Philip Rashleigh's Manuscript Mineral Catalogue circa 1765-80

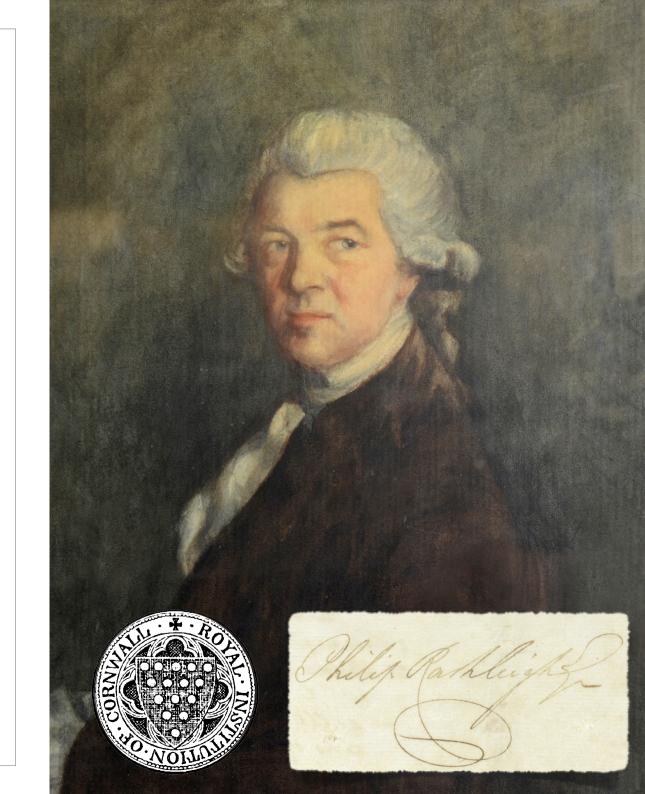
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Philip Rashleigh was born in 1729, the eldest son of Cornish landowner and Member of Parliament, Jonathan Rashleigh. Although born in London and educated at Oxford, his family home was Menabilly, near Fowey, where he spent most of his time.

After his father's death in 1764, Philip Rashleigh was elected Member of Parliament for Fowey in his place, and was to occupy this role continuously from the start of 1765 until Parliament was dissolved in 1802. Despite his commitments as an MP, Rashleigh spent most of his time at his Cornish home and is thought to have started to collect minerals in the mid 1760s.

He recorded the specimens he collected in a small, red (now faded to brown) leather-bound book, giving them numbers, descriptions, and recording the localities that they came from.

The idea for a transcript came about after the author was invited in 2017 to photograph the catalogue while it was unbound and being restored by PZ Restorations in Penzance, Cornwall (further details here: http://www.pzconservation.org.uk/2018/01/a-behind-scenes-glimpse-filming.html

The transcript is intended to be a faithful reproduction of Rashleigh's text retaining his spelling, grammar, mineral species, and original locality names.

Where practicable we have added modern mineral names in notes on each page and a separate section listing locality names mentioned, and where discernible, their modern equivalent.



This Collection of Minerals was note in over to ofterin the knintedge Substances productotin a Minine Country; monerate form a fudgaten first dquive for Experis Vovcelles. Crystallizated ether modes of fem a Judgment of the Ore, but it in word only a laperficial know · house. It has been thought no Bregular heguere, but such / N: 4 two of these Crys en theer formery, but their gages : ciecianto x ostres.

This Collection of Minerals was made in order to obtain the knowledge of substances produced in a Mining Country; and to form a Judgment of the contents of a Stone, the first Idea of it is from Inspection, therefore all the different appearances should be collected; but this must not be entirely rely'd upon, only considered as the first guide for Experiments by different Processes. Crystallizations of Metals are other modes of forming a Judgment of the Ore, but these likewise only give a Superficial knowledge. It has been thought by some Authors that Tin Ore produces no Regular Figure, but such Writers are mistaken. The true form of a crystal of Tin Ore is a Square Column & four sided Piramid Points, as in No: 1 & 2. in No: 4 two of these Crystals are Joined by their sides; & in No: 12 four of them are joined in like manner but these have been a little interrupted in their forming, but their figure is easily discoverd: accidents & obstructions have produced various other forms thus from Gaverigan are the most Regular Crystallizations having a Collumn of four sides on

ten of the Collumn & Sides tending toramed Point of 4 sides the in N. 8 more their fores Side Parramie athere by seme means or other are servelly interrupted in their form as must Enjotule are fixed by one purt or other to the Matter in which they orner, there is scarce a profesti lity of howing all the Sides from & unofted perfect, some are Enias el: there by their dides as at as there plainly demonstrate or they are inclined to take. hill I think is pulliar to his Ore. mes forme of all Shades between whe + Black, & Thelyn & Riv, am resed with most him of stones no Minerallized with owne except a I believe Supposed. It was common that arsenic is contained in most ore, but I believe it an erronious ner; that some Jim bres are infer. or man ak which conterno ar. the best in the Find

top of the Collumn 8 Sides tending towards a Piramid, & ending in a small Piramid Point of 4 sides as in No: 8 - Crystals of Tin Ore seldom extend to more than four Side Pyramid Points & there by some means or other are generally interrupted in their form as most Crystals are fixed by one part or other to the Matter in which they are formed, there is scarce a possibility of having all the Sides Points & angles perfect, some are fixed by one End as Nos: 2, 3, 4 others by their Sides as Nos:

That all these plainly demonstrate the figure they are inclined to take & which I think is peculiar to Tin Ore. Tin Ore is is found of all shades between White & Black, & Yellow and Red, and mixed with most kind of Stones w^{ch} the County produces: It is mixed with all but Minerallized with none except Iron & I believe Sulphur. It is a common Idea that Arsenic is contained in most Tin Ore, but I believe it an erronious opinion; that some Tin Ores are infected with Mundick which contains Ar. Arsenic undoubted but if the Tin Ore found in the Blowing Houses containd

The newword Mineral, there would of I austill where such a frantity is Multer in The Blowning flowers about the Foron another argument to prove that Tin Ore Ives not unterin arune is from the Children Rousting Sotator the loops or Ventholes of the Bourse Hour where all the Efflutia rises from the Milter Fin . Has Din Organtaine Sulphust, I think that world likening be found in the Chimney or the Round House, after so many Thousand Winglet of In Ore has been Milter before Place Have are projet; & I have her seen or heard of either of the above Substances bring found in sufficient Quantit to be collected each for spreimens The Tinners always Examine the by Water other distinguish it from eve other Substance, that Ore being Clumd fre its Matrix or achievest substances, is hear then any other Muller oby being broke very small a rushie on a Shevel and : minus Times will throw all the Cor to the Point of the Shord a wees h away and if thing clas except yold

this Noxious Mineral, there would not be so many Inhabitants in the Town of St: Austell where such a Quantity is Melted in the Blowing Houses about the Town. Another argument to prove that Tin Ore does not contain Arsenic is from the Children Roasting Potatoes in the loops or Vent holes of the Round House where all the Effluvia rises from the Melted Tin. Had Tin Ore containd Sulphur, I think that would likewise be found in the Chimney or the Round House, after so many thousand Weight of Tin Ore has been Melted before these Places are swept; and I have never seen or heard of either of the above Substances being found in sufficient Quantities to be collected even for Specimens.

The tinners always Examine the Ore by Water, & then distinguish it from every other substance, that Ore being Cleaned from its Matrix or adherent substances, is heavier than any other Matter Ecp^t o , & by being broke very small & washd on a Shovel an Experienced Tinner will throw all the Ore to the Point of the Shovel and wash away everything else except Gold.

Native Gold in Quarte from Transilvania Incimens the appearance of Shining Lead, or Iron Mica, or Blend, the Colour is owing to the antimony & arsence whileh the Gold is Mineralised. from Nagyag in Transilvania There are about six different sorts found in this Mine but this Incumen is of the Richest kind Mineralised Gold in a Calcarious pease Spar Gram Do Mineralised Gold Ore, Neted or finely Mineralised Gold Ore shot like Needles which are covered with a flish lolour Coleansons Spar from Do This is the most have of the last four very lunious Specimens

Gold N٥ Native Gold in Brown Quartz from Transilvania. two Specimens 2 Mineralized Gold grown in the form of Leaves or Plated which has the appearance of Shining Lead, or Iron Mica, or Blend, the Colour is owing to the Antimony & Arsenic wth: which the Gold is Mineralised. from Nagyag in Transilvania NB There are about six different sorts found in this Mine but this Specimen is of the Richest kind. 3 Mineralised Gold in a Calcarious pease Spar from Do: Mineralised Gold Ore, Neted or finely woven like small meshes, from Do: 5 Mineralised Gold Ore shot like Needles which are covered with a flesh colour Calcareous Spar from Do: This is the most rare of the last four very Curious Specimens The circled dot or circumpunct is an ancient symbol; as an alchemical symbol it represents Gold. Shining Lead probably = Galena (PbS) Iron Mica = specular Hematite (Fe_2O_3) Blend = Sphalerite (ZnS)

Calcarious pease Spar = pisolitic Calcite or Aragonite (CaCO₃)

Kirkick near Abrudbania in Transilvania Gold Mineralised with Sulphur y means of Iron; Marcasitical Ore. One Hundred weight in the mountains of Facebaya near Zalathna in Fransilvania. twe Gold as found Stream Works in Cornwall Syrites in Sand Stone from

\odot Gold N٥ Native Gold upon White Quartz that is partly Crystallised, with a black 6 Vein impregnated wth: Metal showing through it from the Mountain of Kirnick near Abrudbania in Transilvania Gold Mineralised with Sulphur by means of Iron; or Marcasitical Gold Ore. One Hundred weight of which Yields from 2°z: to 400°z: of Gold; a similar specimen to this yielded 10°z: to 100lb of Ore. From a Mine called Maria Lorretto in the Mountains of Facebaya near Zalathna in Transilvania. 8 Native Gold Germinated in Quartz 9 Native Gold as found in the Stream Works in Cornwall, in Quartz, from Parsonage Mead in Ladock & other Places Native Gold in small grains in the Stream Works in Cornwall 10 particularly about Grampound St: Stephens & St: Ewe Gold Pyrites in Sand Stone from Nagjacks in Transilvania 11

12 the gold appearing makes this Indienes more Chrises 13 Native Gold in Quartz & Blend from Transilvania 14 Native Gold branching out of white Quartz. from Fransilvania. Native leafy Gold upon White Crystalised Quartz, from Do _ Hashing & also contains Vetrious Silver Ore, & Copper On, & grey Silver, with Crystal. from Schamnitz in Hungary 17 Native Gold in a south a loose White Chalk-like substance. Hungary 18 Tyrites with in Gold & Silver not 19 Native Gold from Zillerthall First in a grup theme Stripe noth White warter Native Gold & Silver Ore mised with 20 Lead Ore (M. Carero n.b) 21 Vitrious Silver Ore with Native Gole 22 Sinople containing gold Singula with Gelft a Shining Lead rohus, likewise yillos Gold from a Mine near Schemnitz in Hungary

| ⊙ N° | | | |
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| 2 | Ore which yields Gold by washing & Silver by Fusion between two Walls of White Quartz from Cremnitz the Gold appearing makes this Specimen more Curious ~ | | |
| 3 | Native Gold in Quartz & Blend from Transilvania ~ | | |
| 4 | Native Gold branching out of white Quartz. from Transilvania. | | |
| 5 | Native leafy Gold upon White Crystalised Quartz, from Do: ~ | | |
| 6 | A Mineral that Yields Gold by Washing & also contains Vitrious Silver Ore, & Copper Ore, & Grey Silver, with Crystal. from Schemnitz in Hungary | | |
| 7 | Native Gold in a loose White Chalk-like substance. Hungary | | |
| 8 | Pyrites rich in Gold & Silver w th Trigonal Spar | | |
| 9 | Native Gold from Zillerthall Tirol in a Grey Stone Stripd with White Quartz | | |
| 20 | Native Gold & Silver Ore mix'd with Lead Ore (Mr Carero no: 6) | | |
| 21 | Vitrious Silver Ore with Native Gold | | |
| 22 | Sinople containing Gold | | |
| 23 | Sinople with Gold and Shining Lead which likewise yields Gold from a Mine near Schemnitz in Hungary | | |
| NOTE: | Blend = Sphalerite (ZnS) Vitrious Silver Ore = Acanthite (Ag ₂ S) Grey Silver probably = Acanthite (Ag ₂ S) Crystal = colourless Quartz (SiO ₂) Trigonal Spar = Calcite (CaCO ₃) Sinople is a dark reddish earth pigment Shining Lead probably = Galena (PbS) | | |

Water Gold in White Quarter from Jumatre 25 Netive Leaf yold upon White Luarte from Hungary 26 Rich Native Gold in Grey Quartz from Hungary a fine Specimen. 27 Native Gold in a Solie grey Stone from the Coust of Guinea, an uncommon Specimen 28 Nativeljete somewhat Crysallisis on a grey Stone Stellated with white Meterite 29 Native Silver containing 2 of from Frongsburg in Norway 30 Native yold in Light Gry Luastz from Transilvania 31 Blend with Lead & Copper Ore & which yills gold by Washing Hungerry 32 Gold Grains in the Stream Jin One as found in a Moor belonging Wistackhouse Esglin Frobus

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| 24 | Native Gold in White Quartz from Sumatra |
| 25 | Native Leaf Gold upon White Quartz from Hungary |
| 26 | Rich Native Gold in Grey Quartz from Hungary a fine Specimen. |
| 27 | Native Gold in a Solid Grey Stone from the Coast of Guinea, an uncommon Specimen |
| 28 | Native Gold somewhat Crysallised upon a coat of Crystallised Quartz on a Grey Stone Stellated with white Celenite |
| 29 | Native Silver containing ¼ of Gold in Crystallized Quartz from Kongsburg in Norway |
| 30 | Native Gold in Light Grey Quartz from Transilvania |
| 31 | Blend with Lead & Copper Ore & which Yields Gold by Washing Hungary |
| 32 | Gold Grains in the Stream Tin Ore as found in a Moor belonging to $\ensuremath{W^m}$: Stackhouse Esq in Probus |
| NOTE | |
| NOTE: | Celenite = Gypsum (CaSO ₄ ·2H ₂ O) Blend = Sphalerite (ZnS) |

33 nith Quarte from Hungary 34 Linnopole with Lead One Rich in Silver, with spots of Native yold in the Tinnople from Hungbery 35 Heavy I par with thin Stated Gold Vilation Silver from Schlangenberg in Siberia 36 Native Netted Gold in Luciste from a Mine near Boroza in Transilvania a very reers Specimen 37 Native gold in Quartz 38 Gold from the Island of Bornie very much resembling that of Cornwell 39 Cubic Gold in Mice from a Gold Mine of - Cathrinae politanes 40 D' Richer from Do 41 Native gold en Lime Itone from Reel fors 12 Gold in Comper Gofsen from Siberia 43 From One with Valeve Gold - Do 24 Zinnople with hexagional Coystal a other very curious trystolizations growing larger as they vise from the

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| nº 33 | Zinnople & Copper Ore Rich in Gold with Quartz from Hungary |
| 34 | Zinnople with Lead Ore Rich in Silver, with spots of Native Gold in the Zinnople from Hungary |
| 35 | Heavy Spar with thin Plated Gold & Native Silver from Schlangenberg in Siberia |
| 36 | Native Netted Gold in Quartz from a Mine near Boioza in Transylvania a very rare Specimen |
| 37 | Native Gold in Quartz |
| 38 | Gold from the Island of Bornio very much resembling that of Cornwall |
| 39 | Cubic Gold in Mica from a Gold Mine of Cathrinæpolitanis |
| 40 | D°: Richer from D°: |
| 41 | Native Gold in Lime Stone from Adelfors in Sweden |
| 42 | Gold in Copper Gossan from Siberia |
| 43 | Iron Ore with Native Gold - D°: |
| 44 | Zinnople with hexagonal Crystal & other very curious Calcarious Crystalizations growing larger as they rise from the Base Hungary |
| NOTE: | Zinnople is a spelling variant of sinople - a dark reddish earth pigment Hexagonal crystal = transparent prismatic Quartz (SiO_2) Heavy Spar = Baryte ($BaSO_4$) |
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Lilver Native Silver in Quarts from Native Arborescent Silver Ore Native Silver in fine from Hungary Native Silver in a Calcarious Spar en a Brinon Stone spottie l'offmhite mica f from a Mini calle Frince of Heaven near Freyberg in Saxony Native Capillary Silver 4 or Glass Ore Cristalized on Spas Filor Mineralisel with Julphus & arsenie or Red Filors Ore with mixed with shining Lead & Mundie from Lo singular Di with stineng Lead & Spai from

Silver N٥ Native Silver in Quarts from Norway 2 Native Arborescent Silver Ore from Do: Do: Polish'd 3 Native Silver in fine fibres from Hungary Native Silver found in Cornwall 4 Native Silver in a Calcarious Spar on a Brown Stone spotted wth 5 white Mica from a Mine call'd Prince of Heaven near Freyberg in Saxony Native Capillary Silver from Do: 6 Silver Mineralised with Sulphur or Glass Ore Cristalized on Spar from Do: Silver Mineralised with Sulphur & Arsenic or Red Silver Ore with 8 2 different Cristalizations mixed with shining Lead & Mundic from Do:. singular Do: with shining Lead & Spar from Do: 9 The symbol for silver is also associated with the moon in astrology Calcarious Spar = Calcite(CaCO₃) Glass Ore =Acanthite (Aq₂S) Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3) Shining Lead probably = Galena (PbS) Mundic is an old Cornish name for Pyrite (FeS₂)

Vilver Grey Silver One with very Sin-Thining Lead & Mundie in Spar from (go Tilver Meneralised with Sul-: phurated antimony of. Feather Silver Ore upon Sealy From Ore or Penny Spar from Do Silver Meneralised with Sulphur & Arsenie, or Rie Silver On with Municie from John Georgenstadt 13 Red Silver Ore in Quartz with some Thining Lead from andreastery upon the Harts 14 Red Silver Ore with Lead from Threyberg Red Silver Cristalizations. Grey Silver Ore from Hungary

Silver

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| 10 | Grey Silver Ore with very Singular Cristalisations with Shining Lead & Mundic in Spar from Do: [Prince of Heaven, Freyberg, Saxony] |
| 11 | Silver Mineralised with Sulphurated Antimony or Feather Silver Ore upon Scaly Iron Ore or Penny Spar from Do: |
| 12 | Silver Mineralised with Sulphur & Arsenic, or Red Silver Ore with Mundic from JohnGeorgenstadt in Saxony |
| 13 | Red Silver Ore in Quartz with some Shining Lead from Andreasberg upon the Harts |
| 14 | Red Silver Ore with Lead from Freyberg |
| 15 | Red Silver Cristalizations. |
| 16 | Grey Silver Ore from Hungary in quarts very Rich. |

NOTE: Grey Silver Ore probably = Acanthite (Ag₂S) Shining Lead probably = Galena (PbS) Mundic is an old Cornish name for Pyrite (FeS₂) Feather Silver Ore = Jamesonite (Pb₄FeSb₆S₁₄) Scaly Iron Ore or Penny Spar probably = Hematite (Fe₂O₃) or Goethite (FeO(OH)) Red Silver Ore = Pyrargyrite (Ag₃SbS₃) or Proustite (Ag₃AsS₃) No Vilver Silver On from Jascony Silver Ore Mineralised/with Lead from Javoy 19 Native Caplillary Silver upon Arsenceal Cobalt One from Hiceary Bridge in Devonshire 20 Bark Grey Silver One with Copper Ore form alocce Crystallize Ru Silver On with Sem Leed Ore from andreasberg in the Hartz Red Silver bre with Cockseven be calcareous Spat, from Saxony Grey Silver One with Hellow Ochre & blue Crystal's of Copper. in its Cavities from Fronersdorff Grey Silver Ore partly Crystal-Copper intermixe with Crystal

| \bigcirc | Silver | |
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| N ∘ 17 | Silver Ore from Saxony | |
| 18 | Silver Ore Mineralised with Lead from Savoy | |
| 19 | Native Capillary Silver upon Arsenecal Cobalt Ore from Hiccary Bridge in Devonshire | |
| 20 | Dark Grey Silver Ore with Copper Ore from Alsace | |
| 21 | Crystallized Red Silver Ore with some Lead Ore from Andreasberg in the Hartz | |
| 22 | Red Silver Ore with Cockscombe calcareous Spar, from Saxony | |
| 23 | Grey Silver Ore with Yellow Ochre & blue Crystals of Copper in its Cavities from Konersdorff in Saxony | |
| 24 | Grey Silver Ore partly Crystallized coated with Pyrites of Copper intermixed with Crystal from St: Maria aux Mine | |
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| NOTE: | Capillary Silver = Native Silver (Ag) Arsenecal Cobalt = Cobaltite (CoAsS) Grey Silver Ore probably = Acanthite (Ag ₂ S) Red Silver Ore = Pyrargyrite (Ag ₃ SbS ₃) or Proustite (Ag ₃ AsS ₃) Pyrites of Copper = Chalcopyrite (CuFeS ₂) | |

To Black Silver Ore with Fluor 25 from Marienberg in Sacerny Crystallized Rid Silver Ore Mine-Tralised with arsenie, Lead ore & Spar from the Hartz Dark Red Silver Ore with Luartz from andreasbery in the Hartz. Netter Red Silver Ore containing 28 much arsenie from Maricalery in Jaxony Brittle Vitrified Silver Ore with Sulphur from Hemnels fürst near Fryberg (very fine) Rid & Grey antimornal Vitre fiel Silver in Quartz, from Brainsdorf Capillary Native Silver with Vitrous Silver Ore & Calcarrous Spar from Treyberg-Horn Silver On in little Cubes in 32 brown Iron Ochre from Johana Georgenstadt in Jacony-Native Silver in then lamina ever with litrious Silver Ore from Troughery

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| N ∘ 25 | Black Silver Ore with Fluor from Marienberg in Saxony ~ |
| 26 | Crystallized Red Silver Ore Mineralised with Arsenic, Lead ore & Spar from the Hartz ~ |
| 27 | Dark Red Silver Ore with Quartz from Andreasberg in the Hartz |
| 28 | Netted Red Silver Ore containing much Arsenic from Marienberg in Saxony |
| 29 | Brittle Vitrified Silver Ore with Sulphur from Himnelsfürst near Freyberg (very fine) |
| 30 | Red & Grey Antimonial Vitrified Silver in Quartz from Brainsdorf |
| 31 | Capillary Native Silver with Vitrious Silver Ore & Calcareous Spar from Freyberg ~ |
| 32 | Horn Silver Ore in little Cubes in brown Iron Ochre from JohnGeorgenstadt in Saxony ~ |
| 33 | Native Silver in thin lamina coverd with Vitrious Silver Ore from Freyberg |
| | |
| NOTE: | Black Silver Ore = Stephanite (Ag ₅ SbS ₄) or Acanthite (Ag ₂ S) Fluor = Fluorite (CaF ₂) Dark Red Silver Ore = Pyrargyrite (Ag ₃ SbS ₃) Netted Red Silver Ore = Proustite (Ag ₃ AsS ₃) Brittle Silver Ore = Stephanite (Ag ₅ SbS ₄) Capillary Silver = Native Silver (Ag) Calcareous Spar = Calcite (CaCO ₃) Horn Silver = Chlorargyrite (AgCl) |

Vitrious Silver Ore = Acanthite (Ag_2S)

Vitrious Silver Ore somewhat from Johngeorgenstadt Native Silves in Zuastr from Dentrifice Nation Silver in Spat from Hemnits fürst Small Capillary Silver from Hickory Bridge Deven 40 Red Selver One with Syrites 41 Capillary Silver with Vitrous Silver Ore partly changes into your dune Silver from 42 Natibe Silver with Galina from 43 Junsum with Native & goose dung

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| N ∘ 34 | Vitrious Silver Ore somewhat Crystallized from Freyberg | |
| 35 | Capillary Silver with Quartz from Johngeorgenstadt | |
| 36 | Native Silver in Quartz from Freyberg | |
| 37 | Dentrified Native Silver in Spar from Heimnitsfürst Freyberg | |
| 38 | Native Capillary Silver in [location is not given] | |
| 39 | Small Capillary Silver from Hiccary Bridge, Devon | |
| 40 | Red Silver Ore with Pyrites | |
| 41 | Capillary Silver with Vitrious Silver Ore partly changed into Goose-dung Silver from Freyberg | |
| 42 | Native Silver with Galena from Johngeorgenstadt | |
| 43 | Gypsum with Native & Goose dung Silver in its Cavities from the Hartz | |
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| NOTE: | Vitrious Silver Ore = Acanthite (Ag ₂ S) Capillary Silver = Native Silver (Ag) Red Silver Ore = Pyrargyrite (Ag ₃ SbS ₃) or Proustite (Ag ₃ AsS ₃) | |

Goose-dung Silver is an inferior grade of iron sinter containing silver

no Native Silver upon Yellen trys: 45 Native Nettre Silver upon Zuarte from Sotosi. 46 Netted Silver with Selenitical Spar og from Marienberg. 47 Hom Stone containing Native Silver from Johngwegenstadt. 48 Hom Stone containing Native Vitrious Silver och side Volished from Johngurgenstadt. 49 Native Silver in Clay or from Johnquergenstadt. 50 Native Silver in white Calcarery Inas from Norwey. 51 Native Silver in White & blue Calcareous Spar from Brongsberg in Norwey. 52 Native Silver with Bline and Calcarious Spar - Norway. 38 Nation Silver with Calcureous Spar & Black Lime Stone from 54 Native Silver with Shining Linck & Lead in Heavy Spar from Schlangen? = frurg in Silvina. thir gives Light. on

| n° 44 | Native Silver upon Yellow Crys ^d : Mundic. r r r. | | |
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| 45 | Native Netted Silver upon Quartz from Potosi. | | |
| 46 | Netted Silver with Selenitical Spar from Marienberg. | | |
| 47 | Horn Stone containing Native Silver from Johngeorgenstadt. | | |
| 48 | Horn Stone containing Native & Vitrious Silver one side Polished from Johngeorgenstadt. | | |
| 49 | Native Silver in Clay r r from Johngeorgenstadt. | | |
| 50 | Native Silver in white Calcareous Spar from Norway. | | |
| 51 | Native Silver in White & blue Calcareous Spar from Kongsberg in Norway. | | |
| 52 | Native Silver with Blend and Calcareous Spar - Norway. | | |
| 53 | Native Silver with Calcareous Spar & Black Lime Stone from Norway | | |
| 54 | Native Silver with Shining Zinck & Lead in Heavy Spar from Schlangenburg in Siberia. this gives light on being Rub'd? | | |
| NOTE: | Mundic is an old Cornish name for Pyrite (FeS ₂) Selenitical Spar = Gypsum (CaSO ₄ ·2H ₂ O) Horn Stone = Chert/Jasper Vitreous Silver Ore = Acanthite (Ag ₂ S) Calcareous Spar = Calcite (CaCO ₃) Blend = Sphalerite (ZnS) Shining Zinck = Sphalerite (ZnS) Heavy Spar = Baryte (BaSO4) | | |

Silver Ore Branch's Vitreous Silver Ore with Calcareous Spar rrr from Freyberg Brittle Silver Ore Gray Silver Ore with Corner On & Rneifs from Freyberg ~ 38 Horn Silver Ore of a Veart Colour with Oches of from on Questo from John georgenstadt. 59 Rw Leafy Silver ore with Lead on a Crystal. Hartz 60 Red Silver Ore from Marienberg 61 Red Selver Ori 62 Red Silver One & Lead One in 63 Brittle Silver Ore & Red Crystal: : level Silver Ore. 64 White & Red Selver Ore. 65 Brittle Silver Ore 66 Dark hrey Silver One St Marie 67 Red Selver Ore from Marienberg 68 White Silver Ore

| \supset | Silver Ore |
|-----------|---|
| n° 55 | Branch'd Vitrious Silver Ore with Calcareous Spar r r r from Freyberg |
| 56 | Brittle Silver Ore |
| 57 | Grey Silver Ore with Copper Ore & Kneifs [Gneiss] from Freyberg ~ |
| 58 | Horn Silver Ore of a Pearl Colour with Ocher of Iron on Quartz from Johngeorgenstadt. |
| 59 | Red Leafy Silver Ore with Lead Ore & Crystal. Hartz |
| 60 | Red Silver Ore from Marienberg |
| 61 | Red Silver Ore |
| 62 | Red Silver Ore & Lead Ore in White Quartz from ye Hartz |
| 63 | Brittle Silver Ore & Red Crystallised Silver Ore. |
| 64 | White & Red Silver Ore. |
| 65 | Brittle Silver Ore. |
| 66 | Dark Grey Silver Ore St: Marie |
| 67 | Red Silver Ore from Marienberg |
| 68 | White Silver Ore |
| | |
| NOTE: | Vitrious Silver Ore = Acanthite (Ag_2S) Calcareous Spar = Calcite ($CaCO_3$) Brittle Silver Ore = Stephanite (Ag_5SbS_4) Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3) Grey Silver Ore probably = Acanthite (Ag_2S) |

Horn Silver Ore = Chlorargyrite (AgCl)

Ocher of Iron = limonite (massive oxide or hydroxide of iron)

Brittle White Silver Ore in Quarte Blue Lamulated Copper Ore Brittle Vitrous Silver Ore calle Reach genoceh in Selenitical Speer from Hungary in deotland with galence of Calse in its Cavilies rr two White Silver Ore contening Cobalt from Freyberg -: ous-Rose of Jerico Sper from

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| 69 | Brittle & White Silver Ore in Quartz | |
| 70 | Grey Silver Ore with quartz & Blue Lamulatic Copper Ore Wurtemberg ~ | |
| 71 | Silver Mineralized with one tenth of Arsenick with Selenitical Spar from Ferstenberg | |
| 72 | Grey Silver Ore containing Mercury - Stahlberg | |
| 73 | Brittle Vitrious Silver Ore calld Reschgewach [Röschsewächs] in Selenitical Spar from Hungary | |
| 74 | Silver Ore from Sr: Jona: Erskins Mine in Scotland with Galena. | |
| 75 | Arsenical Slate rich in Silver with Crystallised Arsenick partly Metallick & partly in State of Calx in its Cavities r r r from Biber in Hesse ~ | |
| 76 | Netted White Silver Ore containing Cobalt from Freyberg ~ | |
| 77 | Vitrious Silver Ore with Calcareous Rose of Jerico Spar from Joachimsthal in Bohemia | |
| 78 | Native Silver in Petrosilex Schlangenberg in Siberia with Horn Silver | |
| | | |
| NOTE: | Brittle Silver Ore = Stephanite (Ag_5SbS_4) Grey Silver Ore probably = Acanthite (Ag_2S) Selenitical Spar = Gypsum ($CaSO_4 \cdot 2H_2O$) Horn Silver = Chlorargyrite ($AgCl$) Vitrious Silver Ore = Acanthite (Ag_2S) Petrosilex - any hard, compact, igneous or metamorphic rock rich in silica; especially (a) | |

hornstone or chert; (b) felsite

79 Native Silver & White Silver Ore in DO Native Silver in Hardend From Ceher from the Mine Semenofskoi in the high Mountains of Siberia. 81 White Silver Ore in Speit from Schlangenberg Shining Zine containing Silver which gives dight on being Rubid in Spar; Do 83 Nation Silver in Inags or Course fibers mixed with Quarte - Hemmels furst -84 Native Silver with Quarte which sum to be set in Silver 85 Native Capillery Silver in a bunch coming out of a bid of Quarter between two Walls of Plate from Joungergestalt 26 Native Pilous on the Surface of a Questro black Hillas from Falrian Mine Marienberg 07 Native Silver of a pale Gold Colours Jus through a Red Tron Stone from Hemmelsfunt 08 Native Silves in Heavy Spear - 30 og Native Knøtter Silver in a bed of Quart 90 Netter Native Silver in black Horn Stime or Petro Siles Do see the other You A the Brook

| n° 79 | Native Silver & White Silver Ore in Heavy Spar Schlangenberg | |
|----------|--|--|
| 80 | Native Silver in Harden'd Iron Ocher from the mine Semenofskoi in the high Mountains of Siberia. | |
| 81 | White Silver Ore in Spar from Schlangenberg | |
| 82 | Shining Zinc containing Silver which gives Light on being Rub'd in Spar; Do: | |
| 83 | Native Silver in Snags or Coarse fibers mix'd with Quartz - Hemmelsfurst | |
| 84 | Native Silver with Quartz which seems to be set in Silver | |
| 85 | Native Capillary Silver in a bunch coming out of a bed of Quartz between two Walls of Slate from Joangeorgenstadt | |
| 86 | Native Silver on the Surface of a Quartz & black Killas from Fabian Mine Marienberg | |
| 87 | Native Silver of a pale Gold Colour runing in Veins of White Selenite Spar through a Red Iron or Feld Spar Stone from Hemmelsfurst | |
| 88 | Native Silver in Heavy Spar - Do: | |
| 89 | Native Knotted Silver in a bed of Quartz from Joangeorgenstadt | |
| 90 | Netted Native Silver in Black Horn Stone or Petro Silex. Do: | |
| | see the other End of this Book | |
| NOTE | U | |

NOTE: Heavy Spar = Baryte (BaSO₄)

Hardened Iron Ocher = limonite (massive oxide or hydroxide of iron)

Shining Zinc = Sphalerite (ZnS)

Selenite Spar = Gypsum (CaSO₄·2H₂O)

Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock

Horn Stone = Chert/Jasper

Petrosilex - any hard, compact, igneous or metamorphic rock rich in silica; especially (a)

hornstone or chert; (b) felsite

Silver Ores continued from y other & Spatiese Silver Ore from Schlan genberg Slate with impressions of Fern se worke for Silver from Frankenberg 94 Bline said to contain Silver 05 Vitrious Silver One incrusted upen Quart 96 Vitrous Silver Ore Crystallises Horn Silver Ore & Crystals 98 Crystals of Vitrious Silver on with O Sides a truncated points 99 a Group of Vitrous Silver Ore currously Crystallized in & Sides from a Mune near Joungeorgestadt. Frayberg Cat: 10-100 Netter Cobalt with Red Silver Ore from Marienberg Fabiein Sebustian Mine grey Crystallered Silver Ore with Corner Pyrites, in Quartz - Hungury 102 Fransparent Rid Silver Ove on the Sur-: face upon laminates Quartes Plica rem a Mine near Jourgeorgestadt 103 Red Selver Prestallaged with most part of the mundie decomposed; Hartz

Silver Ores

no

91

Rashleigh filled the allocated pages set aside for silver minerals and registered these specimens in the back of the catalogue.

| Spatose Silver C | Dre from Schla | ngenberg ir | Siberia |
|------------------|----------------|-------------|---------|

- 92 Slate with impressions of Fern & worked for Silver from Frankenberg in Hesse
- 93 Brittle Silver Ore in transparent Crystal
- 94 Blend said to contain Silver
- 95 Vitrious Silver Ore incrusted upon Quartz
- 96 Vitrious Silver Ore
- 97 Crystallized Horn Silver Ore & Crystals of White Lead ore upon Quartz from Catherine Mine in Joangeorgenstadt
- 98 Crystals of Vitrious Silver ore with 8 Sides & truncated points
- a Group of Vitrious Silver Ore curiously Crystallized in 8 Sidesfrom a Mine near Joangeorgenstadt. Freyberg Cat: 10 -
- 100 Netted Cobalt with Red & Vitrious Silver Ore from Marienberg Fabian Sebastian Mine
- 101 Grey Crystallized Silver Ore with Copper Pyrites, in Quartz Hungary
- Transparent Red Silver Ore on the Surface upon laminated Quartz& Mica from a Mine near Joangeorgenstadt
- with Transparent Pale Red Silver Crystallized with most part of the Mundic decomposed; Hartz Joangeorgenstadt

NOTE: Brittle Silver Ore = Stephanite (Ag_5SbS_4)

Blend = Sphalerite (ZnS)

Vitrious Silver Ore = Acanthite (Ag_2S) Horn Silver = Chlorargyrite (AgCl)

Netted Cobalt probably = Erythrite ($Co_3(AsO_4)_2 \cdot 8H_2O$) Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3) Grey Crystallized Silver Ore probably = Acanthite (Ag_2S)

Pale Red Silver Ore = Proustite (Ag₃AsS₃) Mundic is an old Cornish name for Pyrite (FeS₂)

Silver Gruy & White Silver Ore with Lead 104 in a bed of heavy Spar & Luartz from Silvers path Mine Freyberg 105 Red Selver Ore with Pyrites in heavy White Spar from the Neighbourhood of Freyburg 106 Crystallizee dentritical Rie Silver Ore in Quartz near Fryberg 107 Red Silver Ore with White Silver Do 108 Silver & Lead Switzerland 109 Rie Silver Ore in Fluer, Hemmelsfirst-

|) N° | Silver | Rashleigh filled the allocated pages set aside for silver minerals and registered these specimens in the back of the catalogue. |
|---------|---|---|
| 104 | Grey & White Silver Ore with I from Silverspath Mine - Freybo | Lead in a bed of heavy Spar & Quartz erg |
| 105 | Red Silver Ore with Pyrites in I Neighbourhood of Freyberg | neavy White Spar from the |
| 106 | Crystallized dendritical Red Si | lver Ore in Quartz near Freyberg |
| 107 | Red Silver Ore with White Silv | er Dº: |
| 108 | Silver & Lead Switzerland | |
| 109 | Red Silver Ore in Fluor, Hemm | nelsfirst ~ |
| | | |
| | | |
| | | |
| | | |
| NOTE: | Heavy Spar = Baryte (BaSO ₄) Red Silver Ore = Pyrargyrite (Ag ₃ SbS ₂ Fluor = Fluorite (CaF ₂) | 3) or Proustite (Ag ₃ AsS ₃) |

Crystallise Silver Ore

Crystallised Silver Ore

nº

- 1^a Grey Silver Ore forming Triangular crystals in the Cavities of Crystal from Hungary ~ r r
- Red Crystallized Silver Ore with Calcareous Spar & Pyrites rich in Silver from the Hartz \sim r r
- 3a Red Crystallized Silver Ore with Pyrites
- 4^a Crystallized Vitreous Silver Ore with Crystal Johngeorgenstadt

NOTE: Grey Silver Ore probably = Acanthite (Ag_2S) Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3) Calcareous Spar = Calcite ($CaCO_3$) Vitreous Silver Ore = Acanthite (Ag_2S) Native small irregular Grains of Platina del Pinto, a small quantity of Gold may be Extract

Platina del Pinto

Nο

Native small irregular Grains of Platina del Pinto, a small quantity of 1 Gold may be Extracted from it

Ν 2

Platina Ore

NOTE: Platina del Pinto are dense platinum-rich pebbles associated with alluvial gold deposits that were described by Jesuits in the 16th century. These pebbles could not be melted alone but would alloy with and adulterate gold to the extent that the gold bars would become brittle and impossible to refine. The pebbles became known as platina del Pinto - that is, granules of silvery material from the Pinto River, a tributary of the San Juan River in the Chocó region of Colombia.

Tin Crystallized Grain Jin = mid Point, very Rane Levery Curious Jin Grain Column, on the top of the Column tend= : in towards a Piramid are o Sides every other angle very Obtuse, & ending in a four Angle Geramid Point; Garigan mitransparent den on one side, & ending in 2 four lengte Viramio Points, Luxullian in Grains of a Resistous Colour and their Shooting & howing on Sign of ever being fibed to a Base from the every buenhove of

Tin Crystallized (Grain Tin)

N٥

- A very large Tin Grain with a Square Column & four Angle Piramid Point, very Rare,
- Do: with perfect Angles, Black, Smooth & shining as Glass from St: Agnes, very Rare. The true form of a Tin Crystal.
- A very Curious Tin Grain with a 4 Sided Column; on the top of the Column tendin towards a Piramid are 8 Sides every other Angle very Obtuse, & ending in a four Angle Piramid Point; Gavrigan 16 sides.
- A semitransparent Tin Grain with a double Quadrangular Column joind on one side, & ending in 2 four Angle Piramid Points, Luxullian
- Tin Grains of a Resinous Colour and four Angle Piramid 5
- Do: Black shining as Glass.
- A very Uncommon Tin Grain, both Figure & Texture seeming as 7 if compounded of Nos: 2 & 5, said to be found in St: Dominick
- 8 Black Tin Grains intirrupted in their Shooting & having no Sign of ever being fixed to a Base. from the Neighbourhood of St: Austell

notes:

"4 enterd in another Catalogue". These are the specimens that were

Specimen 2 matches Rashleigh Volume 1, Plate 5, Figure 2.

NOTE: On the otherwise blank page opposite this one Rashleigh

> transferred into Rashleigh's later large green catalogue (held in the Royal Institution of Cornwall).

Vin Crystallised Tin Grains with Souble Points and one base, Irregular, & Union mon Tin Grains with a square Column & Pointed at each End, not quite H Large Black Jin Crystals one wighing 602/ from Bohemia Tin Crystals which endeavour to form each a Column of 4 sides with a 4 side peramid point at each end of the Column but have been interrupted in their Crystallization, from Streams 13 of Jin Green of Jan Sides upon a Broken base 14 A Curious Fire Grain in Mica & Quartz from Wheel Fortuna 15 White Jin Grains Do

Tin Crystallised

NOTE: Tin = Cassiterite (SnO_2)

| N∘ 9 | Tin Grains with double Points and one base, Irregular, & Uncommon |
|---------------|---|
| 10 | Tin Grains with a square Column & Pointed at each End, not quite Perfect |
| 11 | Large Black Tin Crystals one weighing 6°z 1/2 from Bohemia |
| 12 | Tin Crystals which endeavour to form each a Column of 4 sides with a 4 side piramid point at each end of the Column but have been interrupted in their Crystallization, from Streams in St: Austell & Luxullian. like 4 a crystals joind by their sides ~ |
| 13 | A Tin Grain of Ten Sides upon a Broken base |
| 14 | A Curious Tin Grain in Mica & Quartz from Wheel Fortune in Breage |
| 15 | White Tin Grains Do: |

Tin Crystallized Irregular

+ Irregular White Fin Grains a & Bu Brown as Di Red a & D. Variegated with Black & Rice a 5 Do noth Black Red & White at Semitransparent Jin Grains ay White Fin Ore from Bohemia a Yellow Jin Grains, Topas Colous. sorts of Crystallized Fin from Si agnis

Tin Crystallized Irregular

- a 4 Irregular White Tin Grains
- a 2 Do: Brown
- a 3 D∘: Red,
- a 4 Do: Variegated with Black & Red
- a 5 Do: with Black Red & White
- a 6 Semitransparent Tin Grains
- a 7 White Tin Ore from Bohemia
- a & Yellow Tin Grains, Topaz Colour.

a A Very Solid Tin Stone with several sorts of Crystallized Tin from St. Agnes

NOTE: Tin Stone = Cassiterite (SnO_2)

Tin Crystallized on its Matrixes on Simitransparent Coystal 6 2 Black Tin upon White Quarts 6 3 Black Tin upon Mundie. 6 4 Black Fin upon Fluor. 6 5 Black Fin on a hard Talk Stone from S. Michaels Mount 66 Black Tin in office upon a Stone 6 7 Black Jin & New Welle lockle in Operch White Quarts; Hul Speed 6 A Black Jin with uncommon Crys-: talizations un Fillas; from ack Tin upon Black & White Fillas; from Beam Jin & Spara Luarts Constalline un Grey Fillas, Wen Bridge 1. 11 Jin upon from Crystal, or Cornish camonds undemmon. a Blue Elvan Stone with Viens of

Tin Crystallized on its Matrixes

- b 1 Black Shining Quadrangular Pyramid Tin on semitransparent Crystal.
- b 2 Black Tin upon White Quarts.
- b 3 Black Tin upon Mundic.
- b 4 Black Tin upon Fluor.
- b 5 Black Tin on a hard Talk Stone from St: Michaels Mount
- b 6 Black Tin in Mica upon a Stone containing Iron.
- b 7 Black Tin & Needle Cockle in opack White Quarts; Huel Speed
- b 8 Black Tin with uncommon Crystalizations upon Killas; from Gavregan
- b 9 Black Tin upon Black & White Killas; from Beam
- o 10 Tin, & Spar or Quarts Crystallized upon Grey Killas; New Bridge
- b 11 Tin upon Spar Crystal, or Cornish Diamonds, uncommon.
- b 12 Tin in a White Growan or Moor Stone
- b 13 Very Large grain Black Tin Crystallized upon a Blue Elvan Stone with Veins of White Quarts; St: Agnes

NOTE: Tin = Cassiterite (SnO_2)

Mundic is an old Cornish name for Pyrite (FeS₂)

Fluor = Fluorite (CaF_2)

Needle Cockle = acicular tourmaline

Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock

Cornish Diamonds = transparent quartz crystals (SiO₂) White Growan is a Cornish name for decomposed granite

Elvan is a Cornish name for fine-grained tourmaline-bearing aplite or quartz porphyry

Tin Crystallized notits matrixes 6 14 Brown Jin Cryftallised upon Black Crystallized Fin mixed with small Inar Crystals upon a Stone mixed with Quarts of agnes 6 16 Garnet Crystallized Tin upon a Blue Hvan Stone; Trevenance 617 Very small light brown Crystallized Tin like Needle Points, upon Spar or Quarts, very Uncommon 6 10 Jin with square Columns frystal. : lized upon blue El van Stonen Black Crystallized Jin upon the mundie & Copper or Wheel Margery in black Semitransperent Yellow Jin

Tin Crystallized wth: its Matrixes

- b 14 Brown Tin Crystallised upon
- b 45 Black Crystallized Tin mixed with small Spar Crystals upon a Stone mixed with Quarts. St: Agnes
- b 16 Garnet Crystallized Tin upon a Blue Elvan Stone; Trevenance.
- b 17 Very small light brown Crystallized Tin like Needle Points, upon Spar or Quarts, very Uncommon
- b 18 Tin with square Columns Crystallized upon blue Elvan Stone
- b 19 Black Crystallized Tin upon semi-opake Quartz at the bottom of which the Tin is Crystallized & intermix'd with Wedge shaped Talk
- b 20 Tin Crystallized with Purple and Azure Colour'd Fluor & Quartz from S^t: Agnes
- b 21 Small grain Crystallized Tin Ore with Mundic & Copper Ore from Wheel Margery in black Killas
- b 22 Semitransparent Yellow Tin Ore very Rare upon a very thin Slate Stone

NOTE: Tin = Cassiterite (SnO_2)

Fluor = Fluorite (CaF_2)

Blue Elvan Stone is a Cornish name for fine-grained tourmaline aplite or quartz porphyry Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock

Mundic is an old Cornish name for Pyrite (FeS_2)

24 An Executing Larrorise Frech Tin Ore 6:23 Columns & pointed Firem to tops from Gavregun, the Black Jin intermixed with white Quartz. Black Jin Crystallised upon a grey Fellas from Bream Jin Crystallized upon Blinda 6 Tin Crystallized upon Granate 26 from Beam Crystallized Fin Ore with variega: Threnfriedersdorf in Jaxony 628 Red Crystallized Fin On from intermixed with white Luarte to black matter - very have 29 Crystallezed Jin noth Copyer Ore from d'agnes 30 Black Crystallized Jin On 14 intermented mith White Crys -=tallezed Fluor - Staguels 31 Very Rich Fin in have Hoom from Beautilers Mone.

| 24 | |
|-------|---|
| N٥ | |
| b 23 | An Exceeding Curious Piece of Tin Ore with Crystals having square Columns & pointed Piramid tops from Gavrigan, the Black Tin intermix'd with white Quartz. |
| b 24 | Black Tin Crystallised upon a Grey Killas from Beam |
| b 25 | Tin Crystallized upon Blend from S ^t : Agnes |
| b 26 | Tin Crystallized upon Granate from Beam |
| b 27 | Crystallized Tin Ore with variegated Talc from Ehrenfriedersdorf in Saxony |
| b 28 | Red Crystallized Tin Ore from S^t : Blazie moor, this is intermix'd with white Quartz & a black matter \sim very Rare |
| b 29 | Crystallized Tin with Copper Ore from St: Agnes |
| b 30 | Black Crystallized Tin Ore intermixed with White Crystallized Fluor - S^t : Agnes |
| b 31 | Very Rich Tin in hard Elvan from Bucklers Mine. |
| | |
| NOTE: | Tin = Cassiterite (SnO_2) Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock Blend = Sphalerite (ZnS) Fluor = Fluorite (ZnS_2) Elvan is a Cornish name for fine-grained aplite or quartz porphyry |

Fin said be Nation Stanstell Moor & Styrkins Native I'm a Native Copper in the same Specimen : This was found in Person from whom I received it - my It meh muce of Jun Efellero Comper Ore & Nation Copper from Silyway in Jerran Mil. this is a very revet which shows the Bother Copper to have bun defrotied by some Liquid Minstrum. + then to have been depopeted on the Fin Stone: how it been by Fire the Yellow Copper on the dome Stone would have been changed if not the Fin On-

- f 1 Tin said be Native St: Austell Moor & St: Stephens
- f 2 Native Tin & Native Copper in the same Specimen; this was found in a
- X Cavity of the Load in Crickbraws & brought by the Miner to the Person from whom I received it ~ r r r
- A rich piece of Tin Ore with some Yellow Copper Ore & Native Copper from St: George in Perran Mr T. this is a very rare & Curious Specimen which shows the Copper to have been dissolved by some Liquid Menstruum & then to have been deposited on the Tin Stone: had it been by Fire the Yellow Copper Ore in the same Stone would have been changed if not the Tin Ore ~ r r r

NOTE: Tin = Cassiterite (SnO_2)

Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)

Menstruum - a substance that dissolves a solid or holds it in suspension

Vin Crystalliza I have wer sun from Cornwall Trivarvnance with small in in Clay Fluit Fortune S. Bruge

Tin Crystallized

| No | |
|----|--|
| 32 | A very Rich piece of Tin Ore With one of the Largest Tin Crystals I have |

X ever seen from Cornwall curious for seize & Figure ~ Trevannance ~ with small brown Crystallized Tin Ore on the other side.

33 Tin Crystallized of a Red Colour like Red Silver Ore in White Quartz

X from Ladies Work in St: Mewan.

NB: Some of the Tin Ore found in this work seems as if it was burnt if so, the Tin Ore at Saundrycock which resembles this must have been burnt likewise; but I can see no traces of Fire in either Work \sim

36 Tin in Clay - Huel Fortune St: Breage

Tin Ore in a White Matrix Huel [no name given] near Marazion

NOTE: Tin = Cassiterite (SnO_2)

There is no entry for specimen 34 or 35

A small Love or String out of its A small Love Started or divided by a blue flyan Stime A Load richly impregnated with Fin in its Fifsurk norn according to the distance they have fallen from the Love: Bown & Luxulian Moors commonly calle Bumt Fin-Red Tin Ore from Si austell moor A Congeries of Fin Ore found in St Blazie Mi Tim Ore of a light brown Colores from the Nisophbourhood of Staustell mallgrein Fin One very rich in a Rudish Felices a Quartz from the Park I agnes

थ _{Tin}

- c 1 A small Lode or String out of its Fissure
- c 2 A small Lode Started or divided by a blue Elvan Stone
- c 3 A Lode richly impregnated with Tin in its Fissure
- c 4 Shode Stones with their Angles worn according to the distance they have fallen from the Lode.
- c 5 Rich Tin Ore from St: Austell Down & Luxulian Moors commonly calld Burnt Tin ~
- c 6 Red Tin Ore from St: Austell moor
- c 7 A Congeries of Tin Ore found in St: Blazie Moor ~
- c 8 Tin Ore of a light brown Colour from the Neighbourhood of S^t : Austell r r ~
- c 9 Black Tin Ore in Granate St: Austell Moor –
- c 10 Tin Ore intermix'd with Quartz Cockle & Mica Luxulian
- c 44 Small Grain Tin Ore very rich in a Redish Killas & Quartz from the Park St. Agnes

NOTE: Tin = Cassiterite (SnO_2)

Elvan is a Cornish name for fine-grained aplite or quartz porphyry

Shode Stone - ore weathered from a lode

Congeries comes from the Latin verb congerere, which means "to bring together"

Cockle = tourmaline

Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock

The Very Rich small grains Fin Ore 12 in a grey Stone same Mine as N. 11

24

N∘ 12

Very Rich small graind Tin Ore in a Grey Stone same Mine as N° : 11

NOTE: Tin Ore = Cassiterite (SnO_2)

Fin Wood like Mixed noth Iron Ore dy Tin Mineralized with & commonly call Wood Fin or with Variegated belts Wood Tin with both Walls, uncommon Wood Tin, very searce attracts the magnetical Neutr

Tin, Woodlike - Mixed with Iron Ore

- d-1 Tin Mineralized with Iron commonly calld Wood Tin or Tooth Tin ~
- d 2 Do: Black & Blister'd
- d-3 Do: with Variegated belts
- d 4 Tin Mineralized with Iron of a light brown colour or Wood Tin
- d 5 Wood Tin with both Walls, uncommon from St Stephens
- d 6 Striated Wood Tin, very scarce St: Austell Down
- d.7 Black Solid Woodlike Tin Ore
- d-8 Woodlike Tin with Quartz.
- d 9 Black Solid Woodlike Tin Ore with a segment of light brown Tin Ore from Luxulian ~ r r
- d 10 Dark Brown Wood like Tin Ore with Black belts or Strakes runing round r r ~
- d 11 The largest & most Explicit piece of Woodlike Tin ore I ever saw 11^{oz} : 10^{dr} from the Goss Moor near the 8 Mile Stone ~ r r r ~ This was broke by an Accident & joind ~
- d 12 Tin Ore mix'd with Iron Ore which attracts the Magnetical Needle Ladies Work St: Mewan

NOTE: Wood Tin - a fibrous variety of Cassiterite (SnO₂)

Fragments of Tin Lodo no the Matrixes 23 Fin in Mica & Luartz Luscillian Tin mised with Vermicular From Ore It austill down_ Jin Ore with Mispiekle, Copper Ore, Purple Fluor, & Quartz from Chronfriedersdorf in Saxony— Jin ore mixed with Mundick & Quartz

Fragments of Tin Lods wth the Matrixes

- f 1 Tin in Fluor ~ ~ St: Agnes
- f 2 Tin in Cockle ~ St: Austell moor
- f 3 Tin in Mica & Quartz, Luxillian
- f 4 Tin mix'd with Vermicular Iron Ore St: Austell down ~
- f 5 Tin Ore with Mispickle, Copper Ore, Purple Fluor, & Quartz from Ehrenfriedersdorf in Saxony ~
- f 6 Tin ore mixd with Mundick & Quartz from Lamellin

NOTE: Tin Ore = Cassiterite (SnO_2)

Fluor = Fluorite (CaF_2) Cockle = Tourmaline

Mispickle = Arsenopyrite (FeAsS)

Mundick is an old Cornish name for Pyrite (FeS₂)

I Lead One Crystallized White Crystallized Striated For-: deroils Lead Ore - from Lead

ħ Lead Ore Crystallized

Nο

- White Crystallized Striated Ponderous Lead Ore from Lead Hills 1 N: B: ~
- 2 White Blister'd Lead Ore from Manockhase [Mennock Hass] near Lead Hills ~
- 3 White Crystallized Needle Lead Ore from the Hartz ~
- White Lead Ore shooting in Groups of long Rays in various Directions 4 from Lead Hills N: B. ~
- White Lead Ore with more compact & finer Stria from 5 Wanlockhead N: B: ~
- White Needle Lead Ore of a very loose texture from Lead Hills ~ 6
- 7 White foliated Lead Ore ~
- 8 Crystallized White Lead Ore commonly call'd Horn Lead Ore on Galena from la Croix in Lorrain
- 9 Do: in Iron Ore ~

White Crystallized Lead Ore = Cerussite (PbCO₃)

White Needle Lead Ore = Cerussite (PbCO₃)

Horn Lead Ore = Phosgenite ($Pb_2CO_3Cl_2$)

No White Crytallized Lead Oreform Light Green Crystallized Lead Ore from Wantockheed N.B. -Very fine green Crystallized Lead One growing like mots upon Quarter from Freyburg in While Crystallized Lead Ore upun yalına. Grundrystallized Lead Ore 14 from Dichoppans in Sascony White Nucledead Ore covered not Green Copyer from the Hartz ~ galena with aWhite Crystal: : lized Covering said to be White Lead Ore From Frieburg in Briscan Gellero Lead Ore forming short Hixagenal Cristals truncated at both Ends, Igrowing upon Iron ore , from La Croix in Lorraine White Blisters Leed Ove with a from Wantock head it B:

| ħ | |
|---------------|--|
| <i>N</i> ° 10 | White Crystallized Lead Ore (from the Hartz) upon Iron Ore ~ |
| 11 | Light Green Crystallized Lead Ore from Wanlockhead N. B. ~ |
| 12 | Very fine Green Crystallized Lead Ore growing like Moss upon Quartz from Freyburg in Brisgaw ~ |
| 13 | White Crystallized Needle Lead Ore upon Galena ~ |
| 14 | Green Crystallized Lead Ore from Zschoppau in Saxony ~ |
| 15 | White Needle Lead Ore coverd w th Green Copper from the Hartz ~ |
| 16 | Galena with a White Crystallized Covering said to be White Lead Ore from Frieburg in Briscau |
| 17 | Yellow Lead Ore forming short Hexagonal Crystals truncated at both Ends, growing upon Iron Ore, from La Croix in Lorraine. |
| 18 | White Blisterd Lead Ore with a light Blue Covering of D°: 2 Callamine from Wanlockhead N B: ~ |
| NOTE: | White Crystallized Lead Ore = Cerussite (PbCO ₃) Green Lead Ore = Pyromorphite (Pb ₅ (PO ₄) ₃ Cl) Needle Lead Ore = Cerussite (PbCO ₃) White Blistered Lead Ore = Cerussite (PbCO ₃) Yellow Lead Ore probably = Pyromorphite (Pb ₅ (AsO ₄) ₃ Cl) Calamine = Hemimorphite (Zn ₄ Si ₂ O ₇ (OH) ₂ ·H ₂ O) |

19 White Crystallized Scaly Lead Ore upon Mundie -20 Cubis of Lead intermised with Cubic Fluor from Berlyshire. Lead Ore Cristallized in Firamids
of four Sides intermixed with Mundie upon Fluor -A Cubic Costallized price of Lead Ore upon a Stone covered with Mundie & Fluor from Derbyshire ~ 23 Culie Lead Ori upon White Fluora et very uncommon lrystal of Lead Ore of the Diamond Jigure mil Engstallind impression in thebottomon transparent Fluor Crystallized Wedge shaped Lead Ore with 4 sides thick base & blunt tops Very small amethistine Cubic I'hor with lubes of Lead One & white Cubic Fluor - from Derbyshire -

| ħ | |
|------------------|---|
| <i>N</i> ∘ 19 | White Crystallized Scaly Lead Ore upon Mundic ~ |
| 20 | Cubes of Lead intermixed with Cubic Fluor from Derbyshire ~ |
| 21 | Lead Ore Cristallized in Piramids of four sides intermixed with Mundic upon Fluor ~ |
| 22 | A Cubic Crystallized piece of Lead Ore upon a Stone coverd with Mundic & Fluor from Derbyshire ~ |
| 23 | Cubic Lead Ore upon White Fluor ~ |
| 24 | A very uncommon Crystal of Lead Ore of the Diamond figure upon transparent Cubic Fluor. with Crystalline impression in the bottom ~ |
| 25 | Mundic upon Cubic Lead Ore on transparent Fluor ~ |
| 26 | Crystallized Wedge shaped Lead Ore with 4 sides thick base & blunt tops |
| 27 | Very small Amethistine Cubic Fluor with Cubes of Lead Ore & white Cubic Fluor ~ from Derbyshire ~ |
| | |
| NOTE: | White Crystallized Scaly Lead Ore = Cerussite (PbCO ₃) Mundic is an old Cornish name for Pyrite (FeS ₂) Cubic Lead Ore = Galena (PbS) Fluor = Fluorite (CaF ₂) White Crystallized Lead Ore = Cerussite (PbCO ₃) Wedge shaped Lead Ore = Anglesite (PbSO ₄) |

A Concreted map of Columnas Black Gulena from le Bras Bretagne in France sud 125 Cubic Lead & transparent Cubic Fluer intermixed with each other from Derbyshire Crystallized Lead Ore, intermixed with Fluor having 24 sides; from Derbyshire Currous Crystallized Lead Ore with Constallized Blend and transparent Cubic Fluor from Derbyshire Tiramicreal Crystallizations of of Lead One some of the Crystals partly decomposed, shewing the internel formation; from Gertyshire w. Dogs tooth Spai-++
Inthe trippyplar Base of
Grien Lead Ore hourney 4 sides partly decomposed from Wantockhead Nithisdale A Solid piece of Crystallizer Lead the Tron Ore from Durham Bluck & White Crystallize Galerie

| ħ | |
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| N ∘ 28 | A Concreted mass of Columnar Black Galena from le Bas Bretagne in France ~ see N° 125 |
| 29 | Cubic Lead & transparent Cubic Fluor intermixed with each other from Derbyshire ~ |
| 30 | Crystallized Lead Ore, intermix'd with Fluor having 24 sides; from Derbyshire ~ |
| 31 | Curious Crystallized Lead Ore with Crystallized Blend and transparent Cubic Fluor from Derbyshire ~ |
| 32 | Piramidical Crystallizations of Lead Ore, some of the Crystals partly decomposed or not perfectly formed shewing the internal formation; from Derbyshire. w th Dogs tooth Spar \sim r r w th a triangular Base of |
| 33 | Green Lead Ore having 4 sides partly decomposed from Wanlockhead Nithisdale ~ |
| 34 | A Solid piece of Crystallized Lead Ore |
| 35 | Curious Figured Lead Ore upon Iron Ore from Durham ~ |
| 36 | Black & White Crystallized Galena from Zschoppau |
| NOTE: | Cubic Lead Ore = Galena (PbS) Crystallized Lead Ore = Galena (PbS) Fluor = Fluorite (CaF_2) Blend = Sphalerite (ZnS) Dog-tooth Spar = scalenohedral Calcite ($CaCO_3$) Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3CI$) |

A Beautiful piece of Shining dark bur Lead Ore Crystallisee Grein Crystallized Lead Ore, containing some from upon a Busty Lucktz Stone from Trueboury in Brisean your & White Crystallized Lead Ore with common balina No. galena o Blind both Crystallizo Galena Crystallized in lubes upon Luartz from Freyberg. 42 Tronquelar Crystals of yalina distinct from each other upon Luartz having the Im= : preprious of other Crystals Homorryberg White Crystallized Lead Ore ro with Gron Ore from Harts from Foules ent in Low: Britany from & Blue Leed Ore from Glicks rove in the Hartz vyr hete Lieu Ore with drops of a Rei Brown semetruns perrent Leed or on galina from

| ħ | |
|----|--|
| 37 | A Beautiful piece of Shining dark blue Lead Ore Crystallized ~ 2 if not artificial |
| 38 | Green Crystallized Lead Ore, containing some Iron upon a Rusty Quartz Stone from Freibourg in Briscaw ~ |
| 39 | Green & White Crystallized Lead Ore with common Galena NB \sim |
| 40 | Galena & Blend both Crystalliz'd |
| 41 | Galena Crystallized in Cubes upon Quartz from Freyberg. |
| 42 | Irregular Crystals of Galena distinct from each other upon Quartz having the Impressions of other Crystals from Freyberg |
| 43 | White Crystallized Lead Ore r r with Iron Ore from Hartz |
| 44 | White Crystallized Lead Ore r r with Dentitric Brown Lead Ore in Cavities. from Poulasent in Low: Britany |
| 45 | Green & Blue Crystals of Copper Ore & White Lead Ore from Glucksrood in the Hartz. r r r |
| 46 | White Lead Ore with drops of a Red Brown semi-transparent Lead Ore on Galena from Poulasent in Britany ~ |
| | |
| | |
| | |

NOTE: Green Crystallized Lead Ore = Pyromorphite $(Pb_5(PO4)_3CI)$ Blend = Sphalerite (ZnS)

White Crystallized Lead Ore = Cerussite (PbCO₃)

Dendritic Brown Lead Ore = Pyromorphite ($Pb_5(PO4)_3CI$)

Red Brown semi-transparent Lead Ore = Pyromorphite ($Pb_5(PO4)_3CI$)

| 27 | Crystallized Rie Spector Line |
|-----|--|
| | dre uper a Micaccous Stone |
| | from a Mine near Catherine bury |
| 48 | Spalon Red Lead Ore in Quarte |
| | with Martial Gold Ore from the Gold Mine Beresoviensi near |
| | Catherine bury un White I nous |
| 49 | Catherine bury upon White Street |
| | Wolour 24 Side Spar growing upon the Lead On Desbyshire |
| CA. | pi of 11 of and the way brans |
| 50 | - parent Cubic Fluor - De |
| 51 | Di nith Blindt Cubic transparent Fluor mure distinct - De |
| | Fluir mure distinct - D. |
| 52 | Lad Ore in White Calcarrous I par not Calcarrous transparent 10 Side |
| | Crystale Derbyshere |
| 53 | Lead On with Calcarious 24 Side |
| | ligitals_ L: |
| 54 | L'& Cubic Fluor or Crystal - 20 |
| 55 | Spar of 12 lides impre spottes with |
| / | Murbie _ 1. |
| 30 | crystallized Lead ore upon Lime Stone |
| 57 | Levi Ore Doys tooth Spar & Cubic Must 5 |
| 50 | Level Ore resembling a deaf |
| 60 | Led Ore adhering to a Coleanous ligital |
| | |

| 47 | Crystallized Red Spatose Lead Ore upon a Micaceous Stone from a Mine near Catherinaburg |
|-------|--|
| 48 | Spatose Red Lead Ore in Quartz with Martial Gold Ore from the Gold Mine Berisoviensi near Catherinaburg |
| 49 | Crystallized Lead Ore upon White Spar with Straw Colour 24 sided Spar growing upon the Lead Ore Derbyshire |
| 50 | Crystallized Lead Ore with very transparent Cubic Fluor ~ Do: |
| 51 | Do: with Blend & small Cubic transparent Fluor more distinct \sim Do: |
| 52 | Lead Ore in White Calcareous Spar w th calcareous transparent 18 sided Crystals Derbyshire |
| 53 | Lead Ore with Calcareous 24 sided Crystals ~ D°: |
| 54 | Do: & Cubic Fluor or Crystal ~ Do: |
| 55 | Lead Ore with transparent Calcareous Spar of 12 sides spotted with Mundic \sim D $^{\circ}$: |
| 56 | Crystallized Lead Ore upon Lime Stone with Dogs tooth Spar Do: |
| 57 | Lead Ore Dogs tooth Spar & Cubic Fluor ~ Do: |
| 58 | Lead Ore adhering to a Screw Stone ~ D°: |
| 59 | Lead Ore resembling a Leaf ~ D°: |
| 60 | Lead Ore adhering to a Calcareous Crystal |
| NOTE: | Red Spatose Lead Ore = Crocoite (PbCrO ₄) Crystallized Lead Ore = Galena (PbS) Fluor = Fluorite (CaF ₂) Mundic is an old Cornish name for Pyrite (FeS ₂) White Calcareous Spar = Calcite (CaCO ₃) Dogs Tooth Spar = scalenohedral Calcite (CaCO ₃) Screw Stone = crinoidal limestone |

abi hickly untaining Silver from West Lotholan ~ a 2 Lead Ore intermixed with White Quartz-West Lothian-Galena encompassed with a Green kind of Vitriels in Quartz from Wandockheed a 4 yellow Lead Ore from Clyodale Wantockheed White Solid Lead Ove with some Black Lead or yalina from Crunford Mine Stul Grain's Lead Ore contain: ing Silver from Lead Hills Stul Graind Lead Ore contain: : ing 33 Oz: of Silver in 100 th of Ore from a Mine near Exetela & grun Lead Ore from Lead Hills a 9 Lead One from Freyberg a 10 Dilver from Saxony all in veins through white Spar from

| ħ | |
|------|---|
| a 61 | Lead Ore (& Cobalt or Copper Nickle) containing Silver from West Lothian ~ |
| a 2 | Lead Ore intermixed with White Quartz - West Lothian ~ |
| 63 | Galena encompassed with a Green kind of Vitriol in Quartz from Wanlockhead |
| a 4 | Yellow Lead Ore from Clysdale Wanlockhead |
| a 5 | White Solid Lead Ore with some Black Lead or Galena from Crawford Mine |
| a 6 | Steel Grain'd Lead Ore containing Silver from Lead Hills ~ |
| a 7 | Steel Grain'd Lead Ore containing 33 Oz: of Silver in 100 lb of Ore from a Mine near Exeter ~ |
| a 8 | Green Lead Ore from Lead Hills |
| a 9 | Lead Ore from Freyberg |
| a 10 | Do: in shorter grains containing Silver from Saxony |
| a 11 | Lead Ore containing Silver runing in Veins through white Spar, from the Old Silver Mine in West Lothian ~ |
| | |

NOTE: Green Vitriol = iron sulphate heptahydrate (FeSO₄·xH₂O) Yellow Lead Ore probably = Anglesite (PbSO₄) Green Lead Ore = Pyromorphite (Pb₅(PO₄)₃Cl) Steel Grained Lead Ore = Galena (PbS)

Lead One with brown Spatose Inn a 13 Lead Or Rich in Silver Calcarious Spar Lead Ore & brinon alternately in A14 an Oval figure a 15 Small Grain'd Lead One & White a 16 Two Specimens containing Virgin any Lead Ore in a Yellow Clay 18 Jalina & Rid Cala of Copper in While Prosper ajg Leas Ore in Sand Store, Lorraine ago Leur Ore of a Tracock Colour from Weigher -21 Galina in Red Horn Stone from Solid White Lead Ore a 23 Lookinglas Lead Or - Hartz a 24 White Lead ore from Briscan. 85 Lead Ove & Copper Ove alternate in Strings or Viens which are seperated which are seperated which care from the flast

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|------|---|
| a 72 | Lead Ore with brown Spatose Iron Ore |
| a 13 | Lead Ore rich in Silver |
| a 14 | Calcareous Spar Lead Ore & brown [space left for mineral name] Alternately in an Oval figure ~ |
| a 15 | Small Grain'd Lead Ore & White Quartz intermix'd |
| a 16 | Two Specimens containing Virgin Lead from Peebleshire |
| a 17 | Lead Ore in a Yellow Clay |
| 78 | Galena & Red Calx of Copper in white Quartz from Wheel Prosper |
| a 19 | Lead Ore in Sand Stone, Lorraine |
| a 80 | Lead Ore of a Peacock Colour from Weyher ~ |
| a 21 | Galena in Red Horn Stone from Johngeorgenstadt |
| a 82 | Solid White Lead Ore ~ |
| a 23 | Lookinglass Lead Ore - Hartz |
| a 24 | White Lead Ore from Briscau. |
| 85 | Lead Ore & Copper Ore alternate in Strings or Veins which are separated which are separated by a White Calcareous Spar from the Hartz ~ |
| | |

NOTE: Brown Spatose Iron Ore = Siderite (FeCO₃)
Lead Ore = Galena (PbS)
Calcareous Spar = Calcite (CaCO₃)
Red Horn Stone = Jasper, a variety of quartz (SiO₂)
Virgin Lead = Native Lead (Pb)
Red Calx of Copper = Cuprite (CuO)
Solid White Lead Ore = Cerussite (PbCO₃)

The Lead On ob White Crystallize Leed Ore sprinkled like sand with freen Lead on & Quarts 87 your Crystallized Lead ore 08 your Crystals of Lead Ore with the liges broke & hollow - Briseau Ingling . 9 Grun transparent Crystals of Lead Orl D. 90 White Lead Ore north blue Crystallized Copper one or Lagues Lazule from Wantockhead Scotland 91 Dark Grun Lead Ore, Flintshire 92 Hom Live Ore upon Caulo Balls with Galina - Derbyshire -93 White Needle Lead Ore upon Quarte -94 White or Horn Lead ove north Galina 95 White Lead Ore with derk blue smell Crystals of Copper Ore - Hartz 96 Grun Lead Ore Crystallisse upon Mamilated 97 Needle Lead in a Muss of long Crystals alston Mour Cumberland al Longly head near youts thell 98 Leed Ore in small Cubre Crystals howing a formation in the lenter with the side of the square purrarel to the external angle apor White latearcour Spad -39 Lead ove with Streated Sparry Gypsum Harte 100 Torregular Enjotals of Leas Ore upon Crystalli-: de directo

| 'n | Lead Ore |
|----------|--|
| n° 86 | White Crystallized Lead Ore sprinkled like sand with Green Lead Ore & Quartz |
| 37 | Green Crystallized Lead Ore |
| 38 | Green Crystals of Lead Ore with the tops broke & hollow - Briscau Freyberg |
| 39 | Green transparent Crystals of Lead Ore; Do: |
| 90 | White Lead Ore with blue Crystallized Copper Ore or Lapis Lazuli from Wanlockhead Scotland |
| 91 | Dark Green Lead Ore, Flintshire |
| 92 | Horn Lead Ore upon Cauld Balls with Galena ~ Derbyshire ~ |
| 93 | White Needle Lead Ore upon Quartz ~ |
| 94 | White or Horn Lead with Galena from a mine near Keswick Cumberland |
| 95 | White Lead Ore with dark blue small crystals of Copper Ore ~ Hartz |
| 96 | Green Lead Ore Crystallized upon Mamilated Ochry Iron Ore & this upon Quartz Lorraine |
| 97 | Needle Lead in a Mass of long Crystals Alston Moor Cumberland - at Langty head near Gross Hill [Cross Gill?] |
| 98 | Lead Ore in small Cubic Crystals having a formation in the Center with the side of the square parrarel to the external Angle - upon White Calcareous Spar ~ Derbyshire |
| 99 | Lead Ore with Striated Sparry Gypsum Hartz |
| 100 | Irregular Crystals of Lead Ore upon Crystallized Quarts [Saxony?] |

Repeated page

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To Lead On
of White Constallize Leed Ore sprinkled like send with your Lead or & Quarts
87 your Crystallized Ladore
00 your Crystals of Lead Ore with the leges
      broke a hollow - Briseau Ingling
. 29 Grun transparent Crystals of Leabort Do
90 White Lead Ore with blue Crystallized
     Conguer one or Lapis descule from
       Wantockhead Scotland
91 Dark Grun Lead Ore, Flintshire
    Hom Level Ore upon Cauld Balls with
      Galina - Derbyshire -
93 While Needle Lead Ore upon Quarte -
94 White or Hom Lead ore north Galence
      from a Mine near Fresnick lumberland
95 White Lead Ore with Dark blue small
       Crystals of Copper Ore - Hartz
96 grun Lead Ore Crystallisie upon Mamilated
97 New Lead in a Muss of long Cristals alsten Mour Cumberland at Longty head news gross Hill -
98 Lead Ore in small Cubic Bristals howing a formation in the linter north the side
     of the square parrarel to the external angle - upon White labourous Sport
99 Lead the with Streated Sparry Gypsum Hart
100 Trongulus Crystals of Lead Ore upon Crystalli-
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Lead Ore (continued)

NOTE: White Crystallized Lead Ore = Cerussite (PbCO₃)

Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3CI$)

Cauld Balls probably = Baryte (BaSO₄) Horn Lead Ore = Phosgenite (Pb₂CO₃Cl₂)

Mamilated Ochry Iron Ore probably = Goethite (FeO(OH))

Needle Lead = Cerussite ($PbCO_3$) Calcareous Spar = Calcite ($CaCO_3$)

In Lead Ore 101 A Crystal of Lead Ore upon trans = : planent Cubic Fluor Crystallized Lead Ore of a Rainbow Colour Inthe Blend Cubic Fluor o Calcarrous Crystallized Spar- Derbyshire Ingstallized Lead Ore spotted like Sand 104 Engstallise Lead Ore with Mundie & Mubic Fluor upon Brack 105 Thining Crystallizer o Side Leav Ore upon Calie Fluor & Line Stone Derbys. 106 Frigalas Engstallized Lead Ore with Toy Right Sides Crystals of Lead Ore wire with purple minute Cubic Fluor & very bright small Cubic White Fluor on the other side - r.r.V. too Crystallized Lead Ore sported with minute Purple Cubic Fluor with get : low Cubic Fluor & Dogs tooth Spots; Der 109 Bright Octoid val Crystals of Lead on 110 Dinth truncatio tops - 20 111- Di with a very broad truncated top I I. The tops currously Crystalized like points standing innerds from each edge Derbyshire - 1. 1. 1.

| ħ | Lead Ore |
|----------------|--|
| 101 | A Crystal of Lead Ore upon transparent Cubic Fluor |
| 102 | Crystallized Lead Ore of a Rainbow Colour with Blend Cubic Fluor & Calcareous Crystallized Spar ~ Derbyshire |
| 103 | Crystallized Lead Ore spotted like Sand upon Cubic Fluor with Lime Stone |
| 104 | Crystallized Lead Ore with Mundic & Cubic Fluor upon Black |
| 105 | Shining Crystallized 8 sided Lead Ore upon Cubic Fluor & Lime Stone Derbys. |
| 106 | Irregular Crystallized Lead Ore with Crystallized Blend ~ Do: |
| 107 | Eight Sided Crystals of Lead Ore coverd with purple minute Cubic Fluor & very bright small Cubic White Fluor on the other side ~ r.r.r. |
| 108 | Crystallized Lead Ore spotted with minute Purple Cubic Fluor with yellow Cubic Fluor & Dogs tooth Spar; Der r r r |
| 109 | Bright Octoëdral Crystals of Lead ore with transparent Cubic Fluor, Der. r r |
| 110 | D°: with truncated tops ~ D°: |
| 111 | Do: with a very broad truncated top Do: rrr |
| 112 | Do: the tops curiously Crystalized like the points of many Spears all the points standing inwards from each edge \sim Derbyshire \sim r.r.r. |
| NOTE: | Crystallized Lead Ore = Galena (PbS) Fluor = Fluorite (CaF ₂) Blend = Sphalerite (ZnS) Calcareous Crystallized Spar = Calcite (CaCO ₃) Mundic is an old Cornish name for Pyrite (FeS ₂) Dogs Tooth Spar = scalenohedral Calcite (CaCO ₃) Octoëdral Crystals of Lead Ore = Galena (PbS) |

Lead Ore with small Mamillater White Cank & small A Cavernous Mals of White Quarte with a bed of Luartz - Sazony the corner of the angles Fre cated mix'd with small Kulie Feluor upon White Calcarcous Spar texture Derbyshire

ħ Lead Ore 113 Crystallized Lead Ore with small Mamillated White Cauk & small transparent Cubic Fluor on Lime stone ~ Derbyshire, Wirksworth. A Cavernous Mass of Crystallized Lead Ore with 24 sided Fluor; D_{\circ} Crystallized Lead Ore upon Crystallized White Quartz with a bed 115 of brown Quartz ~ Saxony Crystallized Lead like small Cubes with the corner of the Angles 116 Truncated mix'd with small Cubic Fluor upon White Calcareous Spar of a Striated texture Derbyshire r.r. Large Crystals of Lead Ore with Cubic Fluor & Mundic Do: 117 A Mass of Crystallized Lead Ore with square tops the Edges of which 118 are smooth & the Centers as if indented with fine sand upon small Cubic Fluor & Lime stone - Do: r r A fine Group of 8 Sided large Crystals of Lead Ore with truncated 119 points & a beautiful Rainbow Colour: Do: ~ r.r.r. A rare piece of Lead Ore with large bright Crystals of 8 Sides & 120 truncated tops, standing far advanced from their Bed of Cubic Fluor spotted with Blend or Zinck Ore Do: r.r.r. NOTE: Crystallized Lead Ore = Galena (PbS) Mamillated White Cauk = Baryte (BaSO₄) Fluor = Fluorite (CaF_2) White Calcareous Spar = Calcite (CaCO₃) Mundic is an old Cornish name for Pyrite (FeS₂) Blend = Sphalerite (ZnS)

Lead Ore Large Crystals of Cubic Lead Ore their Bidle abie Fluor - 2: 1. r. r. Large o Side Crystals with truncat. Mundie - Dir. r.r. 123 A Map of Crystallized Lead One Crajstallineo Blind or Line Ore with transparent Cubic Fluor 9: rr Crystals of Lead Ore with Purple 125. While Lead Ore Decomposed & charges into Galina in Hixangulas Prisms nearly round with truncuted tops from Souleasent in Lower Britary 126 Green Crystallezed Lead Ore on the Jurface from a Mine near the Low Wool Perron - the Vilver pro-: Duce from the Lead in this Mine is said to be 10-02- in 100 thef Ore Grun Crystallized Lead Ore in a Stone like Calamine - from &! 128 SolidWhite Lead Ore - Derbyshere

| ħ | Lead Ore |
|----------------------|--|
| N° 121 | Large Crystals of Cubic Lead Ore projecting about an Inch from their Bed of Cubic Fluor \sim D \circ : r.r.r. |
| 122 | Large 8 Sided Crystals with truncated tops upon Cubic Fluor spotted wth Mundic \sim Do: r.r.r. |
| 123 | A Mass of Crystallized Lead Ore Crystallized Blend or Zinc Ore with transparent Cubic Fluor Do: r r |
| 124 | Crystals of Lead Ore with Purple Cubic Fluor & White Crystallized Quartz |
| 125 | White Lead Ore Decomposed & changed into Galena in Hexangular Prisms nearly round with truncated tops from Pouleasent in Lower Brittany ~ r r r |
| 126 | Green Crystallized Lead Ore on the Surface from a Mine near the Loe Pool Penrose ~ the Silver produced from the Lead in this Mine is said to be 10-oz. in the 100 lb of Ore. |
| 127 | Green Crystallized Lead Ore in a Stone like Calamine ~ from D°: |
| 128 | Solid White Lead Ore ~ Derbyshire |
| | |
| NOTE: | Cubic Lead Ore = Galena (PbS) Fluor = Fluorite (CaF ₂) Mundic is an old Cornish name for Pyrite (FeS ₂) Blend = Sphalerite (ZnS) Green Lead Ore = Pyromorphite (Pb ₅ (PO ₄) ₃ Cl) Solid White Lead Ore = Cerussite (PbCO ₃) |

No, Virgin Copper intermixed with Bright Virgin Copper rising in in small Globules mixed with White Quartz, Cornwall Virgin Copper in form of the Root of a Free, works Fritchen Cornwall & Toliated Virgin Copper, from Sa Crystallized Virgin Copper, Dentritical Virgin Copper, So * Massy Virgin Copper intermixed, from Mullion Cornwall Fine Capillary Virgin Copper, Woolly Virgin Copper, from Wheel Prosper - Cornwalla Hoolly Virgin Copper with small Mily Coloured Crystals of Copper intermised, from De

Copper No 1 Virgin Copper intermix'd with Quartz Cornwall 2 Bright Virgin Copper rising in small Globules mixed with White Quartz, Cornwall Virgin Copper in form of the Root of a Tree, Cooks Kitchen Cornwall 4 Foliated Virgin Copper, from Do: 5 Crystallized Virgin Copper, Cornwall ~ Dendritical Virgin Copper, Do: Massy Virgin Copper intermix'd with Native blue Vitriol, from Mullion 7 Cornwall ~ 8 Fine Capillary Virgin Copper, from Cooks Kitchen ~ Woolly Virgin Copper, from Wheel Prosper ~ Cornwall ~ 9 10 Woolly Virgin Copper with small Ruby Garnet Colour'd Crystals of Copper intermix'd, from Do: ~ Virgin Copper = Native Copper (Cu) Blue Vitriol = Chalcanthite (CuSO₄·5H₂O)

Virgin Copper resembling Tilagree work in this pletes Cornwall Crystallized Glas Copper Ore not very fine bright Red Papulo of What Prosper in Comwall: This is the finest pice of Cops : per one I have yet seen Swired Different Specimens : le 280 upon different grid Crystallined Copper Ore Wheel Fortune Cornwall White Nudle Lead On Crystalli: from Glucks Rate near Zellet:
fild upon the Hartz Proved. Fine Green Radiated Sattin Copper Ord, from the Past Indies, given me by "M" Seymer -

우

- 11 Virgin Copper resembling Filagree work in thin plates Cornwall
- 12 Crystallized Glass Copper Ore wth very fine bright Red Papulæ of D°: on White Quartz, from Wheel Prosper in Cornwall: This is the finest piece of Copper Ore I have yet seen ~
- 13 Several different Specimens of Glass Copper Ore Crystallized upon different Matrixes from Do: ~
- 14 Grey Crystallized Copper Ore from Do: uncommon ~
- 15 Malachites Copper Ore, from Wheel Fortune Cornwall ~
- Velvet Green Copper Ore with White Needle Lead Ore Crystallized upon it, upon White Quartz from Glucks Rade near Zellerfeld upon the Hartz ~ Proved.
- 17 Fine Green Radiated Sattin Copper Ore, from the East Indies, given me by Mr: Seymer ~

NOTE: Virgin Copper = Native Copper (Cu)

Glass Copper Ore = Cuprite (Cu₂O)

Velvet Green Copper Ore = Malachite $Cu_2(CO_3)(OH)_2$

Velout Green Copper Ore in form of Stalactitis deposited upon White Noich Lead Ore, from the Hartz: a very rare and Curious Specimen ~ Frove. Copper Ore with fine Raviant Velout Copper Green & Hellow Iron ore from Gottes Grade near factfeld in Thuringias Radiant'& Milden Copper Gran with some Soled Copper One & broson from Ore from Mary-Magdalin Mini Voigland 21 Malleable Copper in Fron Ore Liver Copper Ore north Changeable Volvet Copper Glass of a fine blue from the Hartz Rich Copper Ore with speeks of Virgin Copper, Sensilvania Dentritical Copper Ore with White Spatose From Ore from a place near the Rhein not for from Birna

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| <i>N</i> ∘ 18 | Velvet Green Copper Ore in form of Stalactites deposited upon White Needle Lead Ore, from the Hartz: a very rare and curious Specimen ~ Proved. |
| 19 | Copper Ore with fine Radiant Velvet Copper Green & Yellow Iron Ore from Gottes Grade near Saalfeld in Thuringia ~ |
| 20 | Radiant & Mildew Copper Green with some Solid Copper Ore & brown Iron Ore from Mary Magdalen Mine Voigtland ~ |
| 21 | Malleable Copper in Iron Ore ~ |
| 22 | Liver Copper Ore with Changeable Velvet Copper Glass of a fine blue from the Hartz ~ |
| 23 | Rich Copper Ore with specks of Virgin Copper, Pensilvania |
| 24 | Dendritical Copper Ore with White Spatose Iron Ore from a place near the Rhein not far from Kirn ~ |

NOTE: Velvet Green Copper Ore = Malachite Cu₂(CO₃)(OH)₂
White Needle Lead Ore = Cerussite (PbCO₃)
Radiant & Mildew Copper Green probably = Malachite Cu₂(CO₃)(OH)₂
Malleable Copper = Native Copper (Cu)
Liver Copper Ore = Bornite (Cu₅FeS₄)

Virgin Copper from Wheel Cock in 26 Capper On with Cobalt Efflores = 27 Rainbow Copper Ore from f. Justa 20 apper ore, & Quartz of various Colours Crystallized thereon from It fast 29 Calcedony Copper Ore from Commodela 30 Di various from Da Copper intimately Spotted with Blister Flint from Reskear 32 Copper intermixed with Hint De Yellow Copper Ore with Crystalli-zed Blend in the middle of it near Redruth A Stone where most of the Copper has been decomposed & Quartz Crystallized in its place from Wheel wek It Just

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|-----------------------------|---|
| N ∘ 25 | Virgin Copper from Wheel Cock in St: Just ~ Cornwall ~ |
| 26 | Copper Ore with Cobalt Efflorescences from Saxony |
| 27 | Rainbow Copper Ore from St: Just |
| 28 | A Stone with the bottom Yellow Copper Ore, & Quartz of various Colours Crystallized thereon from St: Just |
| 29 | Calcedony Copper Ore from Camborn Cornwall ~ |
| 30 | Do: various from Do: ~ |
| 31 | Copper intimately Spotted with Blisterd Flint from Reskear ~ |
| 32 | Copper intermixed with Flint Do: ~ |
| 33 | Yellow Copper Ore with Crystallized Blend in the middle of it near Redruth |
| 34 | A Stone where must of the Copper has been decomposed & Quartz Crystallized in its place from Wheel Cock S ^t : Just |
| NOTE: | Virgin Copper = Native Copper (Cu) Rainbow Copper Ore = Bornite (Cu_5FeS_4) Yellow Copper Ore = Chalcopyrite ($CuFeS_2$) Blend = Sphalerite (ZnS) |

To Copper Ore from N. america 36 Copper & Blend intermised with with White Crystals of Quarter Camborn 37 Grey Copper Ore from Wheel Quick in It Dye very Rich 30 Copper Ore with Native Vitriel 39 Virgin this Mine in the year 1757 produced 15300£ Sterling Value in 37 Days & raised for less than 4 pince in the fa 40 Yellow Blistere Copper Ore from Bullen Gerden Cornwall 41 Blue De from De coutes upon 42 De with higher Blisters & more of a Reighborn shade 14/4 Copper Ore with Garnets contains :

= ing From from a Mine call of Simon Jude new Dagnaska in Temeswar

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|------------------|--|
| N º 35 | Copper Ore from N: America |
| 36 | Copper & Blend intermix'd with cover'd with White Crystals of Quartz ~ Camborn ~ |
| 37 | Grey Copper Ore from Wheel Quick in St Dye very Rich ~ |
| 38 | Copper Ore with Native Vitriol from Pednandrea ~ |
| 39 | Yellow Copper Ore from Wheel Virgin. this Mine in the Year 1757 produced 15300£ Sterling Value in 37 Days & raised it for less than 4 pence in the £ \sim |
| 40 | Yellowed Blister'd Copper Ore from Bullen Garden Cornwall ~ |
| 41 | Blue Do: from Do: coated upon Yellow Copper Ore ~ |
| 42 | Do: with higher Blisters & more of a Rainbow shade |
| 43 | Fine Red Do: |
| 44 | Copper Ore with Garnets containing Iron from a Mine calld Simon Juda near Dagnaska in Temesvar |
| NOTE: | Blend = Sphalerite (ZnS) Grey Copper Ore = Chalcocite (Cu ₂ S)or Tetrahedrite (Cu ₁₂ Sb ₄ S ₁₃) Native Vitriol = Chalcanthite (CuSO ₄ ·5H ₂ O) Yellow Copper Ore = Chalcopyrite (CuFeS ₂) Blistered Copper Ore = Chalcopyrite (CuFeS ₂) |

I Black Copper Ore from Wheel 45 Fortune in Silbreage 46 Fini Coloure Coute Copper from 27 Yellow Copper Ore spotted in Flint giving fire with Steel from haskeds Nation Copper with Red Crystal. : lezer Copper Ore upon white Quarte from Whiel Trooper Bright Crystallezed Copper Ore of a dark yarnet Colour near Black from Wheel Fortune in graneer. rrr 50 Crystallized Copyer On in Ochy Tyofran from Refort addit 51 Octordical Crystals of Red Copper on with some of the angles Frunreated from Whal Prosper TVT 39 Red Calse of Copper with Galena upon White Luartz from Do Red Calse of Copper with Crystal : lize Luartz from De Yellow Copper Ore & Crystals of Copper on upon Crystallined Lucas from Reskect

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|-------|--|
| 45 | Black Copper Ore from Wheel Fortune in St: Breage |
| 46 | Fine Colourd Coated Copper from Bullen Garden |
| 47 | Yellow Copper Ore spotted on Flint giving fire with Steel from Roskear |
| 48 | Native Copper with Red Crystallized Copper Ore upon white Quartz from Wheel Prosper ~ |
| 49 | Bright Crystallized Copper Ore of a dark Garnet Colour near Black from Wheel Fortune in Gwinear. r r r |
| 50 | Crystallized Copper Ore in Ochry Gossan from Kessel addit |
| 51 | Octoedrical Crystals of Red Copper Ore with some of the Angles Truncated from Wheel Prosper r r r |
| 52 | Red Calx of Copper with Galena upon White Quartz from Do: \sim |
| 53 | Red Calx of Copper with Crystallized Quartz from Do: |
| 54 | Yellow Copper Ore & Crystals of Copper Ore upon Crystallized Quartz from Reskear |
| NOTE: | Specimens 48 & 53 are crossed out rather than struck out Black Copper Ore = Tenorite (CuO) of Chalcocite (Cu ₂ S) Yellow Copper Ore = Chalcopyrite (CuFeS ₂) Red Copper Ore = Cuprite (CuO ₂) Red Calx of Copper = Cuprite (CuO ₂) Bright Crystallized Copper Ore = Cuprite (CuO ₂) |

4 Copper Ore 35 Vitrol of Copper or Mulachites Frestle addit 56 Yellow Crystallized Copper Ore with White Cubic Fluor and Lucitz - Saxony 57 Brufs Colourd Copper Ore with a Shining dusty surface 58 Di with a smooth Surface 59 Dontha very bright Surface from Bullen Gerden bo Do with Do x a bright her Surface from Dil 61 Di with fine Blue smell Blisters from Do 62 Bliter Copper Oves of various bright lowers from De 63 Yellow Copper Ore with Mundie resembling Brush Iron Ore from Poldice 64 Stricted green Satten Copper Ore with yellow Congres ore from

| <u>우</u> | Copper Ore |
|----------|---|
| nº 55 | Vitriol of Copper or Malachites & Red Calx of Copper from Kestle addit |
| 56 | Yellow Crystallized Copper Ore with White Cubic Fluor and Quartz ~ Saxony ~ |
| 57 | Brass Colourd Copper Ore with a Shining dusty surface ~ |
| 58 | Do: with a smooth Surface |
| 59 | Do: with a very bright Surface from Bullen Garden |
| 60 | Do: with Do: & a bright Red Surface from Do: |
| 61 | Do: with fine Blue small Blisters from Do: |
| 62 | Blister'd Copper Ores of with various bright Colours of Mundic from Do: |
| 63 | Yellow Copper Ore with Mundic resembling Brush Iron Ore from Poldice |
| 64 | Striated Green Sattin Copper Ore with Yellow Copper Ore from Rhine Brielbach near Cologne |
| NOTE: | Red Calx of Copper = Cuprite (CuO ₂) Yellow Copper Ore = Chalcopyrite (CuFeS ₂) |
| | Fluor = Fluorite (CaF_2) Mundic is an old Cornish name for Pyrite (FeS_2) Striated Green Satin Copper Ore is probably = Malachite $Cu_2(CO_3)(OH)_2$ or Pseudomalachite ($Cu_5(PO_4)_2(OH)_4$) |

Copper Ore frun Copper Ore in Thin foliation plates like several pieces of Paper crumpled together from Lorraine Copper On with blue Efflores-Grun Malachites D Grun & Blue De Transilvania Blue Crystallized Copper One in an Ochry Fron Stone. Do Blue Crystallized Copper Ore upon Liver Coloure Fitch Copper Ore from Transilvania -rr Native Compreh from Camsdorf. Green & Blue Veacock Copper Ore in pule yeller Quarte, from the Startz, rr Souther with Grun Crystalliza: 75 L'entritical Copper Ore from Hartz

Copper Ore no Green Copper Ore in thin foliated plates like several pieces of Paper 65 crumpled together from Lorraine Copper Ore with blue Efflorescence from Lorraine Green Malachites ~ Hungary 67 68 Solid Green Stalactite Malachites Do: 69 Green & Blue Do: Transilvania r r Blue Crystallized Copper Ore in an Ochry Iron Stone. Do: 70 Blue Crystallized Copper Ore upon Liver Colourd Pitch Copper Ore 71 from Transilvania ~ r r 72 Native Copper Polish'd from Camsdorf. Green & Blue Peacock Copper Ore in pale Yellow Quartz, from the 73 Hartz, r r Yellow Copper Ore intimately Spotted with Green Crystallizations 74 of Copper r r 75 **Dentritical Copper Ore from Hartz** Blue Crystallized Copper Ore = Azurite $(Cu_3(CuO_3)_2(OH)_2)$ Green & Blue Peacock Copper Ore probably = Bornite (Cu₅FeS₄) Yellow Copper Ore = Chalcopyrite (CuFeS₂)

Copper Ore Blue Copper Ore with Quartz from Jurstenberg Plate Malachites from the Mine Gumeschefsker Russia Solid hard Malachites incrus: : tated with from one Dorry Velvet Grun Blister Malachites from Di Kr.r. DO Blister Malachites like Worm-- Costs with a small hole in each tuberele, & impressions of Crystals on the under side 01 Dark Grun Malachites will Imboth Shining Blisters: D. 82 Tolish & Malachites - D: 83 Blackish Grey Conner Ore with Pyrites & Stricted Sattin Green 04 Wood Minerallered with Copper 85 Blue Culse of Copper Caruleum montanum . Prufrie .

| 우 | Copper Ore |
|----------|---|
| nº 76 | Blue Copper Ore with Quartz from Furstenberg ~ |
| 77 | Plated Malachites from the Mine Gumeschefskoi Russia |
| 78 | Solid hard Malachites incrustated with Iron Ore Do: rrr |
| 79 | Velvet Green Blister'd Malachites from Do: r.r.r. |
| 80 | Blisterd Malachites like Worm-Casts with a small hole in each tubercle, & impressions of Crystals on the underside from D°: |
| 81 | Dark Green Malachites with smooth Shining Blisters: Do: |
| 82 | Polishd Malachites ~ Do: |
| 83 | Blackish Grey Copper Ore with Pyrites & Striated Sattin Green Russia |
| 84 | Wood Minerallized with Copper Russia ~ |
| 85 | Blue Calx of Copper Coeruleum Montanum ~ Russia. |
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NOTE: Blue Calx of Copper Coeruleum Montanum = Azurite (Cu₃(CuO₃)₂(OH)₂)

Copper Ore ob Wood Mererallized with Corner in Just with Variegated Faris : sontal Stria. Formio Ruples By Variegate Copper Ore no the Syntis in Lucertr Vertzen Rupian 88 Very hich Cala of Corner partly Crystallized with Apllow and Plue Ocher of Copper from Bustle addit 89 Blue & Black Copper Ore from mi Branchamp go Clay hardend with Copper & Crys: Hallizo Glas Copies Ore from The Mine yumeschefoker Rufse I' Ru hardend Ocher of Copper with tender Crystals of bright Red Copper One - 20 Mafry Virgin Copper- Cooks Fritchen_ L' Crystalleres - 20 and Company on & Least on in Luaste from Copper one in a group of small globular figures of a Stricted black your lo-: low on the inside with a lovering of Green from Middleton Typas yorkthe

| 우 | Copper Ore |
|------------------|--|
| N ∘ 86 | Wood Minerallized with Copper in Sand with Variegated Horizontal Striæ Permia. Russ Cat 3b ~ |
| 87 | Variegated Copper Ore with Pyrites in Quartz Voitzen Russia ~ |
| 88 | Very Rich Calx of Copper partly Crystallized with Yellow and Blue Ocher of Copper from Kestle addit ~ |
| 89 | Blue & Black Copper Ore from Mr: Beauchamp |
| 90 | Clay hardend with Copper & Crystalliz'd Glass Copper Ore from the Mine Gumeschefskoi, Russia |
| 91 | Red hardend Ocher of Copper with tender Crystals of bright Red Copper Ore ~ D°: |
| 92 | Massy Virgin Copper ~ Cooks Kitchen ~ |
| 93 | Do: Crystallized ~ Do: |
| 94 | Lead Copper Ore & Lead Ore in Quartz from Wheel Prosper |
| 94 | Copper Ore in a Group of small globular figures of a Striated black Green Colour on the inside with a Covering of Green from Middleton Tyas Yorkshire |
| | |
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| | |
| | |
| NOTE: | Variegated Copper Ore = Bornite (Cu_5FeS_4) Calx of Copper = Cuprite (CuO_2) Glass Copper Ore = Cuprite (CuO_2) Red Ocher of Copper = Cuprite (CuO_2) Virgin Copper = Native Copper (Cu) |

Copper Ore 95 Malachites, the Green intermixed with Black Shiring Copper ore from Finneberg near the Rhine daminated Malachites from Siberia Copper One with Green Velet Malachites 90 A brantiful pick of Storlactite Malas. : chites - Siberice _ 99 Blister Malachites - Do 100 A Group of triangular Crystallized Copper One Willing about I of Mettal, from J. Clopnes 101 D'intermiged noth Hexangular 102 Blue & Green Copper Ore in White 103 Copper Ore with small blue Crystals from Cooks Kitchen

Y Copper Ore 95 Malachites, the Green intermixed with Black Shining Copper Ore from

- 95 Malachites, the Green intermixed with Black Shining Copper Ore from Finneberg near the Rhine
- 96 Laminated Malachites from Siberia
- 97 Copper Ore with Green Velvet Malachites from Hungary ~
- 98 A beautiful piece of Stalactite Malachites ~ Siberia ~
- 99 Blisterd Malachites ~ Do:
- 100 A Group of triangular Crystallized Copper Ore Yielding about ¼ of Mettal, from S^t: Agnes ~
- 101 Do: intermixed with Hexangular Crystal ~ from Do:
- 102 Blue & Green Copper Ore in White [name missing] from Cooks Kitchen
- 103 Copper Ore with small blue Crystals from Cooks Kitchen ~

NOTE: Blue Copper Ore = Azurite $(Cu_3(CuO_3)_2(OH)_2)$

Triangular crystallised copper ore = Chalcopyrite (CuFeS₂)

Wedge Iron Ore Derlyshire Black Homalites Iron Ore forming Vegitations, from Eyberstock Fine black Crystallized From Ore mixt with Hexagonal Crystals, from the Isle of Elba in Italya Stalactical Iron Or , from S! Fridney Iron Ore, White Spat with a Constation of From Ore resembling small maggits or Carterpillers, from Scotland ~ y Hamatites Iron Ore ~ O Blister From Ore From Ore with Green & White Crystal 10 From Ore with Red Crystals

11 Sealy From Ore from Huis mas

Iron N٥ 1 Wedge Iron Ore, Derbyshire ~ 2 Black Hæmatites Iron Ore forming Vegitations from Eyberstock ~ 3 Fine black Crystallized Iron Ore mixt with Hexagonal Crystals, from the Isle of Elba in Italy ~ Stalactical Iron Ore, from St: Just ~ Cornwall 4 5 Kidney Iron Ore, 6 White Spat with a Crustation of Iron Ore resembling small Maggots or Carterpillers, from Scotland ~ 7 Hæmatites Iron Ore ~ Blisterd Iron Ore Iron Ore with Green & White Crystal 9 Iron Ore with Red Crystals 10 11 Scaly Iron Ore from Huis near St: Austell Cornwall Black Hæmatites = Hematite (Fe₂O₃) or Goethite (FeO(OH)) Black Crystallised Iron Ore = Hematite (Fe₂O₃) Kidney Iron Ore = Hematite (Fe_2O_3) Stalactical Iron Ore = Goethite (FeO(OH)) Scaly Iron Ore = Siderite (FeCO₃)

Wavid Scaly Iron Ore upon Crystal: 12 : lize Quartz from Huis -13 Spatuse Iron Ore with very large from Huis, this makes the best Steel Scaly Iron Ore with small cubes on the logis of the Seales from Do 15 Very small distinct Scaly From Ore upon Quartz partly Crystallized from De 16 Scaly From Ore of a Mother of Fearl Colour from S:-The last lise Specimens are the Navieties of Fron Ore from a Tin any other metal lacept Lin White Spatose From Ore with Black Crystalline from a Mine near Padstore 18 Blend, brown, & White Spectose From One in Thur from Camborn Iron Ore with Crystal from 20 Brown Iron Ore intermixed with

| o ⁷ | |
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| V∘ 12 | Waved Scaly Iron Ore upon Crystallized Quartz from Huis ~ |
| 13 | Spatose Iron Ore with very large Scales from Huis, this makes the best Steel ~ |
| 14 | Scaly Iron Ore with small cubes on the Edges of the Scales from Do: \sim |
| 15 | Very small distinct Scaly Iron Ore upon Quartz partly Crystallized from Do: \sim |
| 16 | Scaly Iron Ore of a Mother of Pearl Colour from Do: - The last Six Specimens are the Varieties of Iron Ore from a Tin Mine, & never work'd for Iron or any other Metal Except Tin |
| 17 | White Spatose Iron Ore with Black Crystallized [word missing] from a Mine near Padstow |
| 18 | Blend, brown & White Spatose Iron Ore in Fluor from Camborn ~ |
| 19 | Iron Ore with Crystal from St: Maria aux Mines |
| 20 | Brown Iron Ore intermix'd with Crystal |
| | |
| NOTE: | Scaly Iron Ore = Siderite (FeCO ₃) Spatose Iron Ore = Siderite (FeCO ₃) Blend = Sphalerite (ZnS) Fluor = Fluorite (CaF ₂) |

grun Stoney Iron Ore 21 from Lybenstock in Saxony 22 Fren Ore from Elba 23 Stalactical black Flomatites from Nafsan Suger 24 Steel grain'd From Ore 25 Spatuse from Ore 26 From Ore of a Yellow Colour from Wales 27 Small greine From Ore from Sweden 29 Fine Stricter Hamatites Ore like brown Satten from It Blazie moor 30 Smiris a kind of Emery from Scotland 31 From Ore commonly call Call resembling Wood In from Streamworks in which that Tin is found 32 Capillary Native Vitriel of Iron very vare from Stiria ~

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| Nº 21 | Green Stoney Iron Ore from Eybenstock in Saxony ~ |
| 22 | Iron Ore from Elba |
| 23 | Stalactical black Hæmatites from Nassan Sugen |
| 24 | Steel grain'd Iron Ore |
| 25 | Spatose Iron Ore |
| 26 | Iron Ore of a Yellow Colour from Wales |
| 27 | Small grain'd Iron Ore from Sweden |
| 28 | Do: |
| 29 | Fine Striated Hæmatites Ore like brown Sattin from St: Blazie moor |
| 30 | Smiris a kind of Emery from Scotland |
| 31 | Iron Ore commonly calld C'all resembling Wood Tin from Streamworks in which that Tin is found |
| 32 | Capillary Native Vitriol of Iron very rare from Stiria ~ |
| | |
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| | |
| NOTE: | Hæmatites is either Hematite (Fe_2O_3) or Goethite ($FeO(OH)$) Spatose Iron Ore = Siderite ($FeCO_3$) Smiris is a mixture of Corundum + Hematite + Magnetite + Spinel Native Vitriol of Iron = Melanterite ($Fe_2SO_4 \cdot 7H_2O$) |

Sealy From One with Trianquelar 33 Chystallized Yellow From Ore spotted thereen, from Huis 34 Iron Ore from Nassau Seigen. 35 From Ore in Sorphyry, Statland. 36 Sand From Ore 37 Homatites Iron One with two Plates Broder together from Nanseawen Moor 38 Blisterd De from De 39 Red Do with a Crust of bright Iron Colour from ge / 40 Iron ore with Quarte from Do 41 A Conical Crystal of Do the Base 49 A Group of De joined Brase & Buse 43 Two D: more Cubical joind side 44 Alyroup of L' from Di. 45 Hamatites from Frercheim. 46 Blister Stallactical Do with a States of Lucistr 47 Hamatites From On from the Mine Jumeschefskor Bufrie 48 of price of Old Wood change into

| o [™] | |
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| Nº 33 | Scaly Iron Ore with Triangular Crystallized Yellow Iron Ore spotted thereon, from Huis ~ |
| 34 | Iron Ore from Nassau Seigen. |
| 35 | Iron Ore in Porphyry, Scotland. |
| 36 | Sand Iron Ore |
| 37 | Hæmatites Iron Ore with two Plates Bedded together from Nanscawen Moor |
| 38 | Blisterd D°: from D°: |
| 39 | Red Do: with a Crust of bright Iron Colour from Do: |
| 40 | Iron Ore with Quartz from Do: |
| 41 | A Conical Crystal of D°: the Base Convex the point hollow. D°: |
| 42 | A Group of Do: join'd Base to Base |
| 43 | Two Do: more Cubical joind side to side from Do: |
| 44 | A Group of D°: from D°: . |
| 45 | Hematites from Kircheim. |
| 46 | Blisterd Stallactical Do: with Plates of Quartz |
| 47 | Hæmatites Iron Ore from the Mine Gumeschefskoi Russia |
| 48 | A piece of Old Wood change into Iron Ore by Chalybeate Water Russia |
| | |
| NOTE: | Scaly Iron Ore = Siderite ($FeCO_3$) Triangular Crystallized Yellow Iron Ore = Pyrite (FeS_2) Hæmatites = either Hematite (Fe_2O_3) or Goethite ($FeO(OH)$) |

Ocher of Fron in Rid Clay from Wicksensis Rupil I From Ore Saxony From Ore mith Flaky red Franspa= : rent Crystals of Iron Lorraine

| σ' | |
|-------|---|
| 49 | Ocher of Iron in Red Clay from Wicksensis Russia |
| 50 | Rich Iron Ore in White hardend Clay from D°: |
| 51 | Black Shining Plated Iron Ore resembling Lead Ore \sim with Quartz from Russia |
| 52 | Cellular Iron Ore from Do: |
| 53 | Black Parallelogram Crystal of Iron Ore Saxony |
| 54 | Iron Ore with Flaky red Transparent Crystals of Iron Lorraine r r r |
| 55 | Vegitating Black Hæmatite from Nassau Seigen. r r r |
| 56 | Stallactical Iron Ore - Do: |
| 57 | Do: of a light brown Colour with a thin bright black Covering from Furstenberg. r r r |
| 58 | Long black Stalactite Iron Ore with smooth Surface r r |
| 59 | Rugged Stalactite Iron Ore |
| 60 | Native Iron found near the river Jenisci in Siberia from D ^r : Guthrie see Philosophical Trans: vol 66 Part 2 Page 523 |
| 61 | Hæmatites with a light Brown Covering from Kircheim ~ r r |
| | |
| NOTE: | Hæmatite = Hematite (Fe_2O_3) or Goethite ($FeO(OH)$) Native Iron (sample 60) is part of the Krasnojarsk meteorite - a 700 kg mass found in |

Native Iron (sample 60) is part of the Krasnojarsk meteorite - a 700 kg mass found in 1749 about 149 km from Krasnojarsk. It was transported to St Petersburg in 1772; 515 kg are now in Moscow. It is the first pallasite meteorite ever found and contains spectacular olivine crystals surrounded by iron. The classic Widmanstätten pattern was first discovered by etching this meteorite.

Reference: Pallas, P.S. (1776) Account of the Iron Ore Lately Found in Siberia. Phil. Trans. R. Soc. Lond. January 1, vol. 66, 523-529.

Of Wedge shaped bright Variegated From Ore from Elber 63 A Vigitating Sparry Ochry Substance like little Faggots upon White Quartz; Hungary. Flofs Ferry upon an Iron Ocher Do of Light Blue at large prece of Blister Tron Ore radicate where the ylobules are broke, of a lead Colour on the Jurface, under that a thin layer of Rie Homatile from Nanseawen Mour 67 Native Frusian Blue; Saxony. 18 Thin Stated Stalactete Iron Ore from Breber in Hanase Stalactite Iron Ore in Cubical Crystals from Bristol-70 of Rich pieu of Iron One- Nafsan White Iron Ore with Pyrites, Bayreuth From One with Variegated Crystal - I. Homalite from one with alternate luyers of black & brown lolour the Centir her Jectlane -

| 3 | |
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| 62 | Wedge shaped bright Variegated Iron Ore from Elba |
| 63 | A Vegitating Sparry Ochry Substance like little Faggots upon White Quartz; Hungary. r r r |
| 64 | Floss Ferry upon an Iron Ocher from Styria r r |
| 65 | Do: of Light Blue - |
| 66 | A large piece of Blisterd Iron Ore radiated where the Globules are broke, of a lead colour on the Surface, under that a thin layer of Red Hæmatite from Nanscawen Moor |
| 67 | Native Prussian Blue; Saxony. |
| 68 | Thin Plated Stalactite Iron Ore from Breber in Hanau |
| 69 | Stalactite Iron Ore in Cubical Crystals from Bristol ~ |
| 70 | A Rich piece of Iron Ore ~ Nassau |
| 71 | White Iron Ore with Pyrites, Bayreuth |
| 72 | Iron Ore with Variegated Crystal ~ Do: |
| 73 | Hæmatite Iron Ore with alternate layers of black & brown Colour |
| 74 | Radiated Iron Ore diverging from the Center in Quartz ~ Scotland ~ |
| | |
| NOTE: | Variegated Iron Ore = Hematite ((Fe_2O_3) Floss Ferry = coralloid Aragonite ($CaCO_3$) Native Prussian Blue = earthy Vivianite ($Fe_3(PO_4)_2 \cdot 8H_2O$) |

75 Columnas Mamilatio From Ore the diameter of the Columns Sugertant room the Base from 76 Cauliflower Fronte Very rich Iron Ore finely Crystal-: Mizer from Elba 78 Glus Head From Ore with very fine Dentrito from the Syrenews - rrr 79 Garnets containing from with Copyer Ore & Phosphoretic Spar from Salsbourg 00 Garnets imbedded in Mica from the from Mines in Rufsia

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|-------|---|
| 75 | Columnar Mamilated Iron Ore the diameter of the Columns increasing from the Base from Seigerland r r r r $$ |
| 76 | Cauliflower Iron Ore |
| 77 | Very rich Iron Ore finely Crystallized from Elba |
| 78 | Glass Head Iron Ore with very fine Dendritæ from the Pyrenees \sim r r r |
| 79 | Garnets containing Iron with Copper Ore & Phosphoritic Spar from Salsbourg |
| 80 | Garnets imbedded in Mica from the Iron Mines in Russia |
| NOTE: | Iron Ore from Elba = Hematite ((Fe_2O_3) Garnets containing Iron = Almandine ($Fe_3Al_2(SiO_4)_3$) or Andradite ($Ca_3Fe_2(SiO_4)_3$) |

Mereury - Cinnabar -Cinnabar Ore guith Franspa = from Mors feldt in the Palatinate Cinnabar Ore from Stahlberg Dutchy of Deux Posts Di with Pyrites of Iron from Chroneschel Dutchy of Deux Tento 4 Do in hardence Clay & Spar with Nation Silver, from Stahlberg Cinnabar Ore with Horn Mer-eury from Obermoschel dutchy of Deux Ponts very rare Bitumen from Firehhiim near the Palatinate Cinnabar On with Grey Silver from Obermosekil Cinnabar Ore with Virgin Mercury & solid amalgama of Silver from To it also contains some Copper Excelling scarce

Mercury - Cinnabar -N٥ Cinnabar Ore with Transparent Crystals of Cinnabar from Mörsfeldt in 1 the Palatinate 2 Cinnabar Ore from Stahlberg Dutchy of deux Ponts ~ Do: with Pyrites of Iron from Obermoschel Dutchy of deux Ponts 3 Do: in hardened Clay & Spar with Native Silver, from Stahlberg 4 Cinnabar Ore with Horn Mercury from Obermoschel Dutchy of deux 5 Ponts ~ very rare Cinnabar Ore which contains Bitumen from Kirchheim near the **Palatinate** Cinnabar Ore with Grey Silver from Obermoschel 7 8 Cinnabar Ore with Virgin Mercury & solid Amalgama of Silver from do: it also contains some Copper ~ Exceeding scarce Pyrites of Iron = Pyrite (FeS₂) Horn Mercury = Calomel (Hg_2Cl_2) Grey Silver probably = Acanthite (Ag₂S) Virgin Mercury = Native Mercury (Hg) Amalgama of Silver = Moschellandsbergite (Ag₂Hg₃)

Cinnabar Ore with Syrites of Iron 9 Cabities from morsfeldt Cinnabar with Virgin Mercury which by heat oures out of this Ore, from Stahlberg Il intermised noth some Gold ore in Quartz & Grey mine Stone from 12 Native Cinnewbar nith Vergin Mereury in it & Lead Ore inter. : mixed from Wollsteign in the Palatinati 13 Cinnebar said & be Rich en Gold from Reserveur in Hungary 14 Cinnabur On & Crystal 15 Aveined Mine Stone containing Native Connabar o Virgin Mercung from Woodsteijn 16 Cinnabar Ore 14 Nation Connabar from Bohemia 10 Connabar Ore

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|---------|--|
| N° 9 | Cinnabar Ore with Pyrites of Iron & Crystals of Cinnabar in its Cavities from Morsfeldt ${\sim}$ |
| 10 | Cinnabar with Virgin Mercury which by heat ouzes out this Ore, from Stahlberg |
| 11 | Solid Cinnabar & Quicksilver Ore intermix'd with some Gold Ore in Quartz & Grey mine Stone from The Palatinate |
| 12 | Native Cinnabar with Virgin Mercury in it & Lead Ore intermix'd from Wollsteÿn in the Palatinate |
| 13 | Cinnabar said to be Rich in Gold from Rosenau in Hungary |
| 14 | Cinnabar Ore & Crystal |
| 15 | A veined Mine Stone containing Native Cinnabar & Virgin Mercury from Woolsteÿn |
| 16 | Cinnabar Ore |
| 17 | Native Cinnabar from Bohemia |
| 18 | Cinnabar Ore |
| | |
| | |
| NOTE: | Pyrites of Iron = Pyrite (FeS ₂) Virgin Mercury = Native Mercury (Hg) |

Cinnabar with Native Mercury from the Palatinate Native Quick silver in Crystallized Connabas Ore from Woolfstein a very rare Specimen

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- 19 Cinnabar with Native Mercury from the Palatinate
- 20 Native Quicksilver in Crystallized Cinnabar Ore from Woolfstein a very rare Specimen

NOTE: Native Quicksilver = Native Mercury (Hg)

No Bismuth 1 White Bismuth Ore in the State A Cala producing nearly tact 2 Bismuth from Do in Saxony 3 De from Schneeberg in Jacony Dark rich Bismuth Ore contain-ing Cobalt from Georgeogen: : stadt in Saxony this gives a good blue 5 Red Bismuth from Do Rich Native Bismuth from Metallie Bromuth from John georgenstadt Yellow Cutx of Bismuth, De. Bismuth in Rie Horn Story 2: Bismuth On with Nation Silver Vitreons Salver & Horn Stone

Bismuth W

Ν°

- White Bismuth Ore in the State of Calx producing nearly 40 per C^t. from Johngergenstadt
- 2 Bismuth from Do: in Saxony
- 3 Do: from Schneeberg in Saxony
- 4 Dark rich Bismuth Ore containing Cobalt from Georgergenstadt in Saxony this gives a good blue
- 5 Red Bismuth from Do:
- 6 Rich Native Bismuth from St: Austell Moor Cornwall
- 7 Metallic Bismuth from Johngeorgenstadt
- 8 Yellow Calx of Bismuth, Do:
- 9 Bismuth in Red Horn Stone, Do:
- 10 Bismuth Ore with Native Silver Vitrious Silver & Horn Stone Do:

NOTE: Rashleigh uses an unusual symbol for Bismuth derived from the German Wissmut.

Yellow Calx of Bismuth possibly = Bismutite ($Bi_2O_2(CO_3)$)

Red Horn Stone = Jasper

Vitreous Silver Ore = Acanthite (Ag₂S)

Nette Besmuth Ore with Red Horn Stone from Schneeberg 12 Bismuth Ore in form of a dearf on the Surface from Johngeorgenstut rr 13 Bismultore in asbestus and 14 Small Cubic Bismuth from Breber 15 Metallie Bismuth. 16 Crystallize Bismuth with Quarts Cristallis ... Yellow Calse of Bismuth inclining to your with Quartz from Vilisia 18 De Tolisher 19 Regulus of Besmuth

| W | |
|-------|--|
| 11 | Netted Bismuth Ore with Red Horn Stone from Schneeberg r r |
| 12 | Bismuth Ore in the form of a Leaf on the Surface from Johngeorgenstadt r r |
| 13 | Bismuth Ore in Asbestus and Copper Ore from Sweden. r.r.r.r |
| 14 | Small Cubic Bismuth from Breber in Hanau ~ |
| 15 | Metallic Bismuth. |
| 16 | Crystallized Bismuth with Quartz Cristallized. |
| 17 | Yellow Calx of Bismuth inclining to Green with Quartz from Silesia |
| 18 | Do: Polished ~ |
| 19 | Regulus of Bismuth |
| | |
| NOTE: | Red Horn Stone = Jasper Yellow Calx of Bismuth possibly = Bismutite ($Bi_2O_2(CO_3)$) Regulus is an impure product of smelting |

Antimony

đ **Antimony** Nο Antimony Ore from St: Stephens near Saltash, Cornwall ~ 1 Antimony Ore in White Quartz, from Port Isaac, Cornwall ~ 2 3 Antimony ore with very small lines runing in various directions in a Redish Iron Stone Fine large Needle Antimony from Hungary ~ 4 Fine small graind Do: of a Rainbow Colour from Do: ~ Red & Grey Needle Antimony from Saxony ~ in White Quartz from Braunsdorf in Hungary Exceed9: fine Red Feather Antimony upon White Crystallized Quartz 7 from Saxony ~ Antimony with Native Golden Sulphur from Tuscany 8 Compact Antimony of a Lead Colour from Hungary ~ 9 NOTE: Antimony Ore = Stibnite (Sb_2S_3) Needle Antimony = Stibnite (Sb_2S_3) Red Feather Antimony = Kermesite (Sb_2S_2O)

Antimony with Selimitical Spar curiously Crystallized, from Filsebanias in Hungary Tt Crystallize on of antimony with bright Prain bow. Colours Cristallezations on the to shooting in various directions with Quarte from Hungary or

đ

- 10 Antimony with Selenitical Spar curiously Crystallized, from Filsobanias in Hungary $\sim r$ r
- Opake White Quartz variegated with spots of Antimony, containing Silver
- 12 Crystalliz'd ore of Antimony pretty Solid.
- 13 Crystallized Ore of Antimony in small kind of Needles.
- 14 Capilary Ore of Antimony from Felsobania.
- 15 Antimony with Rays diverging from a center upon white Quartz
- 16 Upright Needle Antimony
- 17 Crystallized Needle Antimony with bright Rainbow Colours from Hungary r r r
- 18 Do: with Selenitical Spar Do: rrr
- 19 A Group of fine long Needle Antimony diverging from a Center with other smaller Cristallizations on the top shooting in various directions with Quartz from Hungary r r r

NOTE: Selenitical Spar = Gypsum (CaSO₄·2H₂O) Needle Antimony = Stibnite (Sb₂S₃)

Intimony Ore Bright Stellated Black Ore noto upor White Quartz from Hungary . r. r. r. Brunsderf 2 Hungar Thimose antimony. Rich Ore of antimony from antimory in White Solid Striated Ore of antimony in Quartz from Braunsdorf Stul Grain antimony from

đ Antimony Ore

| N° | |
|----|---|
| 20 | Bright Stellated Black Ore of Antimony in distinct Spots upon White |
| | Quartz from Hungary r.r.r.r |

- 21 Red & Black Solid Ore of Antimony with Quartz from Braunsdorf 2 Hungary or Saxony
- 22 Plumose Antimony.
- 23 Rich Ore of Antimony from Pillaton Cornwall
- 24 Antimony in White Quartz from Do:
- 25 Solid Striated Ore of Antimony in Quartz from Braunsdorf
- 26 Steel Grain'd Antimony from Hungary
- 27 Red Antimony from Saxony r r r

NOTE: Plumose Antimony probably = Jamesonite ($Pb_4FeSb_6S_{14}$) or Boulangerite ($Pb_5Sb_4S_{11}$) Needle Antimony = Stibnite (Sb_2S_3) Red Antimony = Kermesite (Sb_2S_2O)

Cobalt Striated red Cobalt upen Quarter from Schneeberg in Jasony Metallick Cobalt partly Crys = : tallized, which gives the best sort of blue, from Do Metallick Cobalt in White I par from Biber in Hefre rhich gives a very good blue from attenberg in Jaxery~ Cobalt with Copper One & Spar from Saalfeldt in Saxony elletallick Cobalt partly Crystal: : lized which gives a fine blue from Schneeberg but an indeferent blue from Salzburry

K Cobalt

Ν°

- 1 Striated red Cobalt upon Quartz from Schneeberg in Saxony
- 2 Metallick Cobalt partly Crystallized, which gives the best sort of blue, from Do:
- 3 Metallick Cobalt in White Spar which gives a good blue from Biber in Hesse
- 4 Cobalt with Yellow Fluor which gives a very good blue from Attenberg in Saxony ~
- 5 Cobalt with Copper Ore & Spar from Saalfeldt in Saxony ~
- 6 Metallick Cobalt partly Crystallized which gives a fine blue from Schneeberg
- 7 Metallick Cobalt which gives but an indifferent blue from Salzbourg

NOTE: Red Cobalt = Erythrite ($Co_3(AsO_4)_2 \cdot 8H_2O$)

Metallick Cobalt = Skutterudite (CoAs₃) or Cobaltite (CoAsS)

Fluor is a synonym of Fluorite (CaF₂)

No Netter Fryserniekle & Cobalt of nich in Silver from Freyberg 9 Netted Cobalt rich in Silver from annaberg 10 Red Efflorescent Cobalt that gles an Excellent blue from Schneiberg 11 Metallick Cobalt with Calearous Inear, this gives a good /slue from andreasbery in the Hartz 12 Rev Cotalt on White Speer Cobalt with a Rie & a White Efflorescence, the White is purely arsenical; this gives a good blue from Schneiberg 14 Black Cobalt with a Red Efflo: best blue from Fierstenberg from a Mine calle Frind of Heaven 16 Solid Cobalt with Quarter from Schnieberg

| K | |
|-----------------|---|
| N ∘ 8 | Netted Kupfernickle & Cobalt rich in Silver from Freyberg ~ |
| 9 | Netted Cobalt rich in Silver from Annaberg |
| 10 | Red Efflorescent Cobalt that gives an Excellent blue from Schneeberg |
| 11 | Metallick Cobalt with Calcareous Spar, this gives a good Blue from Andreasberg in the Hartz |
| 12 | Red Cobalt on White Spar |
| 13 | Cobalt with a Red & a White Efflorescence, the White is purely Arsenical; this gives a good blue from Schneeberg |
| 14 | Black Cobalt with a Red Efflorescence which gives the best blue from Fierstenberg |
| 15 | Netted Cobalt containing Silver from a Mine calld Prince of Heaven in Saxony |
| 16 | Solid Cobalt with Quartz from Schneeberg |
| | |
| NOTE: | Kupfernickle = Nickeline (NiAs) Red Cobalt = Erythrite ($Co_3(AsO_4)_2 \cdot 8H_2O$) Calcareous Spar = Calcite ($CaCO_3$) |

No Metallick Cobalt from 17 Poultney Mine, Devonshire 10 Metallick Crystallized Cobalt Very good tobalt which some.

times contains Silver
from andreasberg in the Harte

| K | | | | |
|----|-------------------|------|------|--|
| No | | | | |
| 47 | Marille I of Link | D 1. | | |

- 17 Metallick Cobalt from Poultney Mine, Devonshire
- 18 Metallick Crystallized Cobalt
- 19 Very good Cobalt which sometimes contains Silver from Andreasberg in the Hartz

NOTE: Metallick Cobalt = Skutterudite (CoAs₃) or Cobaltite (CoAs₅)

Localities mentioned in the Catalogue

United Kingdom (Cornwall)

Huis, near St Austell = possibly Greta Wheal Hewas, St Ewe

Luxullian, near St Austell

St Blazey Moor, near St Austell

St Austell Moor

Luxillian = Luxulyan, near St Austell

Luxullian Moor, near St Austell

Neighbourhood of St Austell

St Stephens, near Saltash = St Stephens-by-Saltash

Beam = Old Beam Mine, Treverbyn

Buckler Mine = Bucklers Mine, St Austell

Bullen/Bullin Garden = Bullen Garden Mine, Camborne

Camborne

Crickbraws = Creegbraws Mine, Chacewater

Gavrigan = Gaverigan Tin Stream Works, St Enoder

Kessel adit = possibly Kessel Downs Quarry near Helston

Mine near Padstow

Ladies Work St Mewan

Lamellin = possibly Lamellin Cross near Liskeard

Loe Pool, Penrose - Castle Wary Silver Mine or Wheal Pool, Penrose Estate, near Helston; an adit to drain this mine was constructed in 1780.

Mullion

Nanscawen Moor

New Bridge

Parsonage Mead, Ladock

Pednandrea = Pendandrea Mine, Redruth

Pillaton = Wheal Leigh, Pillaton

Poldice = Poldice Mine, Gwennap

Port Isaac = Port Isaac, St Endellion

Roskear, Camborne & Reskear = Roskear, Camborne

Near Redruth

The Park, St Agnes

St Agnes

United Kingdom (Cornwall) - continued

St Dominick = St Dominick near Callington

St George in Perran = Perran St George Mine, Perranporth

St Just

St Mewan

St Michael's Mount, Marazion

St Stephens = St Stephens-in-Brannel

Saundrycock = Sandrycock Alluvial Tin Work

Stream Works around Grampound St Stephens & St Ewe

Stream Works on a Moor, Probus

Trevenance/Trevannance = Trevaunance, St Agnes

Cooks Kitchen = Cook's Kitchen Mine, Carn Brea

Wheel Cock, St Just

Wheel Fortune, Breage, near Helston

Wheel Margery = Wheal Margery, St Ives

Wheel Prosper, near Lanivet

Wheel Quick, St Dye = Wheal Jewel (incl. Wheal Quick), Gwennap

Wheel Speed = possibly Wheal Speed, St Ives

Wheel Virgin = Wheal Virgin, Gwennap

Wheel ??, near Marazion

United Kingdom (rest of England)

Bristol

Derbyshire

Langty head, near Gross Hill [possibly Cross Fell], Alston Moor,

Cumberland (Cumbria)

Mine near Keswick, Cumberland (Cumbria)

Crawford Mine, Derbyshire

Poultney Mine = possibly Willsworthy Mine, Huckworthy Bridge, Devon

Derbyshire Wirksworth, Derbyshire

Lead-Silver mine near Exeter

Hiccary Bridge, Devon = Huckworthy Bridge

Middleton Tyas, Yorkshire

United Kingdom (Scotland)

Sir John Erskine Mine, Silver Glen, Alva, near Stirling Leadhills

Wanlockhead

Peebleshire

West Lothian - probably Hilderston a 17th Century Silver mine where silver was discovered in 1606. The landowner was Sir Thomas Hamilton of Binny and Monkland, but it was taken over by James VI in 1608, when 59 men were employed. This number was expanded with 7 miners from Germany, and later in 1608, by a further 35 Englishmen. The precise date the mine was abandoned is not known, but it must have closed soon after 1614.

Europe (Germany)

Annaberg = Annaberg, Erzgebirge, Saxony Attenberg, Saxony = Altenberg, Erzgebirge, Saxony Braunsdorf, Saxony = Oberschönau-Bräunsdorf, Erzgebirge, Saxony Catherine Mine, Johngeorgenstadt, Saxony = Catharina Mine/Katharina Mine, Johanngeorgenstadt, Saxony

Chemnitz, Saxony

Ehrenfriedersdorf, Saxony = Ehrenfriedersdorf, Erzgebirge, Saxony
Eyberstock/Eybenstock, Saxony = Eibenstock, Erzgebirge, Saxony
Fabian Sebastian Mine, Marienberg, Saxony = no change needed
Hemnitsfurst/Hemmelfurst, Freyberg = Himmelsfürst, Freiberg, Saxony
Kunersdorf (Konersdorff) = Cunersdorf - part of the town of AnnabergBuchholz, Erzgebirge, Saxony

Johngeorgenstadt, Saxony = Johanngeorgenstadt, Saxony

Marienberg, Saxony = Marienberg, Erzgebirge, Saxony

Schneeberg, Saxony = Schneeberg, Erzgebirge, Saxony

Silverspath Mine, Freyberg, Saxony = Silberspat Mine, Freiberg, Saxony

Prince of Heaven mine, near Freyberg, Saxony = Himmelsfürst Mine,

Freiberg, Saxony

Zschoppau, Saxony = Zschopau, Erzgebirge, Saxony

Andreasberg, Hartz Mountains = St Andreasberg, Harz Mt., Lower Saxony

Europe (Germany) - continued

Glucks Rade near Zellerfeld & Glucksrood, Hartz = Glücksrad Mine, Clausthal-Zellerfeld, Harz Mt., Lower Saxony

Kirchheim, near the Palatinate = Kirchheim, Rheinland-Pfalz

Morsfeldt in the Palatinate = Mörsfeldt, Rheinland-Pfalz

Obermoschel, Dutchy of Deux-Ponts, Rhineland-Palatinate = Obermoschel, Rheinland-Pfalz

Stahlberg, Dutchy of Deux-Ponts, Rhineland-Palatinate = Stahlberg Mine, Obermoschel, Rheinland-Pfalz

Finneberg near the Rhine = Virneberg Mine, Rheinbreitbach, Rheinland-Pfalz

Rhine Brielbach near Cologne = Rheinbreitbach, Rheinland-Pfalz Wollsteÿn/Woolsteÿn in the Palatinate = Wolfstein, Rheinland-Pfalz Near the Rhine not far from Kirn = contradictory - Rhine is not near Kirn Camsdorf = Kamsdorf, Thuringia

Gottis Grade, near Saalfeld, Thuringia = Gnade Gottes Mine near Saalfeld, Thuringia

Saalfeldt, Saxony = Saalfeld, Thuringia

Biber in Hesse or Breber in Hanau or Brebes in Hanau = Bieber near Gelnhausen, Hesse

Frankenberg, Hesse = Frankenberg, Waldeck, Hesse

Weyher = Villmar-Weyer, Rhenish Massif, Hesse

Mary Magdalen Mine, Voigtland = Vogtland - a region across Bavaria/ Saxony/Thuringia; there were several mines of this name

Bayreuth = Bayreuth, Oberfranken, Bayern

Briscau, Freiburg = Freiburg im Breisgau, Baden-Württemberg

Nassan Sugen/Nassau Seigen = principality of Nassau-Siegen

Seigerland = a region of Germany, now part of the district of Siegen

Wittgenstein = Siegerland, Rhenisch Massif, North Rhine-Westphalia (mining district since bronze age, Fe, Ag, Cu, Co, Ni, Pb ...)

Wurttenberg, Baden Wurttenberg = today part of the state Baden-Württemberg

Furstenburg/Fierstenberg (Ferstenberg) - this refers to the princes of Fürstenberg who ruled large parts of the Schwarzwald area in SW Germany (today: Baden-Württemberg), where famous cobalt silver mines are located in the valley of the Kinzig river. Fürstenberg is not a place name.

Europe (others)

Kongsburg, Norway

Adelfors, Sweden

Le Bas, Bretagne, France

La Croix in Lorraine

Lorraine

Pulasent/Pouleasent, Lower Brittany, France - Poullaouen (the Huelgoat region was famous for galena & pyromorphite in the 18th century)

Saint Marie aux Mines, Vosges Mountains, NE France

Pyrenees

Isle of Elba, Tuscany Italy

Joachimsthal, Bohemia, Brandenburg = Joachimsthal, Erzgebirge, Bohemia, today: Jáchymov, Czech Republic

Filsebanias = Felsobanya, Hungary

Simon Juda mine, near Dagnaska, Temesvar, Hungary = Simon Juda mine, Dognaska, Banat, near Temsevar (today: Timisoasa, Romania)

Rosenau, Hungary

Schemnitz, Hungary

Zillerthall, Tirol, Austria = Zillertal, valley in Tyrol, Austria

Stiria/Styria = Steinermark, Austria

Nagyag/Nagjacks, Transilvania, Romania

Mountain of Kirnick, near Abrudbania, Transilvania, Romania

Mine at Maria Lorretto, Mountains of Facebaya, near Zalathna, Transilvania, Romania Mine near Boioza, Transylvania, Romania

Silesia = a region mostly in Poland (on the border with the Czech Republic & Germany)

Switzerland

Russia

Near River Jenisci, Siberia = River Enisei which flows N-S and originates in Tuva (a federal republic of Russia, located in extreme southern Siberia on the border with Mongolia)

Schlanggenberg (Schlangenburg), Siberia

Semenofskoi in the high Mountains of Siberia

Mine near Catherinaburg = Jekaterinburg, Ural

Gold Mine Berisoviensi near Catherinaburg = Beresowsk near

Jekaterinburg, Ural

Mine of Cathrinæpolitanis = Catherinenstadt

Marx, formerly Russia

Permia

Gumenschefskoi Mine

Wicksensis

Other Regions

East Indies

Sumatra, Indonesia

Borneo, Indonesia

Coast of Guinea, N of Sierra Leone, Africa

Potosi (probably Cerro Rico, Bolivia - world's largest silver mine)

North America

Pennsylvania, USA

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