffs.

N.K., "Ecton Mines"

Map shows "Bowler?" at 101,5797

Mem GSNDerbs (1887) 158

* shallow trial .

SK05 0985 5835

BROAD ECTON MINE, Ecton, Wetton, Staffs.

See also ECTON MINE, SALTS LEVEL, ECTON ENGINE SHAFT, etc.

N.K., "Ecton Mines"

Map shows "Broad Ecton Mine" at 0985 5835

"BUSHMAN'S" MINE, Ecton, Welton, Staffs.

See DUTCHMAN'S LEVEL

Bull PDMHS 1 [3], Oct (1960) Facing p. 2 has drawing
of "West Face of Ecton, ca. 1930" showing
"(c) 'Bushman's' at position of DUTCHMAN'S ~~MINI~~
LEVEL

CHADWICK MINE, Ecton, Welton, Staffs.

RSWB 21/5/61. Notes, p 177. Quick look at dumps - u/s.

N.K. "Ecton Mines" Map shows "Chadwick" at 102 580₆.

Mem GSN Derkes (1887) 158. A small E-W vein,
CHADWICK VEIN; galena at surface;
copper ore below. Not worked into
the deeper ground.

1" III

SK 099 577

CLAY MINE, Ecton Hill, Welton, Staffs

Mem GSR Derbs (1887) 158

A shallow trial

NK (1961) "Ecton Mines" p3.

A shallow mine

CLAYTON LEVEL, Ecton Hill, Welton, Staffs. (I)

See also ECTON MINE; WATERBANK SHAFT, etc.

Bull PDMHS (1960) 1[3], 2: Clayton Sough Arch pointed, two small falls cleared, in preservation work in May/June 1960

RSWB, 21/5/61. Field Notes, p. 177. open, with an inch or two of water

P. Smith & Derbs Caving Club 4/61. Leads to waterbank workings (q.v.). Brought out specimen from "waterbank workings in Clayton adit", ident. by RSWB (1-R) as Celestite, pale blue xls on partly haematitic vein caliche with limestone breccia.

"Found by E. Jarvis" - P. Smith.

N.R. Ecton Mines

Map shows "Clayton Adit" at 096,580,

RSWB et al. II, 152-156 (14/10/62), 159-162 (17/10/62), 167-174 (28/10/62)
III, 19-23 (3/2/63), 25-28 (10/2/63), 87-88 (25/5/63), IV, 67-68 (16/2/64), 159
(24/1/65), V, 15-16 (21/11/65) → "WATERBANK 80 fm Level"

Waterbank mine workings: blue celestine, pink & colourless calcite,
colourless cubes fluorite, blue fibrous celestine.

Main Hall & side tunnels: Superb aurichalcite; good smithsonite,
hemimorphite, gypsum, calcite, baryte, fluorite,
chalcopyrite, rosasite (rarely), galena, ? blende,
stalactitic hydrozincite, malachite.

Bob, SRK Serpierite (1R) blue acicular & under gypsum
Min Mag (1968) 36 [282] p 882. "Gyp, cupr, aur, baryte, smiths,
hemi, fluorite"

CLAYTON LEVEL, Ecton Hill, Wetton, Staffs (II)

VIVIAN'S VEIN (9v)

RSWB, P.T. (11/72)

As above. From side-tunnel on LHS before Main Hall, v.g. aurichalcite on dolomite rhombs (IR) w. calcite. One patch w. traces yellow powdery? greenockite (red when hot) w. sooty? covellite, sphalerite relics, smithsonite. From Main Hall, good serpentine, gypsum. From mineralised belly just beyond main hall baryte, on which fluorite (clear cubes), occas. calcite; chalcopryite on & in fluorite; sphalerite under fluorite; pyrite cubo-octahedraⁱⁿ clusters & veinlets on fluorite; also on the fluorite are gypsum, hemimorphite, smithsonite (some

being yellowish, in micro II^e growth rhombohedra
on calcite scalenohedra; serpierite. Spots
black bituminous material occasionally.
Sometimes galena on baryte & calcite.
The fluorite mostly colourless, some pale
yellowish, traces purple.

R.E. Starkey (1983) J. Russell Soc 1 [2] 16-18 A pocket of
xlised celestine in Clayton adit contained
golden acicular millerite showing alt'n
to bright green morenosite.

RSWB (1983) Min. Rec. 15-24. Aurichalcite, celestine,
Serpierite.

CLAYTON LEVEL, Ecton Hill, Welton, Staffs (III)

JA Robey & L Porter (1972) Map, p22 Clayton
adit level leads to the following levels
(in order from entrance) DALE V. (RHS);
JOAN V. (RHS); VIVIAN'S V. (LHS + RHS); CLAYTON
PIPE ["Main Hall"]; BAG LEVEL (RHS) → WATERBANK
80 fm LEVEL.

DEEP ECTON LEVEL, Ecton Hill, Welton, Staffs

See also ECTON MINE

Bull PDMHS (1960) I [3] 2: Preservation work, May/June, 1960. Was in bad state. Driven 1774. Original grit keystone "RS 1774" replaced by a new, similarly marked limestone one. Some timbering & re-arching done.

NK. "Ecton Mines" Map shows "Deep Ecton Adit" at O96₂ 5815

RSWB et al. III 86, 90-91 (25-26/5/63) Chalcopyrite xls in and on calcite. Blende. Open adit

1" III

SK 099 584

DEEP ECTON SHAFT, Ecton Hill, Welton, Staffs

REWB 10/62 [II, 156-7]; 5/63 [III, 89-90]

10/62: Calcite, malachite, azurite
chrysocolla, chalcocite, chalcophyllite ✓
on dumps ~ 099584 & nearby walls.
5/63: ~~Auriferous~~ ~~chalcocite~~ ~ 099584

DUTCHMANS LEVEL, Ecton, Welton, Staffs.

See also ECTON MINE

PDMHS Coll has photo.

RSWB 8/5/60 See Field Report, p.68, Loc 224 = Dumps. Chalcopyrite; blende; ?smithsonite; galena; fluorite, purple, colourless & pink cubes; calcite, combination nail-head + dog-tooth; malachite; azurite; baryte; limonite; aurichalcite (checked, ?X-ray)

RSWB 21/5/61. Field Notes, p 177. Now efficiently wired off

N.K. "Ecton Mines" (1961) Map shows. "Dutchman Mine" above big dump,
at 098,582, description.

Mem GS Netherby (1887) 157-8. Irregular EW DUTCHMAN'S
VEIN, between ECTON & QUARRY V's. In the
DUTCHMAN'S OR OLD ECTON M. - 3 great open
chambers occur, by removal of copper ore,
at 30, 50, & 80 fms - the last called "the
Big Open", said to be 40 yds from E-W and
100 yds from N-S. Not worked into
the deeper ground.

SK 15 102,583₃

EAST ECTON MINE, Ecton, Welton, Staffs.

N.K. "Ecton Mines"

102,583₃

Map shows "East Ecton Mine" at

Mem GSN Derbs (1887) 158. NOT worked into
the deeper ground.

SK 098 583

ECTON ENGINE SHAFT, Ecton, Welton, Staffs.
See also SALTS LEVEL, ECTON MINE, etc.

PDMHS Coll: Photo of Ecton Engine Shaft at Salts Level. (q.v.).

N.K. "Ecton Mines" Map shows "Site of Engine House", above
broad Ecton Mine, at ~ 099 584

SK 09 58

ECTON SOUGH, Welton, Staffs.

Farey (1811) p 328 or 9: SE of Warslow, Staffs, through N skirt of the Hill, in shale Limestone. Conveys water to and from the Hydraulic Pumping Engine of the Mine.

J. Robey & L. Porter (1972)
= APES TOR SOUGH

1" III

SK 09 58

ECTON VEIN, Ecton, Welton, Staffs

Mem GS N Derbs (1887) 157-8.

joint, in the N part

An EW irregular
of Ecton Hill.

SK 05

099.581₂

FLY MINE, Ecton, Welton, Staffs.

See also ECTON MINE

DMHS Coll has photo.

N.K., "Ecton Mines"

Map shows "Fly Mine" at 099.581₂

099⁵ 578⁵.
GOOD HOPE MINE, Ecton, Welton, Staffs.

RSWB, 21/5/61. Notes, p.177. Loc 249. On dumps: Aurichalcite
in calcite;

N.K. "Ecton Mines" Map shows "Good Hope ~~mine~~? " at 099⁵ ~~578~~⁵⁷⁸

Mem GSN Derbs (1887) 158. A shallow trial.

1" III

SK 0965 5783

GOULD MINE, Eton, Welton, Staffs

RSWB, PT (1/70) V 153 A little
aurichalcite on f large dump near
096578 [= Gould or Hamnook M?], in
caliche

SK05 0985 5778
GREGORY MINE, Ecton, Welton, Staffs.

N.K., "Ecton Mines"

Map shows "Gregory?" at 0985 5778

Mem GSNDerbs (1887) 158 * shallow trial

1" III

SK 097 5785

HAMNOOK MINE, Ecton, Welton, Staffs

NK (1961) "Eton Mines": A shallow mine,
merely mentioned, p 3.

JAR & L.P. (1972) 5, 22, 40, 41

Rusob, PT (1/70) II 153 A little aurichalcite
in calcite on f. large dump nr 096 578
[= Hamnook or Gould M?].

SK 095 580

HURTS LEVEL, Ecton, Welton, Staffs.

See WHEY LEVEL.

1" III

SK 099 579

The LUM, Ecton Hill, Wetton, Staffs

RSWB, 5/63 [III, 89-90] Dumps at
099 579 have a little aerichalcite
on calcite

Rothwell & Mason (1992) UKJMM II 30-40
Wulfenite, tab. & bipy. xls. to 0.5 mm on
quartz [SK 100 580]. - Cooper (1987)

OLD ECTON MINE, Ecton Hill, Welton, Staffs
= DUTCHMAN'S MINE (See DUTCHMAN'S LEVEL)

1" III

SK 100 ~~580~~ 579

PLATT MINE, Ecton Hill, Welton, Staffs.

Mem GS NDerks (1887) 158

A shallow trial

1" III

SK 09, 581

QUARRY VEIN, Ecton, Welton, Staffs.
of STONE QUARRY M.

Mem GSN Deeks (1887) 157-8.

joint, S of DUTCHMAN'S VEIN.
only was obtained

An E-W irregular
galena

SALTS LEVEL, Ecton, Staffs.

See also ECTON MINE; ECTON ENGINE SHAFT.

Bull PDMHS (1960) I [3], 2: Visited by permission of Mr. Ratcliffe.
In good condition.

Photo in PDMHS coll., ~~at~~ of ECTON ENGINE SHAFT at Salts Level.

N.K. "Ecton Mines"

Map shows "Salts Level" at 097583₅

RSWB et al. II, 187-192 (18/11/62), 201-207 (2/12/62), III, 88-89 (26/5/63)

Entered by portal in garden of big house.

Calcite, galena, aurichalcite, azurite, stalactitic
hydrozincite; malachite, chalcopryite,
Leads to great plunging pipe working.

SK05 099 583

STONE QUARRY MINE, Ecton, Welton, Staffs.

QUARRY VEIN [qv]

N.K., "Ecton Mines"

Map shows "Stone Quarry Mine" at 099.583.

Mention p 12

1" III

SK 094 576

SWAINSLEY MINE, Eton, Welton, Staffs

J Robey & L Ponter (1972)

1" III

SK 099,584 - 099,580

VIVIAN'S VEIN, Ecton, Welton, Staffs

Mem G S N Derks (1887) 158.

Nearly N-S,

followed for a short distance only, &
disregarded by the old miners
except as poss. guide to new pipes

J A Robey & L Porter (1972)

VIVIAN'S VEIN & LEVEL; 6, 11, 22, 46, 52, 55, 82.
~ NNW $\rightarrow$ SSE, crosses Dutchman's Vein &
Clayton Adit. Vivian's Level off

R Clayton adit is "Fly mine side tunnel".
[with ^{RFB (1962)} calcite dog-teeth → 3" some with
chalcopyr inclusions good chalcopysite
xls, galena, ? sphalerite; good aurichalcite
w. malachite, rosasite; fluorite,
smithsonite.]

and MINE SK15 1025 5755

WATERBANK SHAFT, Ecton, Welton, Staffs. (I)

See also ECTON MINE; CLAYTON ~~ADIT~~ LEVEL [WATERBANK
80 fm LEVEL]

PDMHS Coll has photo.

P. Smith, 4/61 lent me specimen coll by Derbs Caving Club in
the Waterbank Workings in Clayton Level. ✓ for ident.
Found in cleft. Ident. by RSWB

Is Celestite (H, ss, I-R [cf Yate material of GR] - New loc area.
Pale blue xls on vein calcite, partly haematitic (the calcite!), with
limestone breccia.

RSWB, 21/5/61, Notes, p 177. ~~Loc~~ Loc 248 Large dumps. Two
big shafts. Ruins. V. interesting. On dumps: calcite;
fluorite, some colourless, some purple cubes assoc. w. pitch;

baryte; azurite; malachite; aurichalcite in calcite; blende;
smithsonite; galena; rosasite (checked, ^{9/5/61}IR); drusy white
calcite vughs of ~~plac~~ tabular habit ~~in~~ (checked, IR) in
brown limestone.

N.K., "Eaton Mines."

Map shows "Waterbank Mine" at

103 576, and "Adit" at 104 5765

PT 12/69. Serpierite, blue blades, some like those illustrated
in Dana  One spec. with zlangite.

RSWB, PT. 18/1/70 (V, 153) Matrix limestone, some sandstone.
Aurichalcite (IR) malachite (IR) ?rosasite. Pitch, galena,
sphalerite, chalcopryite, some altg to covelline (showing
refl. pleochroism). Baryte, calcite, Smithsonite; One
specimen⁽⁷⁰⁻⁹⁾ with serpiente (IR) and some blades
linarite (IR), also white x-line hydrozincite (blue fluor, uv, sw)

WATERBANK SHAFT/MINE, Ecton, Welton, Staffs (II)

Mem GSN Derbs (1887) 158. Waterbank vein, nearly N-S, followed only a short distance; disregarded by old miners except as possible guide to new pipes. The vein follows the bedding down to 45 fms, then becomes ill-defined, but has lately been yielding galena, caulk, blende, and a little cu ore at this depth.

RSWB, PT 18/1/70 Contd. One specimen (RSWB 70/11), has, in

addition to serpentine & linarite, small xls
smithsonite, small xls ? langite □

H. Winstanley (1975) got down shaft to
level. Mucky but some blue material
eg spec → RSWB 75-120 - Vg. linarite with
vg serpentine, some thin & colourless bevelled
plates  ? wulfenite

[NO! THIS WAS BAG MINE, H.W.]

Roy Starkey Priv Comm 11/85 Wulfenite,
class, on dumps [of the Barite?]

WATERBANK SHAFT/MINE, Ecton, Wotton, Staffs (III)
S. Rust (1983) Mineral Realm 3 [2/3] 29-32 Leadhillite

D. Green Priv. Comm 12/87. "S. Rust has
collected ramsbeckite and
schulenbergite from the dumps."

Atkinson, P., Moore, J. McM & Evans A.M. (1982)
Bull B R G M, Sect II, No. 2, 149-56
Fluid inclusion homog temp 77°C (one only).

S. Rust pers comm in Livingstone et al (1990)
J. Russ. Soc. 3 (1) 23-4.
Namuwite small hex. xls on dumps of
Waterbank mine

SA Rust, UK J Min Min (1992) 11
Rambeckite - WATERBANK M.

SA Rust Priv Comm (1993) A yellow film
of ?greenockite, X-rayed by the BM
seems to contain zincan otavite.

BMNH Coll. Brochantite, serpierite
namuwite, cerussite, spangolite,
posnjakite (all micromounts.) - A.M.
Clark, priv. comm., 1993.

Rothwell & Mason (1992) UKJMM 11 30-40 Wulfenite
(ident XRD, BM(NH)), small yellow bipyr., reported by
S.A. Rust (1985)

WATERBANK SHAFT/MINE, Ecton, Welton, Staffs (IV)

S.A. Rust, UKJMM (1995) 15 30-35. Anglesite,
aurichalcite, brochantite, linarite,
namuwite, posnjakite, ramsbeckite,
schulenbergite, serpierite.

S. Rust & D. Green (2005), UKJMM 25, 33-34
Olsacherite, $Pb_2(SO_4)(SeO_4)$, 1st Brit, on
1 spec. (9x5x6mm) Royal blue selenian
linarite or schmiederite to 0.2mm aggs
& a pale brown uspher egg ~ 0.25mm of
blades $\rightarrow$ 0.1mm = olsacherite. (unfort destroyed
in analysis XRD) [SEM photo]

1" III

SK 0905 581

WEST ECTON MINE, Warslow, Staffs

J. RObey & L Ponder (1972)

SK05 0957 5806

WHEY LEVEL, Ecton, Welton, Staffs.

= HURTS LEVEL

See also ECTON MINE

Ball PDMHS (1960) - [3]. = HURTS LEVEL by Cheese factory.
PDMHS Coll has photo.

RSWB, 21/5/61. Field Notes, p.177. Closed by door.

N.K. "Ecton Mines"

Map shows "Whey Level" at 0957 5806

RSWB, TBG. III, 31 (17/2/63). Calcite, baryte, gypsum needles