Philip Rashleigh's Manuscript Mineral Catalogue circa 1765-80

held in the :

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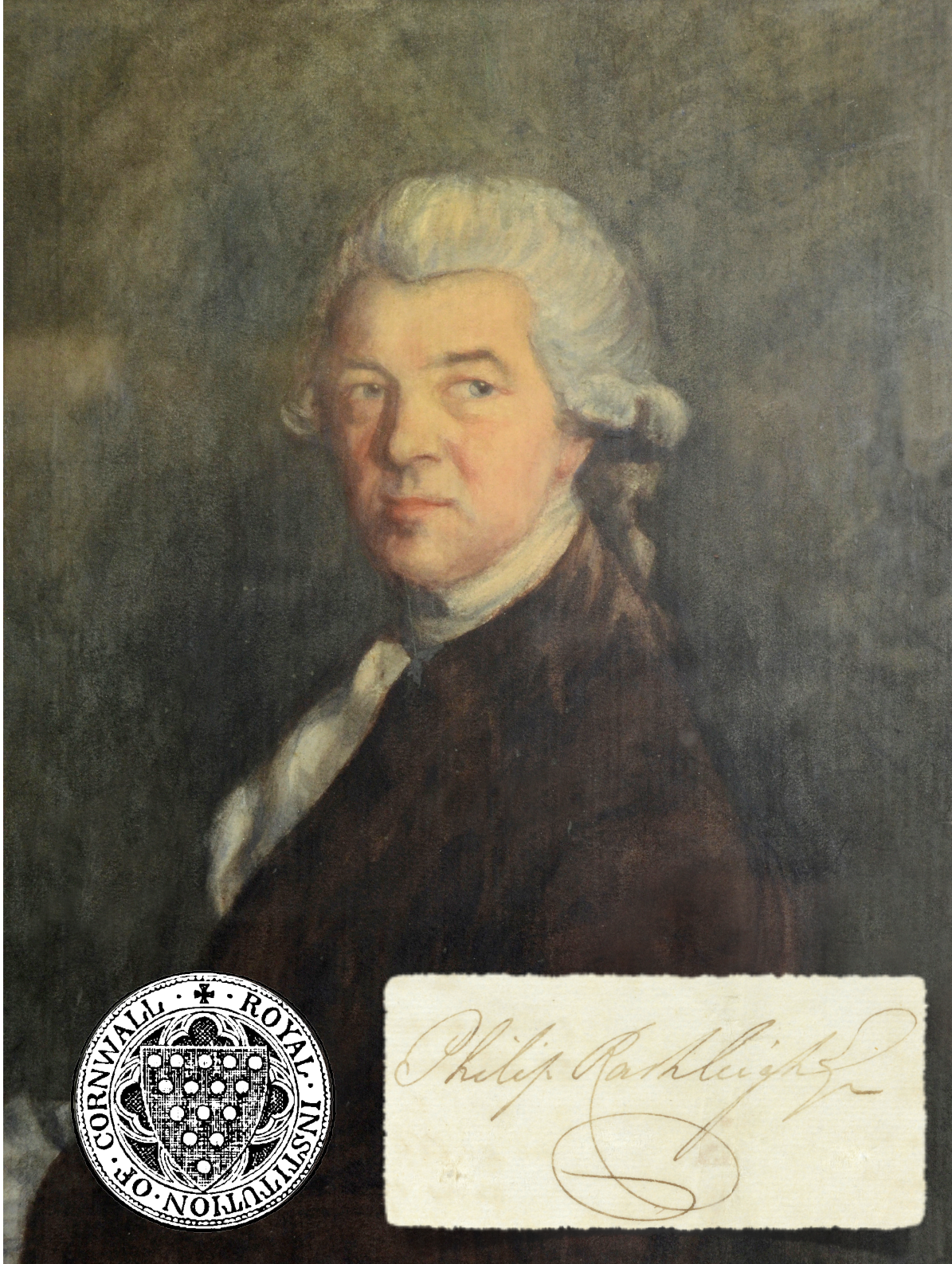
Compiled by:

A.G. Tindle and P.N. Sleep

Royal Institution of Cornwall 2025



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.

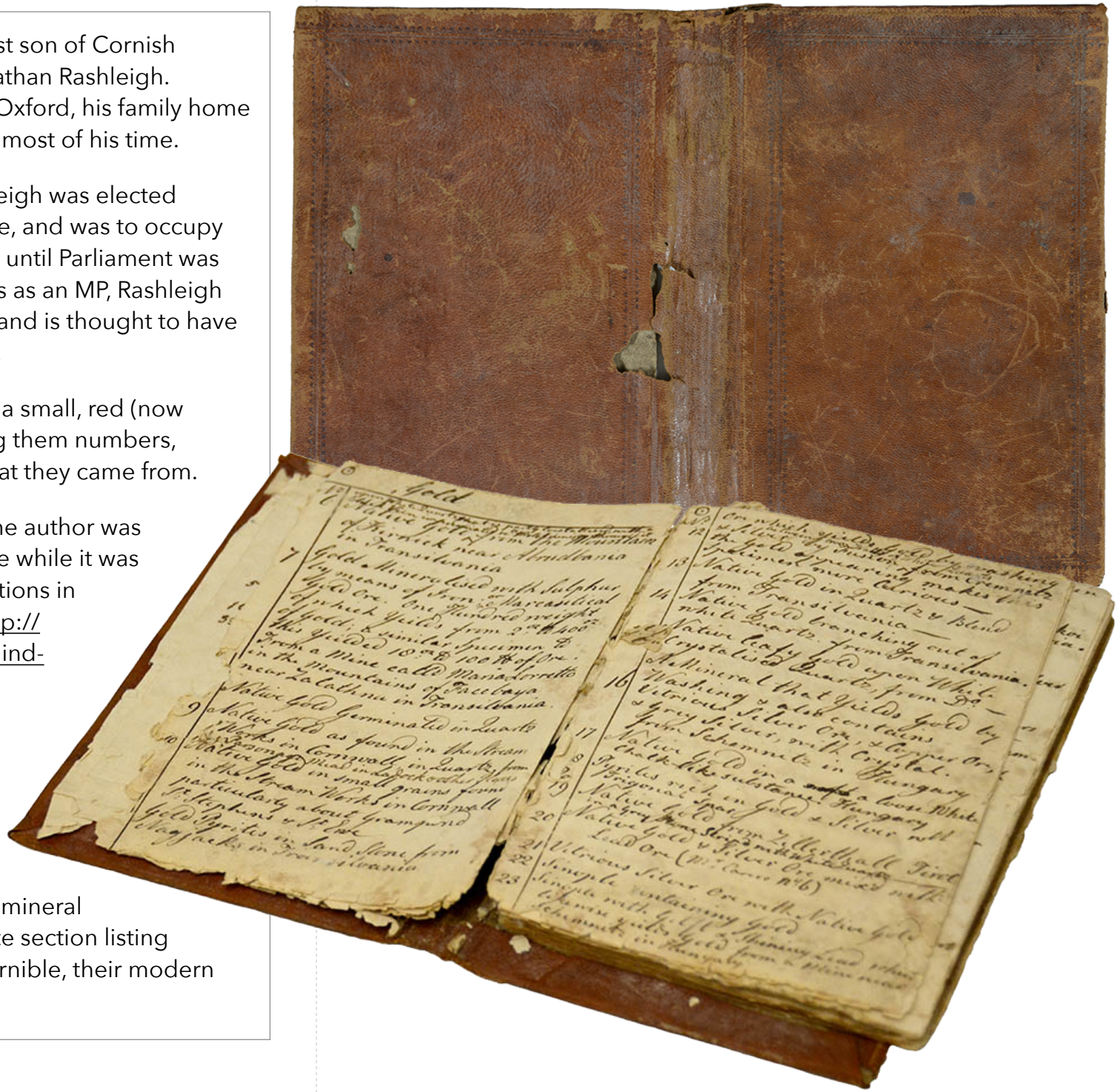
After his father's death in 1764, Philip Rashleigh was elected Member of Parliament for Fowey in his place, and was to occupy this role continuously from the start of 1765 until Parliament was dissolved in 1802. Despite his commitments as an MP, Rashleigh spent most of his time at his Cornish home and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

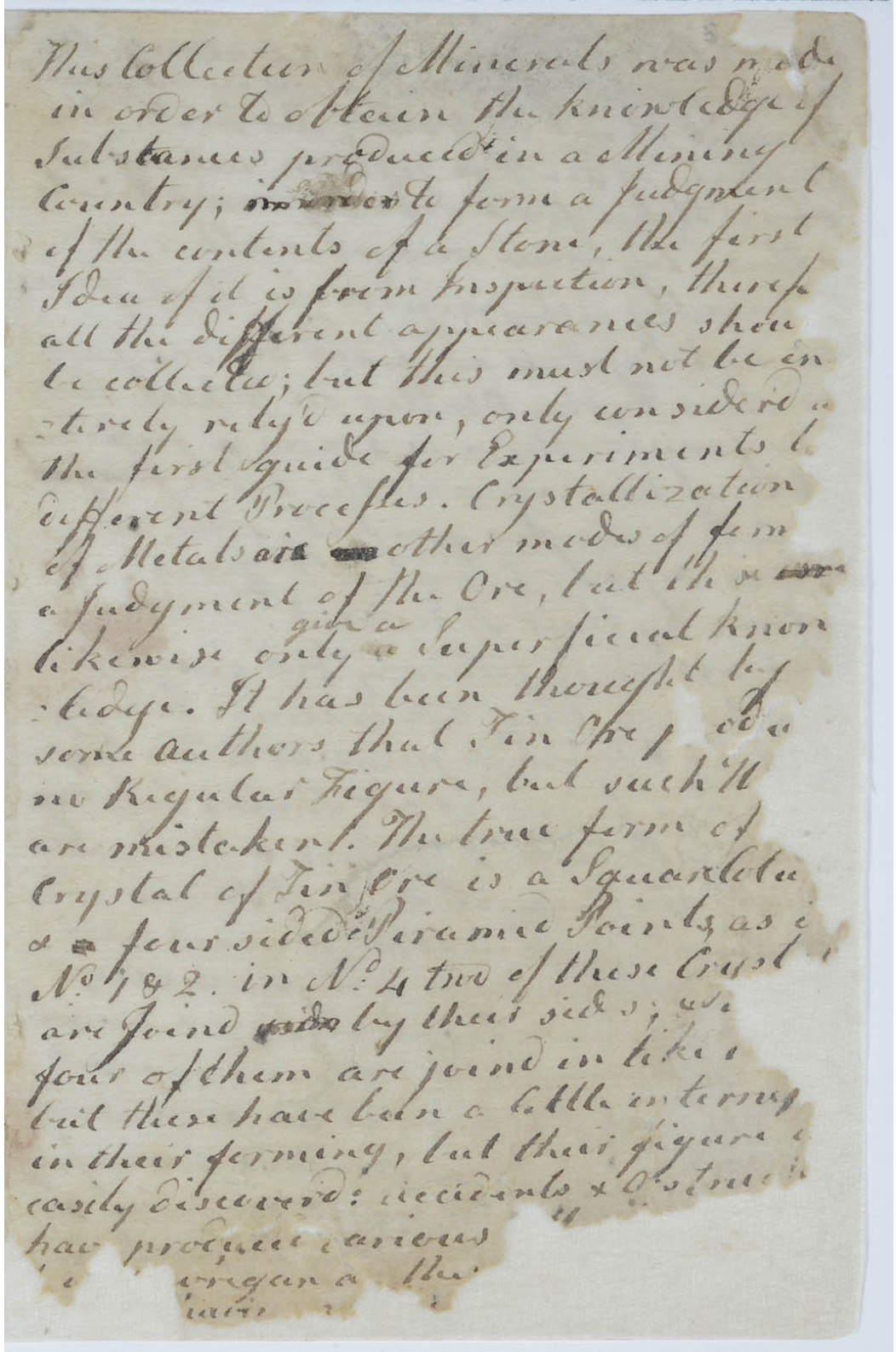
He recorded the specimens he collected in a small, red (now faded to brown) leather-bound book, giving them numbers, descriptions, and recording the localities that they came from.

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

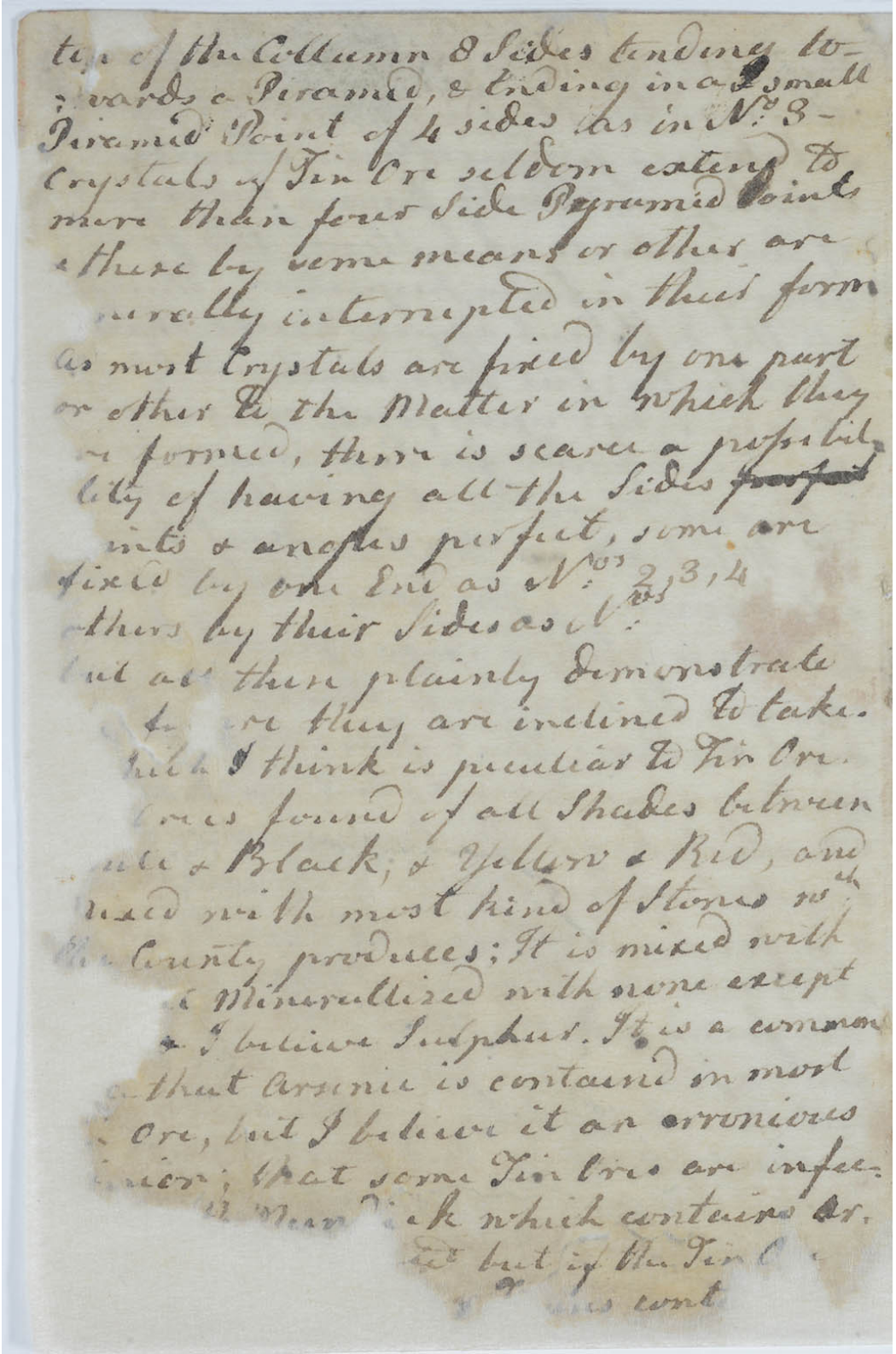
The transcript is intended to be a faithful reproduction of Rashleigh's text retaining his spelling, grammar, mineral species, and original locality names.

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.



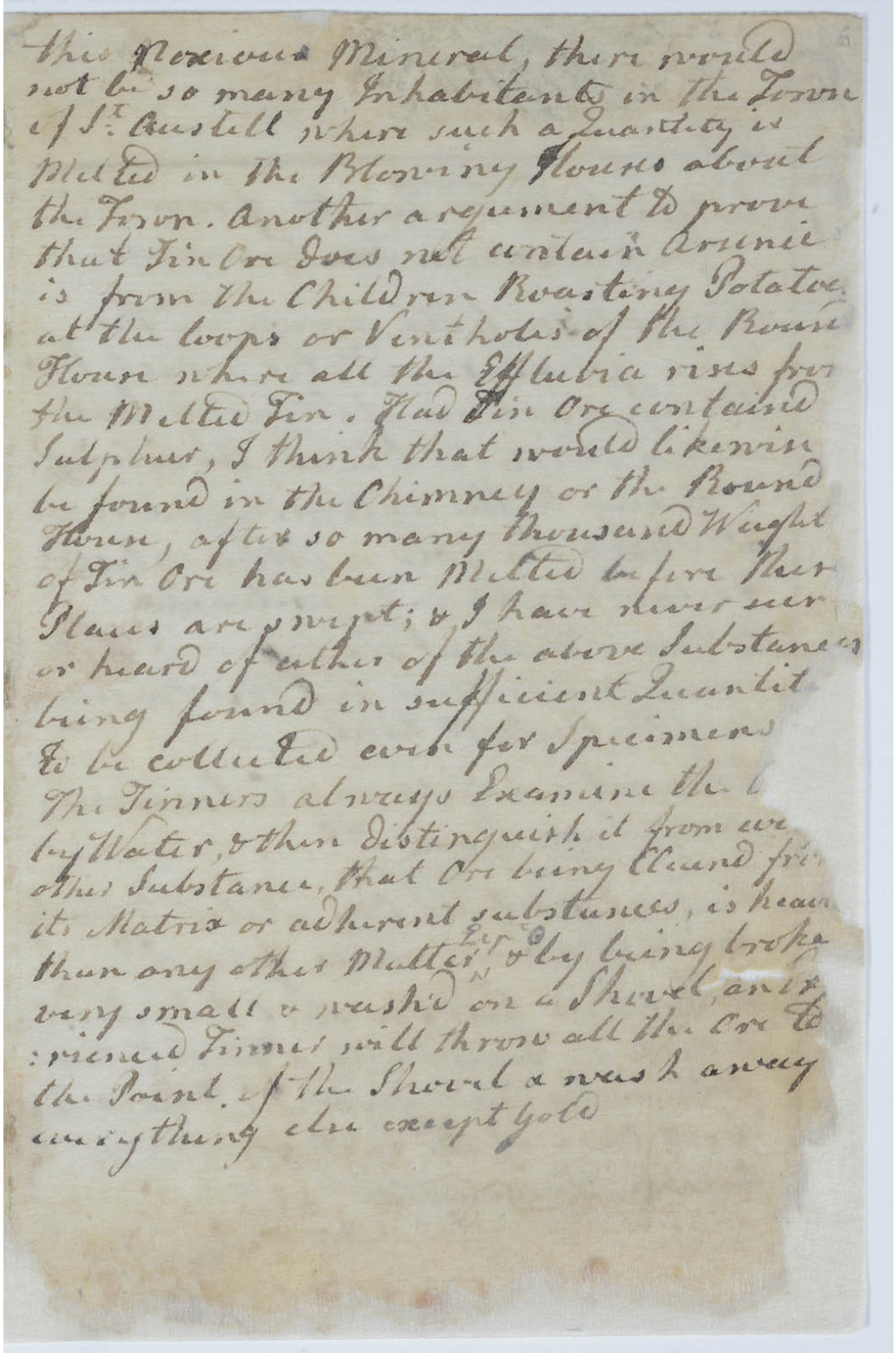


This Collection of Minerals was made in order to obtain the knowledge of substances produced in a Mining Country; and to form a Judgment of the contents of a Stone, the first Idea of it is from Inspection, therefore all the different appearances should be collected; but this must not be entirely rely'd 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



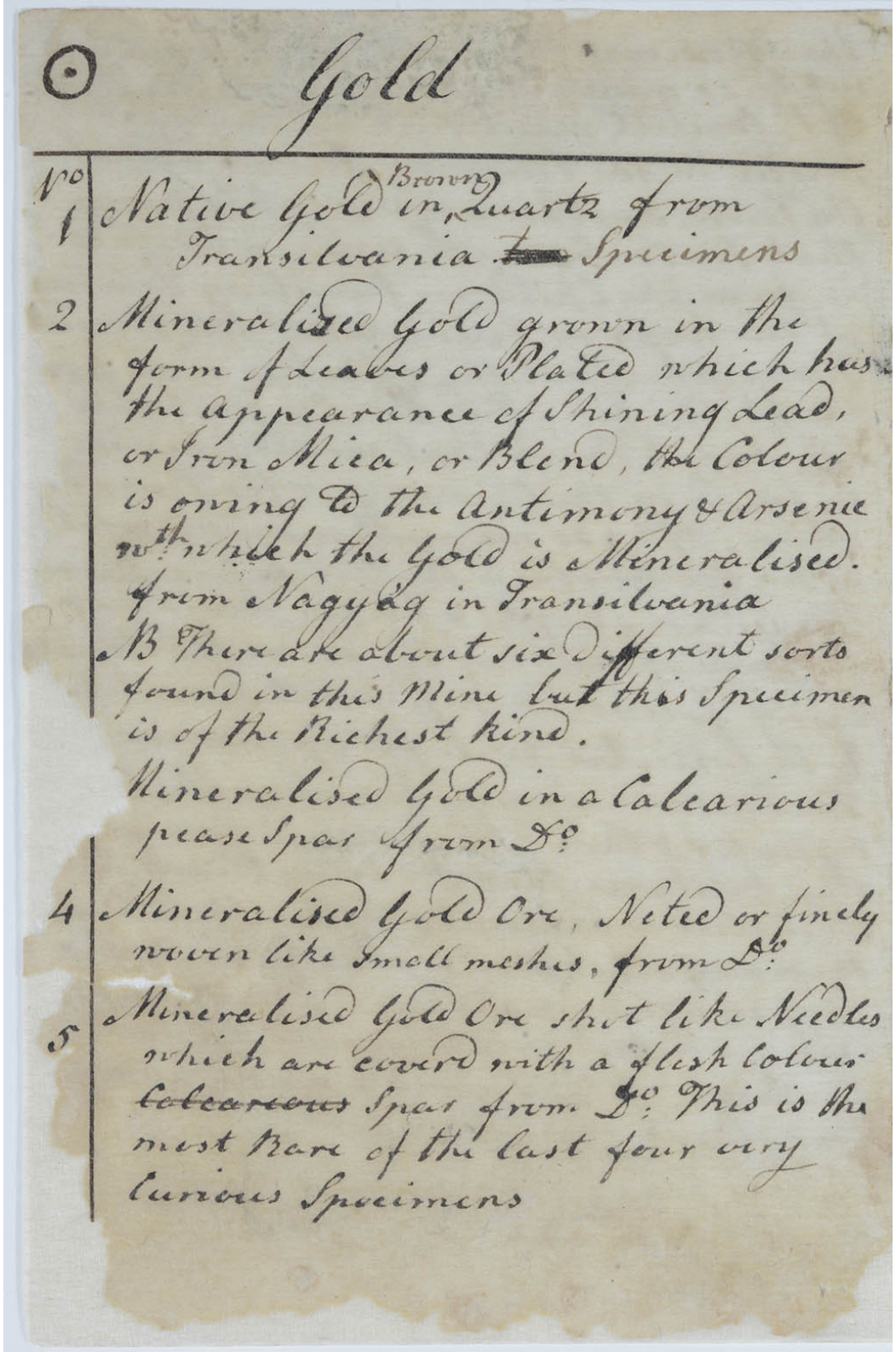
top of the Collumn 8 Sides tending towards a Piramid, & ending in a small Piramid Point of 4 sides as in Nº: 8 - Crystals of Tin Ore seldom extend to more than four Side Pyramid Points & there by some means or other are generally interrupted in their form as most Crystals are fixed by one part or other 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 wch 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



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.

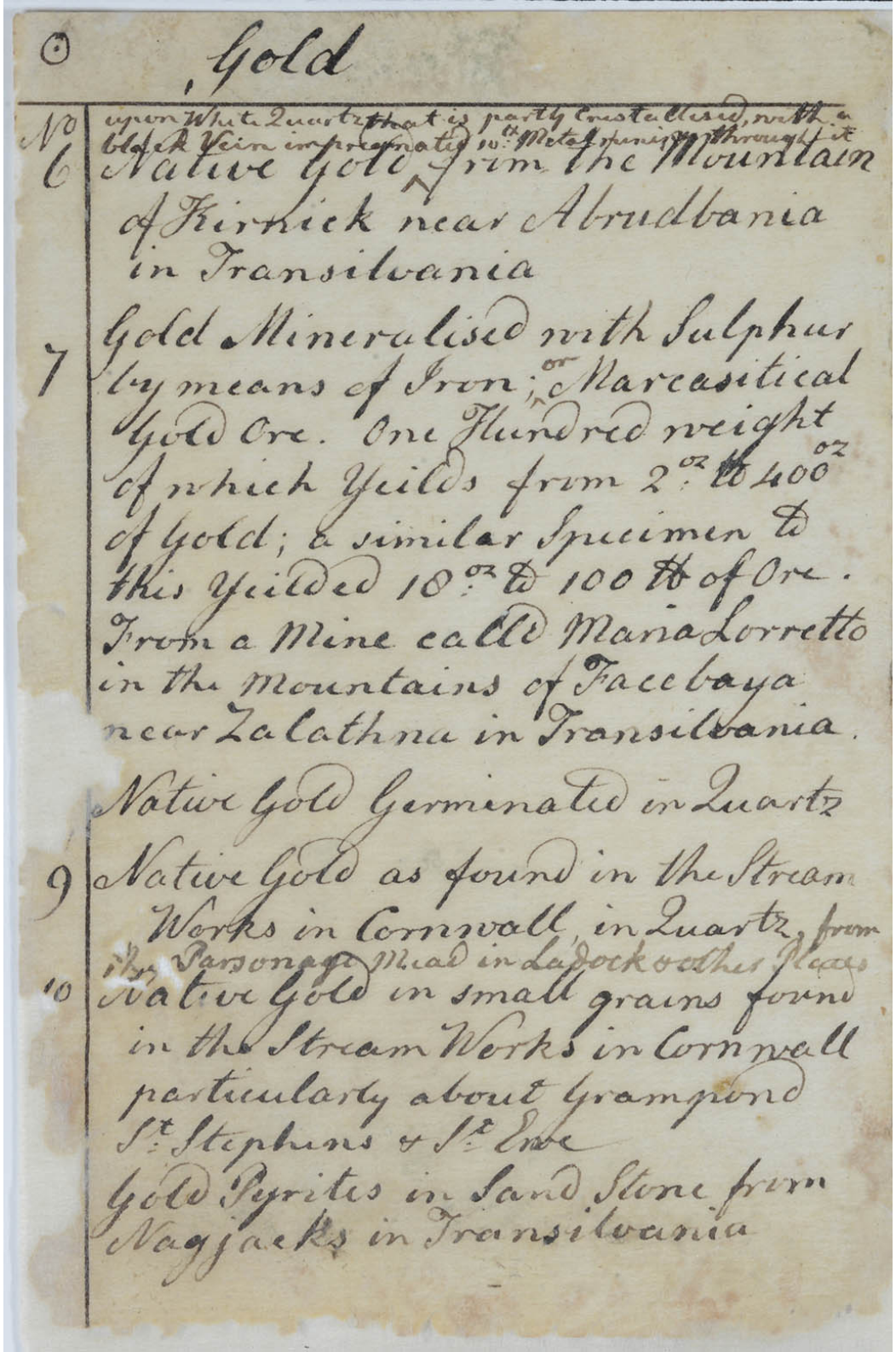
The tinners always Examine the Ore by Water, & then distinguish it from every other substance, that Ore being Cleaned from its Matrix or adherent substances, is heavier than any other Matter Ecpt ⊙ , & by being broke very small & washd on a Shovel an Experienced Tinner will throw all the Ore to the Point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



⊙ Gold

Nº	
1	Native Gold in Brown Quartz from Transilvania ~~two~~ Specimens
2	Mineralised 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:
4	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

NOTE: 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 ($CaCO_3$)


⊙ Gold

No 6 upon White Quartz that is partly Crystallised, with a black Vein impregnated wth: Metal showing through it Native Gold from the Mountain of Kirrick near Abrudbania in Transilvania

7 Gold Mineralised with Sulphur by means of Iron; or Marcasitical Gold Ore. One Hundred weight of which Yields from 2oz to 400oz of Gold; a similar Specimen to this Yielded 10oz to 100 lb of Ore. From a Mine calld Maria Lorretto in the Mountains of Facebaya near Zalathna in Transilvania.

8 Native Gold Germinated in Quartz

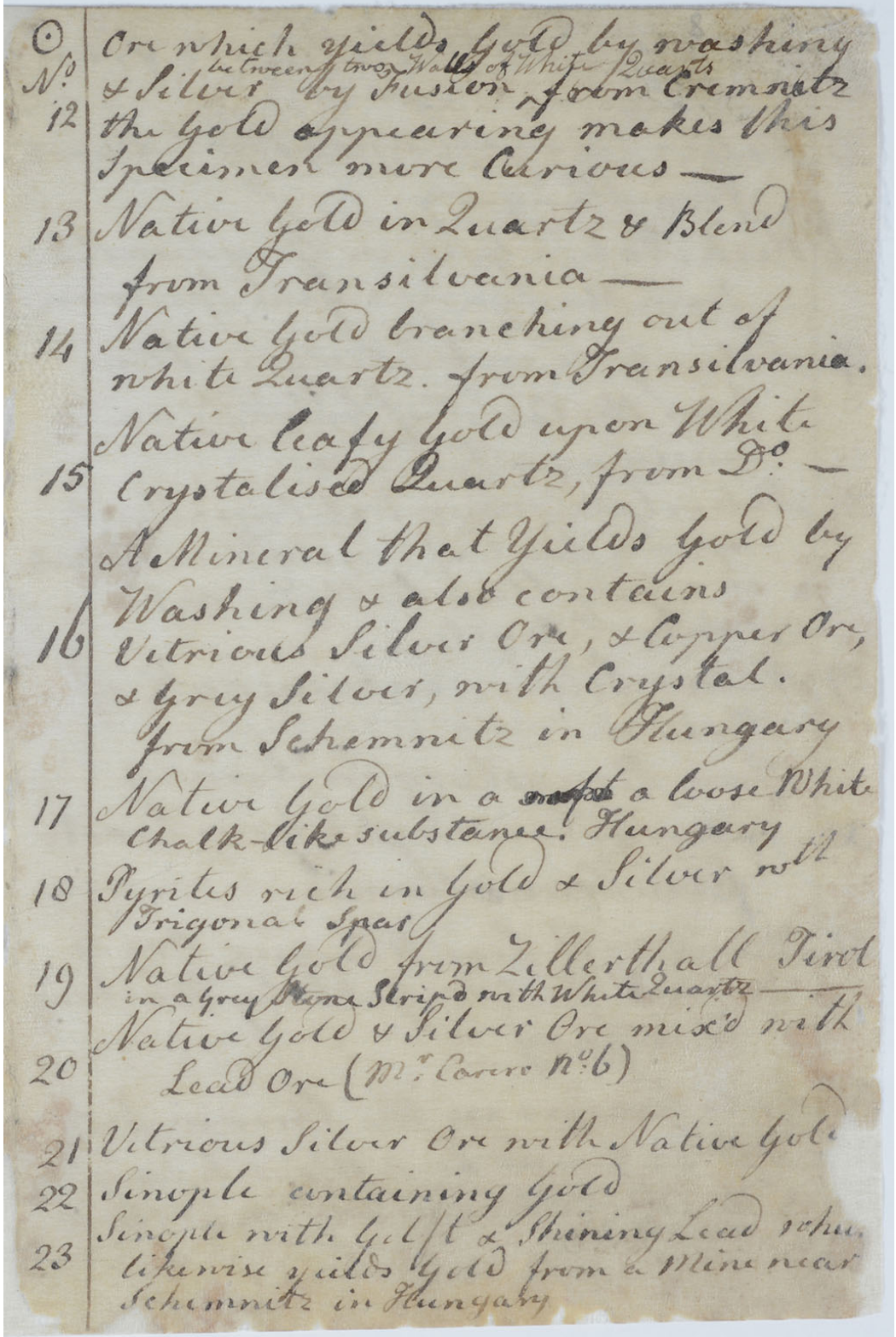
9 Native Gold as found in the Stream Works in Cornwall, in Quartz, from the Parsonage Mead in Ladock & other Places

10 Native Gold in small grains found in the Stream Works in Cornwall particularly about Grampond St: Stephens & St: Ewe

11 Gold Pyrites in Sand Stone from Nagjacks in Transilvania

⊙ Gold

No	
6	Native Gold upon White Quartz that is partly Crystallised, with a black Vein impregnated wth: Metal showing through it from the Mountain of Kirnick near Abrudbania in Transilvania
7	Gold Mineralised with Sulphur by means of Iron; or Marcasitical Gold Ore. One Hundred weight of which Yields from 2oz: to 400oz: of Gold; a similar specimen to this yielded 10oz: 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
10	Native Gold in small grains in the Stream Works in Cornwall particularly about Grampound St: Stephens & St: Ewe
11	Gold Pyrites in Sand Stone from Nagjacks in Transilvania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№
12 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 —
13 Native Gold in Quartz & Blend from Transilvania —
14 Native Gold branching out of white Quartz. from Transilvania.
15 Native leafy Gold upon White Crystalised Quartz, from Dº —
16 A Mineral that Yields Gold by Washing & also contains Vitrious Silver Ore, & Copper Ore, & Grey Silver, with Crystal. from Schemnitz in Hungary
17 Native Gold in a loose White Chalk-like substance. Hungary
18 Pyrites rich in Gold & Silver wth Trigonal Spar
19 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

⊙

Nº	
12	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 ~
13	Native Gold in Quartz & Blend from Transilvania ~
14	Native Gold branching out of white Quartz. from Transilvania.
15	Native leafy Gold upon White Crystalised Quartz, from Dº: ~
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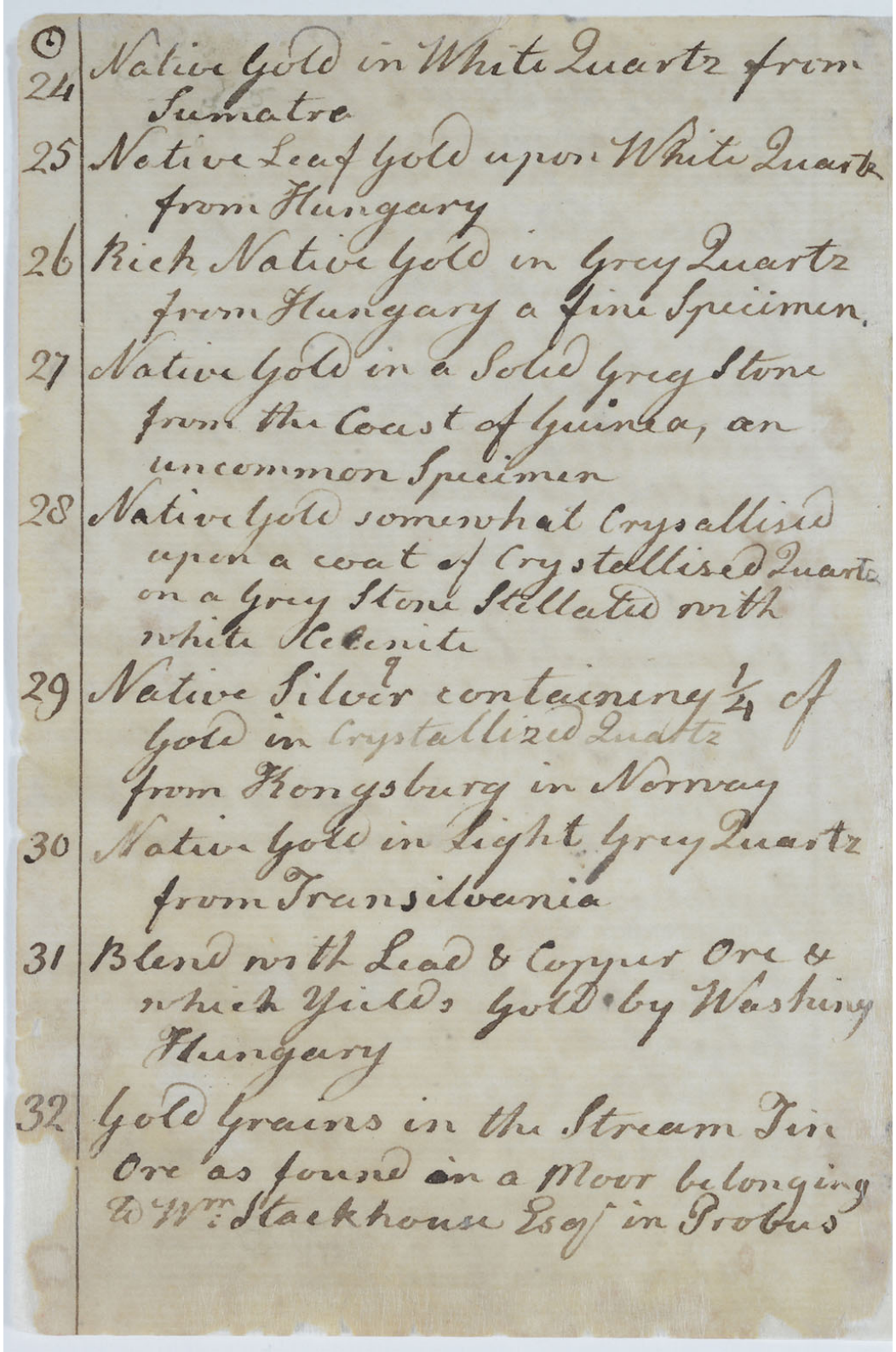
18	Pyrites rich in Gold & Silver wth Trigonal Spar
19	Native Gold from Zillerthall Tirol in a Grey Stone Stripd with White Quartz
20	Native Gold & Silver Ore mix'd with Lead Ore (Mr Carero nº: 6)
21	Vitrious Silver Ore with Native Gold
22	Sinople containing Gold
23	Sinople with Gold and Shining Lead which likewise yields Gold from a Mine near Schemnitz in Hungary

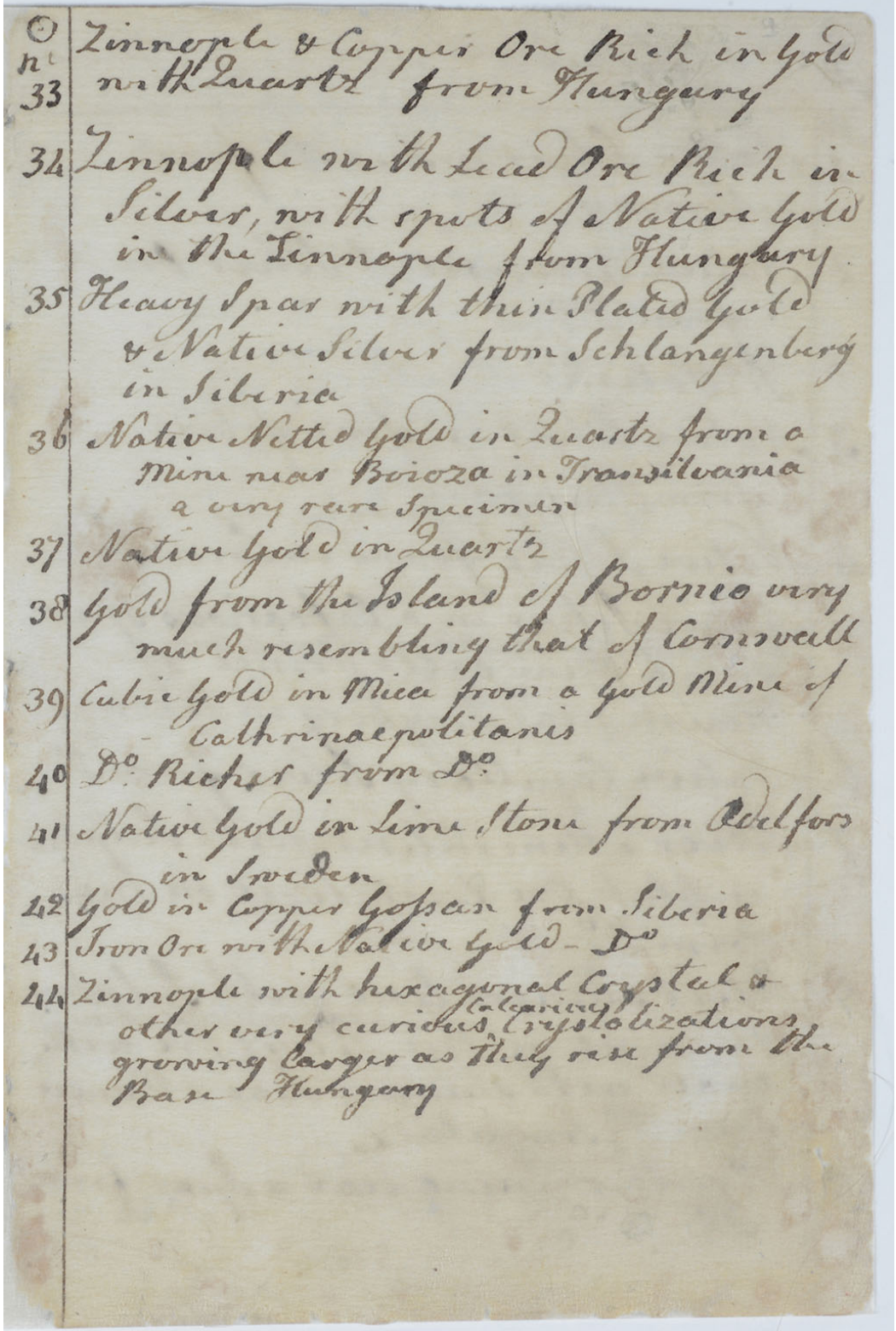
NOTE: Blend = Sphalerite (ZnS)
Vitrious Silver Ore = Acanthite (Ag_2S)
Grey Silver probably = Acanthite (Ag_2S)
Crystal = colourless Quartz (SiO_2)
Trigonal Spar = Calcite ($CaCO_3$)
Sinople is a dark reddish earth pigment
Shining Lead probably = Galena (PbS)


⊙
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 1/4 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 Wm: Stackhouse Esq in Probus

⊙

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 Wm: Stackhouse Esq in Probus

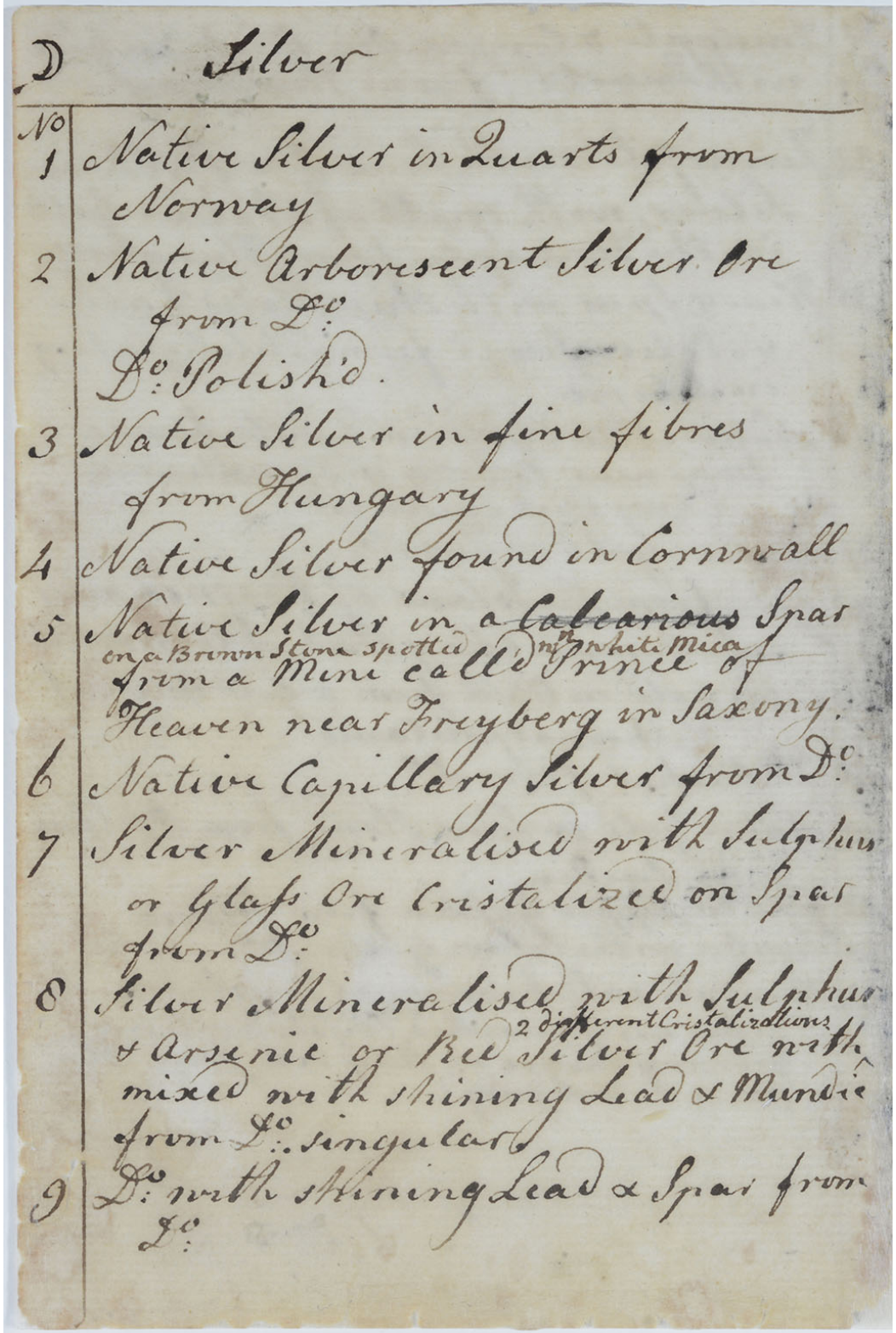
NOTE: Celenite = Gypsum ($CaSO_4 \cdot 2H_2O$)
Blend = Sphalerite (ZnS)


⊙
n°
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 Transilvania 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 Dº: Richer from Dº:
41 Native Gold in Lime Stone from Adelfors in Sweden
42 Gold in Copper Gossan from Siberia
43 Iron Ore with Native Gold - Dº:
44 Zinnople with hexagonal Crystal & other very curious Calcarious Crystalizations growing larger as they rise from the Base Hungary

⊙

n°	
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	Dº: Richer from Dº:
41	Native Gold in Lime Stone from Adelfors in Sweden
42	Gold in Copper Gossan from Siberia
43	Iron Ore with Native Gold - Dº:
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 ($BaSO_4$)



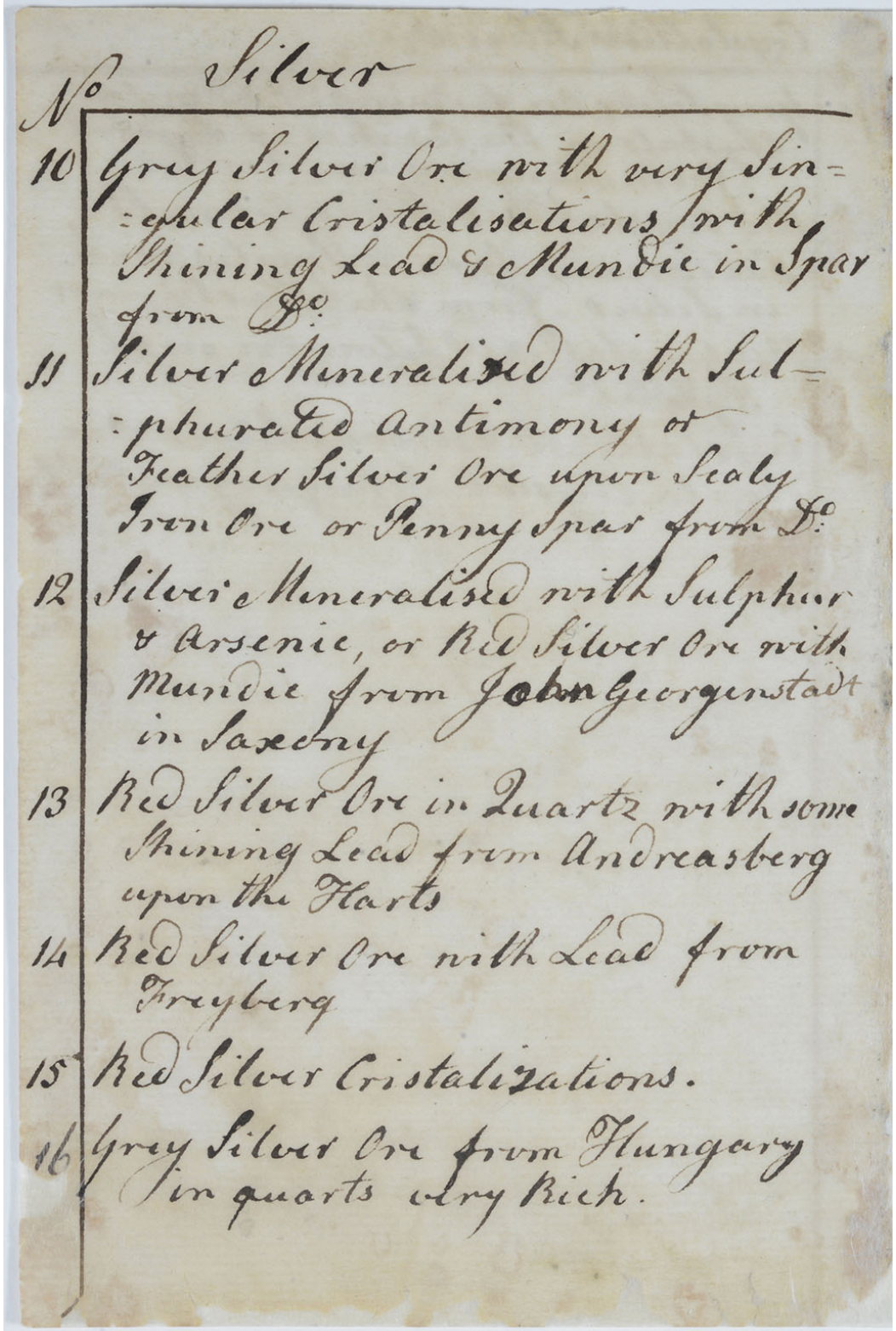
☽ Silver

No	
1	Native Silver in Quarts from Norway
2	Native Arborescent Silver Ore from Do Do: Polish'd.
3	Native Silver in fine fibres from Hungary
4	Native Silver found in Cornwall
5	Native Silver in a ~~Calcarious~~ Spar on a Brown Stone spotted wth white Mica from a Mine call'd Prince of Heaven near Freyberg in Saxony.
6	Native Capillary Silver from Do:
7	Silver Mineralised with Sulphur or Glass Ore Cristalized on Spar from Do:
8	Silver Mineralised with Sulphur & Arsenic or Red Silver Ore with 2 different Cristalizations mixed with shining Lead & Mundic from Do:. singular
9	Do: with shining Lead & Spar from Do:

☽ *Silver*

No	
1	Native Silver in Quarts from Norway
2	Native Arborescent Silver Ore from Do: Do: Polish'd
3	Native Silver in fine fibres from Hungary
4	Native Silver found in Cornwall
5	Native Silver in a Calcarious Spar on a Brown Stone spotted wth white Mica from a Mine call'd Prince of Heaven near Freyberg in Saxony
6	Native Capillary Silver from Do:
7	Silver Mineralised with Sulphur or Glass Ore Cristalized on Spar from Do:
8	Silver Mineralised with Sulphur & Arsenic or Red Silver Ore with 2 different Cristalizations mixed with shining Lead & Mundic from Do:. singular
9	Do: with shining Lead & Spar from Do:

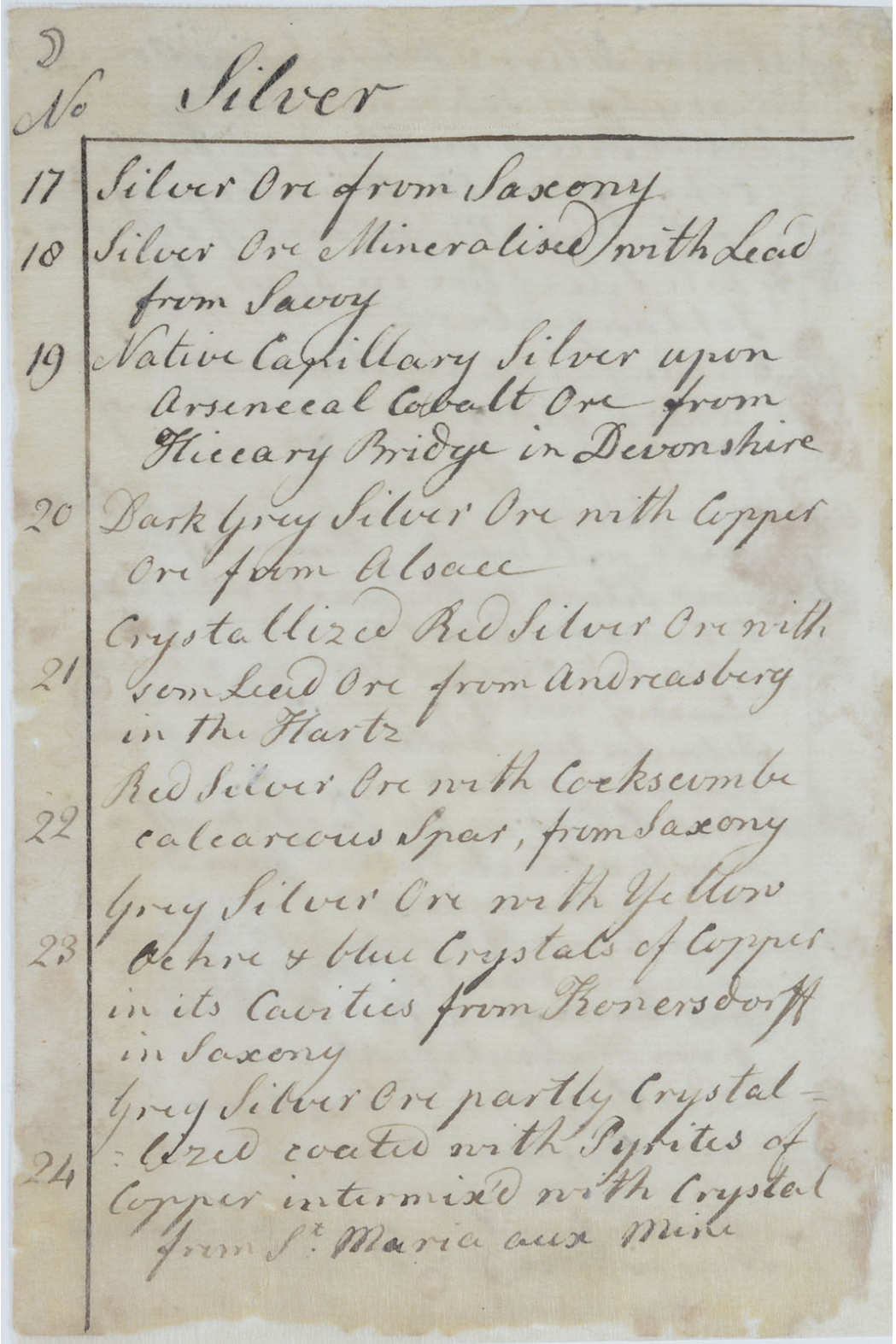
NOTE: The symbol for silver is also associated with the moon in astrology
Calcarious Spar = Calcite($CaCO_3$)
Glass Ore =Acanthite (Ag_2S)
Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3)
Shining Lead probably = Galena (PbS)
Mundic is an old Cornish name for Pyrite (FeS_2)



Silver

No	
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 (Ag_2S)
Shining Lead probably = Galena (PbS)
Mundic is an old Cornish name for Pyrite (FeS_2)
Feather Silver Ore = Jamesonite ($Pb_4FeSb_6S_{14}$)
Scaly Iron Ore or Penny Spar probably = Hematite (Fe_2O_3) or Goethite (FeO(OH))
Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3)



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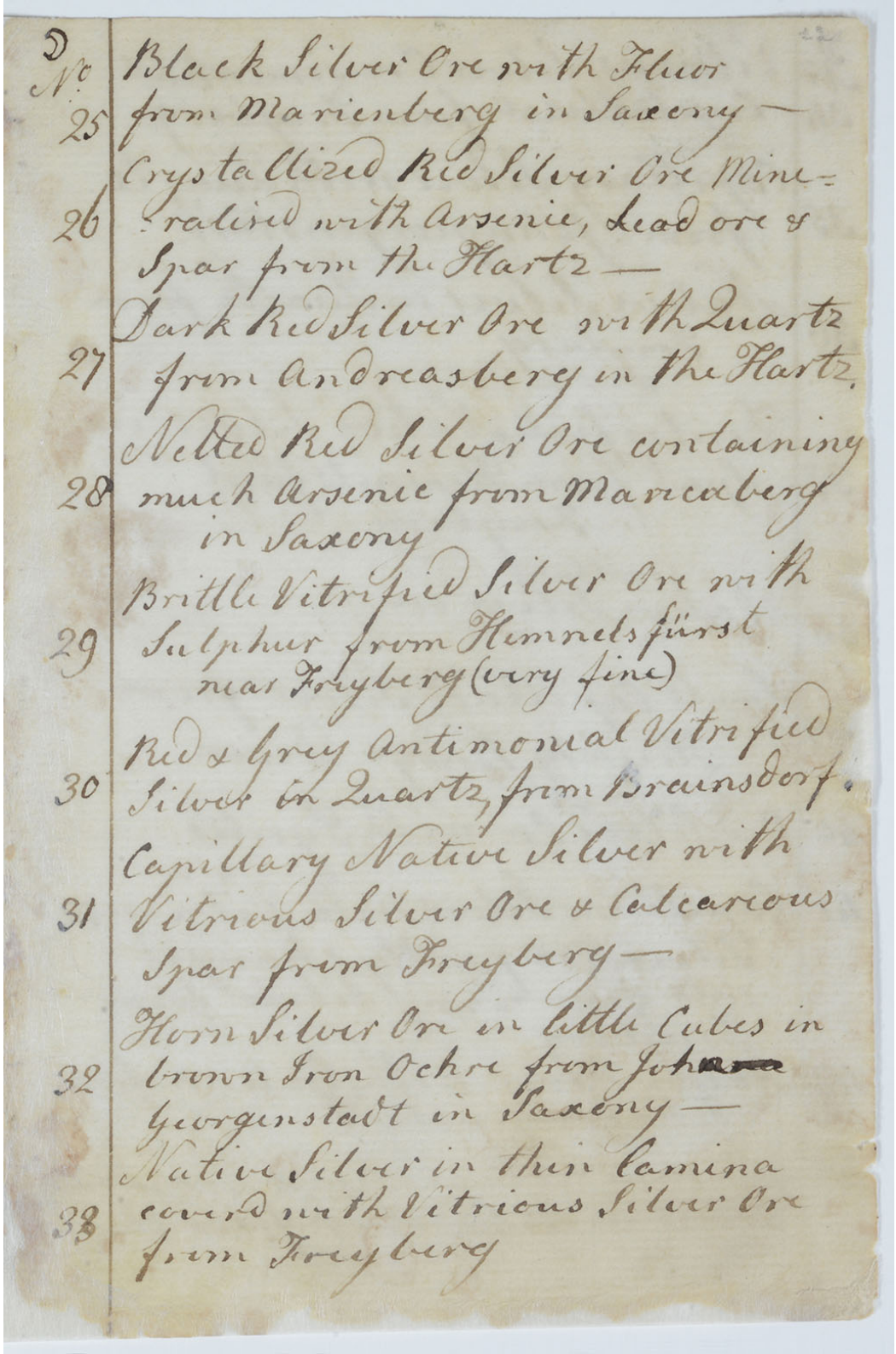
Silver

No	
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 S^{t}: Maria aux Mine

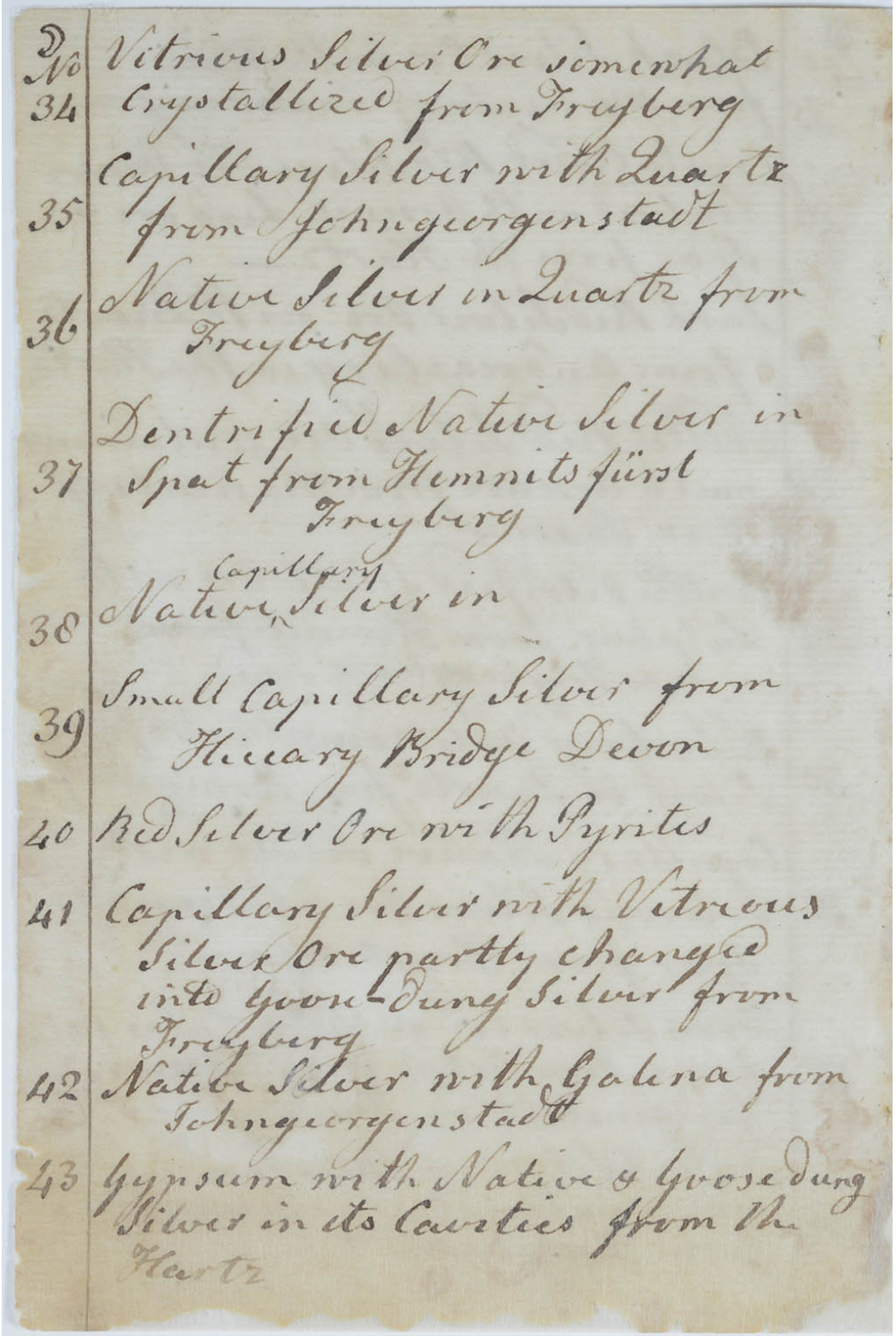
NOTE: Capillary Silver = Native Silver (Ag)
Arsenecal Cobalt = Cobaltite (CoAsS)
Grey Silver Ore probably = Acanthite (Ag_2S)
Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3)
Pyrites of Copper = Chalcopyrite ($CuFeS_2$)



No	
25	Black Silver Ore with Fluor from Marienberg in Saxony —
26	Crystalized Red Silver Ore Mineralized 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 Himmelsfürst 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 Johanngeorgenstadt in Saxony —
33	Native Silver in thin Lamina coverd with Vitrious Silver Ore from Freyberg

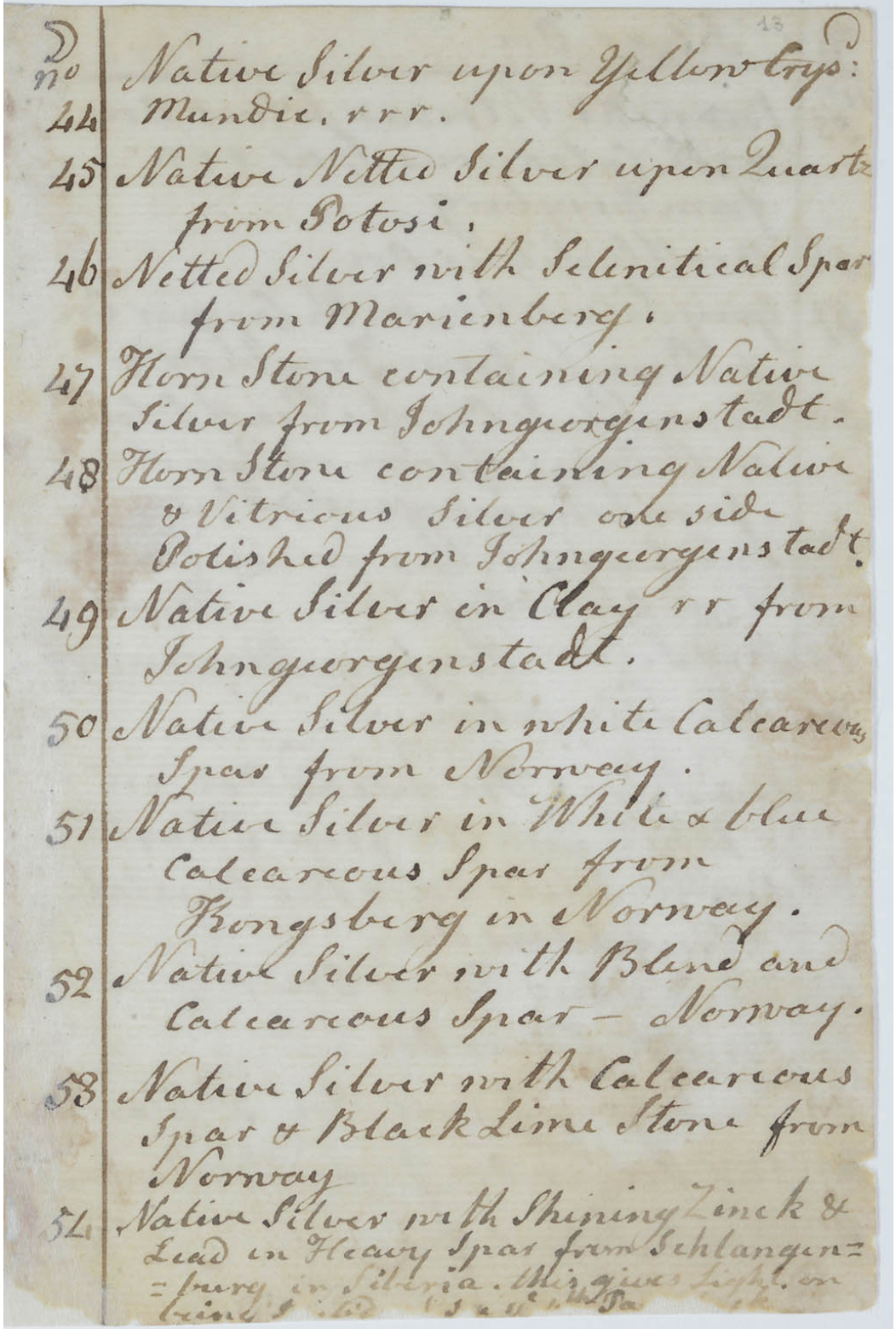
No	
25	Black Silver Ore with Fluor from Marienberg in Saxony ~
26	Crystallized Red Silver Ore Mineralised with Arsenic, Lead ore & Spar from the Hartz ~
27	Dark Red Silver Ore with Quartz from Andreasberg in the Hartz
28	Netted Red Silver Ore containing much Arsenic from Marienberg in Saxony
29	Brittle 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_5SbS_4) or Acanthite (Ag_2S)
Fluor = Fluorite (CaF_2)
Dark Red Silver Ore = Pyrargyrite (Ag_3SbS_3)
Netted Red Silver Ore = Proustite (Ag_3AsS_3)
Brittle Silver Ore = Stephanite (Ag_5SbS_4)
Capillary Silver = Native Silver (Ag)
Calcareous Spar = Calcite ($CaCO_3$)
Horn Silver = Chlorargyrite (AgCl)
Vitrious Silver Ore = Acanthite (Ag_2S)



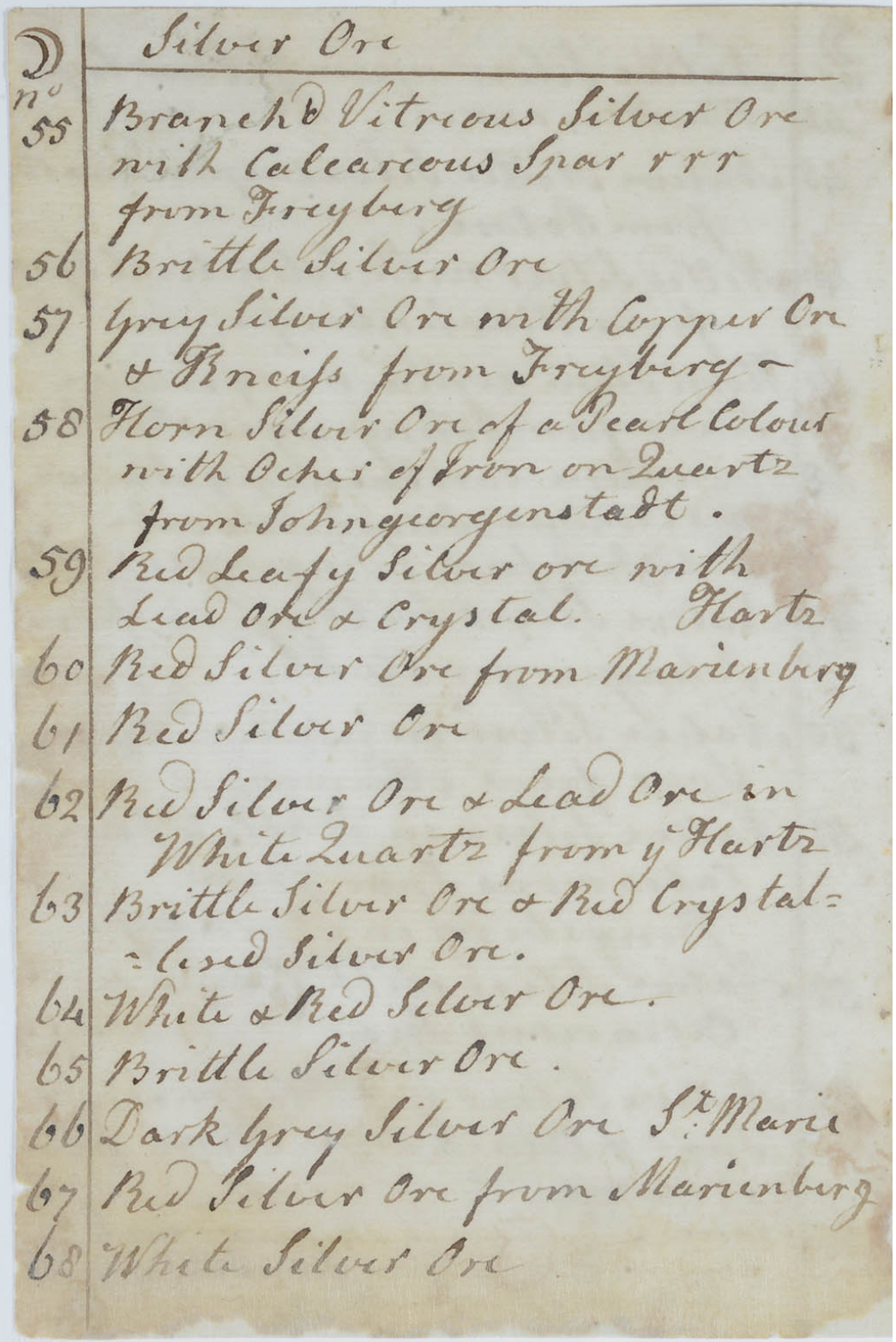
No	
34	Vitrious Silver Ore somewhat Crystallized from Freyberg
35	Capillary Silver with Quartz from Johngeorgenstadt
36	Native Silver in Quartz from Freyberg
37	Dentrified Native Silver in Spar from Heimnitsfürst Freyberg
38	Native Capillary Silver in [location is not given]
39	Small Capillary Silver 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

NOTE: Vitrious Silver Ore = Acanthite (Ag_2S)
Capillary Silver = Native Silver (Ag)
Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3)
Goose-dung Silver is an inferior grade of iron sinter containing silver



n°	
44	Native Silver upon Yellow Crys[d]: Mundic. r r r.
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 ($CaSO_4 \cdot 2H_2O$)
Horn Stone = Chert/Jasper
Vitreous Silver Ore = Acanthite (Ag_2S)
Calcareous Spar = Calcite ($CaCO_3$)
Blend = Sphalerite (ZnS)
Shining Zinck = Sphalerite (ZnS)
Heavy Spar = Baryte (BaSO4)



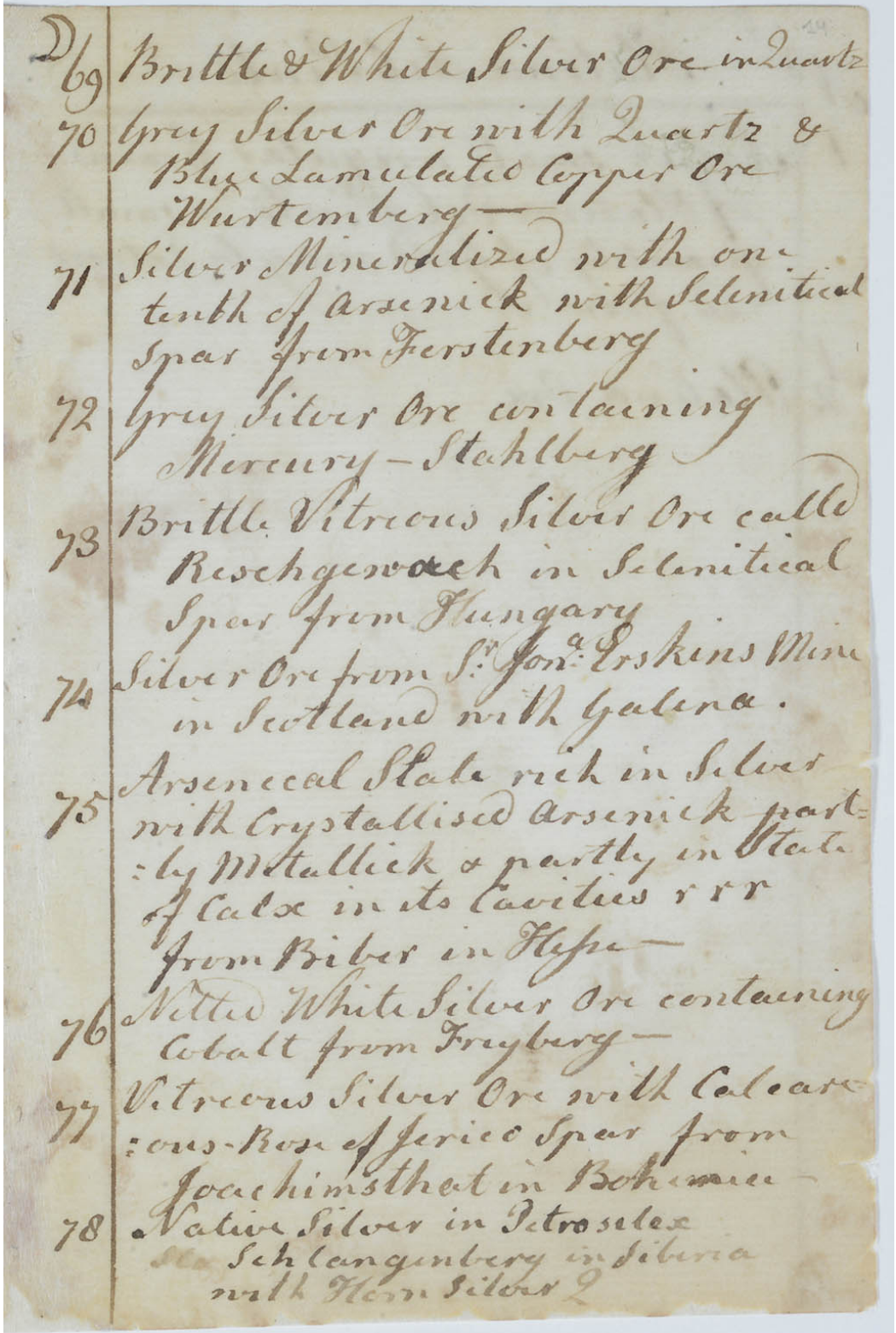
☽ Silver Ore

nº	
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 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 Crystal= =lized 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

☽ Silver Ore

nº	
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)


69 Brittle & White Silver Ore in Quartz
70 Grey Silver Ore with Quartz & Blue Lamulated 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 Vitreous Silver Ore calld Reschgewach 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 Vitreous Silver Ore with Calcareous-Rose of Jerico Spar from Joachimsthal in Bohemia —
78 Native Silver in Petrosilex Schlangenberg in Siberia with Horn Silver

☽

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.

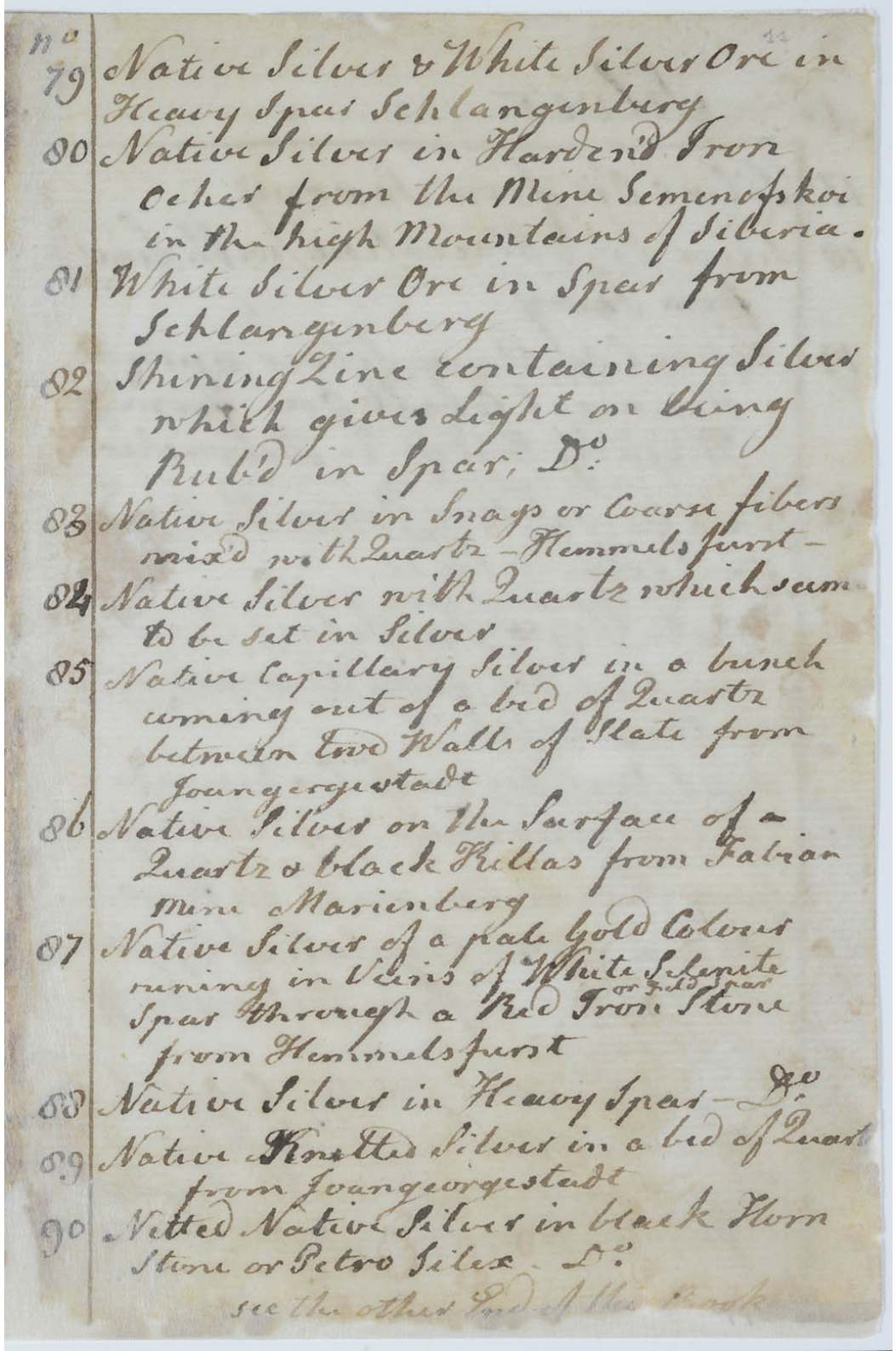
75 Arsenical Slate rich in Silver with Crystallised Arsenick partly Metallick & partly in State of Calx in its Cavities r r r from Biber in Hesse ~

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



nº

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

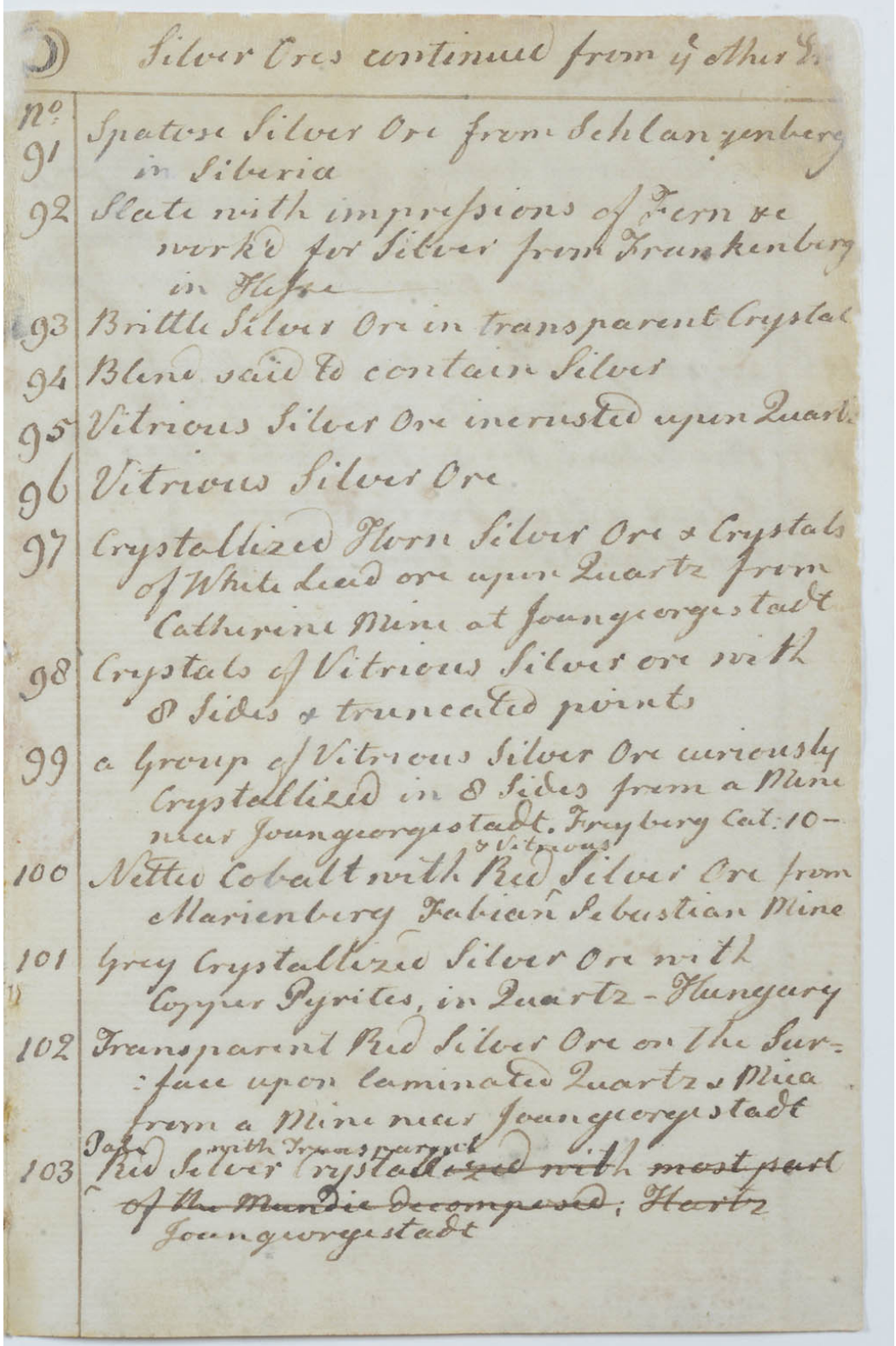
88 Native Silver in Heavy Spar - Dº:

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: Heavy Spar = Baryte ($BaSO_4$)
Hardened Iron Ocher = limonite (massive oxide or hydroxide of iron)
Shining Zinc = Sphalerite (ZnS)
Selenite Spar = Gypsum ($CaSO_4 \cdot 2H_2O$)
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 4th Shelf

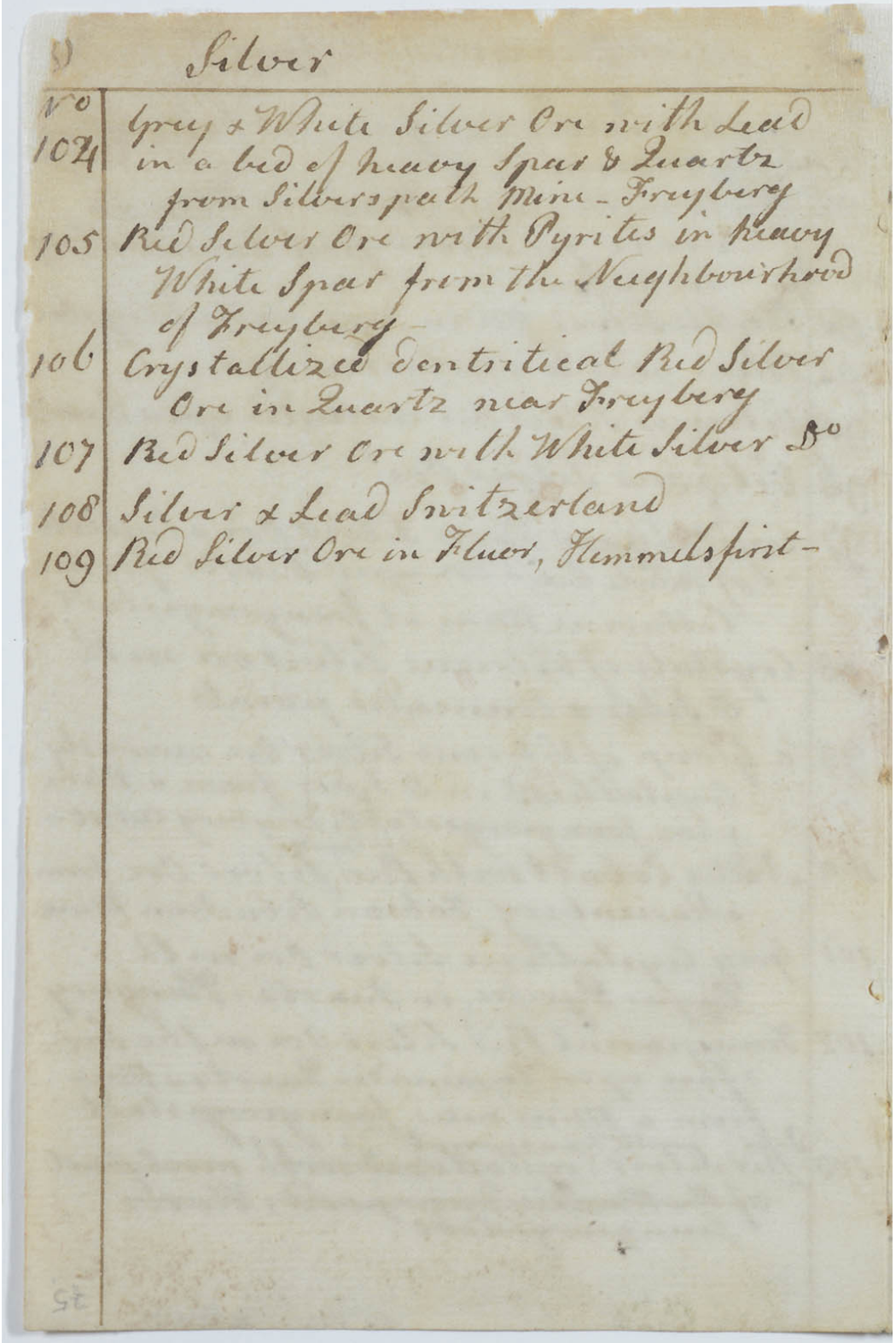
Nº	
91	Spatose Silver Ore from Schlangenberg in Siberia
92	Slate with impressions of Fern &c worked for Silver from Frankenberg in Hesse
93	Brittle Silver Ore in transparent Crystal
94	Blend said to contain Silver
95	Vitrious Silver Ore incrusted upon Quartz
96	Vitrious Silver Ore
97	Crystallized Horn Silver Ore & Crystals of White Lead ore upon Quartz from Catherine Mine at Joungeorgestadt
98	Crystals of Vitrious Silver ore with 8 Sides & truncated points
99	a Group of Vitrious Silver Ore curiously Crystallized in 8 Sides from a Mine near Joungeorgestadt. 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
102	Transparent Red Silver Ore on the Surface upon laminated Quartz & Mica from a Mine near Joungeorgestadt
103	Pale Red Silver with Transparent Crystallized with ~~most part of the Mundic decomposed;~~ Hartz Joungeorgestadt

☽ Silver Ores

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

nº	
91	Spatose Silver Ore from Schlangenberg in 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
99	a Group of Vitrious Silver Ore curiously Crystallized in 8 Sides from 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
102	Transparent Red Silver Ore on the Surface upon laminated Quartz & Mica from a Mine near Joangeorgenstadt
103	with Transparent Pale Red Silver Crystal~~lized 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 (Ag_3AsS_3)
Mundic is an old Cornish name for Pyrite (FeS_2)

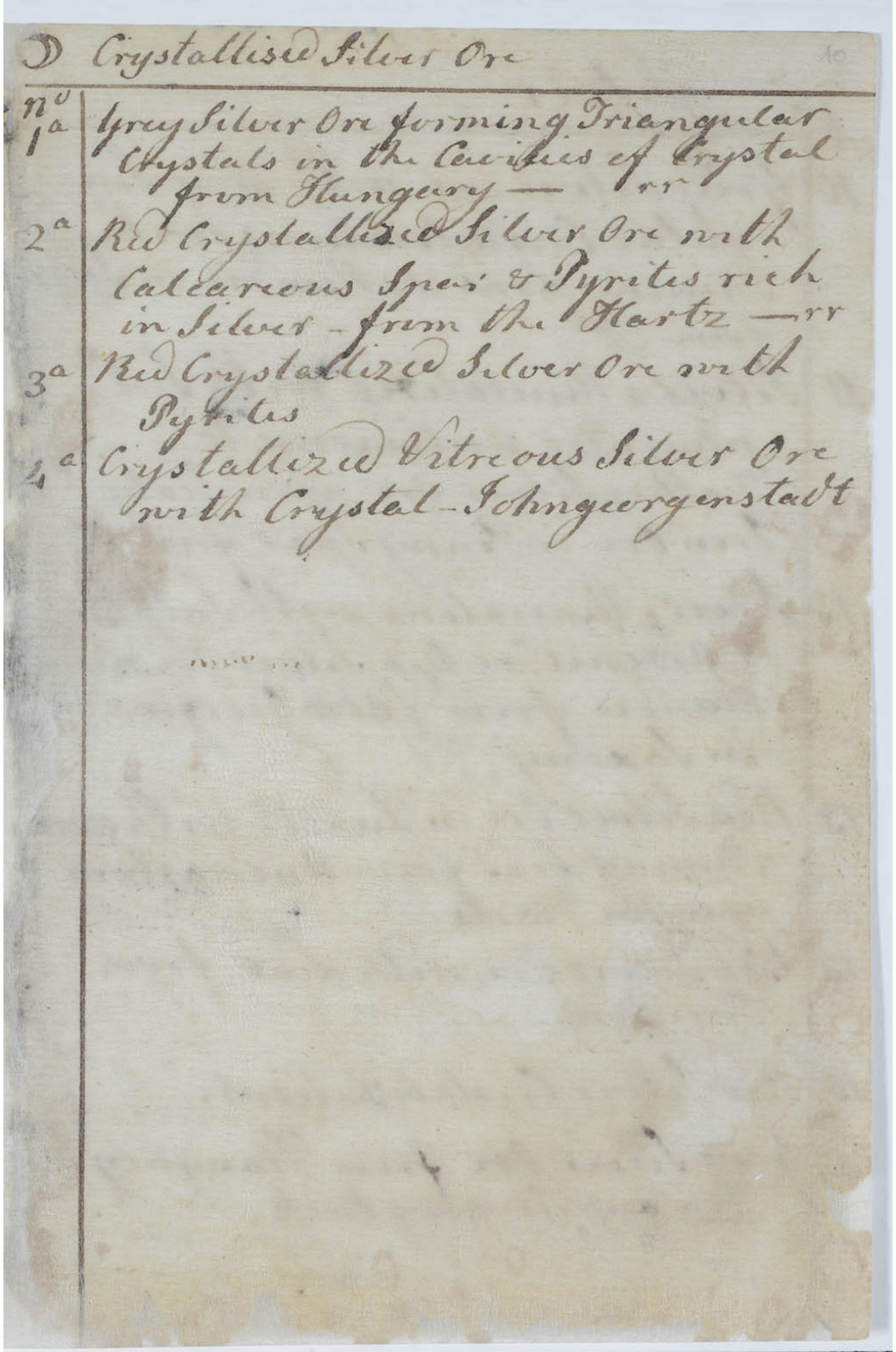


Silver

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

N°	
104	Grey & White Silver Ore with Lead in a bed of heavy Spar & Quartz from Silverspath Mine - Freyberg
105	Red Silver Ore with Pyrites in heavy White Spar from the Neighbourhood of Freyberg
106	Crystallized dendritical Red Silver Ore in Quartz near Freyberg
107	Red Silver Ore with White Silver D°:
108	Silver & Lead Switzerland
109	Red Silver Ore in Fluor, Hemmelsfirst ~

NOTE: Heavy Spar = Baryte ($BaSO_4$)
Red Silver Ore = Pyrargyrite (Ag_3SbS_3) or Proustite (Ag_3AsS_3)
Fluor = Fluorite (CaF_2)

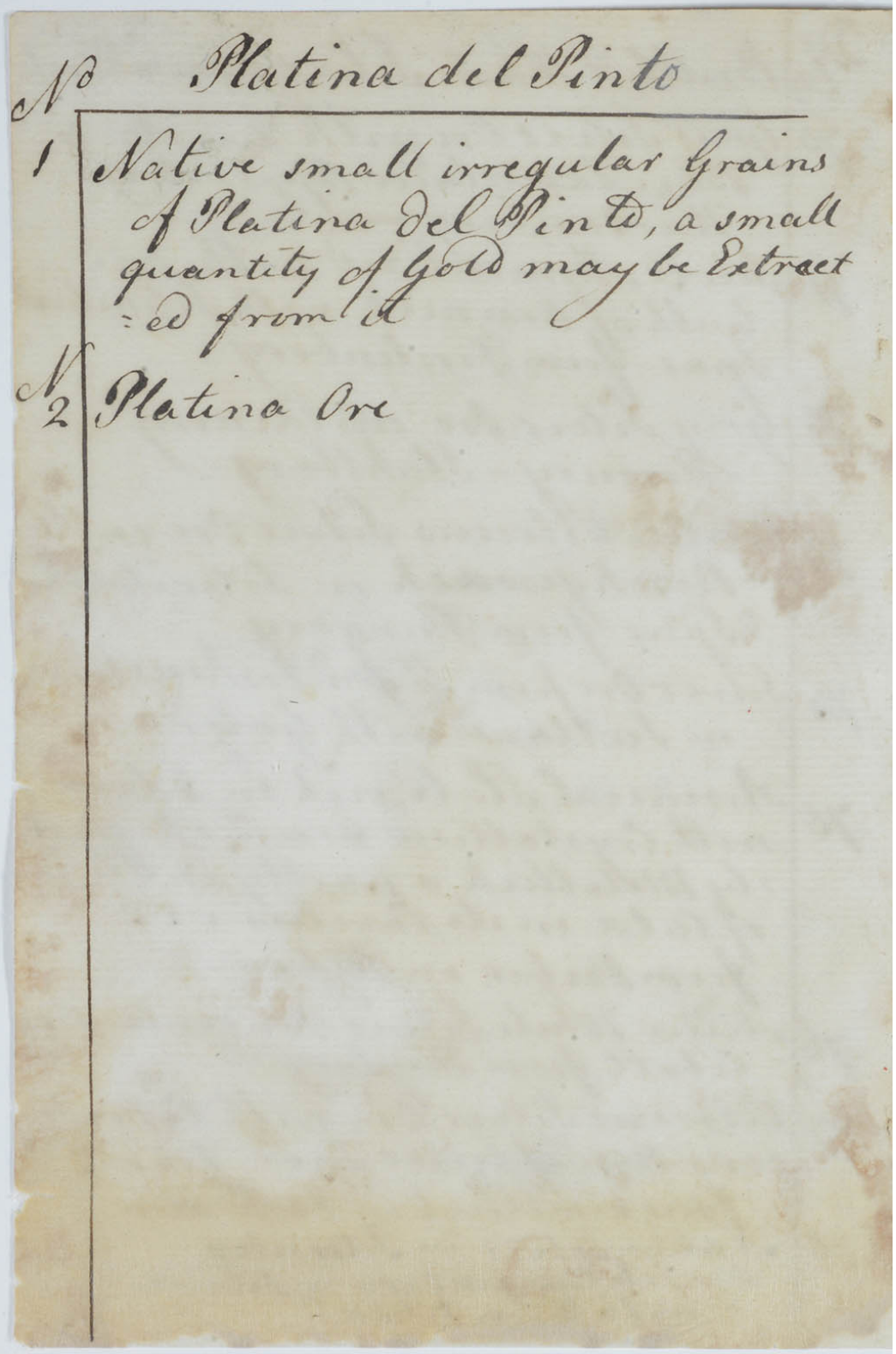

☽ Crystallised Silver Ore

nº	
1ª	Grey Silver Ore forming Triangular Crystals in the Cavities of Crystal from Hungary — rr
2ª	Red Crystallized Silver Ore with Calcareous Spar & Pyrites rich in Silver - from the Hartz — rr
3ª	Red Crystallized Silver Ore with Pyrites
4ª	Crystallized Vitreous Silver Ore with Crystal - Johngeorgenstadt

☽ *Crystallised Silver Ore*

*n*º	
1ª	Grey Silver Ore forming Triangular crystals in the Cavities of Crystal from Hungary ~ r r
2ª	Red Crystallized Silver Ore with Calcareous Spar & Pyrites rich in Silver - from the Hartz ~ r r
3ª	Red Crystallized Silver Ore with Pyrites
4ª	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)



Platina del Pinto

Nº	
1	Native small irregular Grains of Platina del Pinto, a small quantity of Gold may be Extracted from it
N 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.

4 Tin Crystallized (Grain Tin)

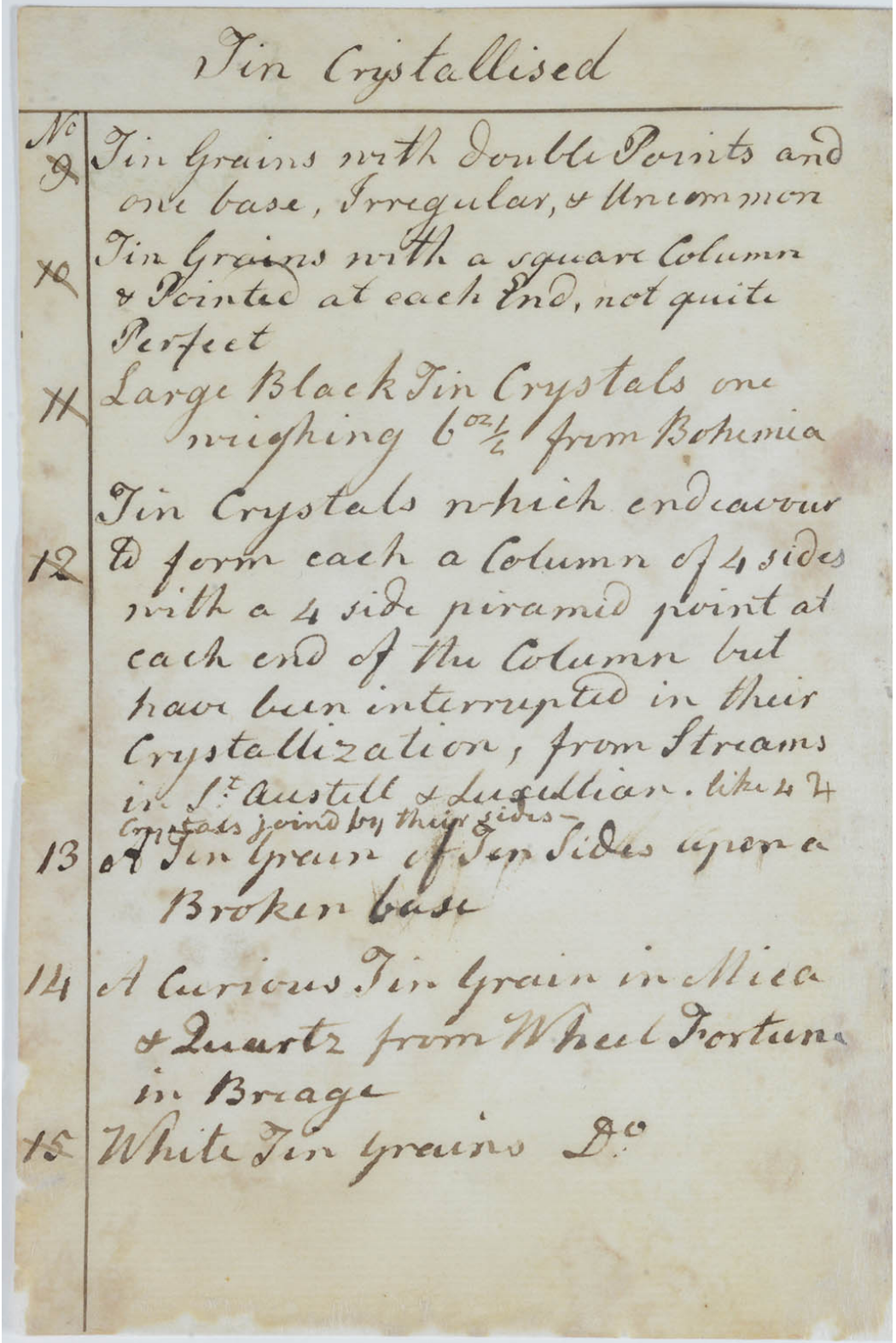
No	
~~1~~	A very large Tin Grain with a Squ[a]re Column & four Angle Pira=mid Point, very Rare,
~~2~~	D[o]: with perfect Angles, Black, Smooth & shining as Glass from S[t]: Agnes, very Rare. The true form of a Tin Crystal.
~~3~~	A very curious Tin Grain with a 4 Sided Column; on the top of the Column tend=in towards a Piramid are 8 Sides every other Angle very Obtuse, & ending in a four Angle Piramid Point; Gavrigan 16 sides.
~~4~~	A semitransparent Tin Grain with a double Quadrangular Column joind on one side, & ending in 2 four Angle Piramid Points, Luxullian
~~5~~	Tin Grains of a Resinous Colour and four Angle Piramid
~~6~~	D[o]: Black & shining as Glass.
~~7~~	A very Uncommon Tin Grain, both Figure & Texture seeking as if compounded of N[os]: 2 & 5; said to be found in S[t]: Dominick
~~8~~	Black Tin Grains interrupted in their Shooting & having no Sign of ever being fixed to a Base. from the Neighbourhood of S[t]: Austell

4 *Tin Crystallized (Grain Tin)*

No	
~~1~~	A very large Tin Grain with a Square Column & four Angle Piramid Point, very Rare,
~~2~~	D[o]: with perfect Angles, Black, Smooth & shining as Glass from S[t]: Agnes, very Rare. The true form of a Tin Crystal.
~~3~~	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.
~~4~~	A semitransparent Tin Grain with a double Quadrangular Column joind on one side, & ending in 2 four Angle Piramid Points, Luxullian
~~5~~	Tin Grains of a Resinous Colour and four Angle Piramid
~~6~~	D[o]: Black shining as Glass.
~~7~~	A very Uncommon Tin Grain, both Figure & Texture seeming as if compounded of N[os]: 2 & 5, said to be found in S[t]: Dominick
~~8~~	Black Tin Grains intirrupted in their Shooting & having no Sign of ever being fixed to a Base. from the Neighbourhood of S[t]: Austell

NOTE: On the otherwise blank page opposite this one Rashleigh notes:
"4 enterd in another Catalogue".
These are the specimens that were transferred into Rashleigh's later large green catalogue (held in the Royal Institution of Cornwall).

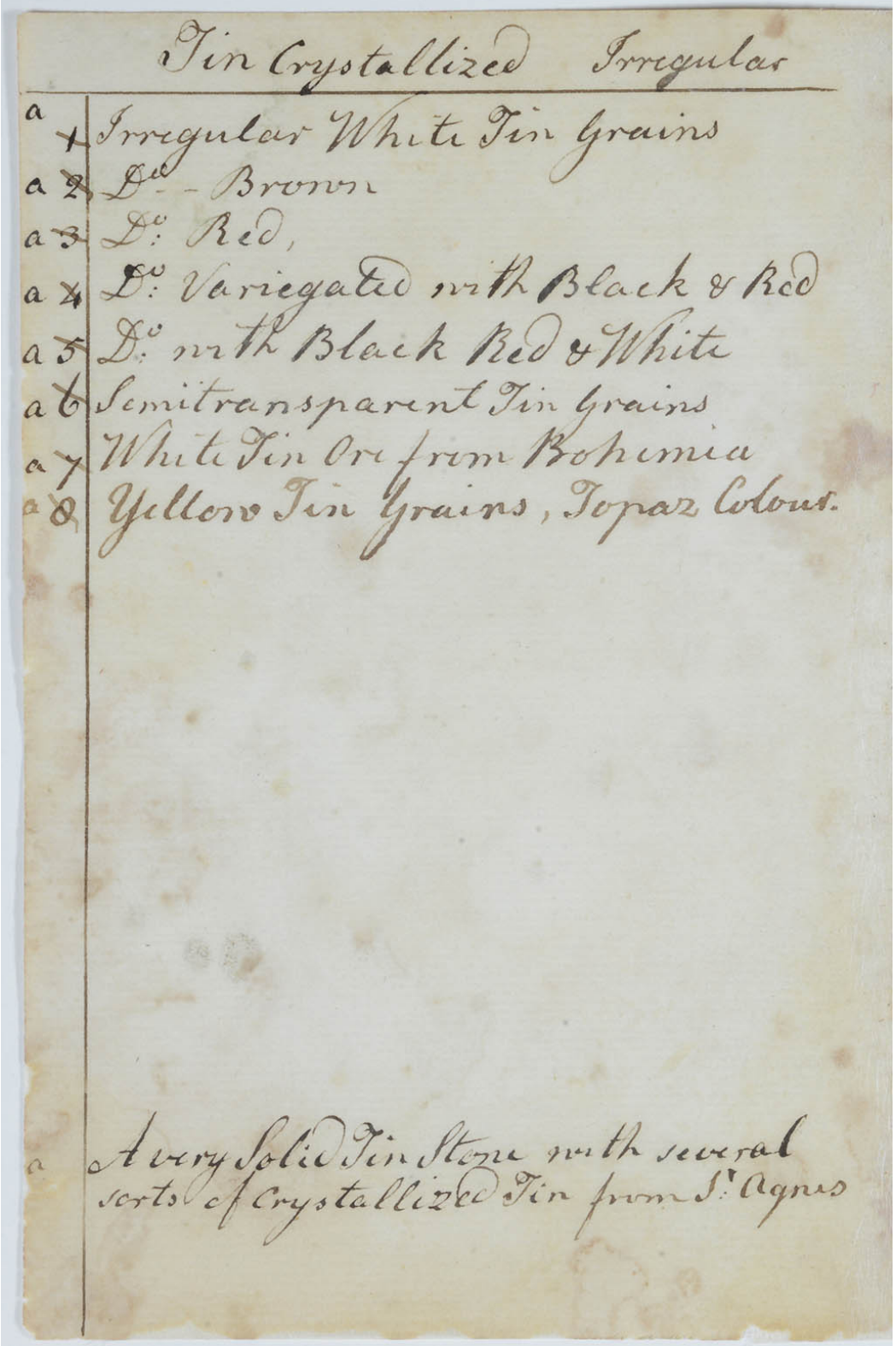
Specimen 2 matches Rashleigh Volume 1, Plate 5, Figure 2.



Tin Crystallised

No	
~~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 6oz ½ 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 ⫤ 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:

NOTE: Tin = Cassiterite (SnO_2)


Tin Crystallized Irregular

a 1 Irregular White Tin Grains
a 2 Do - Brown
a 3 Do 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 8 Yellow Tin Grains, Topaz Colour.

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

Tin Crystallized Irregular

a ~~1~~ Irregular White Tin Grains

a ~~2~~ Do: - Brown

a ~~3~~ Do: Red,

a ~~4~~ Do: Variegated with Black & Red

a 5 Do: with Black Red & White

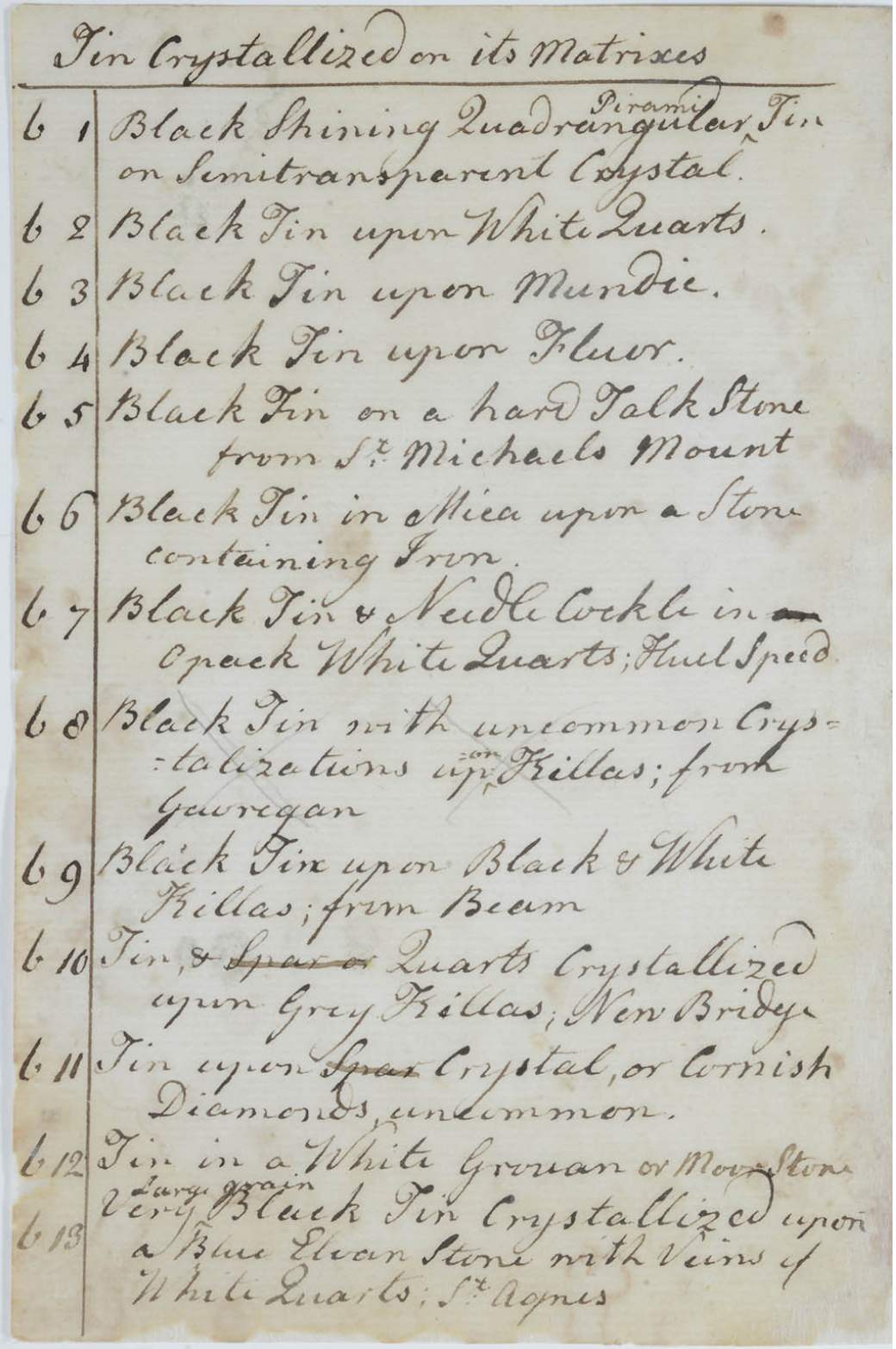
a ~~6~~ Semitransparent Tin Grains

a ~~7~~ White Tin Ore from Bohemia

a ~~8~~ 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

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

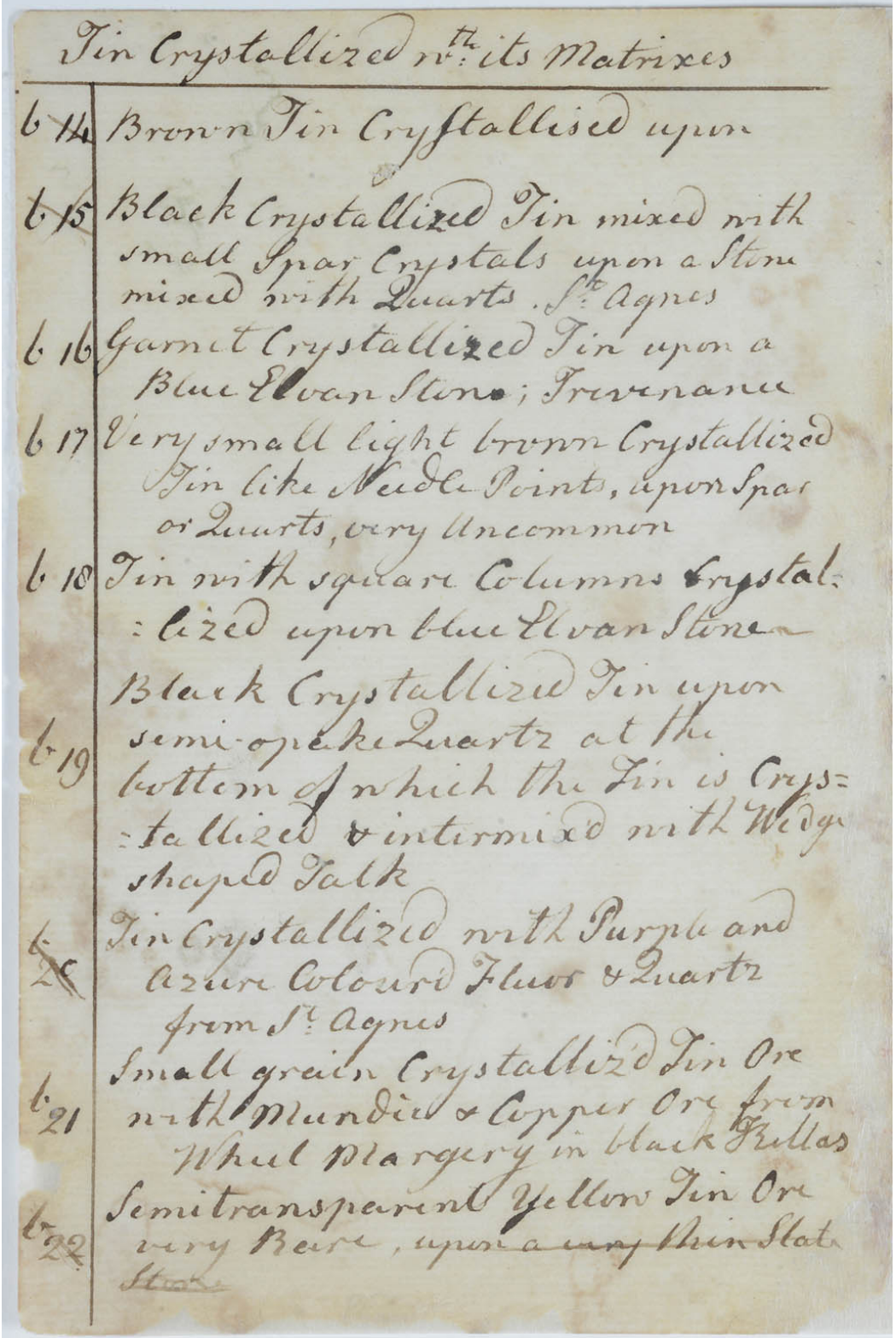
b 10 Tin, & ~~Spar or~~ Quarts Crystallized upon Grey Killas; New Bridge

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 (FeS_2)
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 (SiO_2)
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 wth: its Matrixes

b 14 Brown Tin Crystallised upon

b 15 Black Crystallized Tin mixed with small Spar Crystals upon a Stone mixed with Quarts. Stt: 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 Crystal: : lized upon blue Elvan Stone

b 19 Black Crystallized Tin upon semi-opake Quartz at the bottom of which the Tin is Crys: : tallized & intermixed with Wedge shaped Talk

b 20 Tin Crystallized with Purple and Azure Colour'd Fluor & Quartz from Stt: Agnes

b 21 Small grain Crystallized Tin Ore with Mundic & Copper Ore from Wheal Margery in black Killas

b 22 Semitransparent Yellow Tin Ore very Rare, upon a very thin Slate Stone

Tin Crystallized wth: its Matrixes

b ~~14~~ Brown Tin Crystallised upon

b ~~15~~ 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

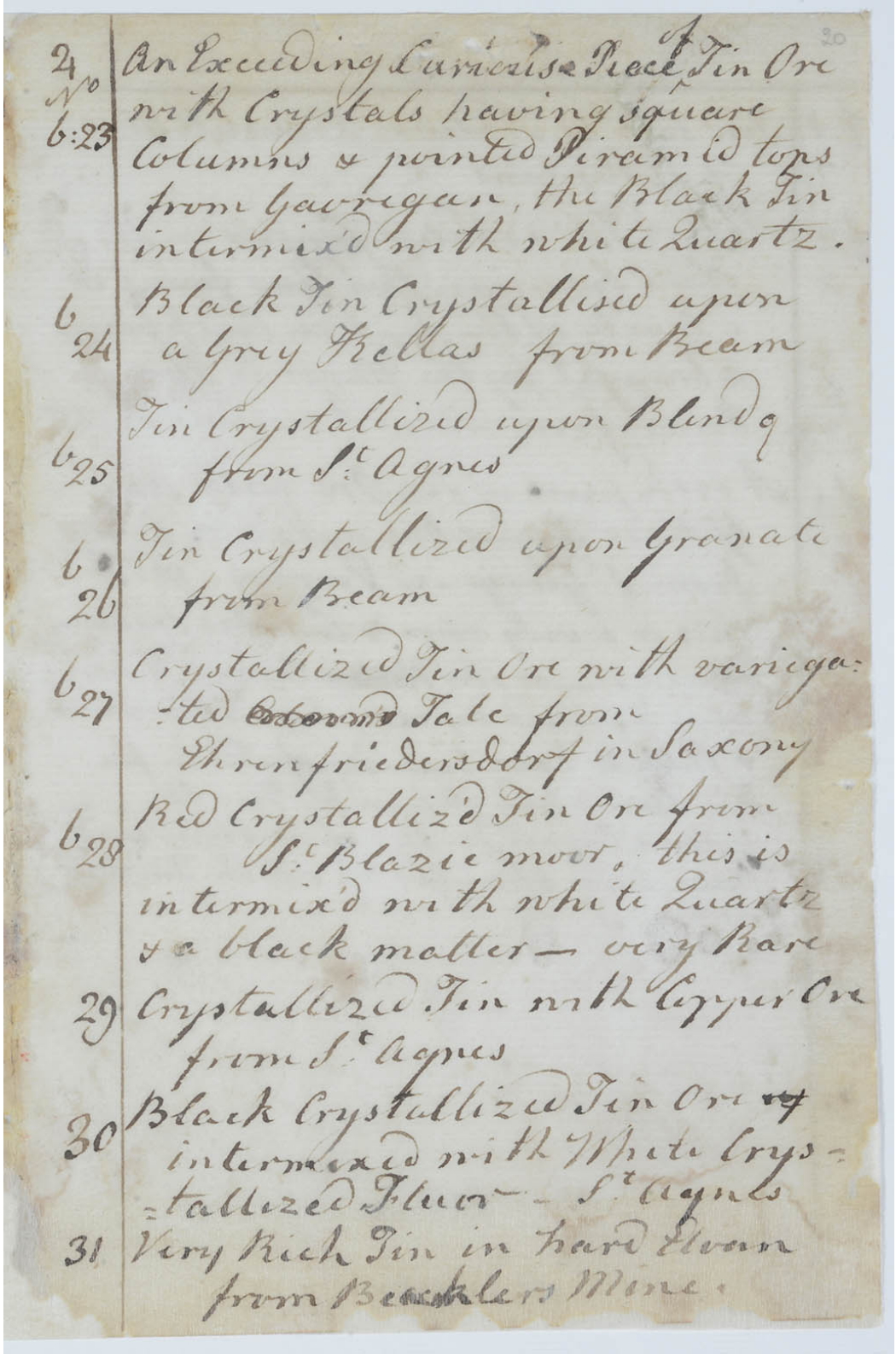
b 19 Black Crystallized Tin upon semi-opake Quartz at the bottom of which the Tin is Crystallized & intermix'd with Wedge shaped Talk

b ~~20~~ Tin Crystallized with Purple and Azure Colour'd Fluor & Quartz from St: 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)

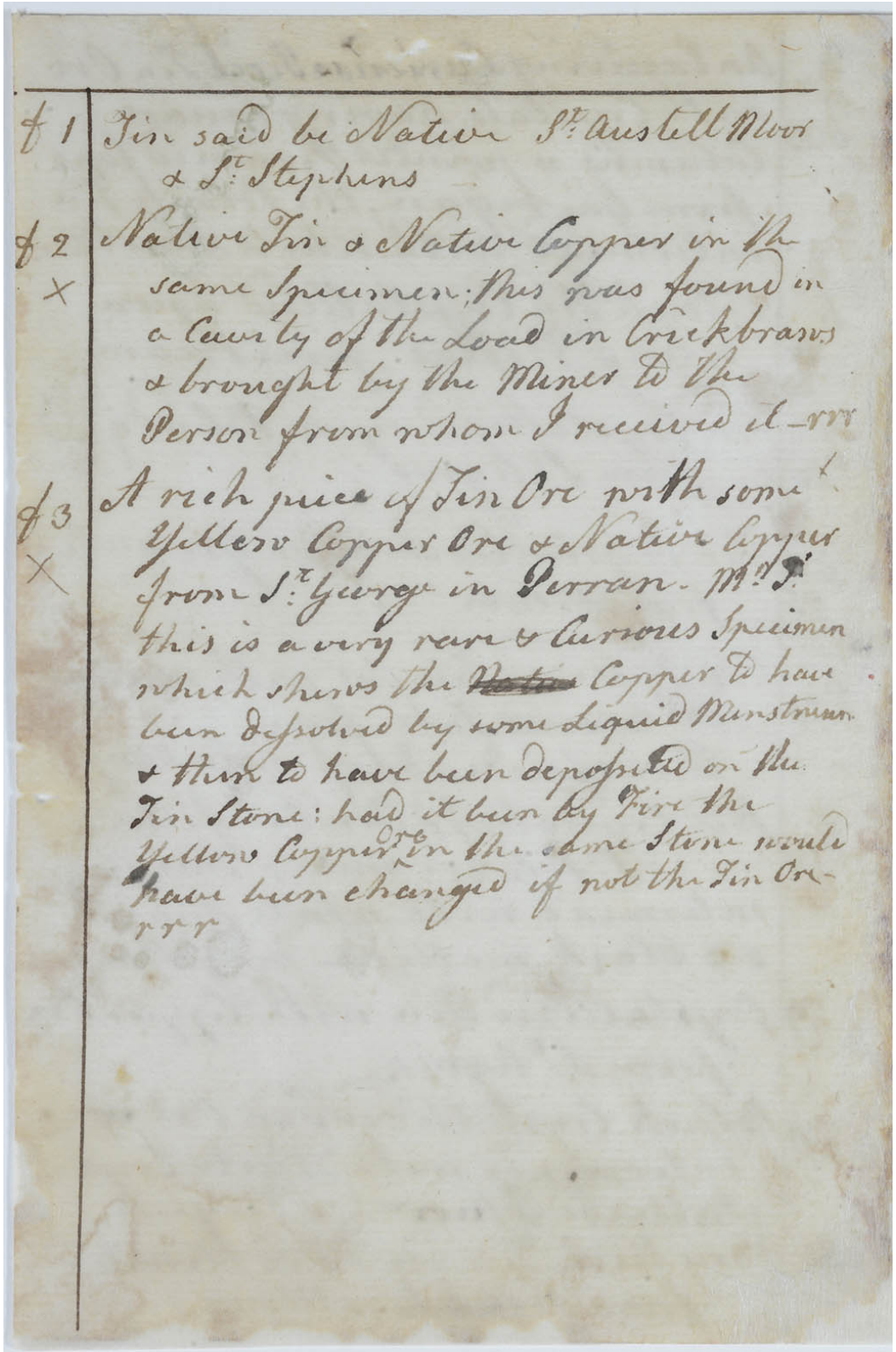


24

No

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 St: 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 St: Blazie moor, this is intermix'd with white Quartz & a black matter ~ very Rare
b 29	Crystallized Tin with Copper Ore from St: Agnes
b 30	Black Crystallized Tin Ore intermixed with White Crystallized Fluor - St: 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 (CaF_2)
Elvan is a Cornish name for fine-grained aplite or quartz porphyry

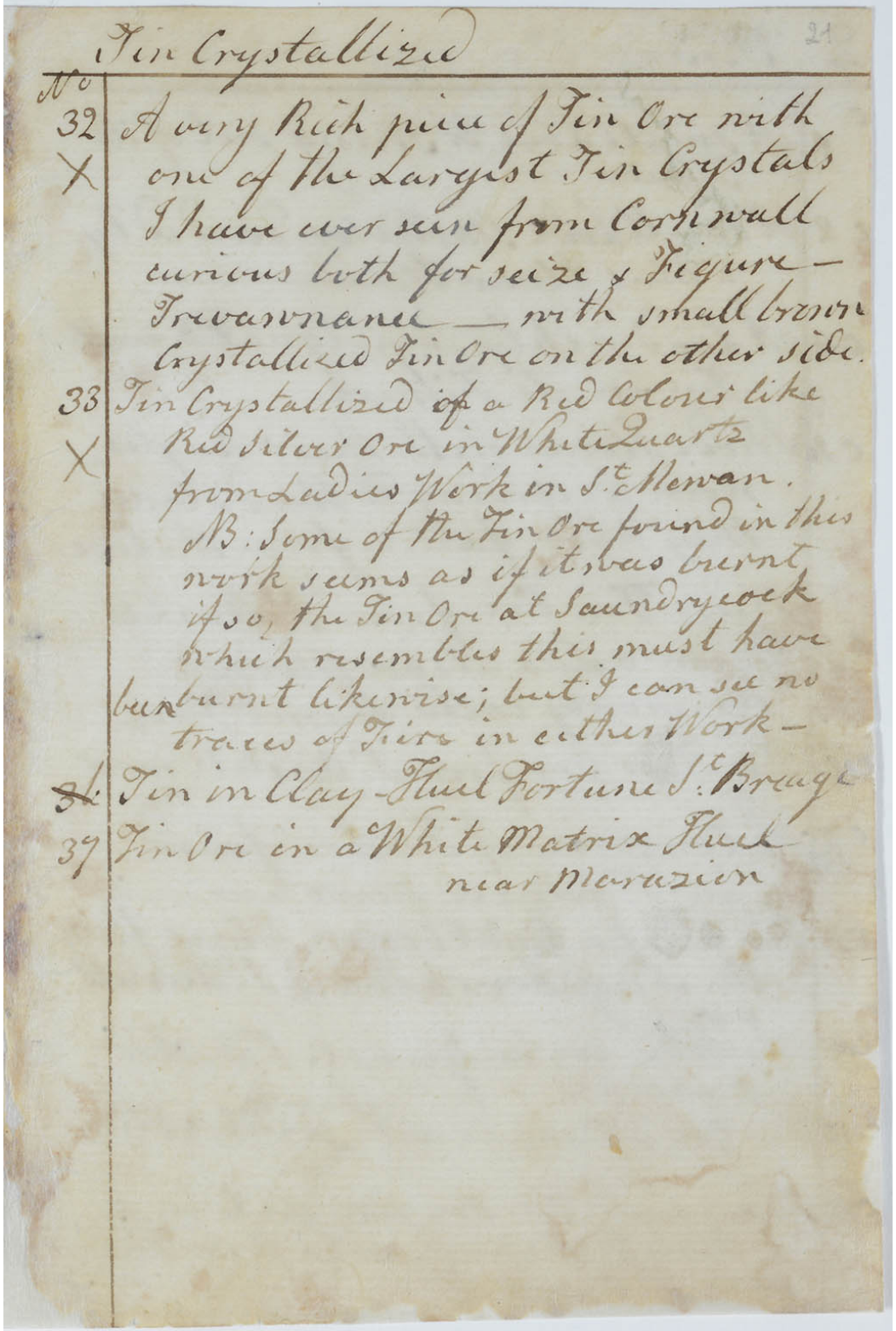


f 1 Tin said be Native St: Austell Moor & St: Stephens

f 2 X Native Tin & Native Copper in the same Specimen; this was found in a Cavity of the Load in Crickbraws & brought by the Miner to the Person from whom I received it ~ r r r

f 3 X 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


Tin Crystallized

No

32 X — A very Rich piece of Tin Ore with one of the Largest Tin Crystals I have ever seen from Cornwall curious both for seize & Figure — Trevannance — with small brown Crystallized Tin Ore on the other side.

33 X — Tin Crystallized of a Red Colour like Red Silver Ore in White Quartz 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 burnt likewise; but I can see no traces of Fire in either Work —

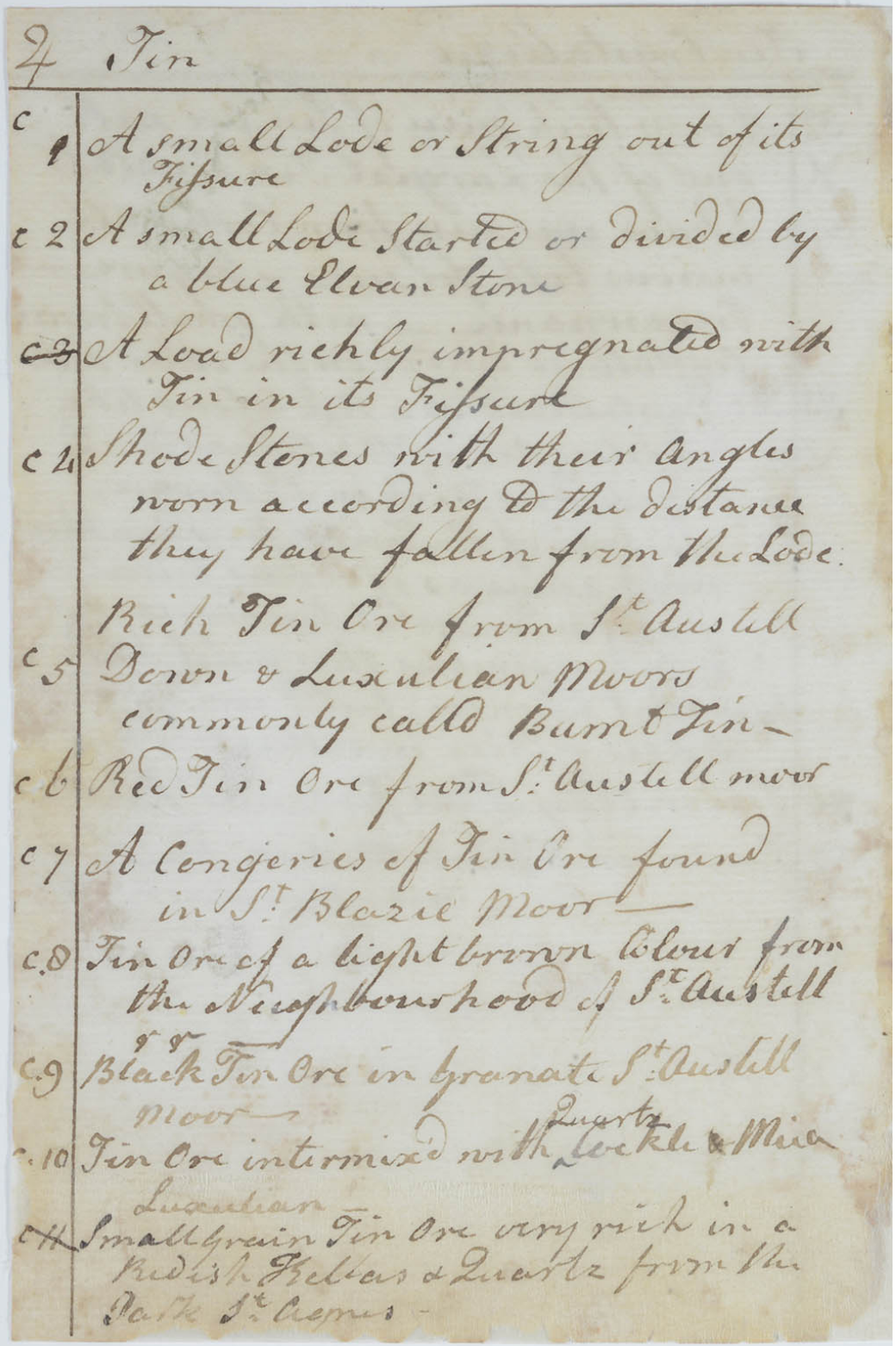
~~34~~ — Tin in Clay - Huel Fortune St: Breage

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

Tin Crystallized

No	
32 X	A very Rich piece of Tin Ore With one of the Largest Tin Crystals I have ever seen from Cornwall curious for seize & Figure ~ Trevannance ~ with small brown Crystallized Tin Ore on the other side.
33 X	Tin Crystallized of a Red Colour like Red Silver Ore in White Quartz 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 ~
~~36~~	Tin in Clay - Huel Fortune St: Breage
37	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



4 *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 ~

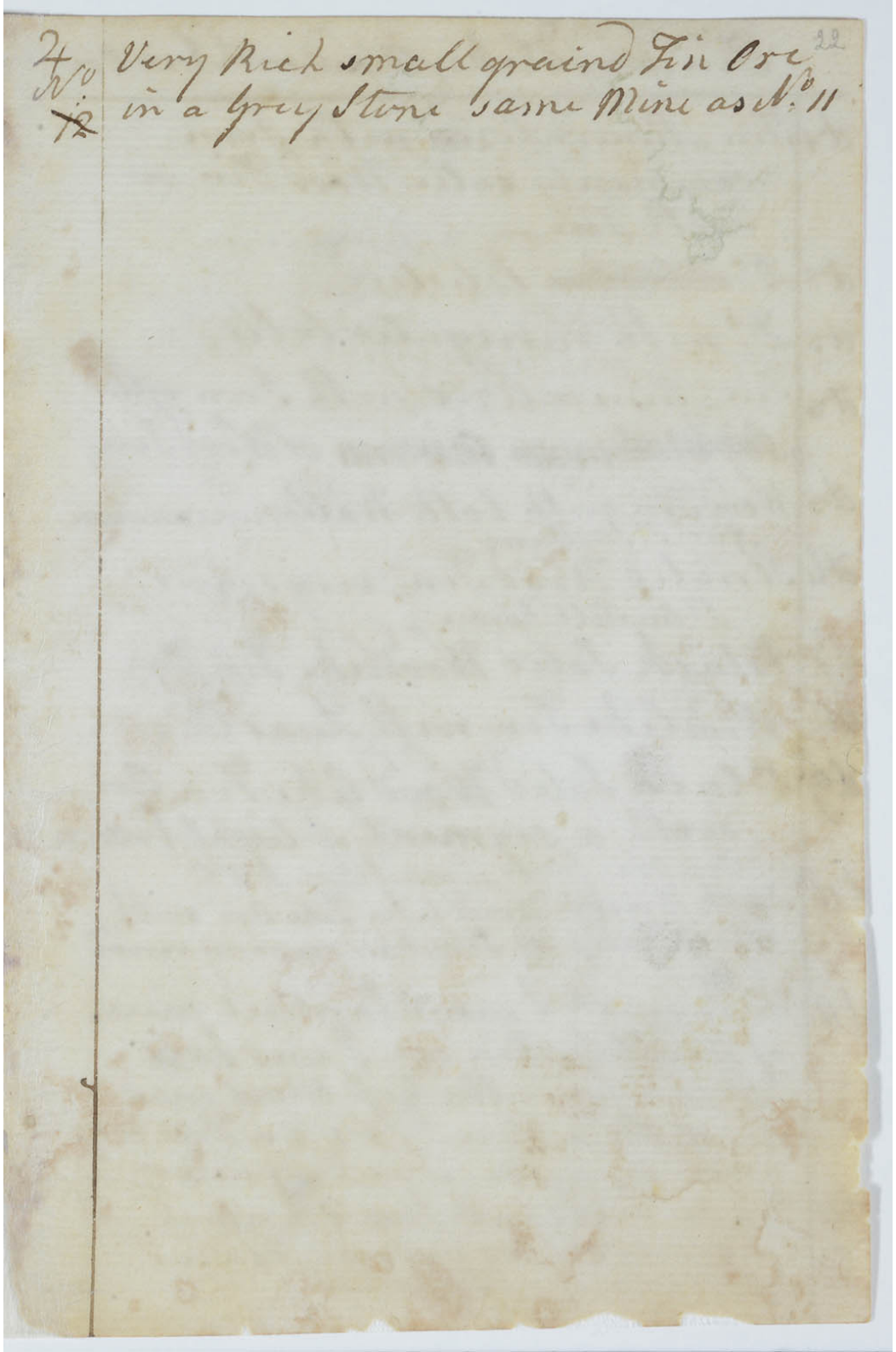
c 8 Tin Ore of a light brown Colour from the Neighbourhood of St: Austell r r ~

c 9 Black Tin Ore in Granate St: Austell Moor –

c 10 Tin Ore intermix'd with Quartz Cockle & Mica Luxulian

c ~~11~~ Small Grain Tin Ore very rich in a Redish Killas & Quartz from the Park St: Agnes

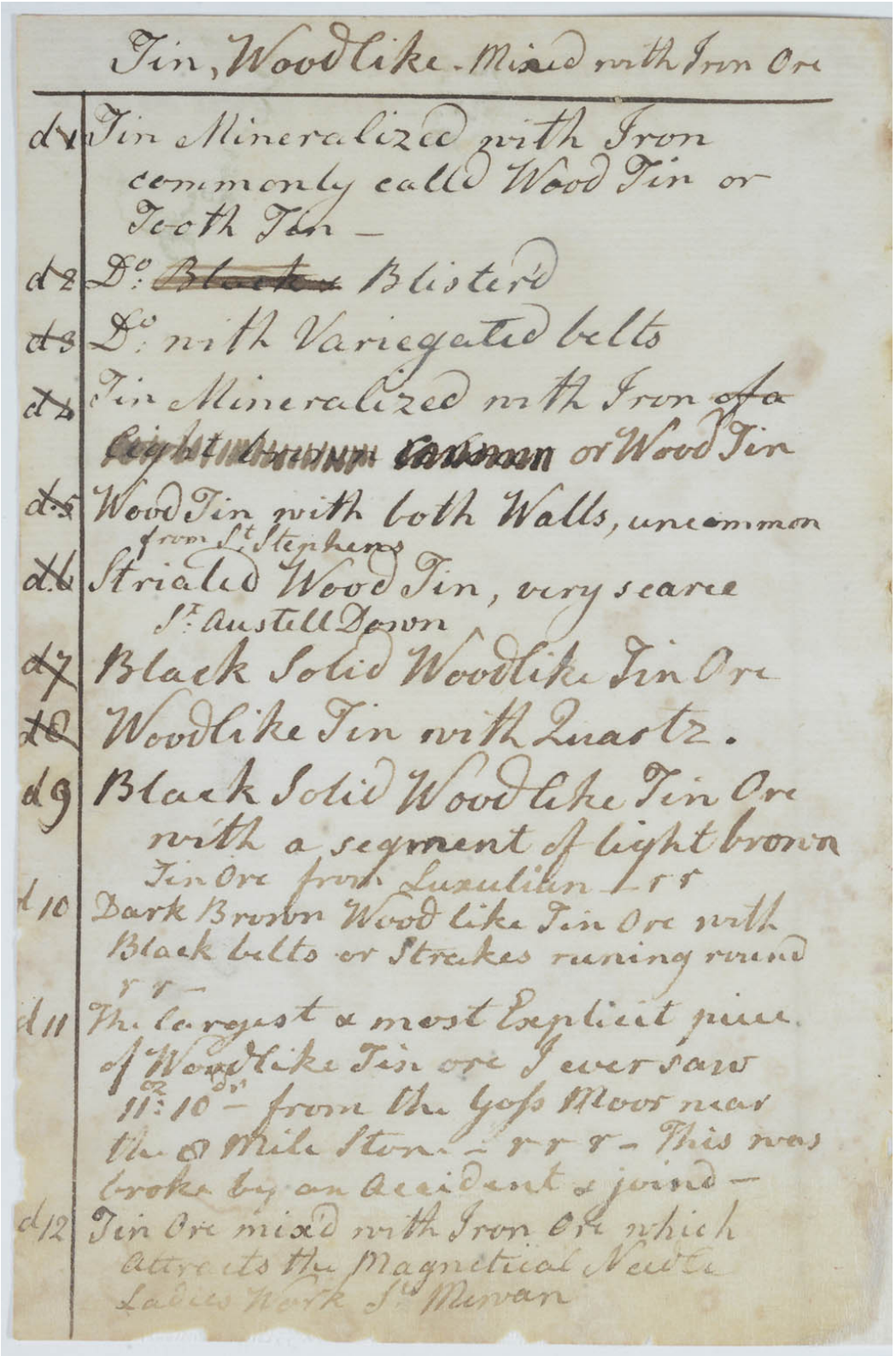
NOTE: Tin = Cassiterite (SnO_2)
Elvan is a Cornish name for fine-grained aplite or quartz porphyry
Shode Stone - ore weathered from a lode
Congeries comes from the Latin verb congerere, which means "to bring together"
Cockle = tourmaline
Killas is a Cornish mining term for a thermally metamorphosed sedimentary rock



4

N°
~~12~~ Very Rich small graind Tin Ore in a Grey Stone same Mine as N°: 11

NOTE: Tin Ore = Cassiterite (SnO_2)


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 Lt Stephens

d 6 Striated Wood Tin, very scarce Lt 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 11oz: 10dr – from the Goss Moor near the 8 Mile Ston – r r r – This was broke by an Accident & joind –

d 12 Tin Ore mixd with Iron Ore which attracts the Magnetical Needle Ladies Work St: Mewan

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

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~~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.

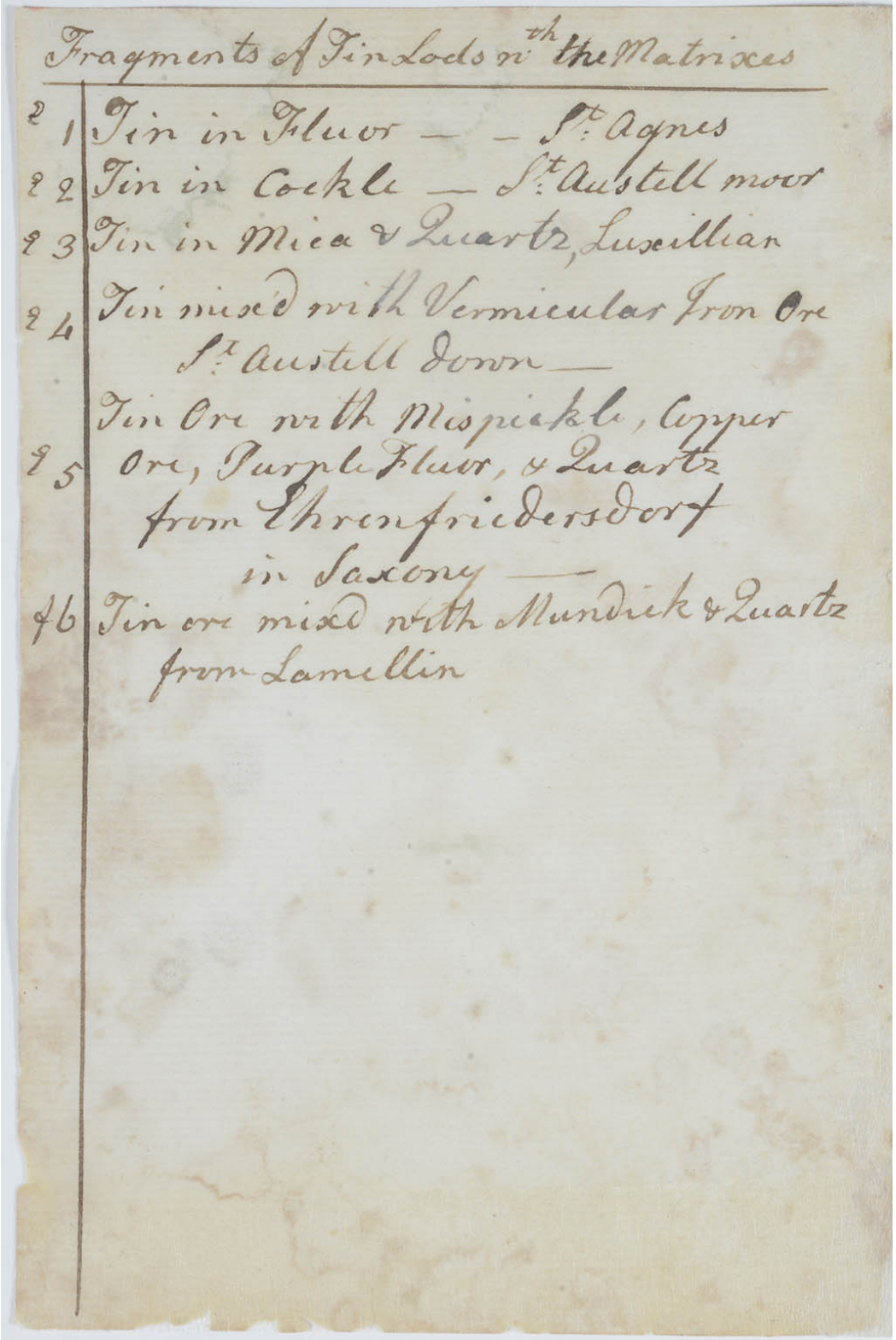
d 9 Black Solid Woodlike Tin Ore with a segment of light brown Tin Ore from Luxulian ~ r r

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 11oz: 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 (SnO_2)


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 mixd 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

Fragments of Tin Lods w^th^ the Matrixes

f 1 Tin in Fluor ~ ~ S^t^: Agnes

f 2 Tin in Cockle ~ S^t^: Austell moor

f 3 Tin in Mica & Quartz, Luxillian

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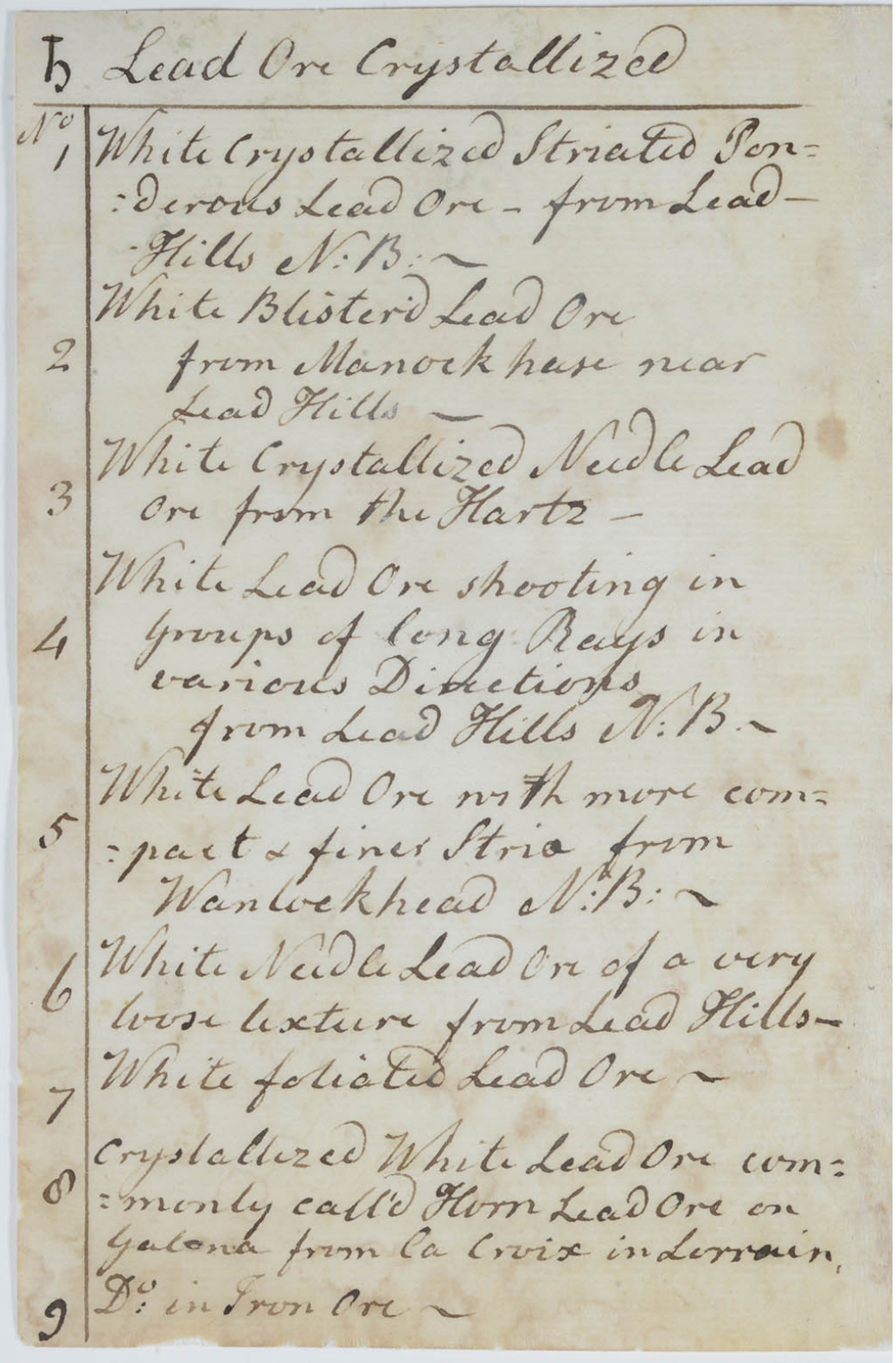
f 5 Tin Ore with Mispickle, Copper Ore, Purple Fluor, & Quartz from Ehrenfriedersdorf in Saxony ~

f 6 Tin ore mixd with Mundick & Quartz from Lamellin

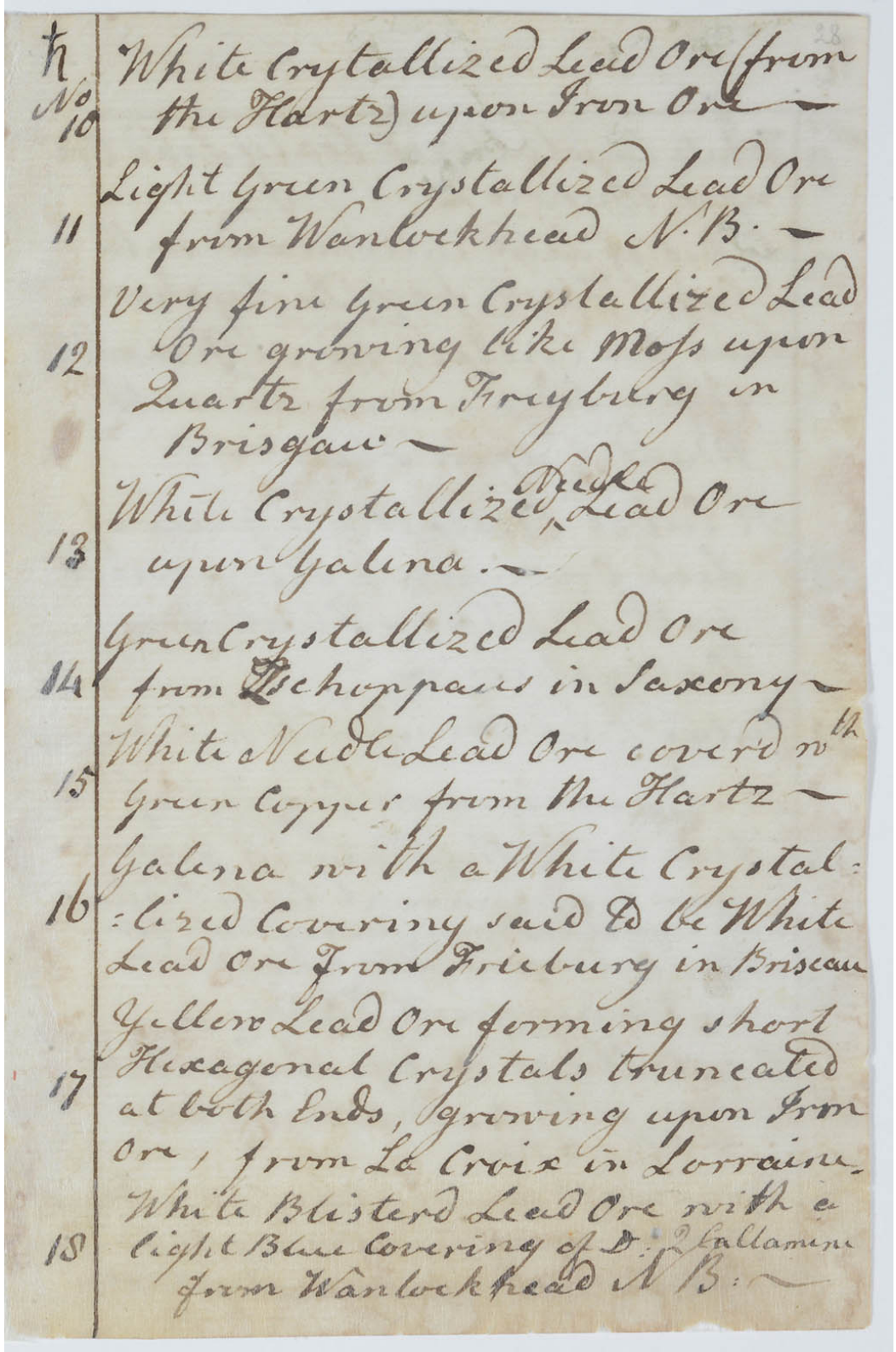
NOTE: Tin Ore = Cassiterite (SnO_2)
Fluor = Fluorite (CaF_2)
Cockle = Tourmaline
Mispickle = Arsenopyrite (FeAsS)
Mundick is an old Cornish name for Pyrite (FeS_2)



♄ *Lead Ore Crystallized*

No	
1	White Crystallized Striated Ponderous Lead Ore - from Lead Hills N: B: ~
2	White Blister'd Lead Ore from Manockhase [Mennock Hass] near Lead Hills ~
3	White Crystallized Needle Lead Ore from the Hartz ~
4	White Lead Ore shooting in Groups of long Rays in various Directions from Lead Hills N: B. ~
5	White Lead Ore with more compact & finer Stria from Wanlockhead N: B: ~
6	White Needle Lead Ore of a very loose texture from Lead Hills ~
7	White foliated Lead Ore ~
8	Crystallized White Lead Ore commonly call'd Horn Lead Ore on Galena from la Croix in Lorrain
9	D°: in Iron Ore ~

NOTE: White Crystallized Lead Ore = Cerussite ($PbCO_3$)
White Needle Lead Ore = Cerussite ($PbCO_3$)
Horn Lead Ore = Phosgenite ($Pb_2CO_3Cl_2$)



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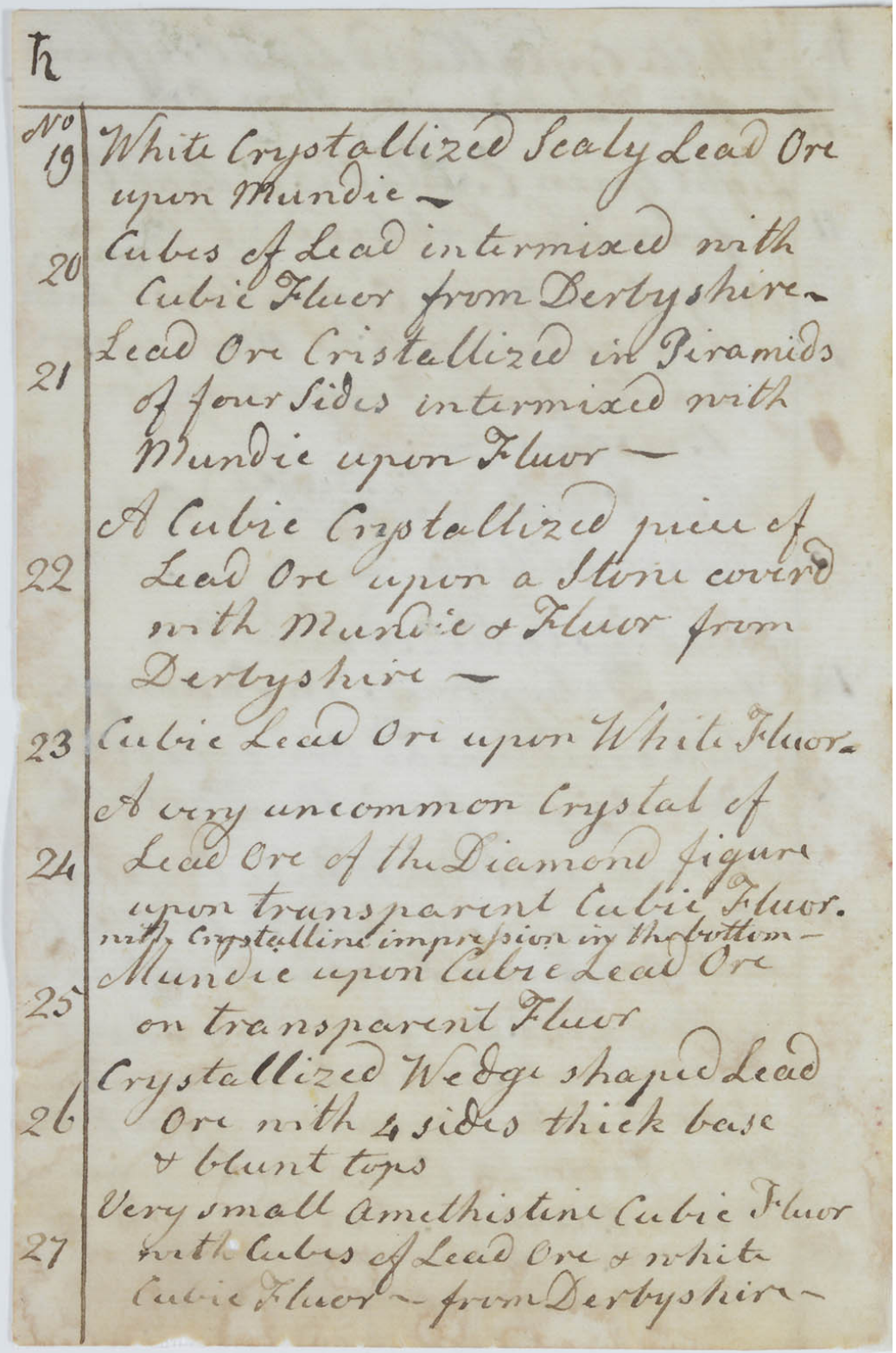
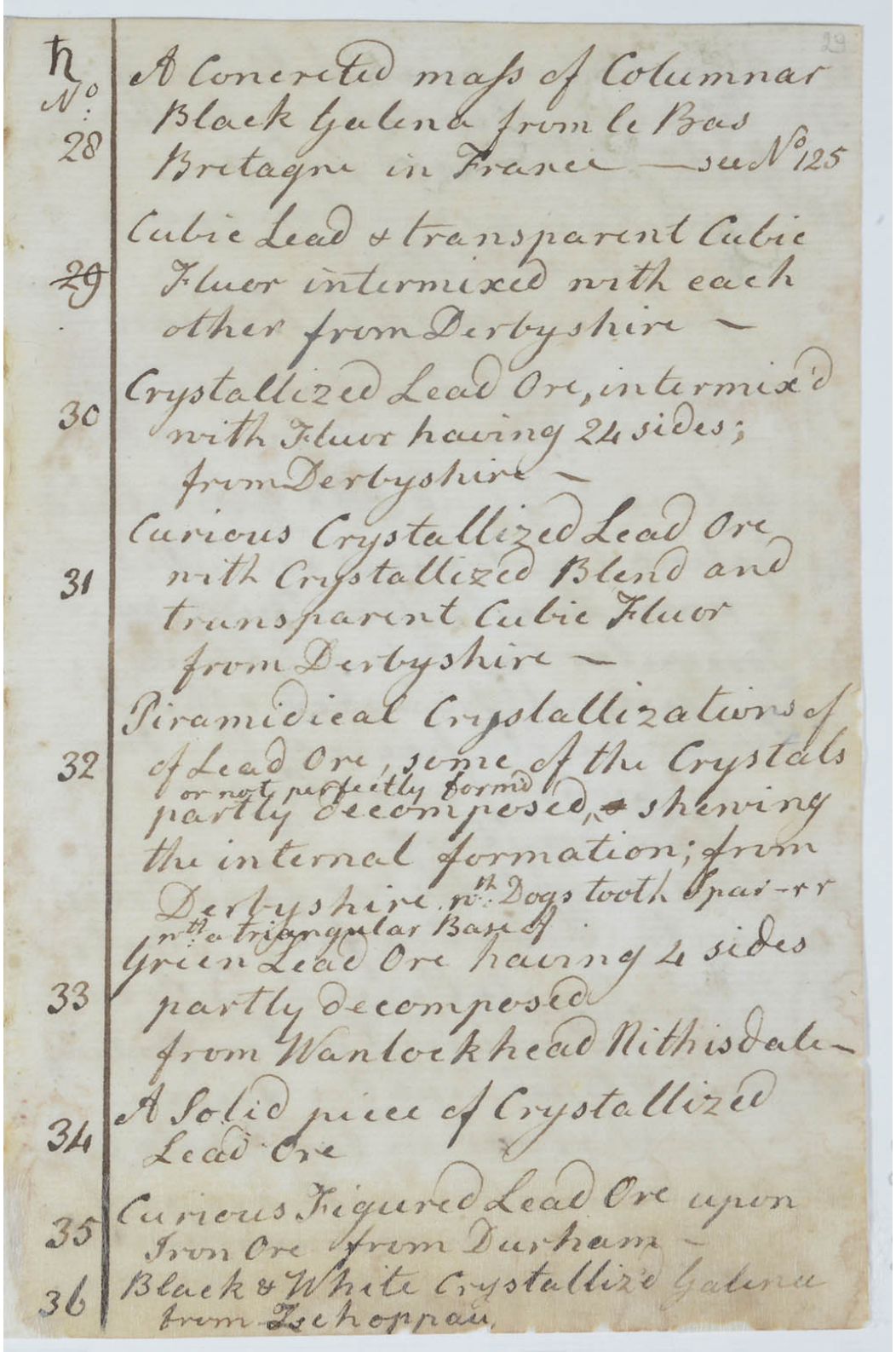
No	
10	White Crystallized Lead Ore (from the Hartz) upon Iron Ore ~
11	Light Green Crystallized Lead Ore from Wanlockhead N. B. ~
12	Very fine Green Crystallized Lead Ore growing like Moss upon Quartz from Freyburg in Brisgaw ~
13	White Crystallized Needle Lead Ore upon Galena ~
14	Green Crystallized Lead Ore from Zschoppau in Saxony ~
15	White Needle Lead Ore coverd wth 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 Do: 2 Callamine from Wanlockhead N B: ~

NOTE: White Crystallized Lead Ore = Cerussite ($PbCO_3$)
Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3Cl$)
Needle Lead Ore = Cerussite ($PbCO_3$)
White Blistered Lead Ore =Cerussite ($PbCO_3$)
Yellow Lead Ore probably = Pyromorphite ($Pb_5(AsO_4)_3Cl$)
Calamine = Hemimorphite ($Zn_4Si_2O_7(OH)_2 \cdot H_2O$)



No	
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 ($PbSO_4$)



♄ No.	
28	A Concreted mass of Columnar Black Galena from le Bas Bretagne in France — see No 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. wth Dogs tooth Spar — r r wth 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

♄ No	
28	A Concreted mass of Columnar Black Galena from le Bas Bretagne in France ~ see No 125
~~29~~	Cubic Lead & transparent Cubic Fluor intermixed with each other from Derbyshire ~
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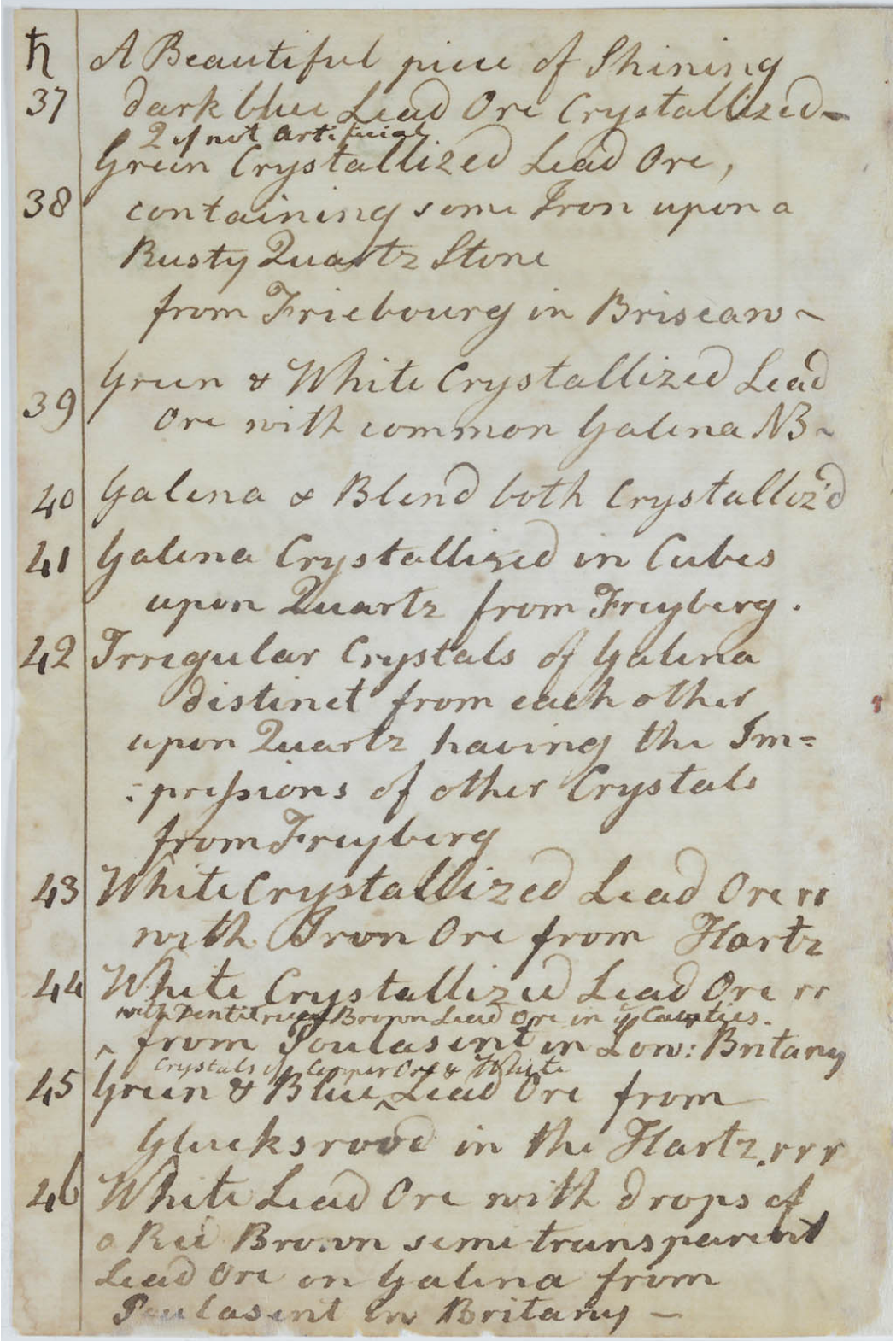
33	Green Lead Ore having 4 sides partly decomposed from Wanlockhead Nithisdale ~
34	A Solid piece of Crystallized Lead Ore
35	Curious Figured Lead Ore upon Iron Ore from Durham ~
36	Black & White Crystallized Galena from Zschoppau

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 ($Pb_5(PO_4)_3Cl$)



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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 ~

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

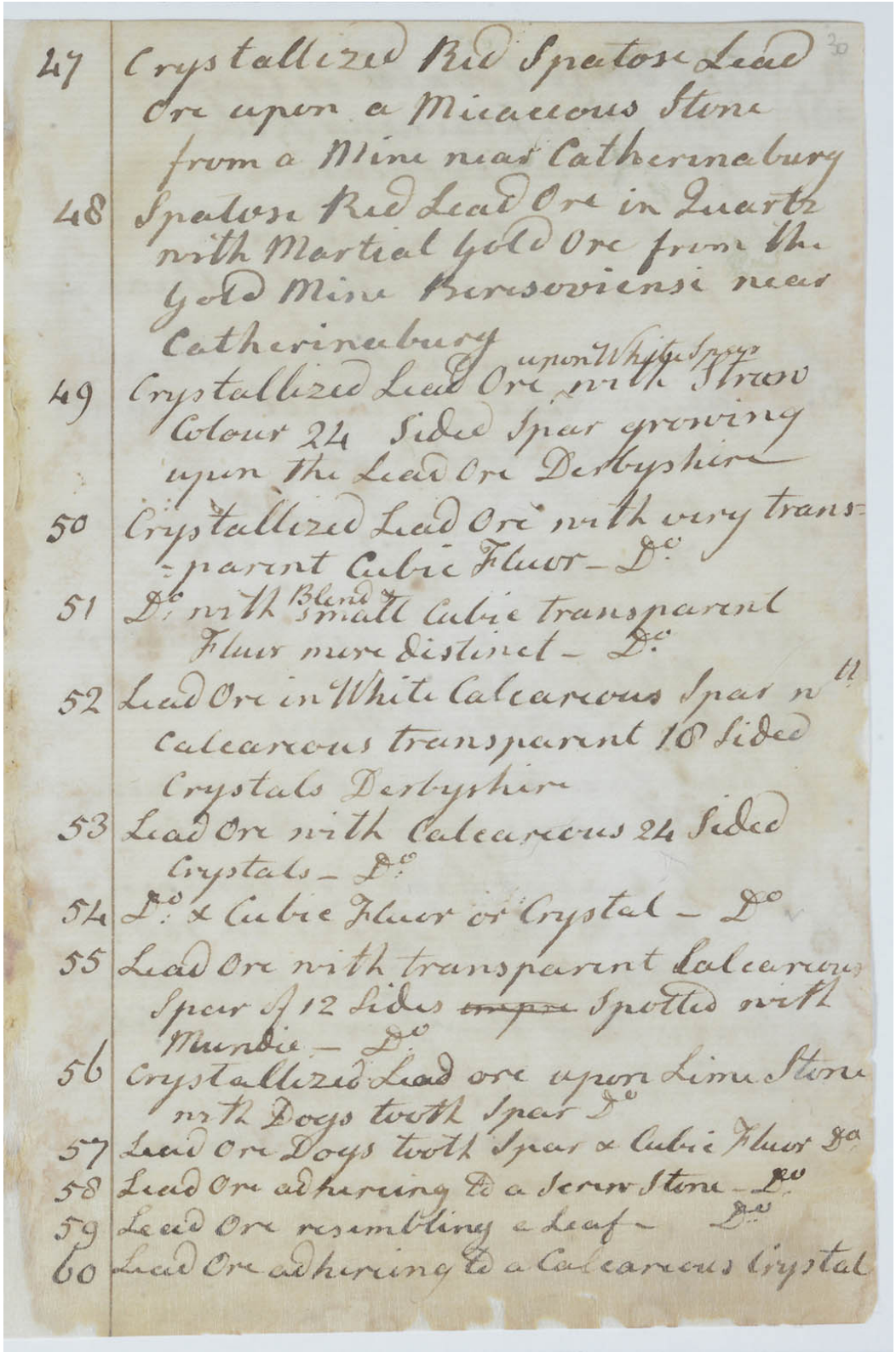
43 White Crystallized Lead Ore r r with Iron Ore from Hartz

44 White Crystallized Lead Ore r r with Dentitric Brown Lead Ore in it 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 ($Pb_5(PO4)_3Cl$)
Blend = Sphalerite (ZnS)
White Crystallized Lead Ore = Cerussite ($PbCO_3$)
Dendritic Brown Lead Ore = Pyromorphite ($Pb_5(PO4)_3Cl$)
Red Brown semi-transparent Lead Ore = Pyromorphite ($Pb_5(PO4)_3Cl$)


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 ~ Do:

52 Lead Ore in White Calcareous Spar wth calcareous transparent 18 sided Crystals Derbyshire

53 Lead Ore with Calcareous 24 sided Crystals ~ Do:

54 Do: & Cubic Fluor or Crystal ~ Do:

55 Lead Ore with transparent Calcareous Spar of 12 sides spotted with Mundic ~ Do:

56 Crystallized Lead Ore upon Lime Stone with Dogs tooth Spar Do:

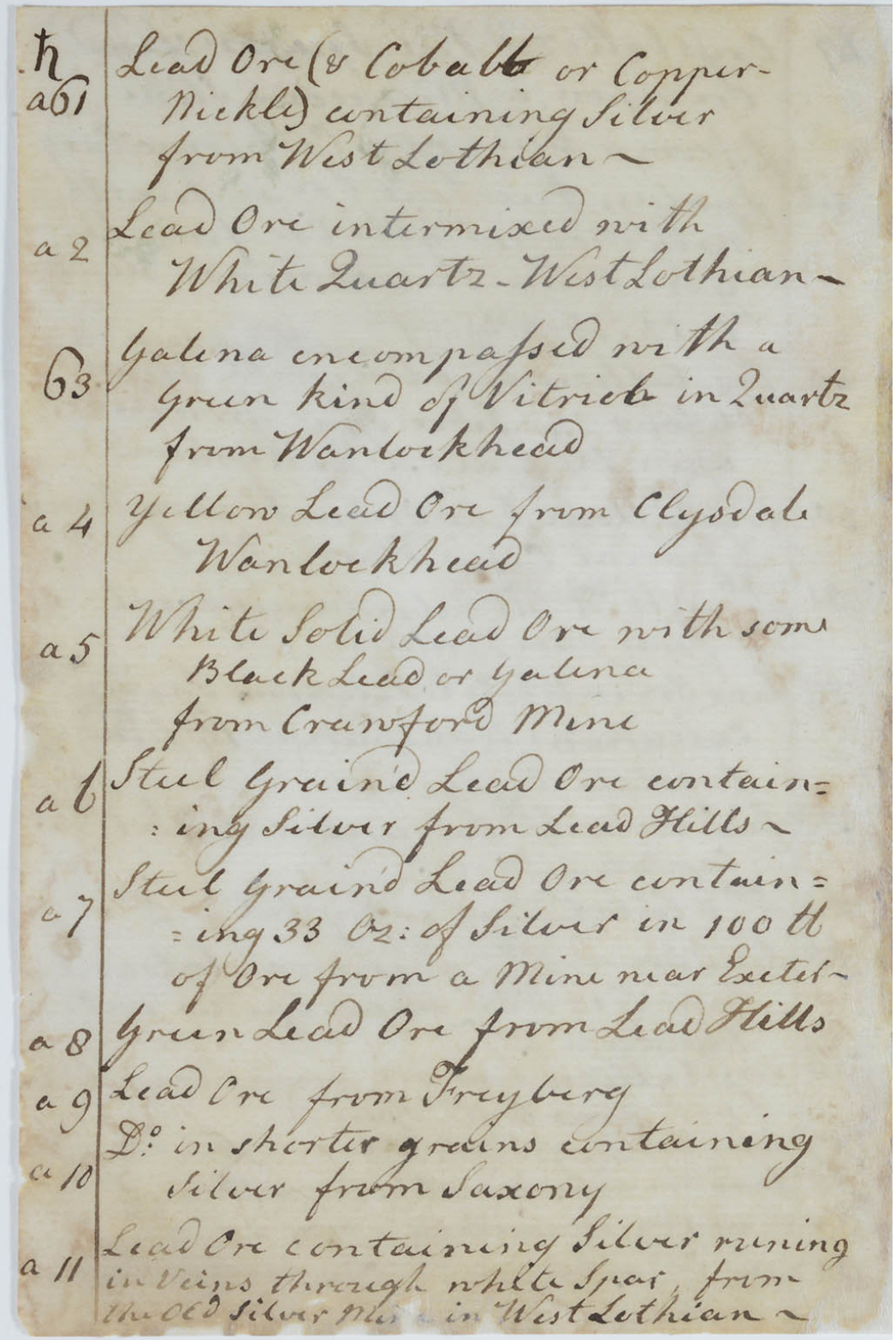
57 Lead Ore Dogs tooth Spar & Cubic Fluor Do:

58 Lead Ore adhering to a Screw Stone ~ Do:

59 Lead Ore resembling a Leaf ~ Do:

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



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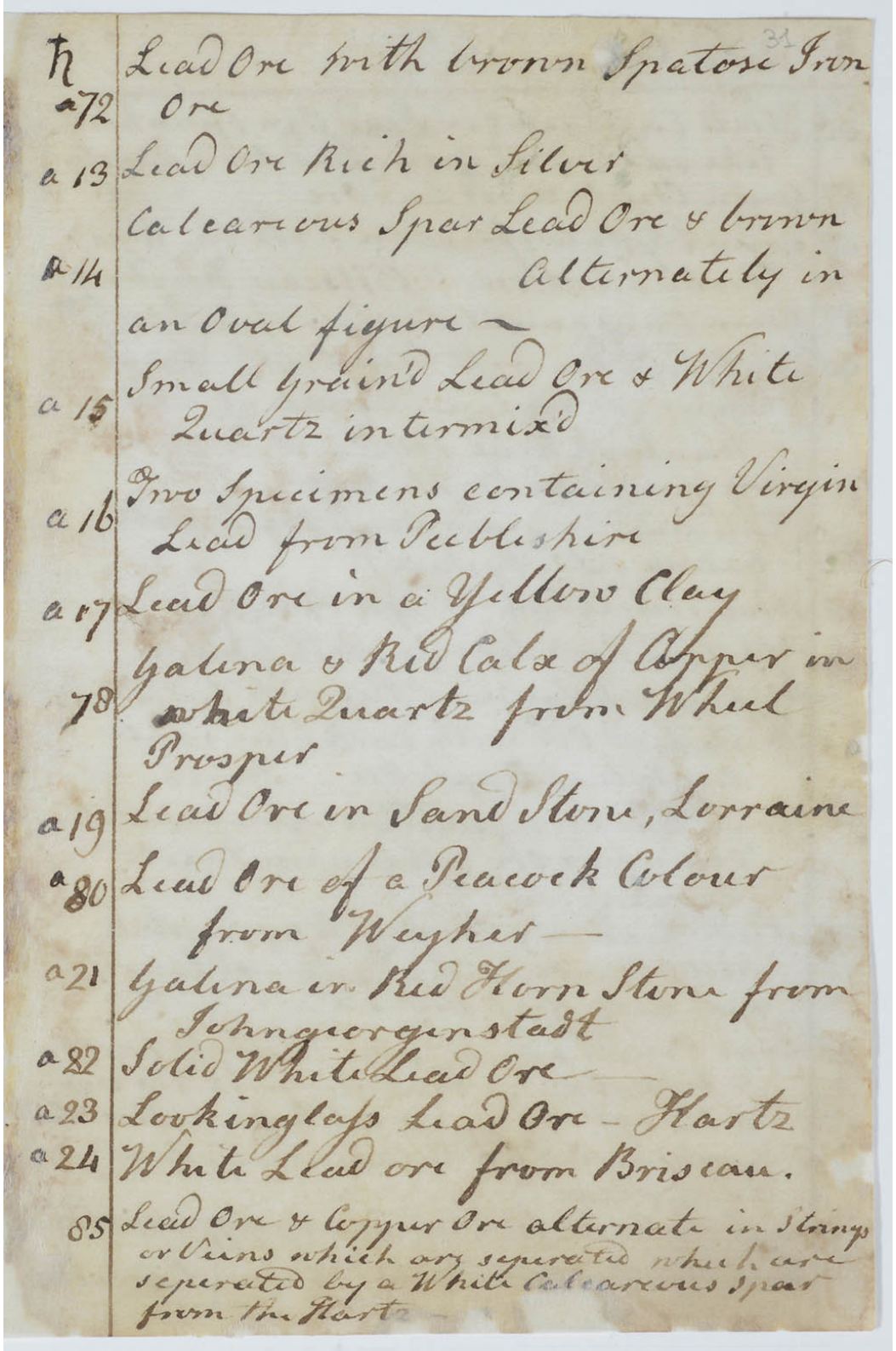
a 61	Lead Ore (& Cobalt or Copper Nickle) containing Silver from West Lothian ~
a 2	Lead Ore intermixed with White Quartz - West Lothian ~
63	Galena encompassed with a Green kind of Vitriol in Quartz from Wanlockhead
a 4	Yellow Lead Ore from Clysdale Wanlockhead
a 5	White Solid Lead Ore with some Black 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 ($FeSO_4 \cdot xH_2O$)
Yellow Lead Ore probably = Anglesite ($PbSO_4$)
Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3Cl$)
Steel Grained Lead Ore = Galena (PbS)



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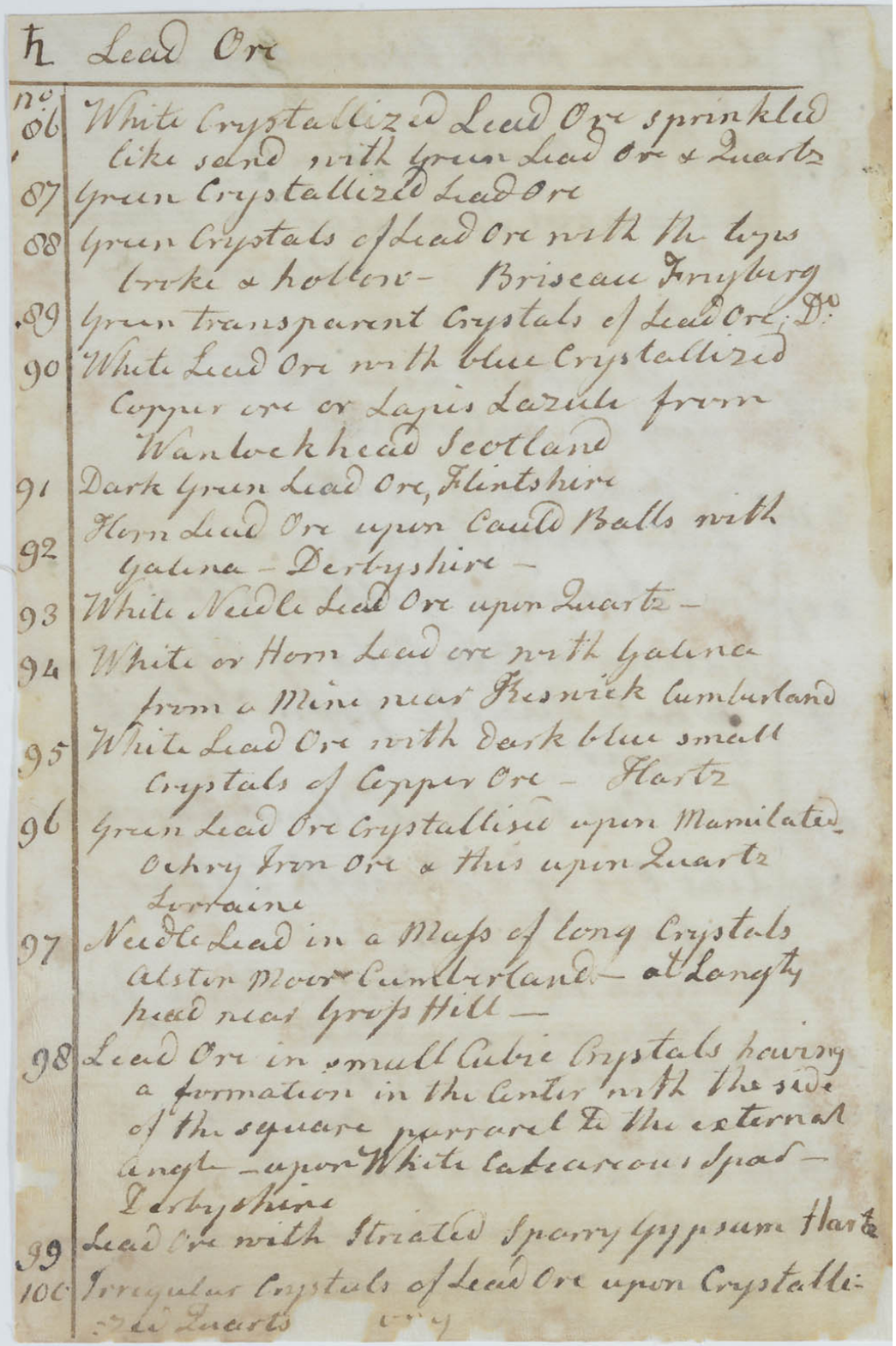
a 72	Lead Ore with brown Spatose Iron Ore
a 13	Lead Ore rich in Silver
a 14	Calcareous Spar Lead Ore & brown [space left for mineral name] Alternately in an Oval figure ~
a 15	Small Grain'd Lead Ore & White Quartz intermix'd
a 16	Two Specimens containing Virgin Lead from Peebleshire
a 17	Lead Ore in 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 ($FeCO_3$)
Lead Ore = Galena (PbS)
Calcareous Spar = Calcite ($CaCO_3$)
Red Horn Stone = Jasper, a variety of quartz (SiO_2)
Virgin Lead = Native Lead (Pb)
Red Calx of Copper = Cuprite (CuO)
Solid White Lead Ore = Cerussite ($PbCO_3$)



ħ Lead Ore

nº
86 White Crystallized Lead Ore sprinkled like sand with green Lead Ore & Quartz
87 Green Crystallized Lead Ore
88 Green Crystals of Lead Ore with the tops broke & hollow - Briscau Freyberg
89 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 ore 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 Crystallised 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 -
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

ħ Lead Ore

nº	
86	White Crystallized Lead Ore sprinkled like sand with Green Lead Ore & Quartz
87	Green Crystallized Lead Ore
88	Green Crystals of Lead Ore with the tops broke & hollow - Briscau Freyberg
89	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?]

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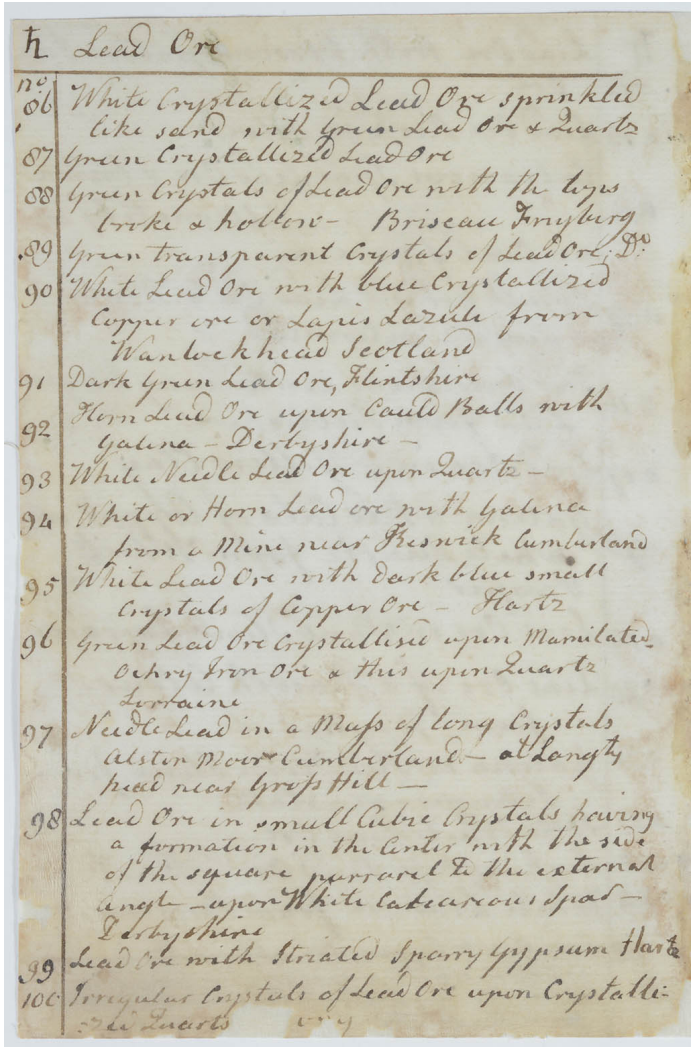

♄ Lead Ore

No 86 White Crystallized Lead Ore sprinkled like seed with green Lead Ore & Quartz
87 Green Crystallized Lead Ore
88 Green Crystals of Lead Ore with the tops broke & hollow – Briseau Freyberg
89 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 –
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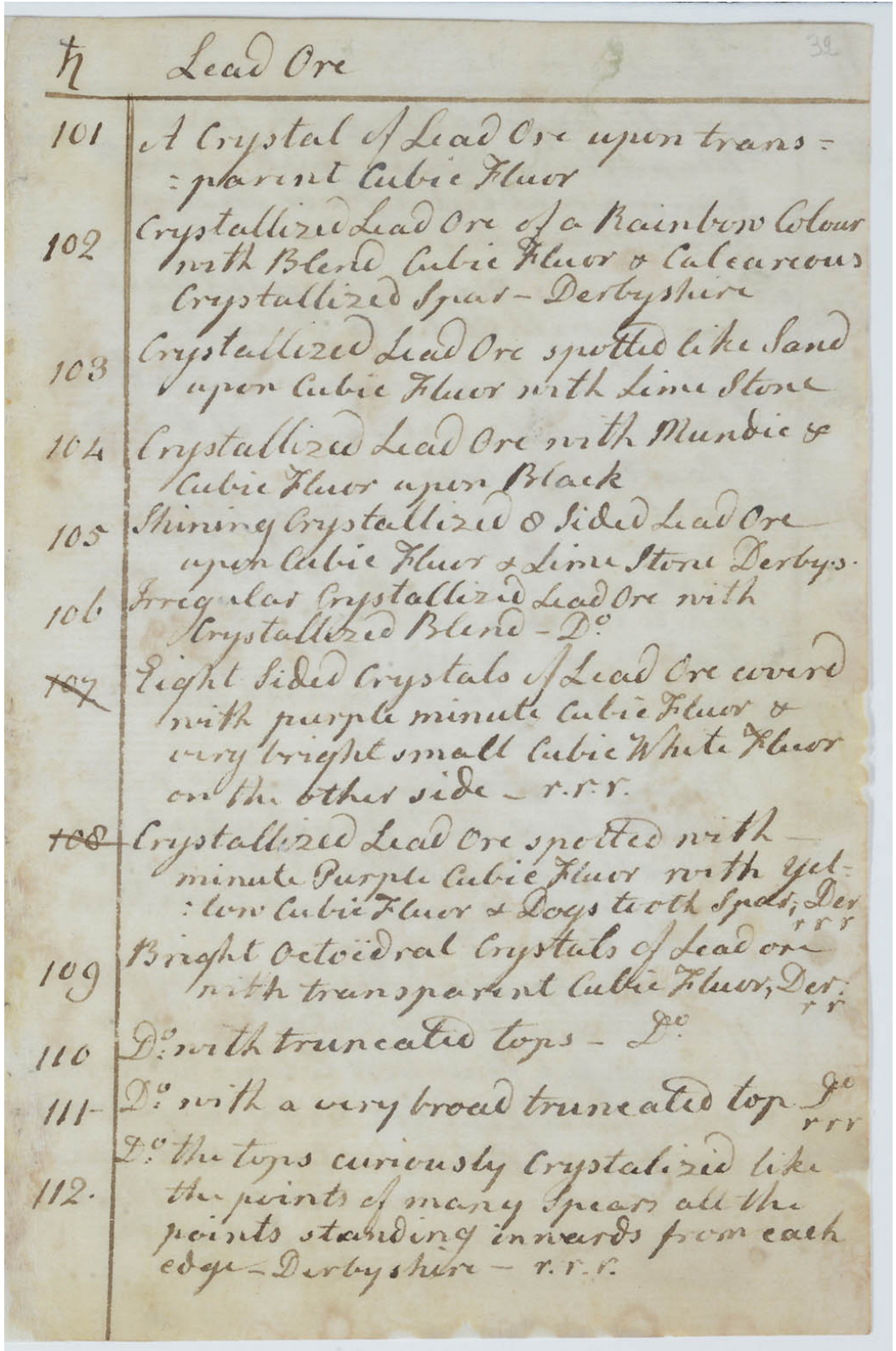
96 Green Lead Ore Crystallised upon Mamilated Ochry Iron Ore & this upon Quartz Lorraine
97 Needle Lead in a Mass of long Crystals Alston Moor Cumberland – at Longly head near Greps Hill –
98 Lead Ore in small Cubic Crystals having a formation in the Center with the side of the square parrarel to the external angle – upon White Calcareous Spar – Derbyshire
99 Lead Ore with Striated Sparry Gypsum Hartz
100 Irregular Crystals of Lead Ore upon Crystallized Quartz

Lead Ore (continued)

NOTE: White Crystallized Lead Ore = Cerussite ($PbCO_3$)
Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3Cl$)
Cauld Balls probably = Baryte ($BaSO_4$)
Horn Lead Ore = Phosgenite ($Pb_2CO_3Cl_2$)
Mamilated Ochry Iron Ore probably = Goethite ($FeO(OH)$)
Needle Lead = Cerussite ($PbCO_3$)
Calcareous Spar = Calcite ($CaCO_3$)



♄ 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

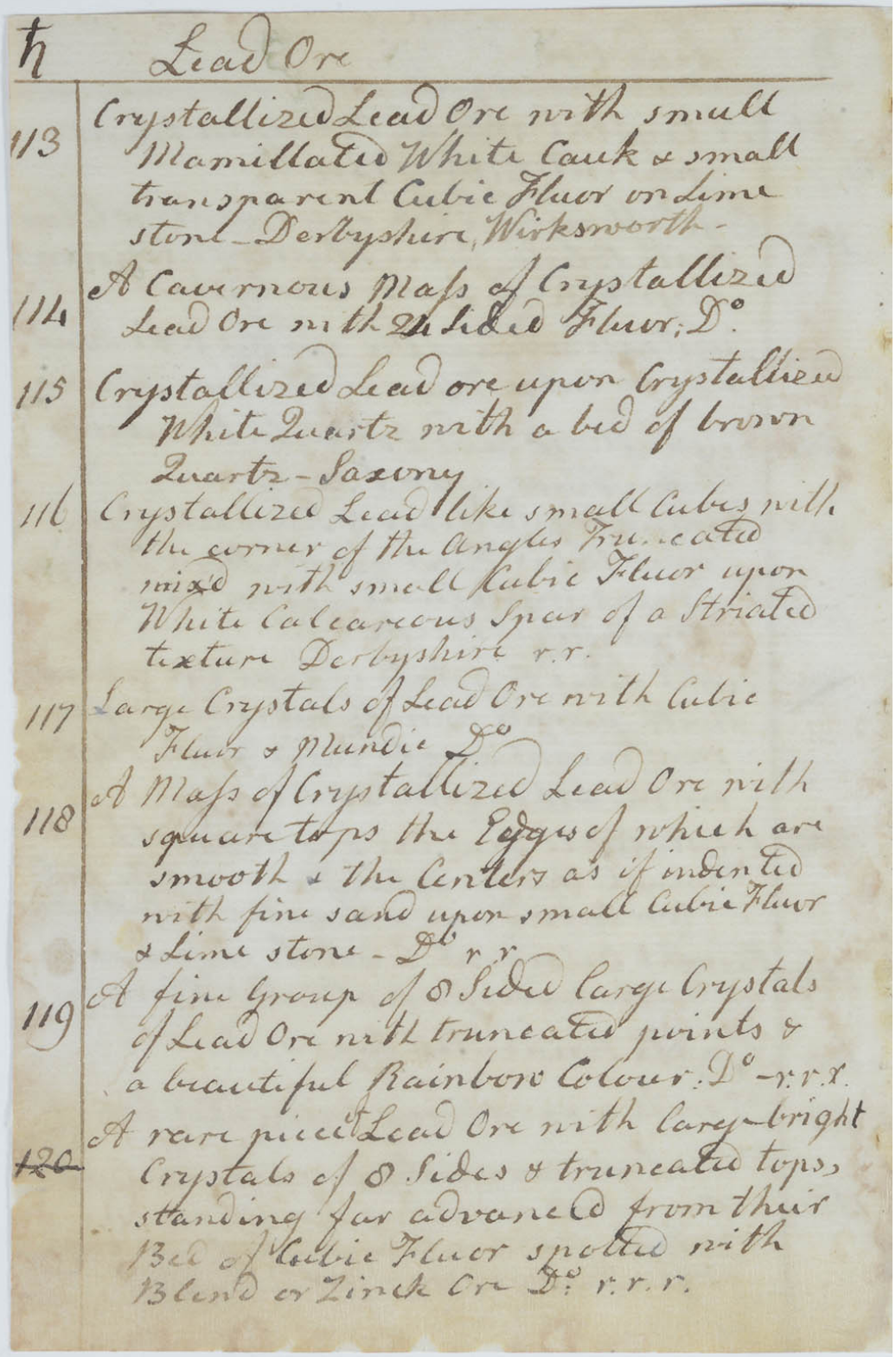
109 Bright Octoëdral Crystals of Lead ore with transparent Cubic Fluor, Der. r r

110 Dº: with truncated tops ~ Dº:

111 Dº: with a very broad truncated top Dº: r r r

112 Dº: the tops curiously Crystalized like the points of many Spears all the points standing inwards from each edge ~ Derbyshire ~ 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

113 Crystallized Lead Ore with small Mamillated White Cauk & small transparent Cubic Fluor on Lime stone Derbyshire, Wirksworth -

114 A Cavernous Mass of Crystallized Lead Ore with 24 sided Fluor; Do

115 Crystallized Lead ore upon Crystallized White Quartz with a bed of brown Quartz - Saxony

116 Crystallized Lead like small Cubes with the corner of the Angles Truncated mixed with small Cubic Fluor upon White Calcareous Spar of a Striated texture Derbyshire r.r.

117 Large Crystals of Lead Ore with Cubic Fluor & Mundic Do

118 A Mass of Crystallized Lead Ore with square tops the Edges of which are smooth & the Centers as if indented with fine sand upon small Cubic Fluor & Lime stone - Do r r

119 A fine Group of 8 Sided large Crystals of Lead Ore with truncated points & a beautiful Rainbow Colour: Do - r.r.r.

~~120~~ A rare piece of Lead Ore with large bright Crystals of 8 Sides & truncated tops, standing far advanced from their Bed of Cubic Fluor spotted with Blend or Zinck Ore Do: r.r.r.

♄ *Lead Ore*

113 Crystallized Lead Ore with small Mamillated White Cauk & small transparent Cubic Fluor on Lime stone ~ Derbyshire, Wirksworth.

114 A Cavernous Mass of Crystallized Lead Ore with 24 sided Fluor; Do:

115 Crystallized Lead Ore upon Crystallized White Quartz with a bed of brown Quartz ~ Saxony

116 Crystallized Lead like small Cubes with the corner of the Angles Truncated mix'd with small Cubic Fluor upon White Calcareous Spar of a Striated texture Derbyshire r.r.

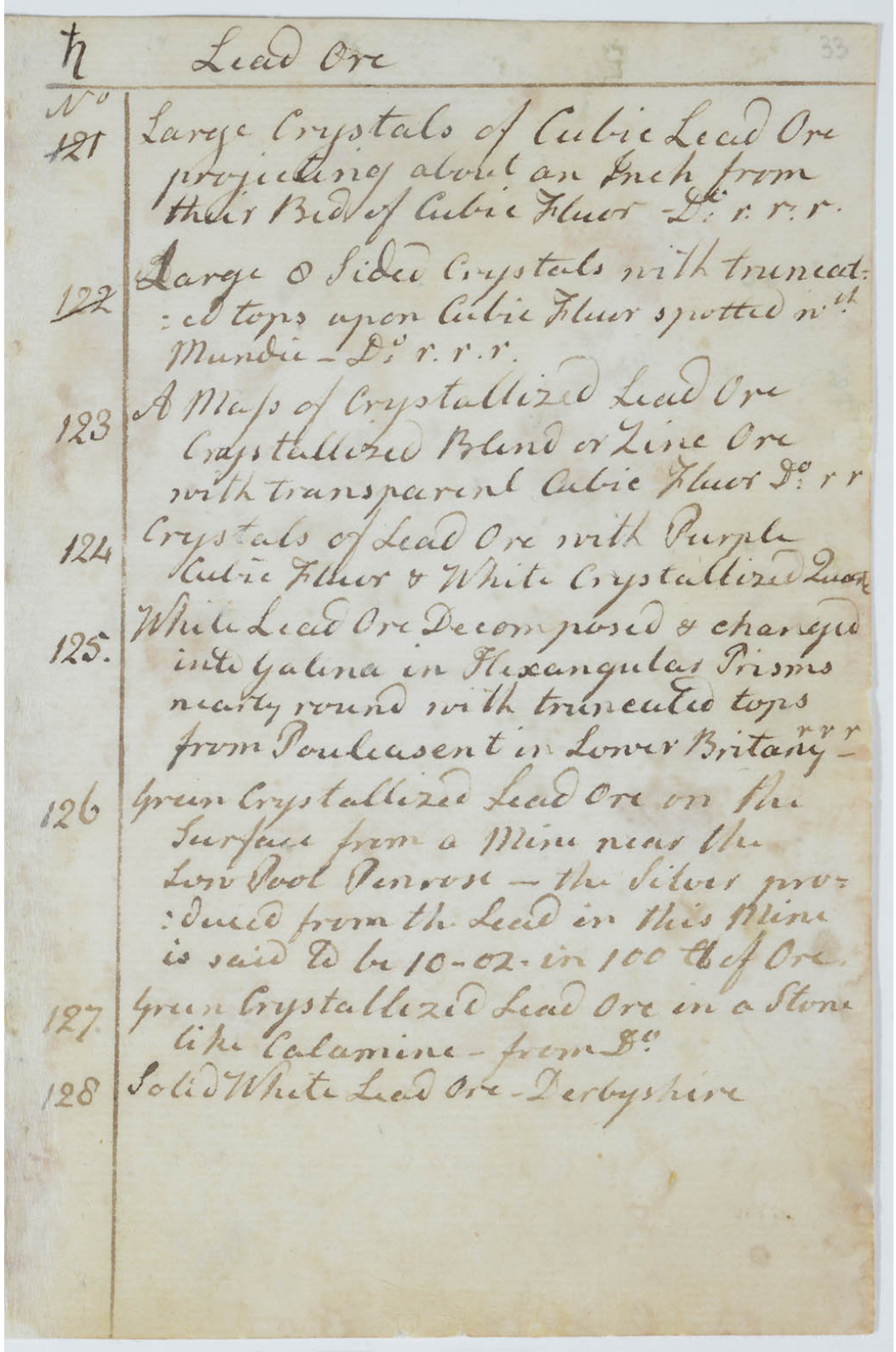
117 Large Crystals of Lead Ore with Cubic Fluor & Mundic Do:

118 A Mass of Crystallized Lead Ore with square tops the Edges of which are smooth & the Centers as if indented with fine sand upon small Cubic Fluor & Lime stone - Do: r r

119 A fine Group of 8 Sided large Crystals of Lead Ore with truncated points & a beautiful Rainbow Colour: Do: ~ r.r.r.

~~120~~ A rare piece of Lead Ore with large bright Crystals of 8 Sides & 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 ($BaSO_4$)
Fluor = Fluorite (CaF_2)
White Calcareous Spar = Calcite ($CaCO_3$)
Mundic is an old Cornish name for Pyrite (FeS_2)
Blend = Sphalerite (ZnS)



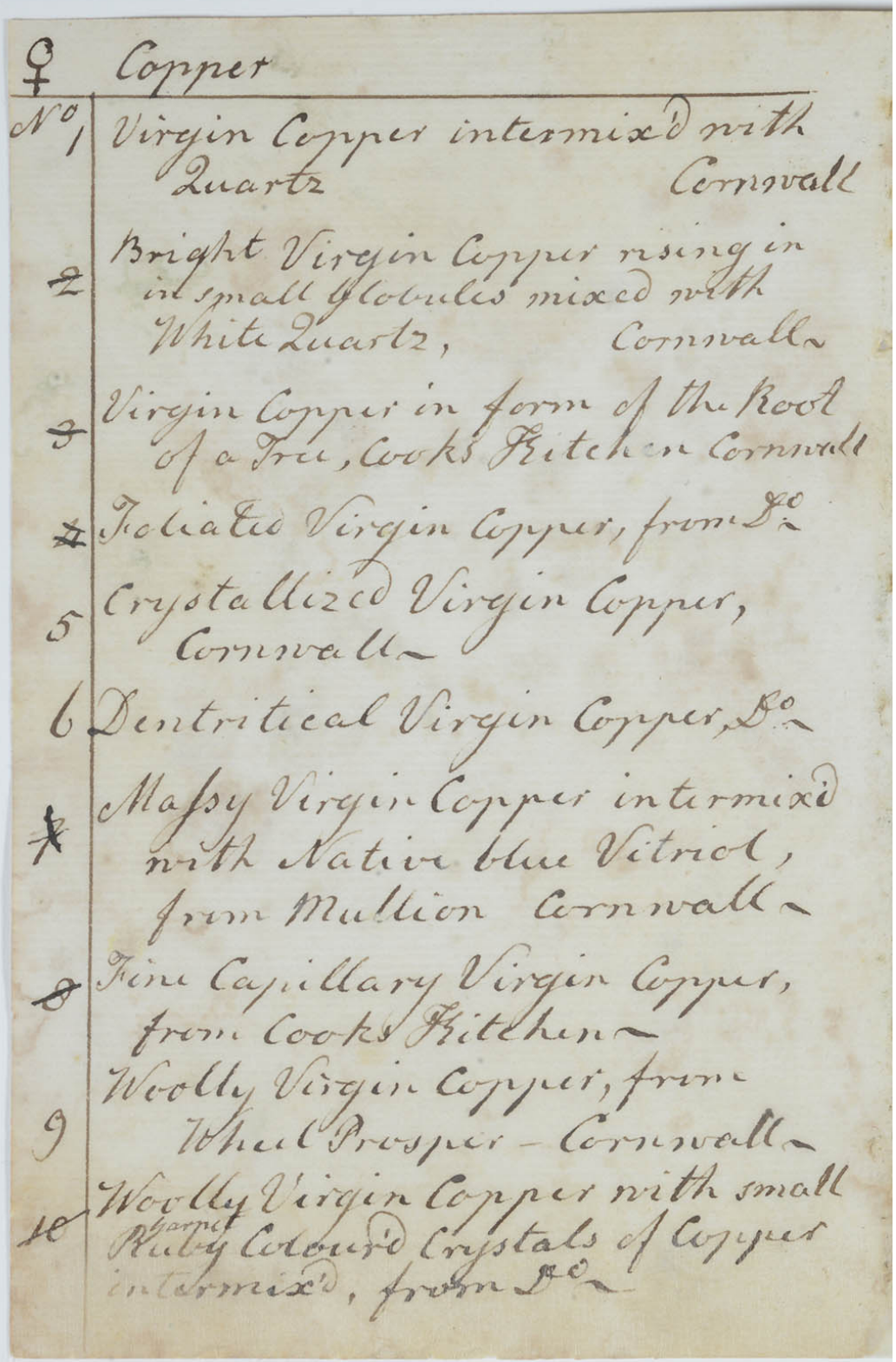
♄ Lead Ore

Nº	
~~121~~	Large Crystals of Cubic Lead Ore projecting about an Inch from their Bed of Cubic Fluor – Dº: r. r. r.
122	Large 8 Sided Crystals with truncated tops upon Cubic Fluor spotted wth Mundic – 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 Britany – 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 100 lb of Ore.
127	Green Crystallized Lead Ore in a Stone like Calamine – from Dº
128	Solid White Lead Ore – Derbyshire

♄ *Lead Ore*

*N*º	
~~121~~	Large Crystals of Cubic Lead Ore projecting about an Inch from their Bed of Cubic Fluor ~ Dº: r.r.r.
~~122~~	Large 8 Sided Crystals with truncated tops upon Cubic Fluor spotted wth Mundic ~ 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 Dº:
128	Solid White Lead Ore ~ Derbyshire

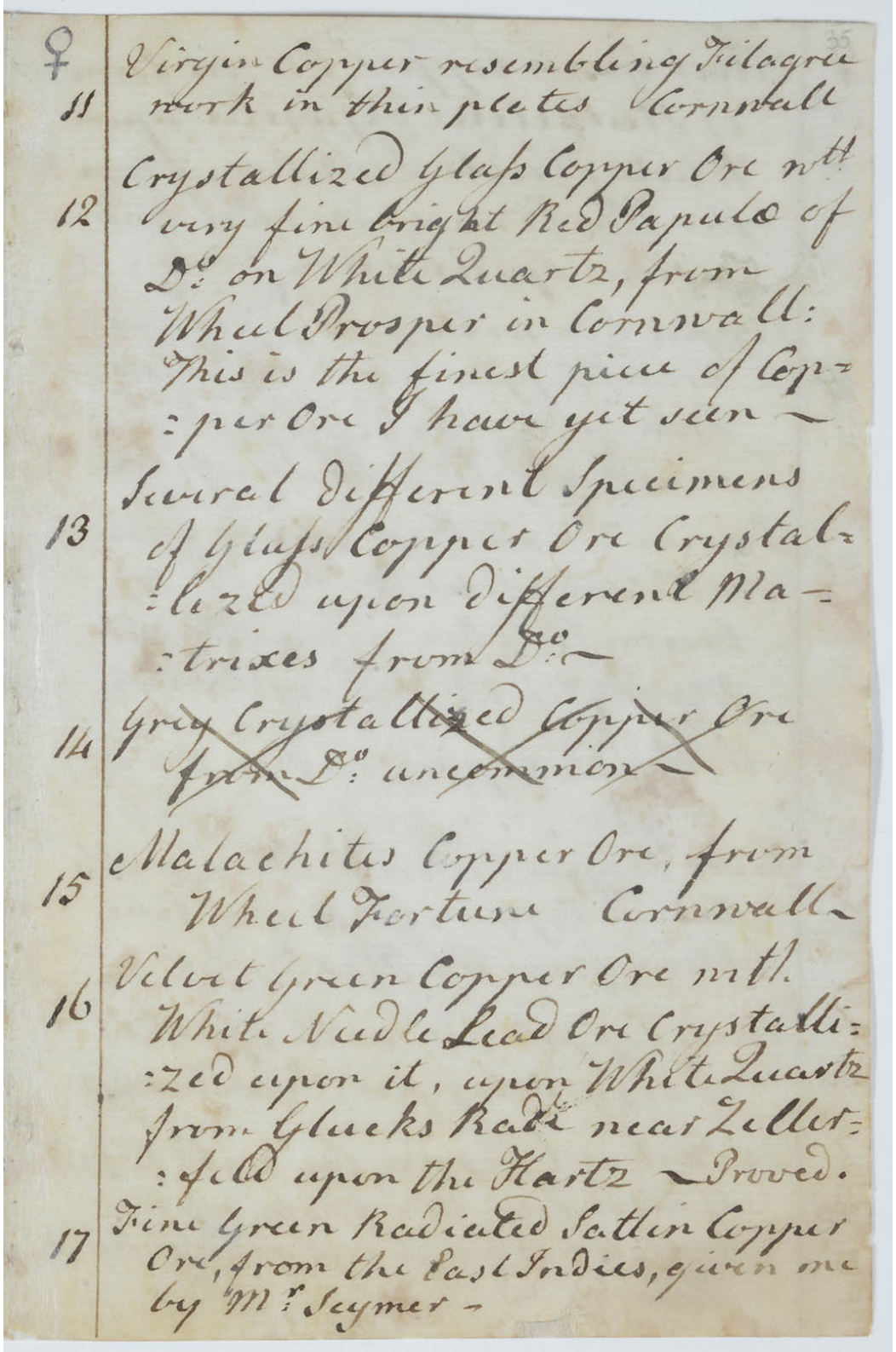
NOTE: Cubic Lead Ore = Galena (PbS)
Fluor = Fluorite (CaF_2)
Mundic is an old Cornish name for Pyrite (FeS_2)
Blend = Sphalerite (ZnS)
Green Lead Ore = Pyromorphite ($Pb_5(PO_4)_3Cl$)
Solid White Lead Ore = Cerussite ($PbCO_3$)



♀ *Copper*

Nº	
1	Virgin Copper intermix'd with Quartz Cornwall
~~2~~	Bright Virgin Copper rising in small Globules mixed with White Quartz, Cornwall
~~3~~	Virgin Copper in form of the Root of a Tree, Cooks Kitchen Cornwall
~~4~~	Foliated Virgin Copper, from Dº:
5	Crystallized Virgin Copper, Cornwall ~
6	Dendritical Virgin Copper, Dº:
~~7~~	Massy Virgin Copper intermix'd with Native blue Vitriol, from Mullion Cornwall ~
~~8~~	Fine Capillary Virgin Copper, from Cooks Kitchen ~
9	Woolly Virgin Copper, from Wheel Prosper ~ Cornwall ~
~~10~~	Woolly Virgin Copper with small Ruby Garnet Colour'd Crystals of Copper intermix'd, from Dº: ~

NOTE: Virgin Copper = Native Copper (Cu)
Blue Vitriol = Chalcanthite ($CuSO_4 \cdot 5H_2O$)



♀

11 Virgin Copper resembling Filagree work in thin plates Cornwall

12 Crystallized Glass Copper Ore wth very fine bright Red Papulæ of D^{o}: 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 D^{o}: ~

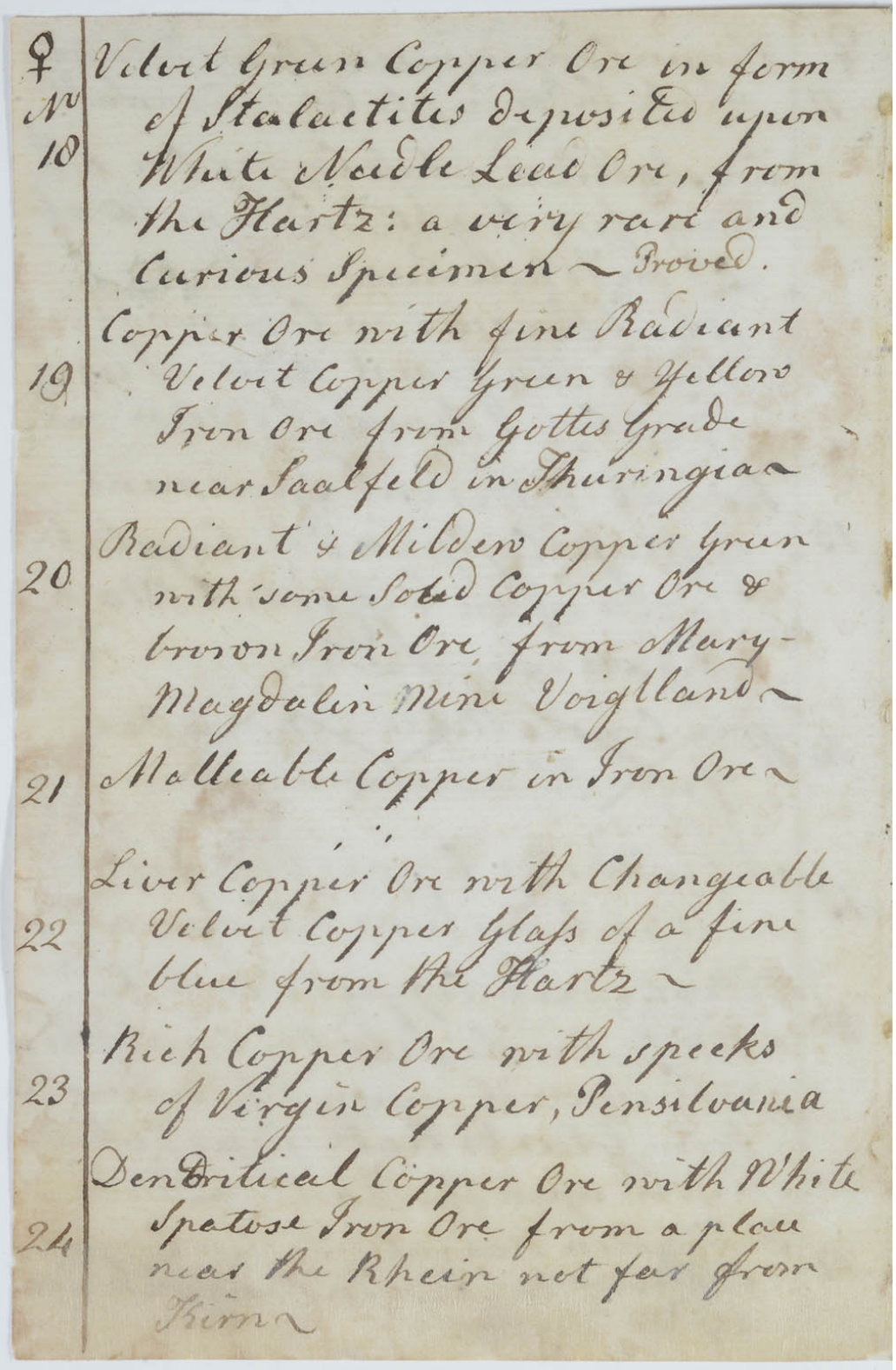
14 ~~Grey Crystallized Copper Ore from Do: uncommon~~ ~

15 Malachites Copper Ore, from Wheel Fortune Cornwall ~

16 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 M^{r}: Seymer ~

NOTE: Virgin Copper = Native Copper (Cu)
Glass Copper Ore = Cuprite (Cu_2O)
Velvet Green Copper Ore = Malachite $Cu_2(CO_3)(OH)_2$


♀
Nº
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 ~

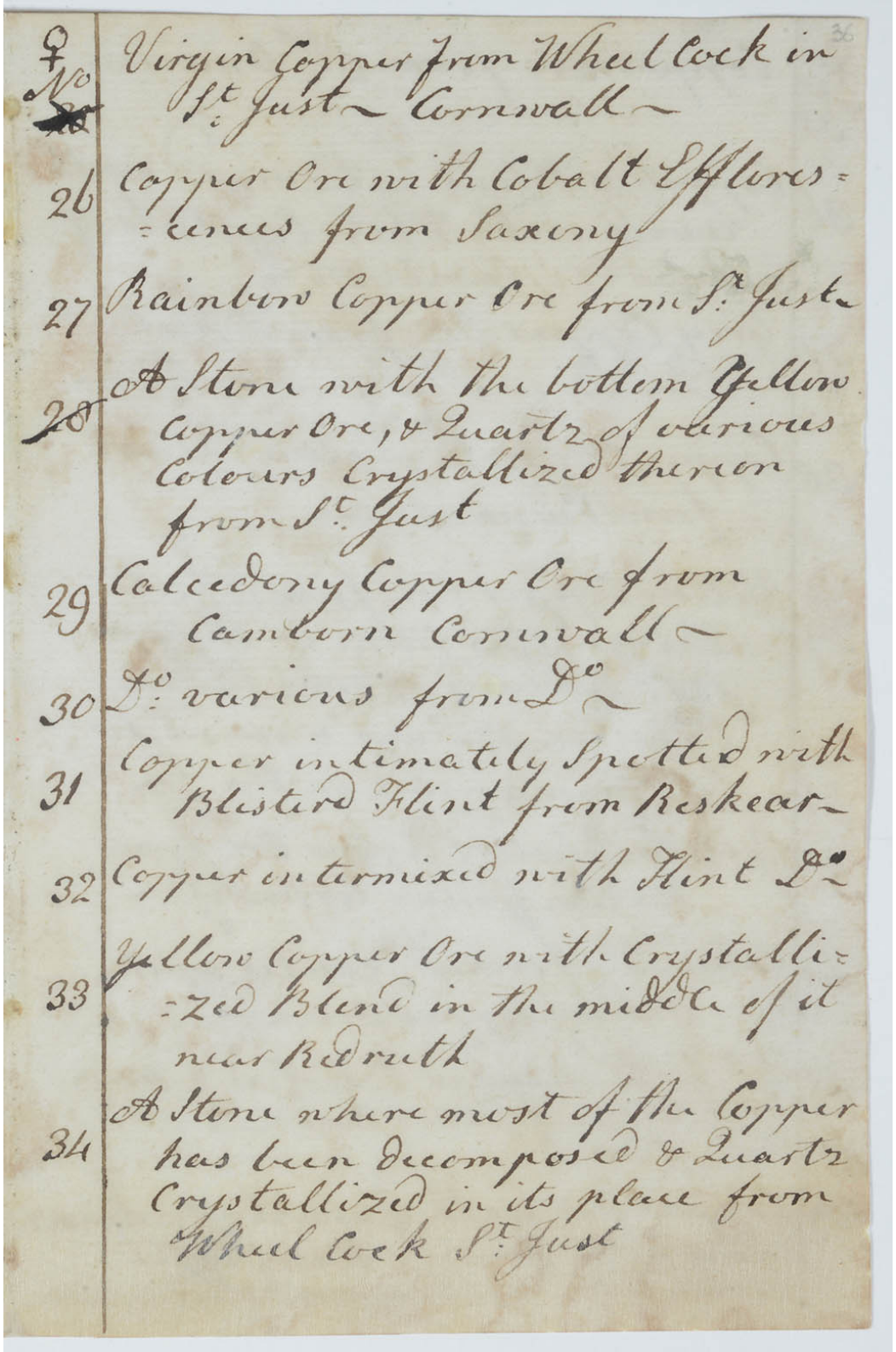
21 Malleable Copper in Iron Ore ~

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 ~

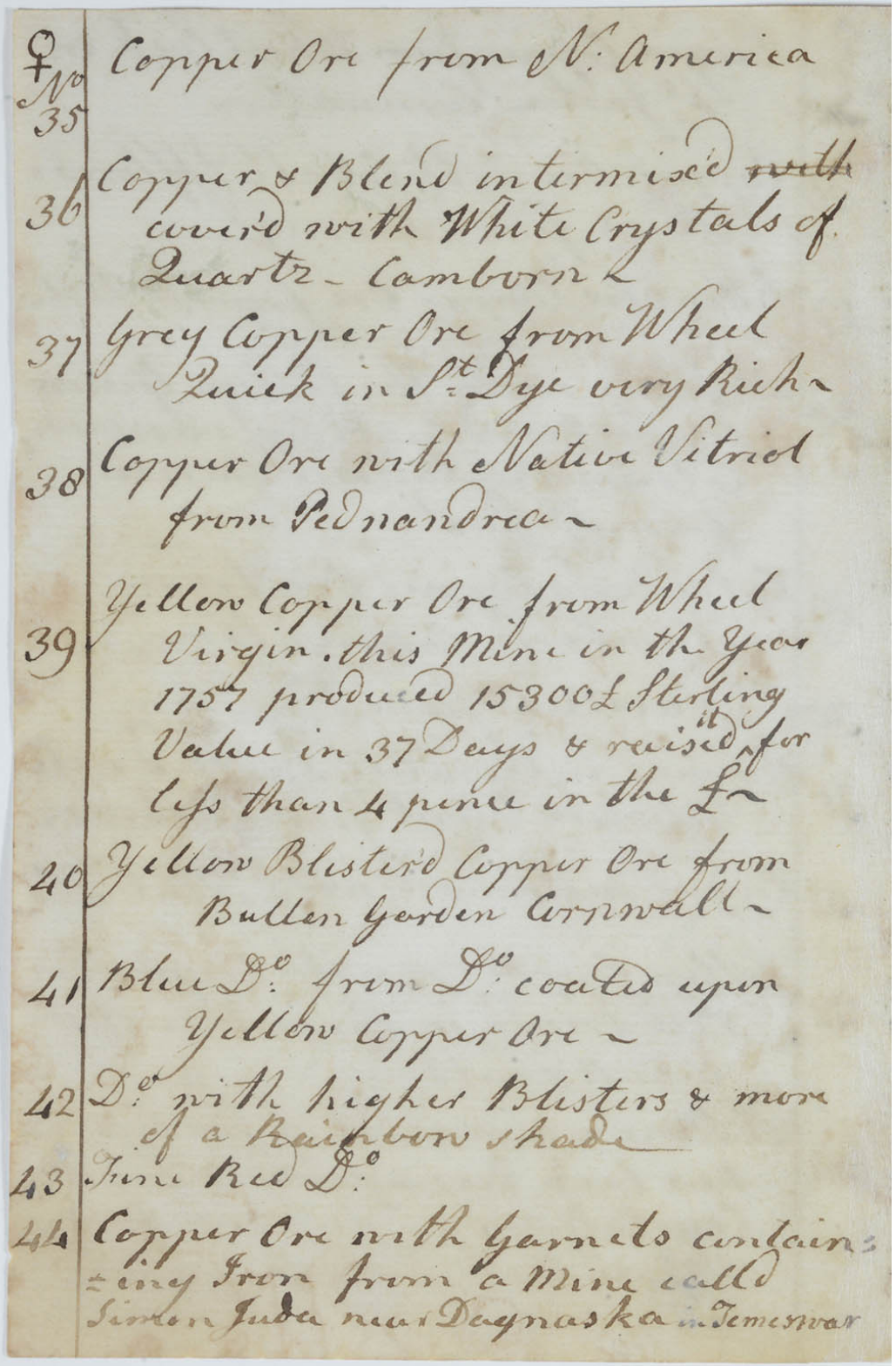
NOTE: Velvet Green Copper Ore = Malachite $Cu_2(CO_3)(OH)_2$
White Needle Lead Ore = Cerussite ($PbCO_3$)
Radiant & Mildew Copper Green probably = Malachite $Cu_2(CO_3)(OH)_2$
Malleable Copper = Native Copper (Cu)
Liver Copper Ore = Bornite (Cu_5FeS_4)



♀

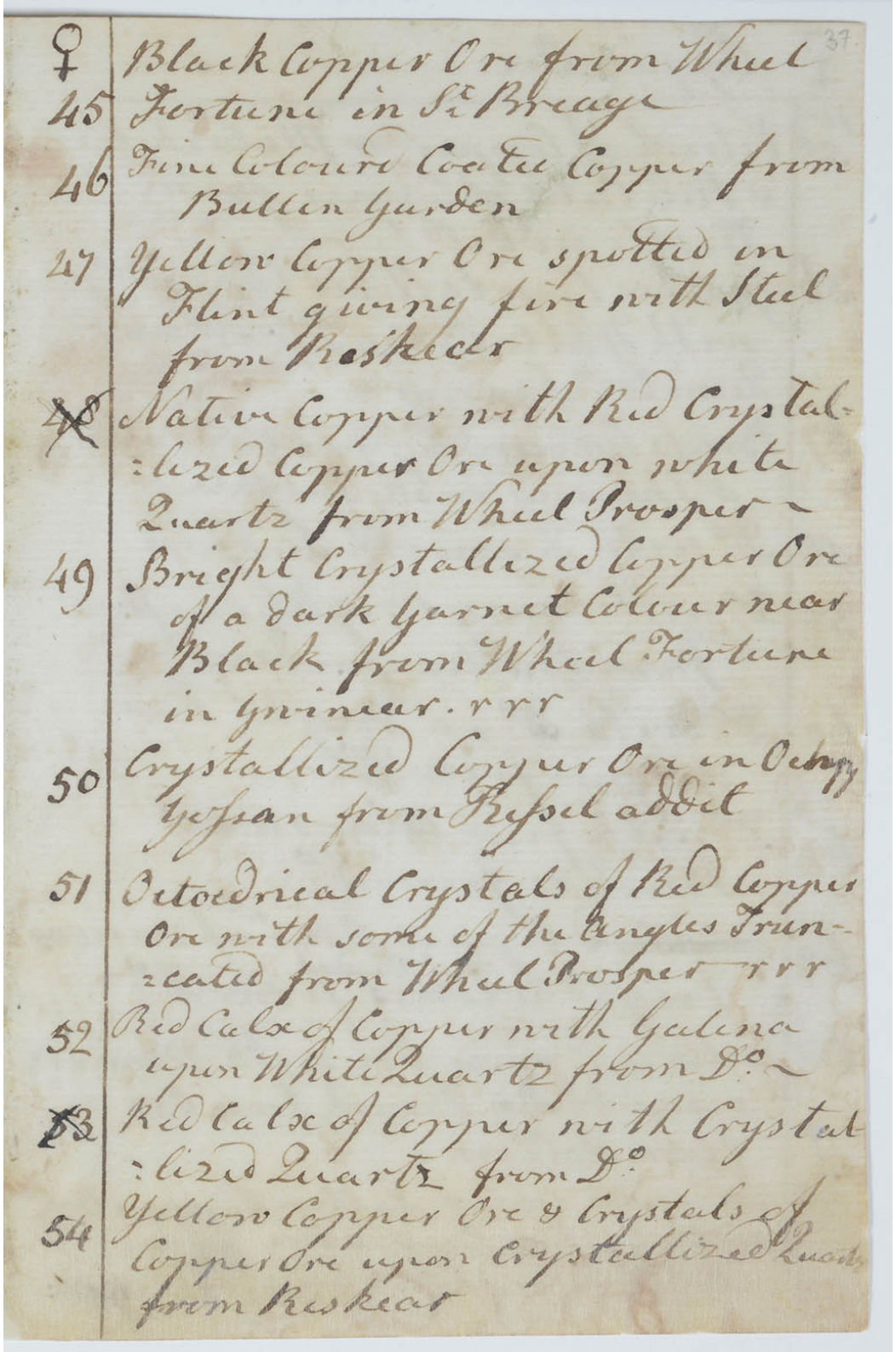
No	
~~25~~	Virgin Copper from Wheel Cock in St: Just ~ Cornwall ~
26	Copper Ore with Cobalt Efflorescences from Saxony
27	Rainbow Copper Ore from St: Just
~~28~~	A Stone with the bottom Yellow Copper Ore, & Quartz of various Colours Crystallized thereon from St: Just
29	Calcedony Copper Ore from Camborn 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 St: Just

NOTE: Virgin Copper = Native Copper (Cu)
Rainbow Copper Ore = Bornite (Cu_5FeS_4)
Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)
Blend = Sphalerite (ZnS)



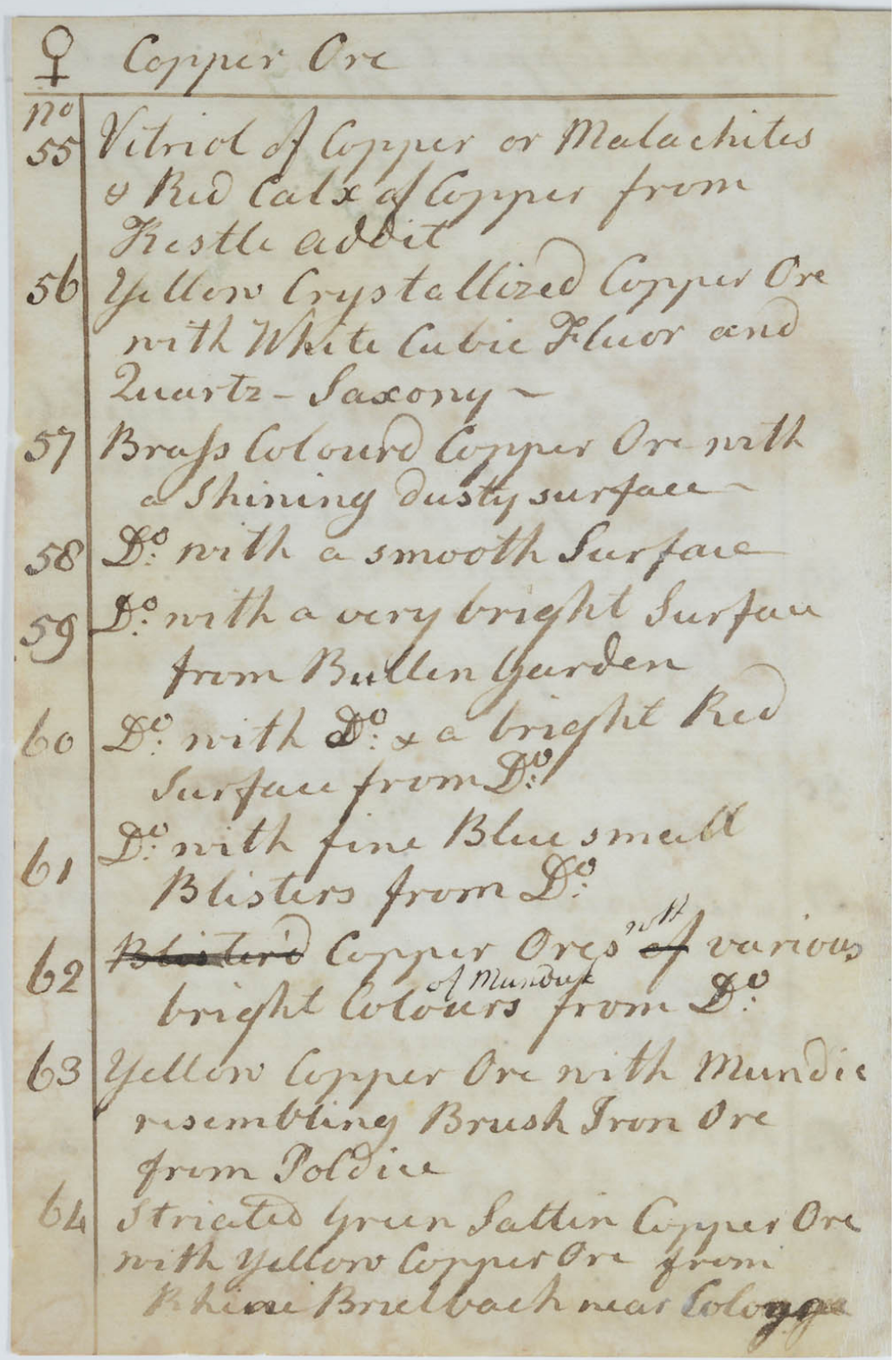
♀ No	
35	Copper Ore from N: America
36	Copper & Blend intermis'd ~~with~~ cover'd with White Crystals of Quartz ~ Camborn ~
37	Grey Copper Ore from Wheel Quick in S^t Dye very Rich ~
38	Copper Ore with Native Vitriol from Pednandrea ~
39	Yellow Copper Ore from Wheel Virgin. this Mine in the Year 1757 produced 15300£ Sterling Value in 37 Days & raised it for less than 4 pence in the £ ~
40	Yellowed Blister'd Copper Ore from Bullen Garden Cornwall ~
41	Blue D^o: from D^o: coated upon Yellow Copper Ore ~
42	D^o: with higher Blisters & more of a Rainbow shade
43	Fine Red D^o:
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_2S)or Tetrahedrite ($Cu_{12}Sb_4S_{13}$)
Native Vitriol = Chalcanthite ($CuSO_4 \cdot 5H_2O$)
Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)
Blistered Copper Ore = Chalcopyrite ($CuFeS_2$)



♀	
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: ~
~~53~~	Red Calx of Copper with Crystallized Quartz from Do:
54	Yellow Copper Ore & Crystals of Copper Ore upon Crystallized Quartz from Reskear

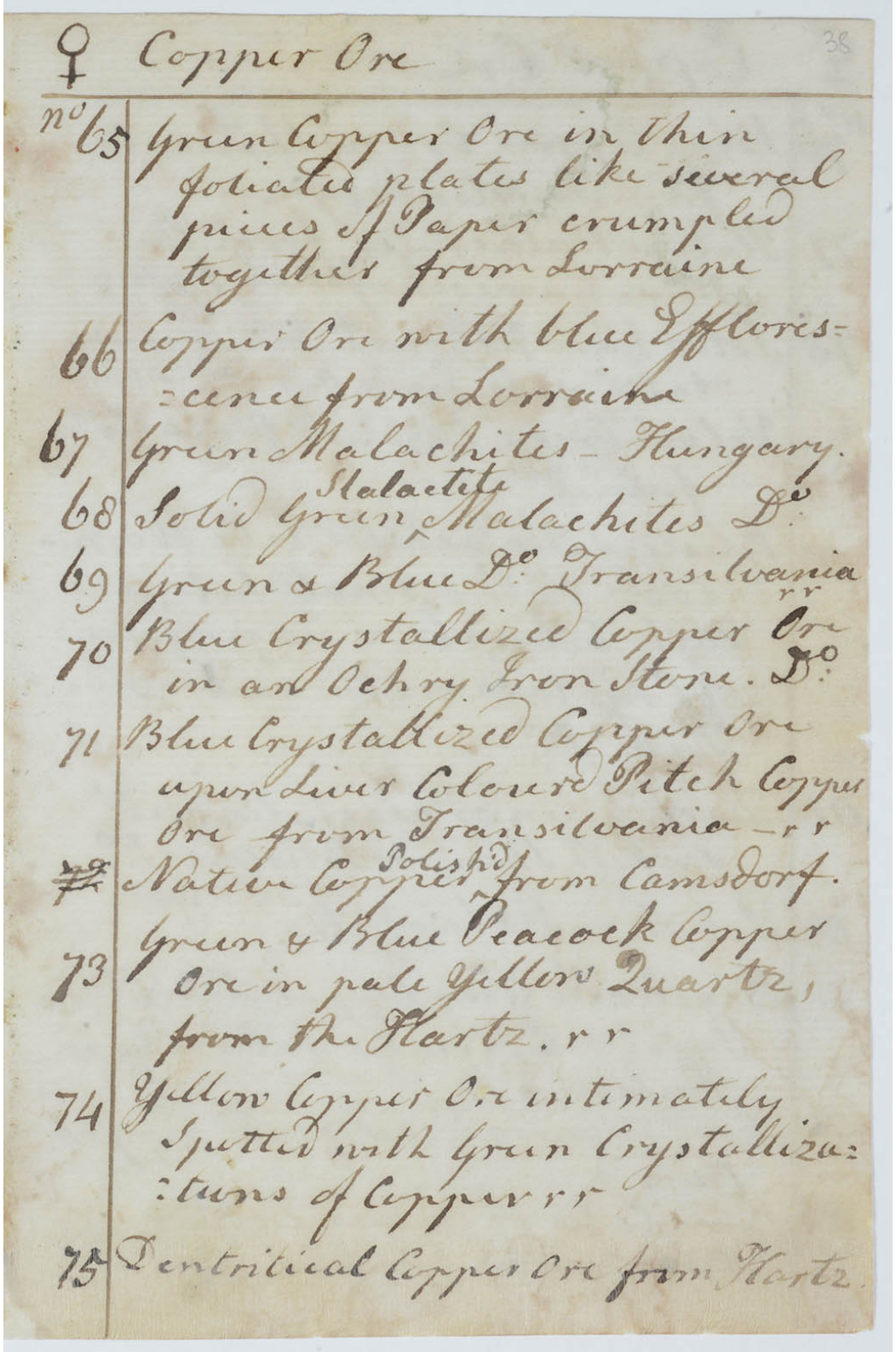
NOTE: Specimens 48 & 53 are crossed out rather than struck out
Black Copper Ore = Tenorite (CuO) of Chalcocite (Cu_2S)
Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)
Red Copper Ore = Cuprite (CuO_2)
Red Calx of Copper = Cuprite (CuO_2)
Bright Crystallized Copper Ore = Cuprite (CuO_2)



♀ 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

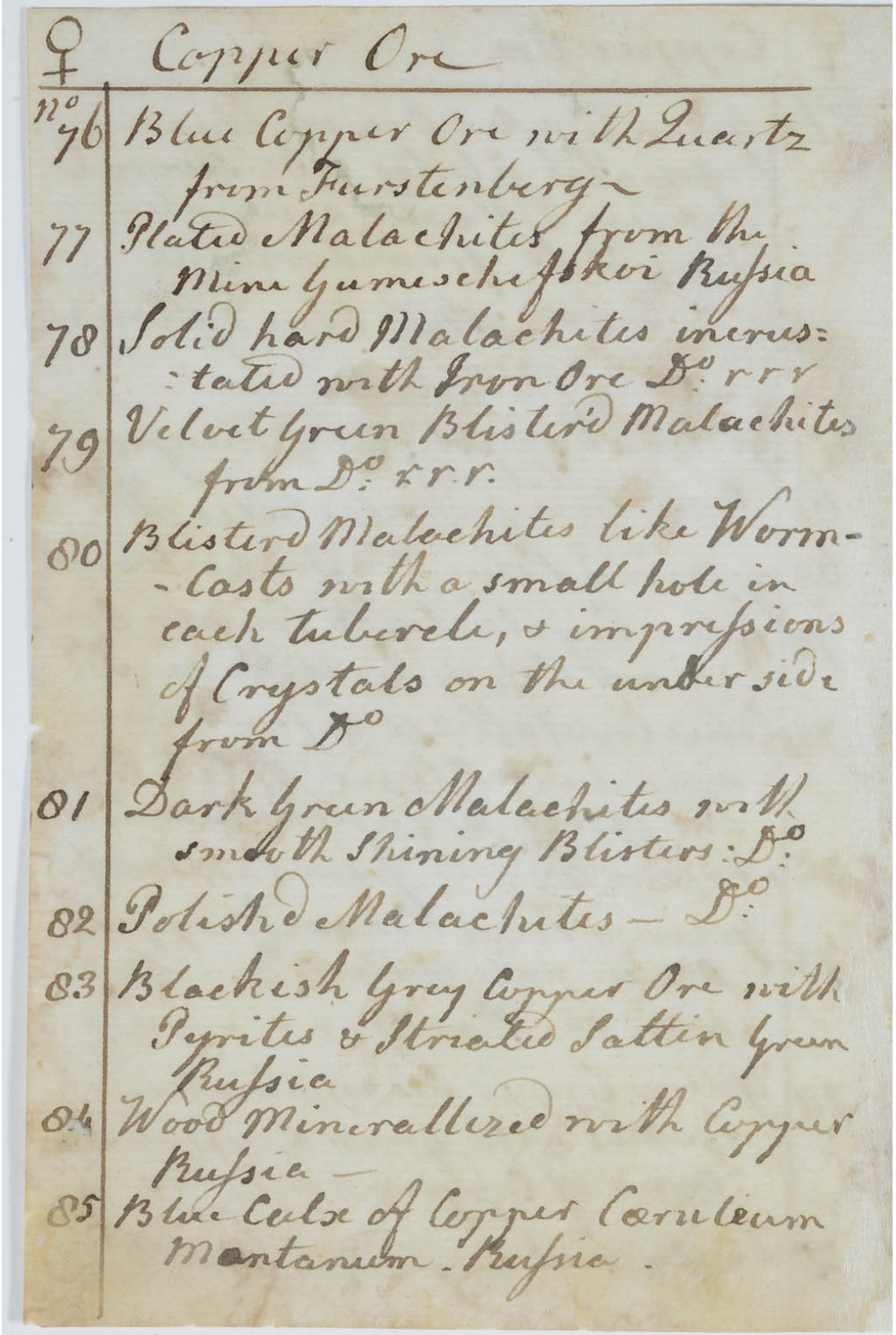
NOTE: Red Calx of Copper = Cuprite (CuO_2)
Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)
Fluor = Fluorite (CaF_2)
Mundic is an old Cornish name for Pyrite (FeS_2)
Striated Green Satin Copper Ore is probably = Malachite $Cu_2(CO_3)(OH)_2$ or Pseudomalachite $(Cu_5(PO_4)_2(OH)_4)$



♀ Copper Ore

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

NOTE: Blue Crystallized Copper Ore = Azurite ($Cu_3(CuO_3)_2(OH)_2$)
Green & Blue Peacock Copper Ore probably = Bornite (Cu_5FeS_4)
Yellow Copper Ore = Chalcopyrite ($CuFeS_2$)



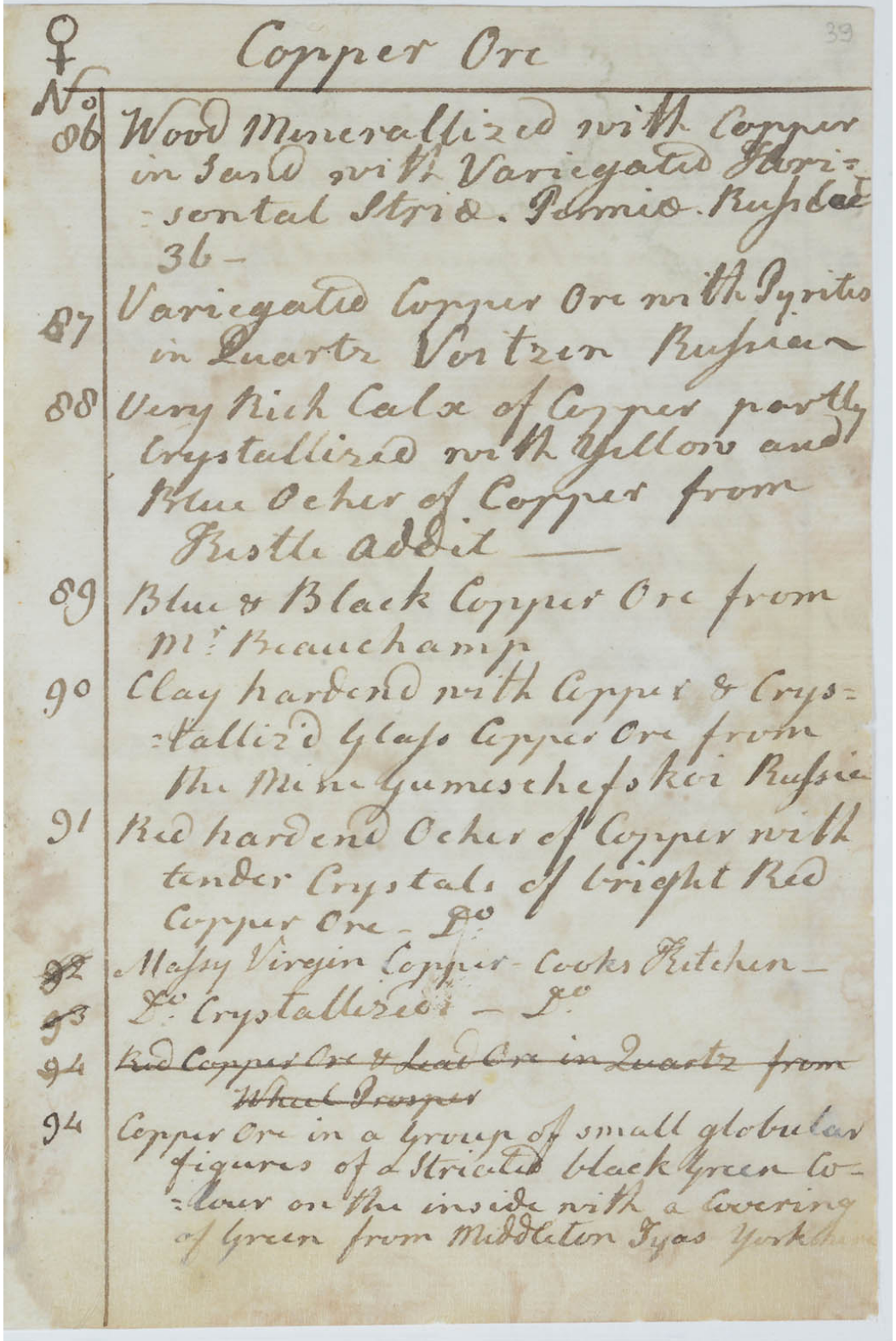
♀ Copper Ore

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: r r r
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 Dº
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.

♀ *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: r r r
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 Dº:
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.

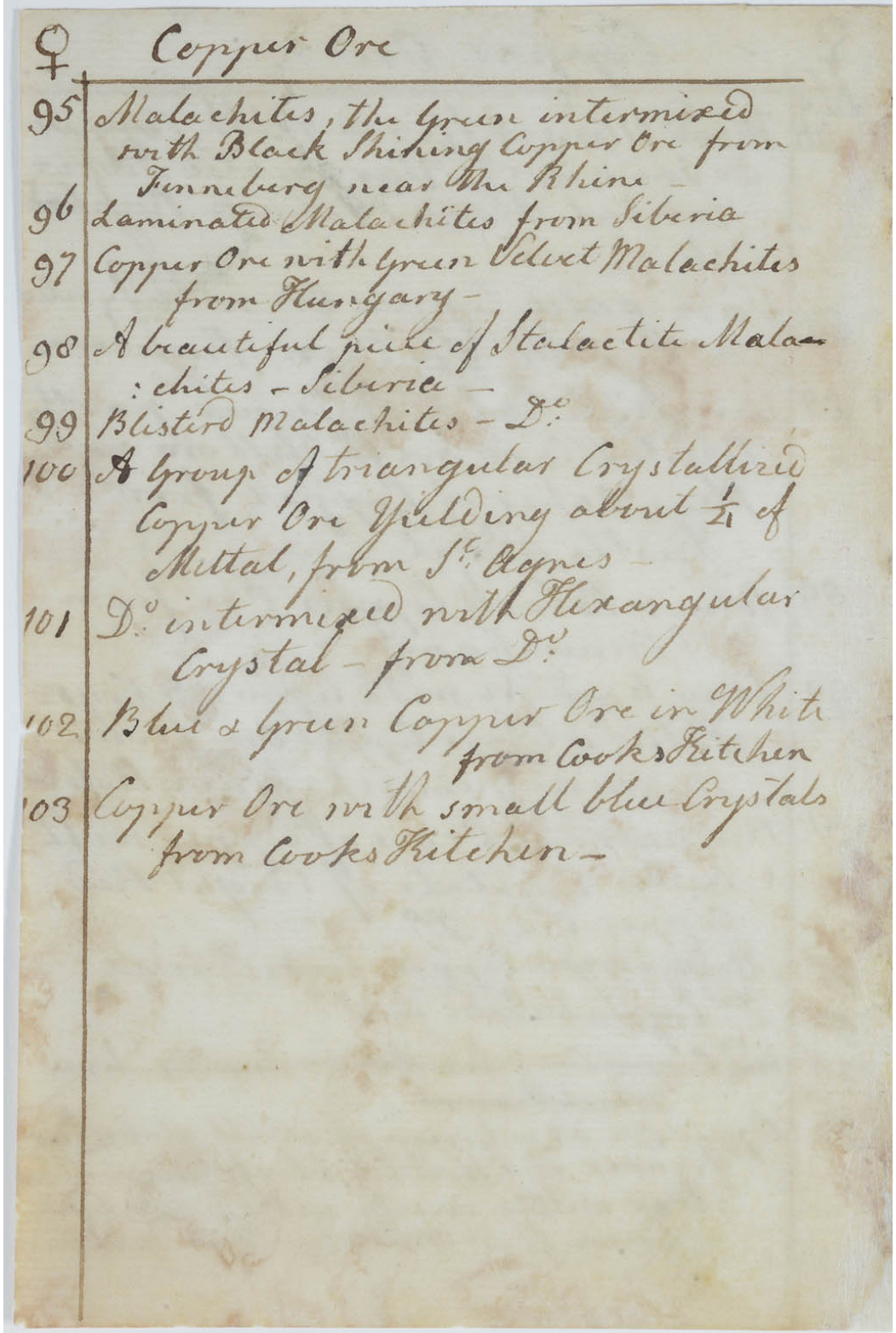
NOTE: Blue Calx of Copper Coeruleum Montanum = Azurite ($Cu_3(CuO_3)_2(OH)_2$)



♀ *Copper Ore*

Nº	
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 ~ Do:
~~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

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 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 Blistered Malachites – Dº

100 A Group of triangular Crystallized Copper Ore Yielding about 1/4 of Mettal, from Sᵗ. Agnes –

101 Dº intermixed with Hexangular Crystal – from Dº

102 Blue & Green Copper Ore in White from Cooks Kitchen

103 Copper Ore with small blue Crystals from Cooks Kitchen –

♀ *Copper Ore*

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:

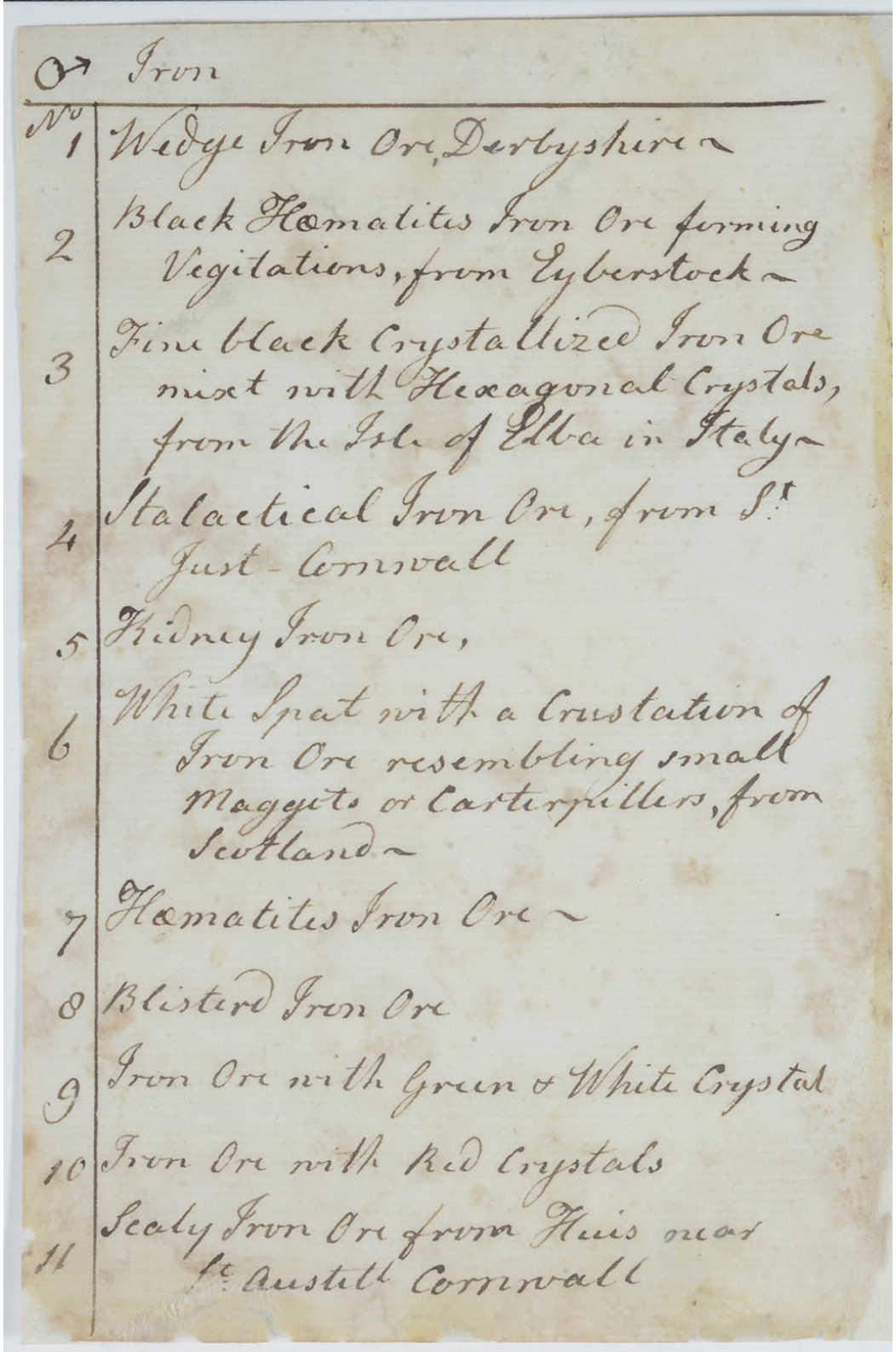
100 A Group of triangular Crystallized Copper Ore Yielding about ¼ of Mettal, from Sᵗ: Agnes ~

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 ($CuFeS_2$)



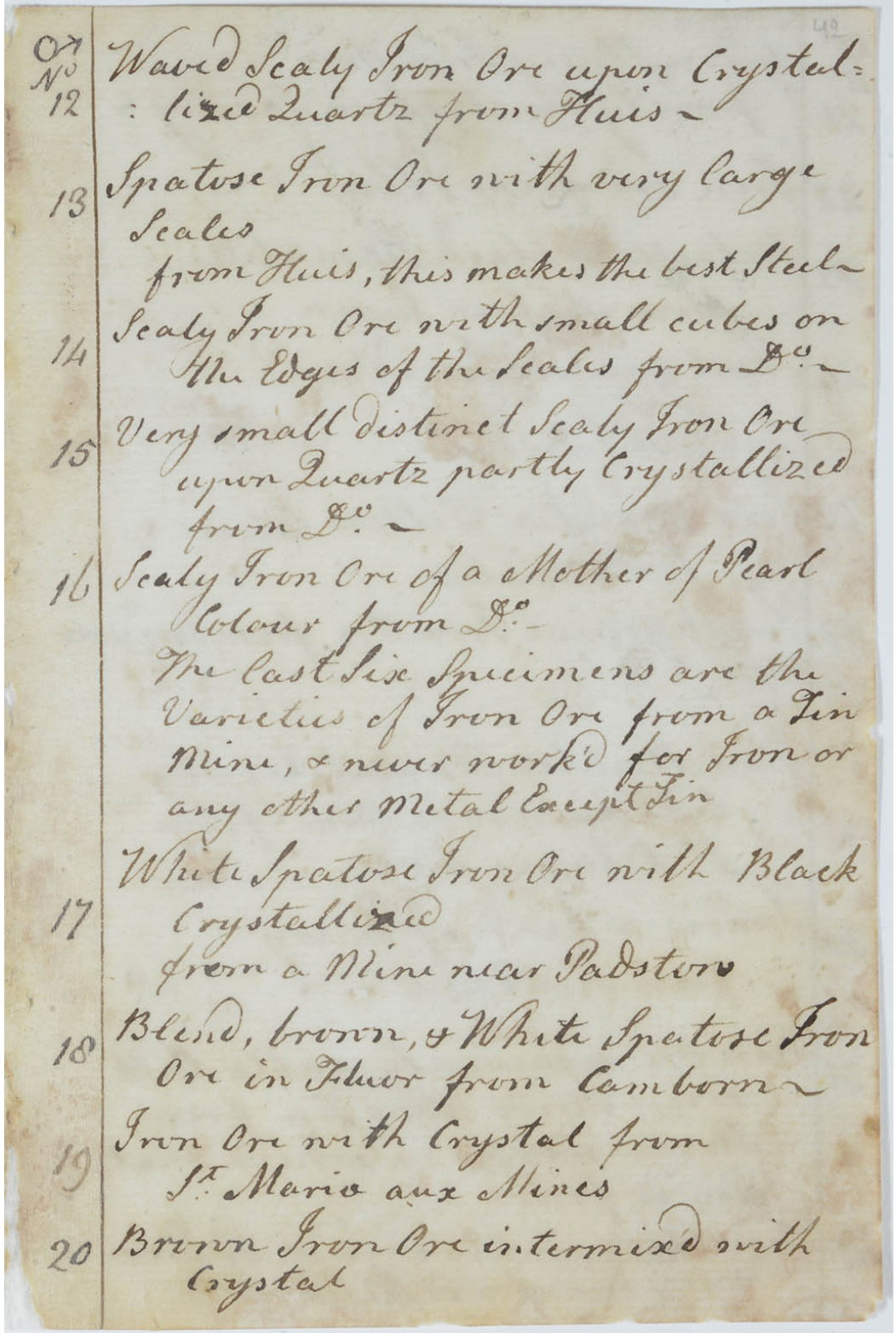
♂ Iron

Nº	
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 ~
4	Stalactical Iron Ore, from Stt: Just ~ Cornwall
5	Kidney Iron Ore,
6	White Spat with a Crustation of Iron Ore resembling small Maggots or Carterpillers, from Scotland ~
7	Hæmatites Iron Ore ~
8	Blisterd Iron Ore
9	Iron Ore with Green & White Crystal
10	Iron Ore with Red Crystals
11	Scaly Iron Ore from Huis near Stt: Austell Cornwall

♂ *Iron*

Nº	
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 ~
4	Stalactical Iron Ore, from Stt: Just ~ Cornwall
5	Kidney Iron Ore,
6	White Spat with a Crustation of Iron Ore resembling small Maggots or Carterpillers, from Scotland ~
7	Hæmatites Iron Ore ~
8	Blisterd Iron Ore
9	Iron Ore with Green & White Crystal
10	Iron Ore with Red Crystals
11	Scaly Iron Ore from Huis near Stt: Austell Cornwall

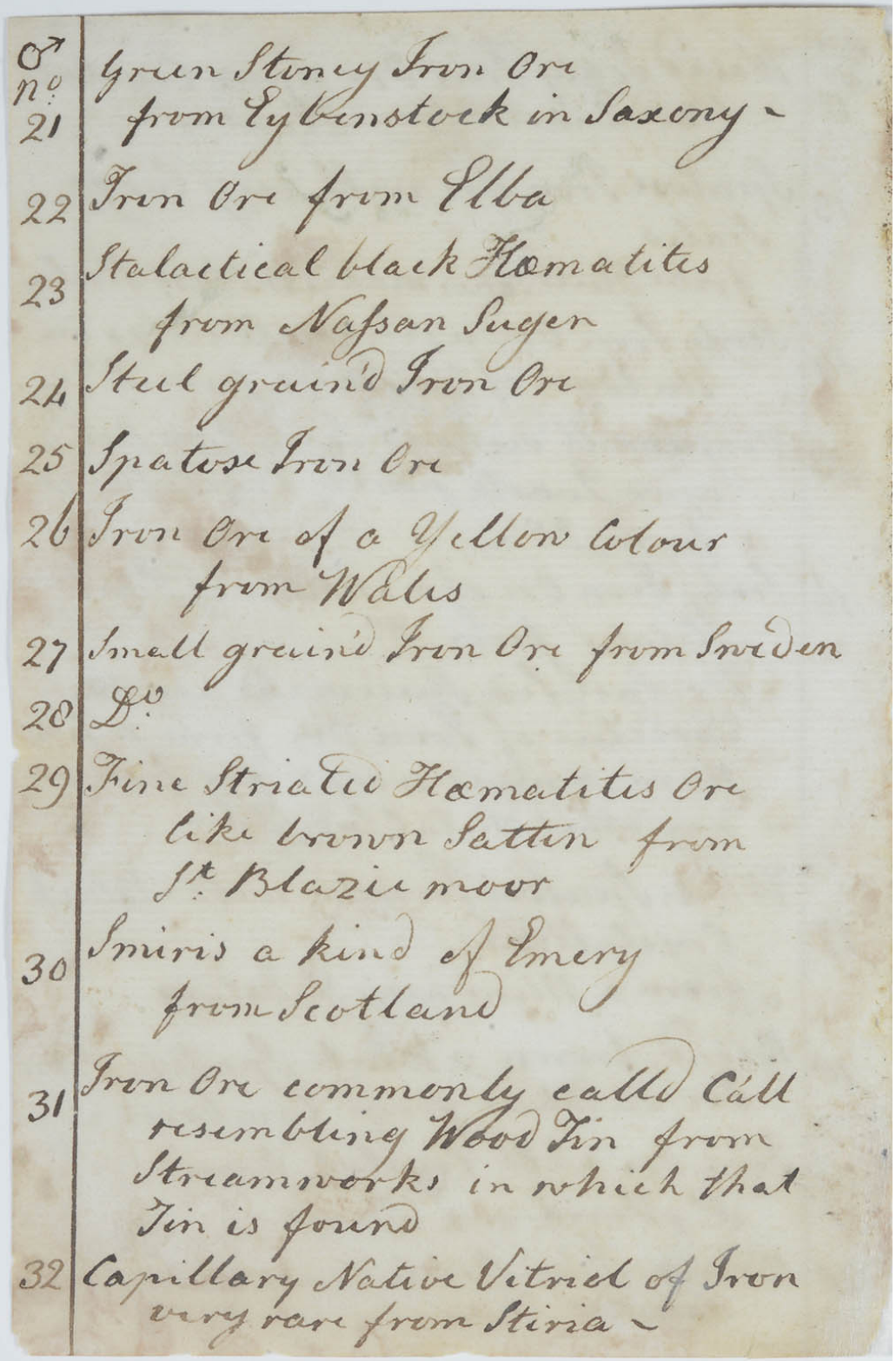
NOTE: Black Hæmatites = Hematite (Fe_2O_3) or Goethite ($FeO(OH)$)
Black Crystallised Iron Ore = Hematite (Fe_2O_3)
Kidney Iron Ore = Hematite (Fe_2O_3)
Stalactical Iron Ore = Goethite ($FeO(OH)$)
Scaly Iron Ore = Siderite ($FeCO_3$)



♂

Nº	
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: ~
15	Very small distinct Scaly Iron Ore upon Quartz partly Crystallized from Dº: ~
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 Stº: Maria aux Mines
20	Brown Iron Ore intermix'd with Crystal

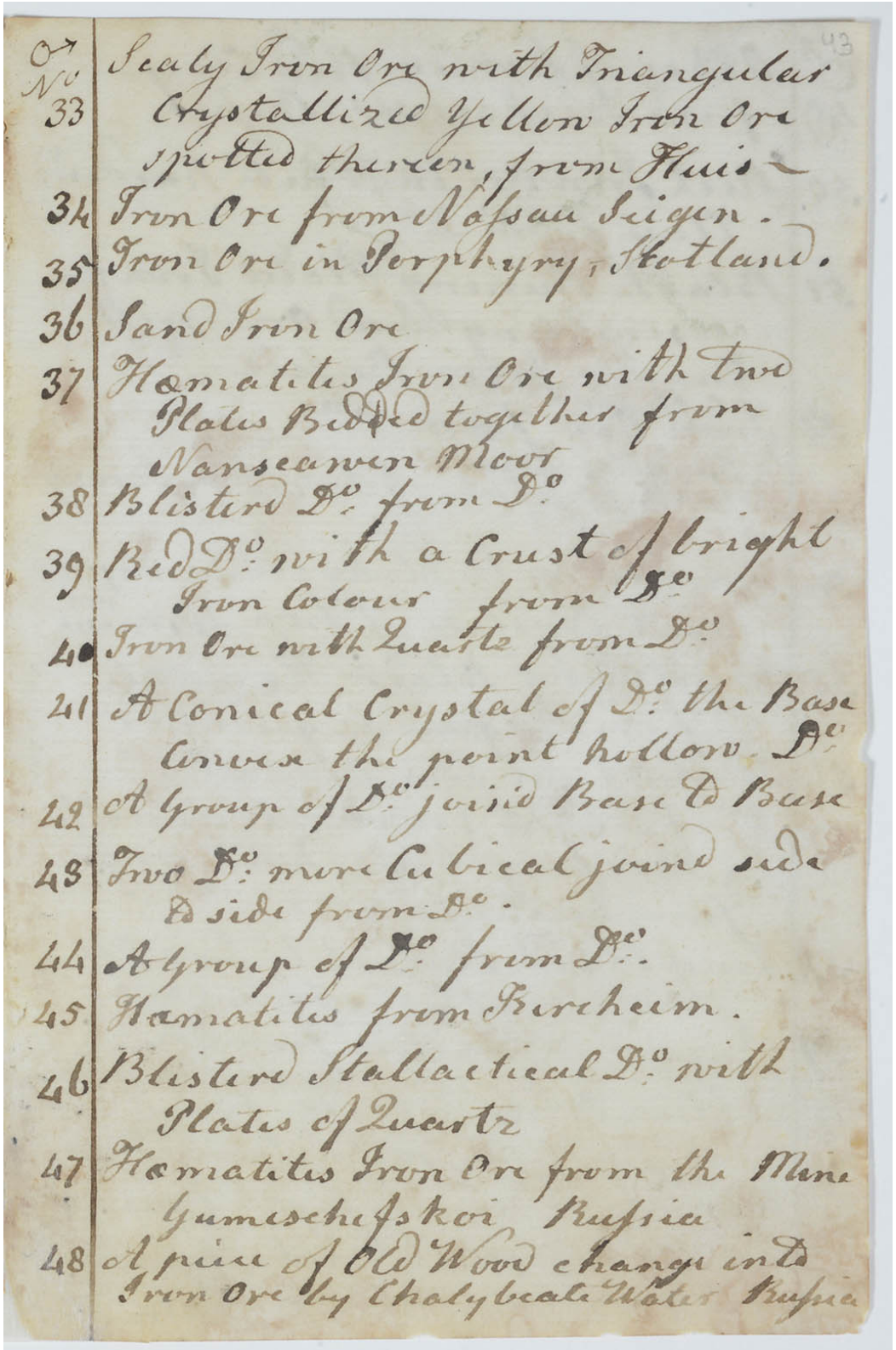
NOTE: Scaly Iron Ore = Siderite ($FeCO_3$)
Spatose Iron Ore = Siderite ($FeCO_3$)
Blend = Sphalerite (ZnS)
Fluor = Fluorite (CaF_2)



♂

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 Stt: 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 ~

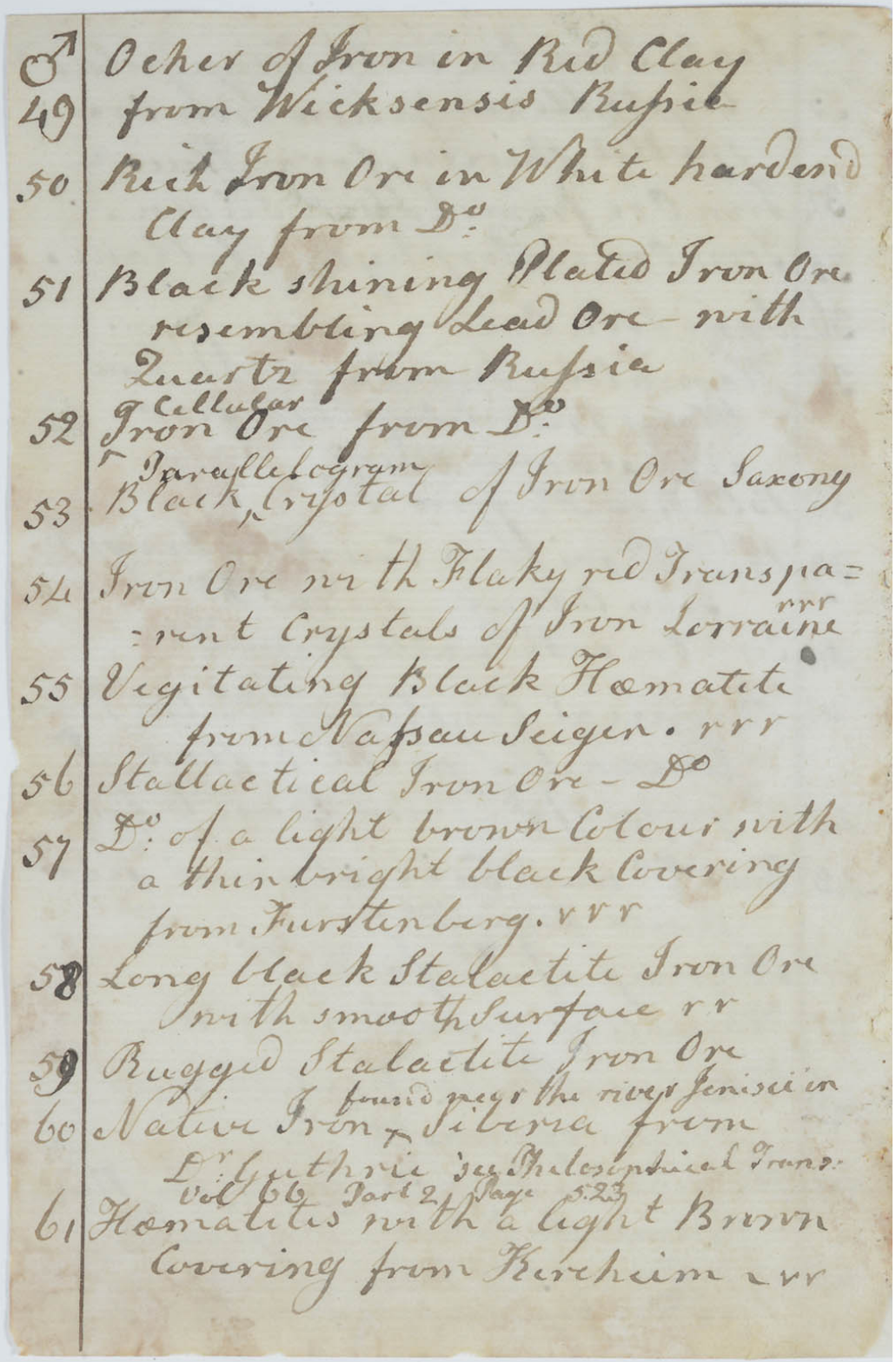
NOTE: Hæmatites is either Hematite (Fe_2O_3) or Goethite ($FeO(OH)$)
Spatose Iron Ore = Siderite ($FeCO_3$)
Smiris is a mixture of Corundum + Hematite + Magnetite + Spinel
Native Vitriol of Iron = Melanterite ($Fe_2SO_4 \cdot 7H_2O$)



♂

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 Dº: from Dº:
39	Red Dº: with a Crust of bright Iron Colour from Dº:
40	Iron Ore with Quartz from Dº:
41	A Conical Crystal of Dº: the Base Convex the point hollow. Dº:
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 Dº: from Dº: .
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

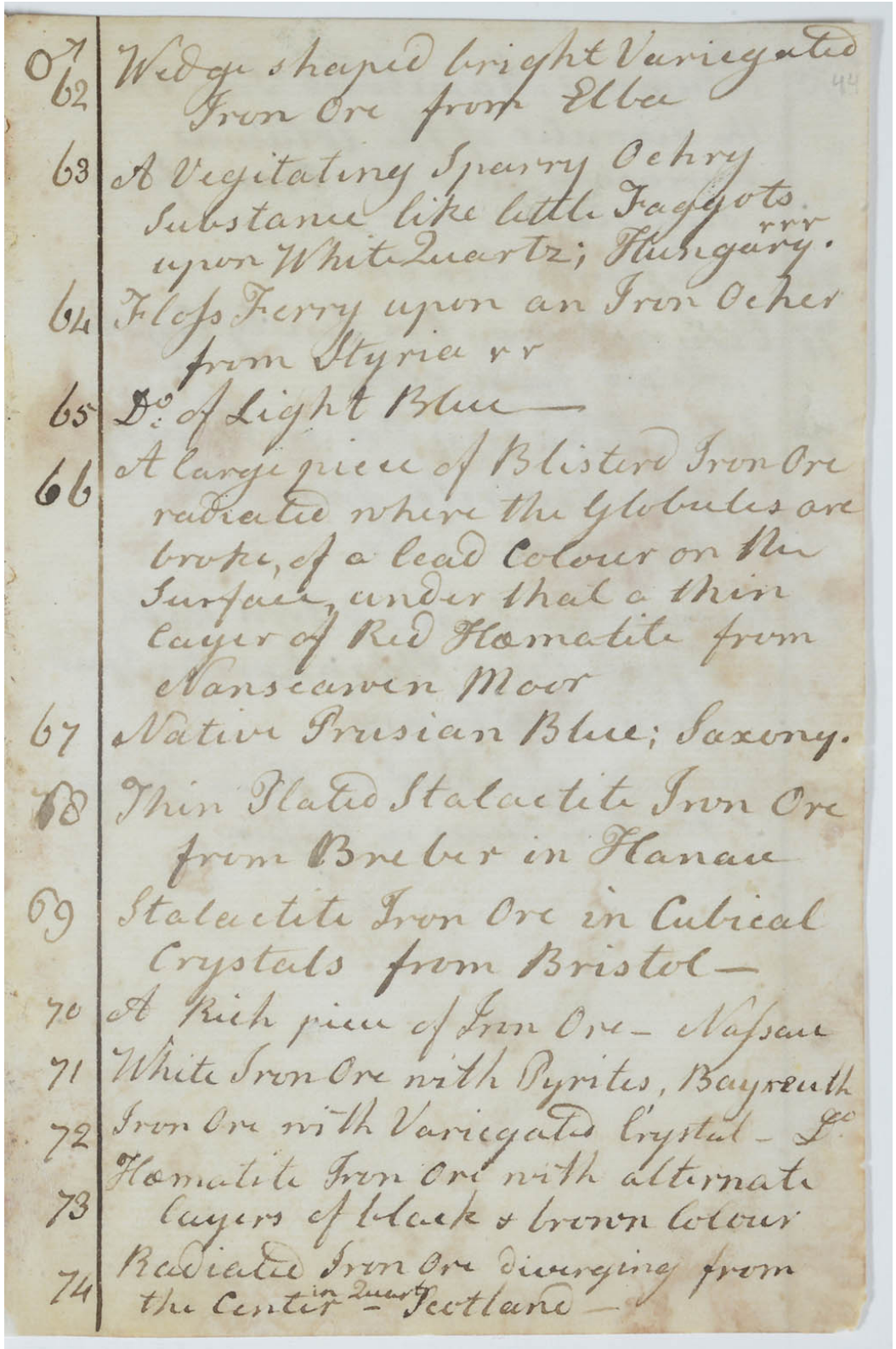
NOTE: Scaly Iron Ore = Siderite ($FeCO_3$)
Triangular Crystallized Yellow Iron Ore = Pyrite (FeS_2)
Hæmatites = either Hematite (Fe_2O_3) or Goethite ($FeO(OH)$)



♂

49	Ocher of Iron in Red Clay from Wicksensis Russia
50	Rich Iron Ore in White hardend Clay from Dº:
51	Black Shining Plated Iron Ore resembling Lead Ore ~ 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 Dr: 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 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.



♂

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

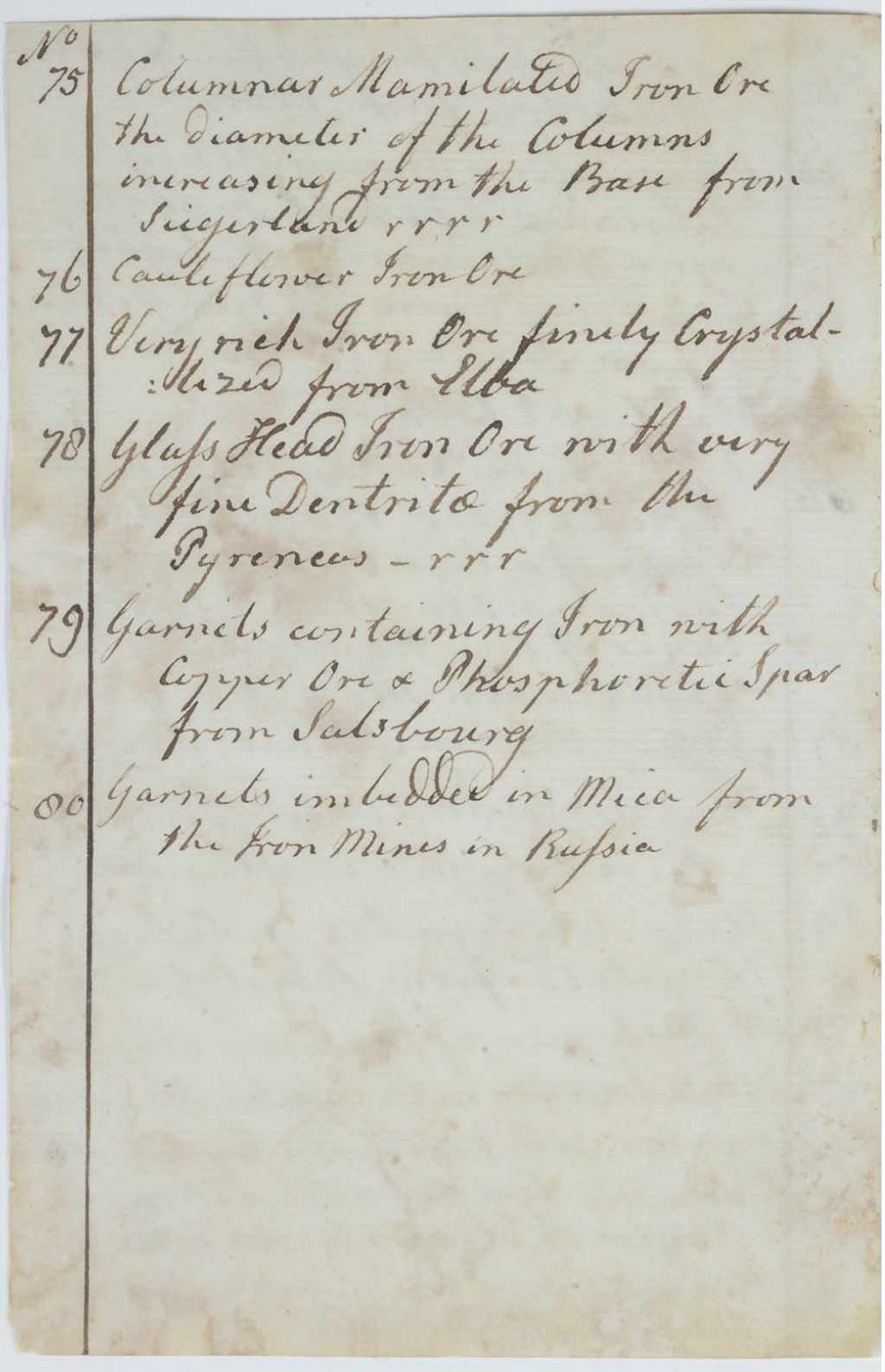
71 White Iron Ore with Pyrites, Bayreuth

72 Iron Ore with Variegated Crystal ~ Do:

73 Hæmatite Iron Ore with alternate layers of black & brown Colour

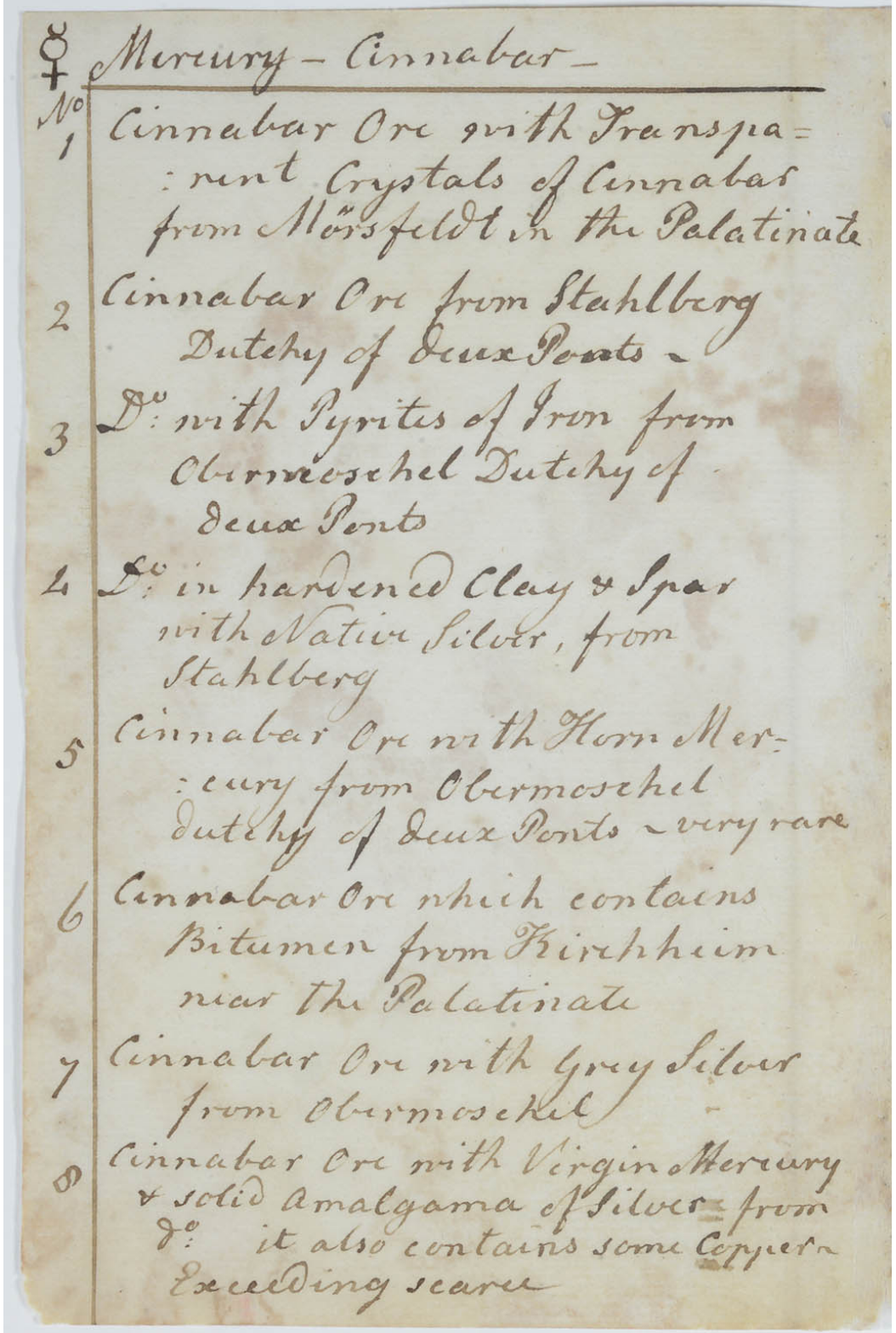
74 Radiated Iron Ore diverging from the Center in Quartz ~ Scotland ~

NOTE: Variegated Iron Ore = Hematite ((Fe_2O_3))
Floss Ferry = coralloid Aragonite ($CaCO_3$)
Native Prussian Blue = earthy Vivianite ($Fe_3(PO_4)_2{\cdot}8H_2O$)



Nº	
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 ~ 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

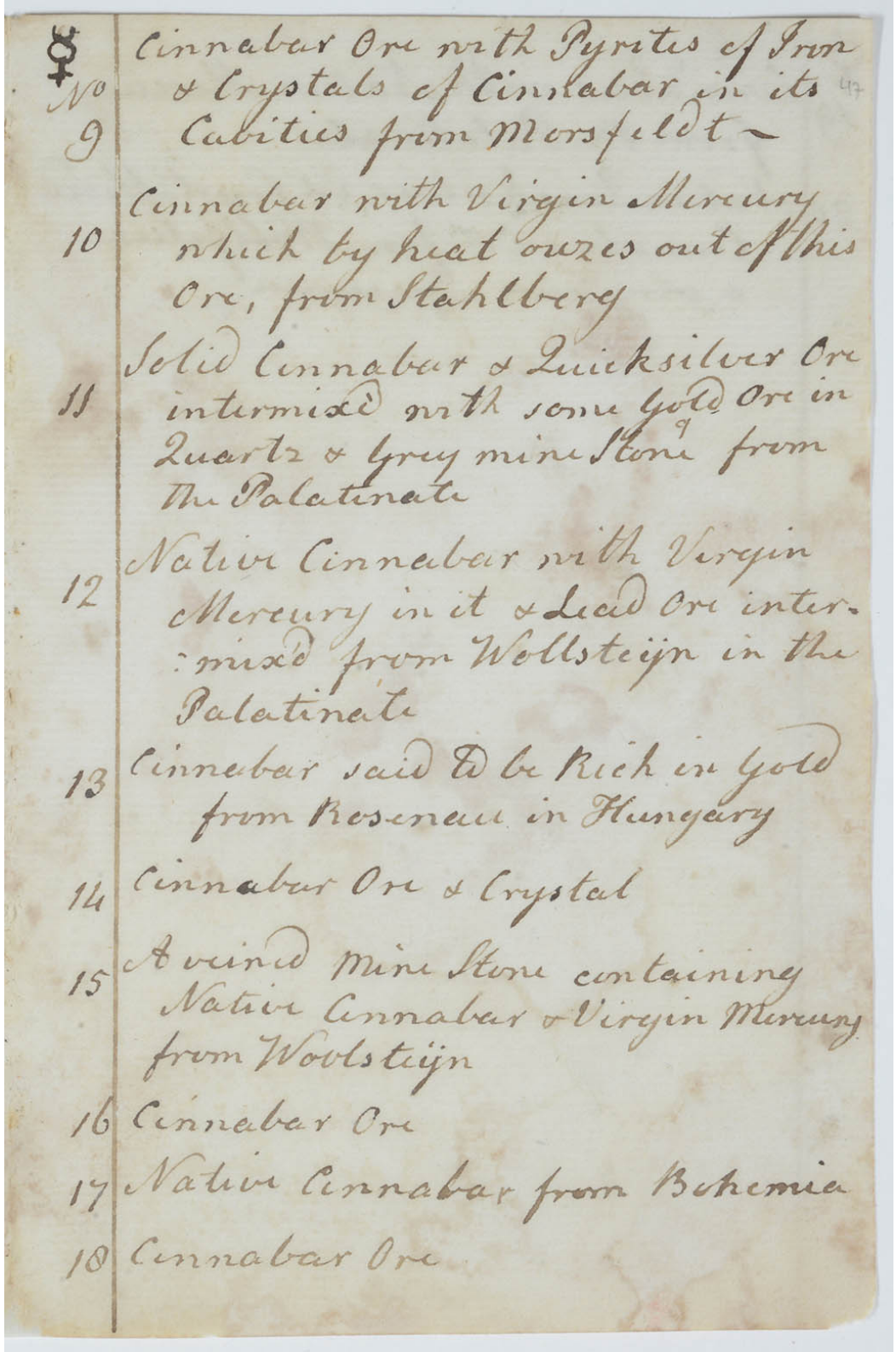
NOTE: Iron Ore from Elba = Hematite ((Fe_2O_3) Garnets containing Iron = Almandine $(Fe_3Al_2(SiO_4)_3)$ or Andradite $(Ca_3Fe_2(SiO_4)_3)$



☿ *Mercury - Cinnabar -*

No	
1	Cinnabar Ore with Transparent Crystals of Cinnabar from Mörsfeldt in the Palatinate
2	Cinnabar Ore from Stahlberg Dutchy of deux Ponts ~
3	Do: with Pyrites of Iron from Obermoschel Dutchy of deux Ponts
4	Do: in hardened Clay & Spar with Native Silver, from Stahlberg
5	Cinnabar Ore with Horn Mercury from Obermoschel Dutchy of deux Ponts ~ very rare
6	Cinnabar Ore which contains Bitumen from Kirchheim near the Palatinate
7	Cinnabar Ore with Grey Silver from Obermoschel
8	Cinnabar Ore with Virgin Mercury & solid Amalgama of Silver from do: it also contains some Copper ~ Exceeding scarce

NOTE: Pyrites of Iron = Pyrite (FeS_2)
Horn Mercury = Calomel (Hg_2Cl_2)
Grey Silver probably = Acanthite (Ag_2S)
Virgin Mercury = Native Mercury (Hg)
Amalgama of Silver = Moschellandsbergite (Ag_2Hg_3)



☿ No	
9	Cinnabar Ore with Pyrites of Iron & Crystals of Cinnabar in its Cavities from Morsfeldt ~
10	Cinnabar with Virgin Mercury which by heat ouzes out of this Ore, from Stahlberg
11	Solid Cinnabar & Quicksilver Ore intermixed with some Gold Ore in Quartz & Grey mine Stone from The Palatinate
12	Native Cinnabar with Virgin Mercury in it & Lead Ore intermixed 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

☿ No	
9	Cinnabar Ore with Pyrites of Iron & Crystals of Cinnabar in its Cavities from Morsfeldt ~
10	Cinnabar with Virgin Mercury which by heat ouzes out this Ore, from Stahlberg
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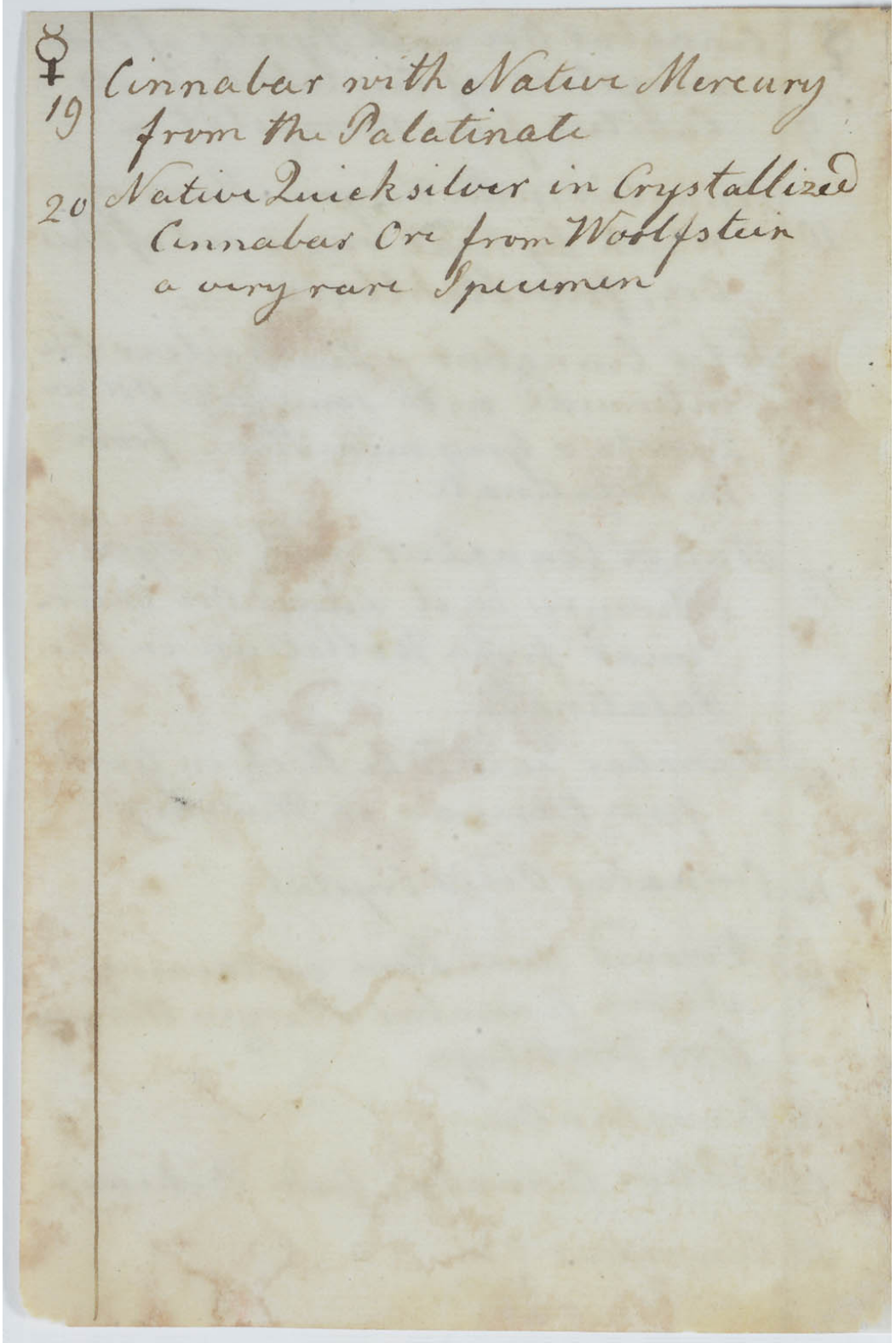
16	Cinnabar Ore
17	Native Cinnabar from Bohemia
18	Cinnabar Ore

NOTE: Pyrites of Iron = Pyrite (FeS_2)
Virgin Mercury = Native Mercury (Hg)

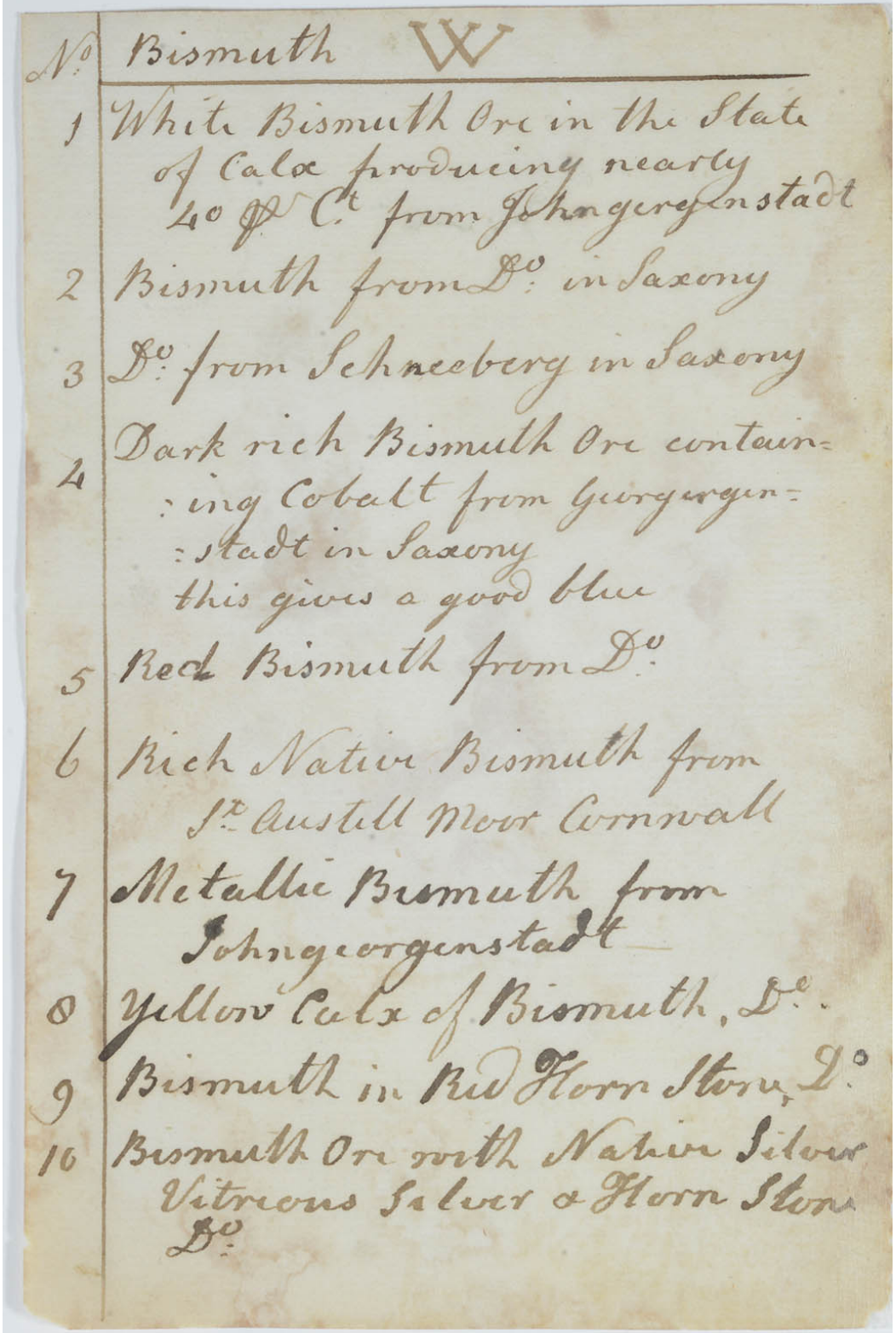


☿

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)

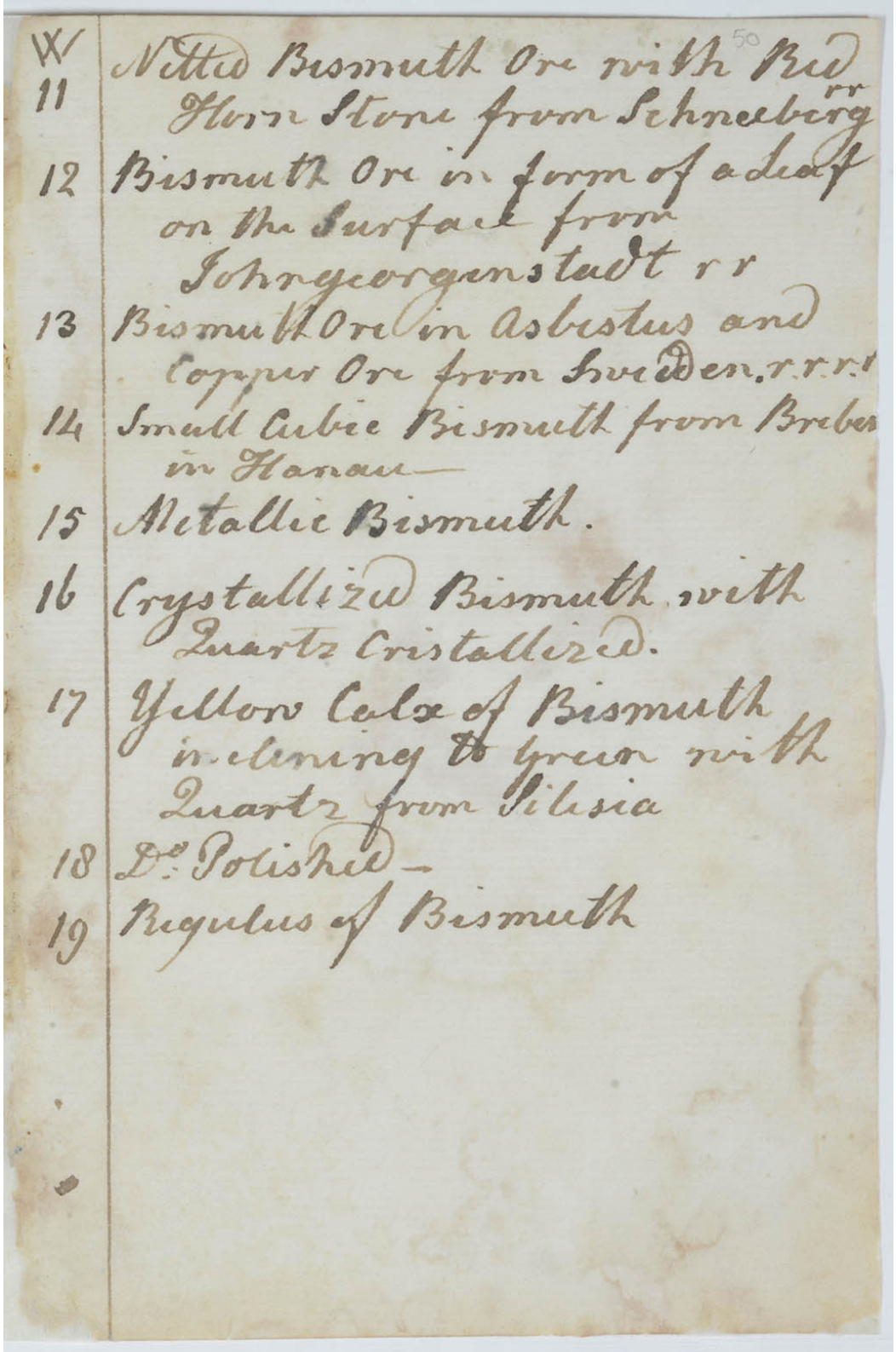


Nº	Bismuth W
1	White Bismuth Ore in the State of Calx producing nearly 40 ℔ Ct from Johngeorgenstadt
2	Bismuth from Dº in Saxony
3	Dº from Schneeberg in Saxony
4	Dark rich Bismuth Ore containing Cobalt from Georgergen=stadt in Saxony this gives a good blue
5	Red Bismuth from Dº
6	Rich Native Bismuth from Stº 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 Vitreous Silver & Horn Stone Dº

Bismuth *W*

Nº	
1	White Bismuth Ore in the State of Calx producing nearly 40 per Ct. 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 Stº: 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:

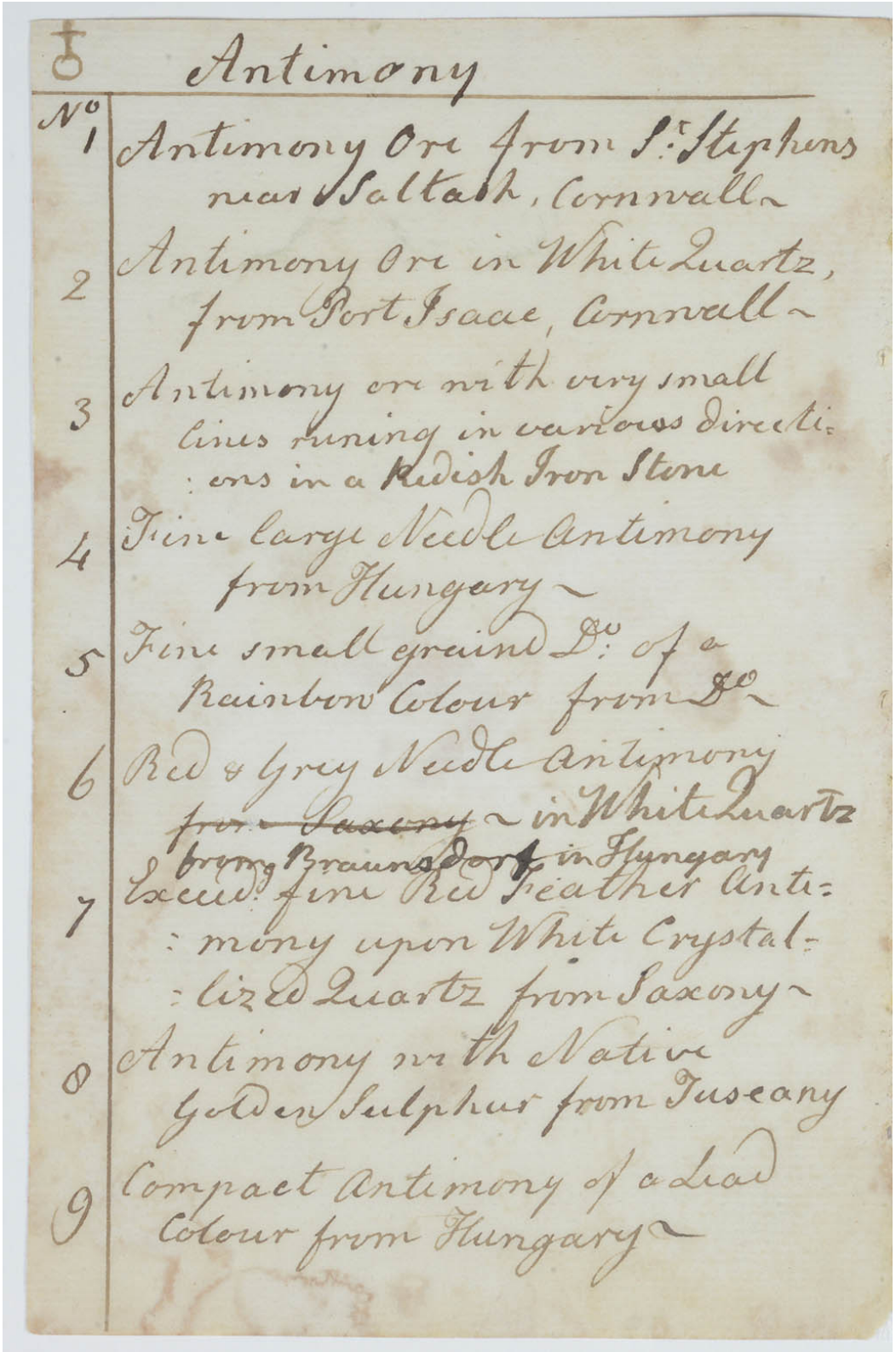
NOTE: Rashleigh uses an unusual symbol for Bismuth derived from the German Wissmut.
Yellow Calx of Bismuth possibly = Bismutite ($Bi_2O_2(CO_3)$)
Red Horn Stone = Jasper
Vitreous Silver Ore = Acanthite (Ag_2S)


W
11 Netted Bismuth Ore with Red Horn Stone from Schneeberg r r
12 Bismuth Ore in 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

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



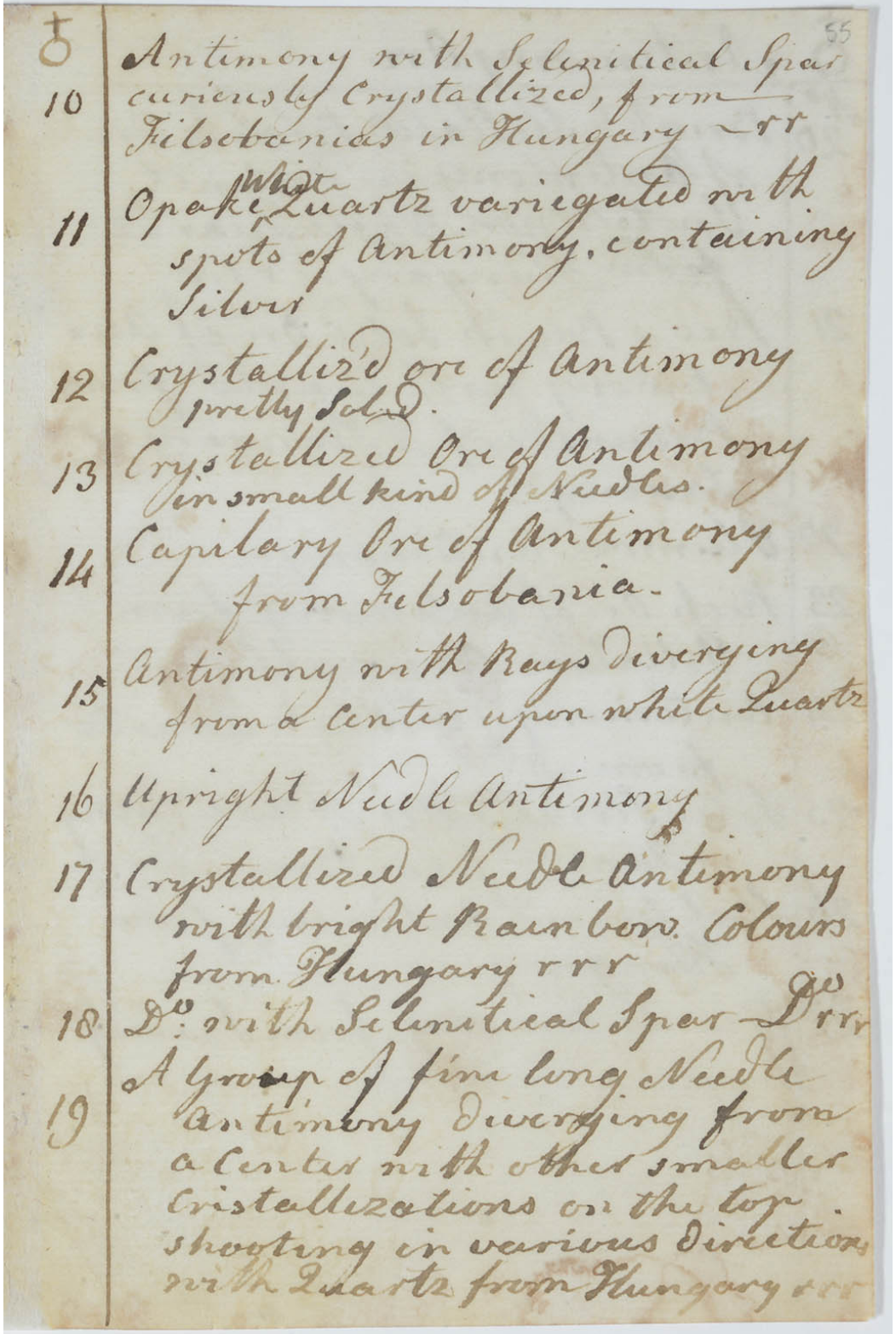
♁ Antimony

Nº	
1	Antimony Ore from S.t Stephens near Saltash, Cornwall~
2	Antimony Ore in White Quartz, from Port Isaac, Cornwall~
3	Antimony ore with very small lines runing in various directi: ons in a Redish Iron Stone
4	Fine large Needle Antimony from Hungary~
5	Fine small graind D.o of a Rainbow Colour from D.o~
6	Red & Grey Needle Antimony ~~from Saxony~~ ~ in White Quartz ~~from Braunsdorf~~ in Hungary
7	Exceed.g fine Red Feather Anti: mony upon White Crystal: lized Quartz from Saxony~
8	Antimony with Native Golden Sulphur from Tuscany
9	Compact Antimony of a Lead Colour from Hungary~

♁ *Antimony*

Nº	
1	Antimony Ore from St: Stephens near Saltash, Cornwall ~
2	Antimony Ore in White Quartz, from Port Isaac, Cornwall ~
3	Antimony ore with very small lines runing in various directions in a Redish Iron Stone
4	Fine large Needle Antimony from Hungary ~
5	Fine small graind Do: of a Rainbow Colour from Do: ~
6	Red & Grey Needle Antimony ~~from Saxony~~ ~ in White Quartz from Braunsdorf in Hungary
7	Exceedg: fine Red Feather Antimony upon White Crystallized Quartz from Saxony ~
8	Antimony with Native Golden Sulphur from Tuscany
9	Compact Antimony of a Lead Colour from Hungary ~

NOTE: Antimony Ore = Stibnite (Sb_2S_3)
Needle Antimony = Stibnite (Sb_2S_3)
Red Feather Antimony = Kermesite (Sb_2S_2O)



♁

10 Antimony with Selenitical Spar curiously Crystallized, from Filsobanias in Hungary ~ r r

11 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

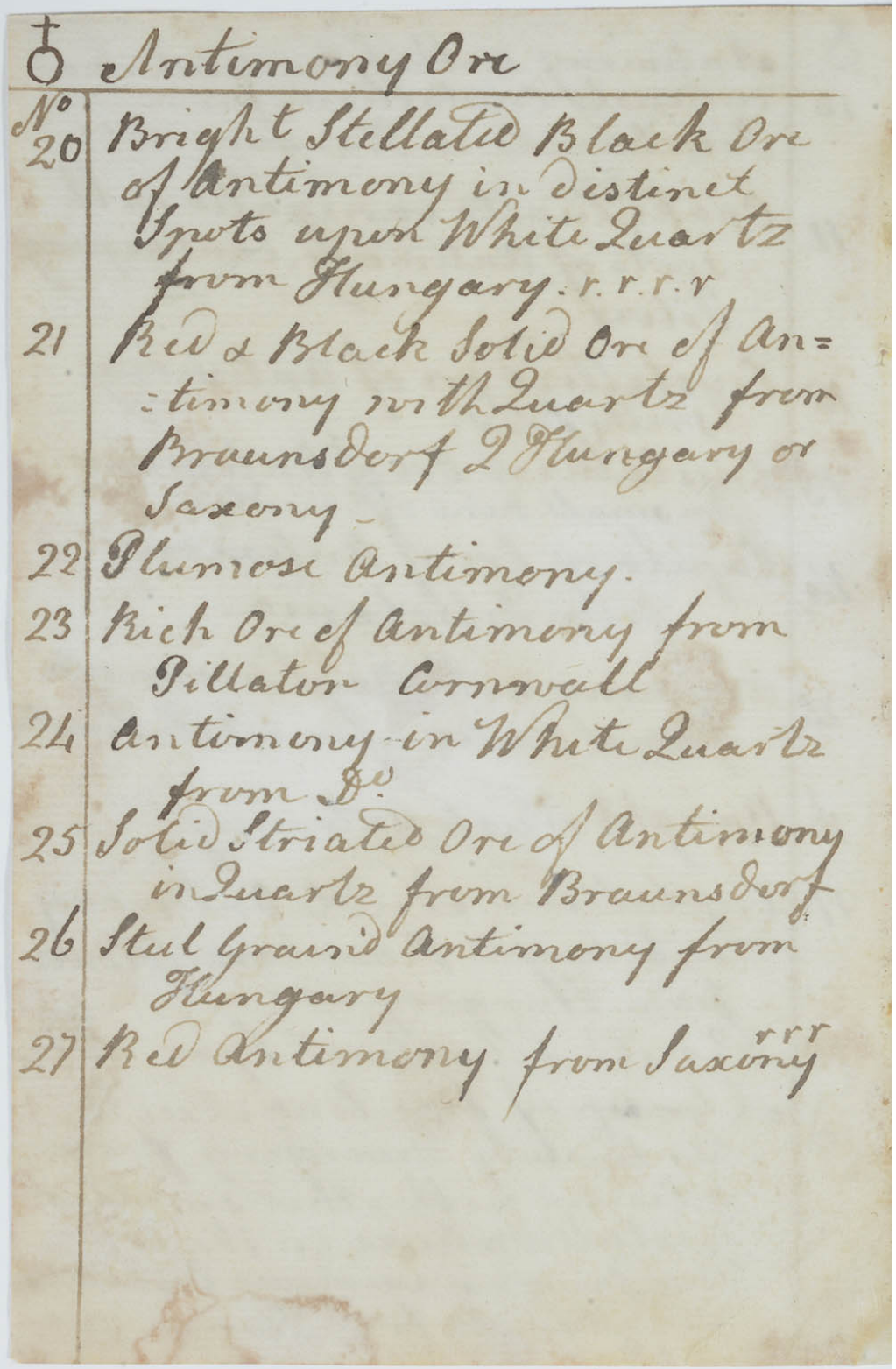
16 Upright Needle Antimony

17 Crystallized Needle Antimony with bright Rainbow Colours from Hungary r r r

18 Dº: with Selenitical Spar Dº: r r r

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 ($CaSO_4 \cdot 2H_2O$)
Needle Antimony = Stibnite (Sb_2S_3)



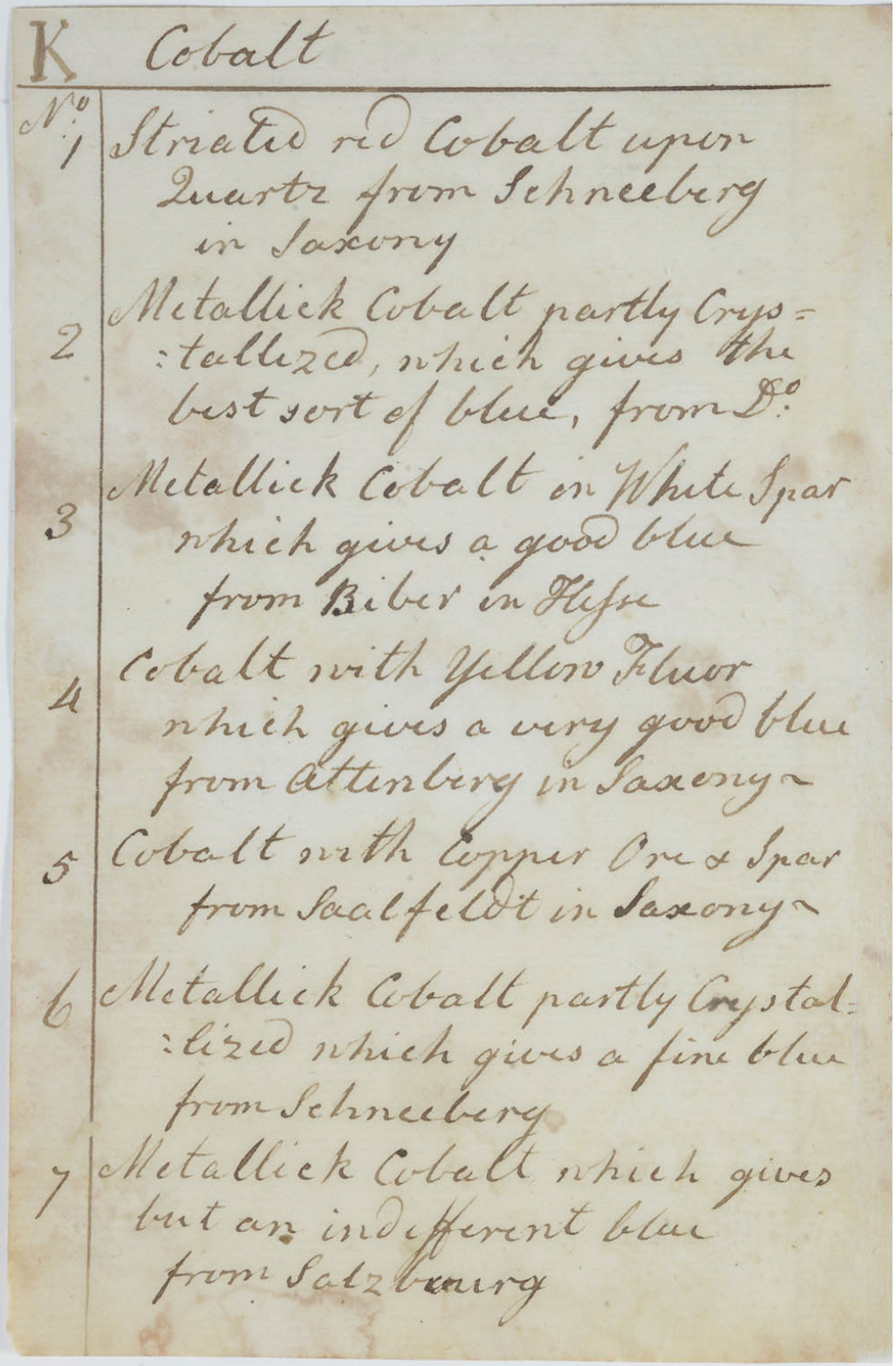
♁ Antimony Ore

Nº	
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 Pillator Cornwall
24	Antimony in White Quartz from Dº
25	Solid Striated Ore of Antimony in Quartz from Braunsdorf
26	Stel Grain'd Antimony from Hungary
27	Red Antimony from Saxony r r r

♁ *Antimony Ore*

Nº	
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)

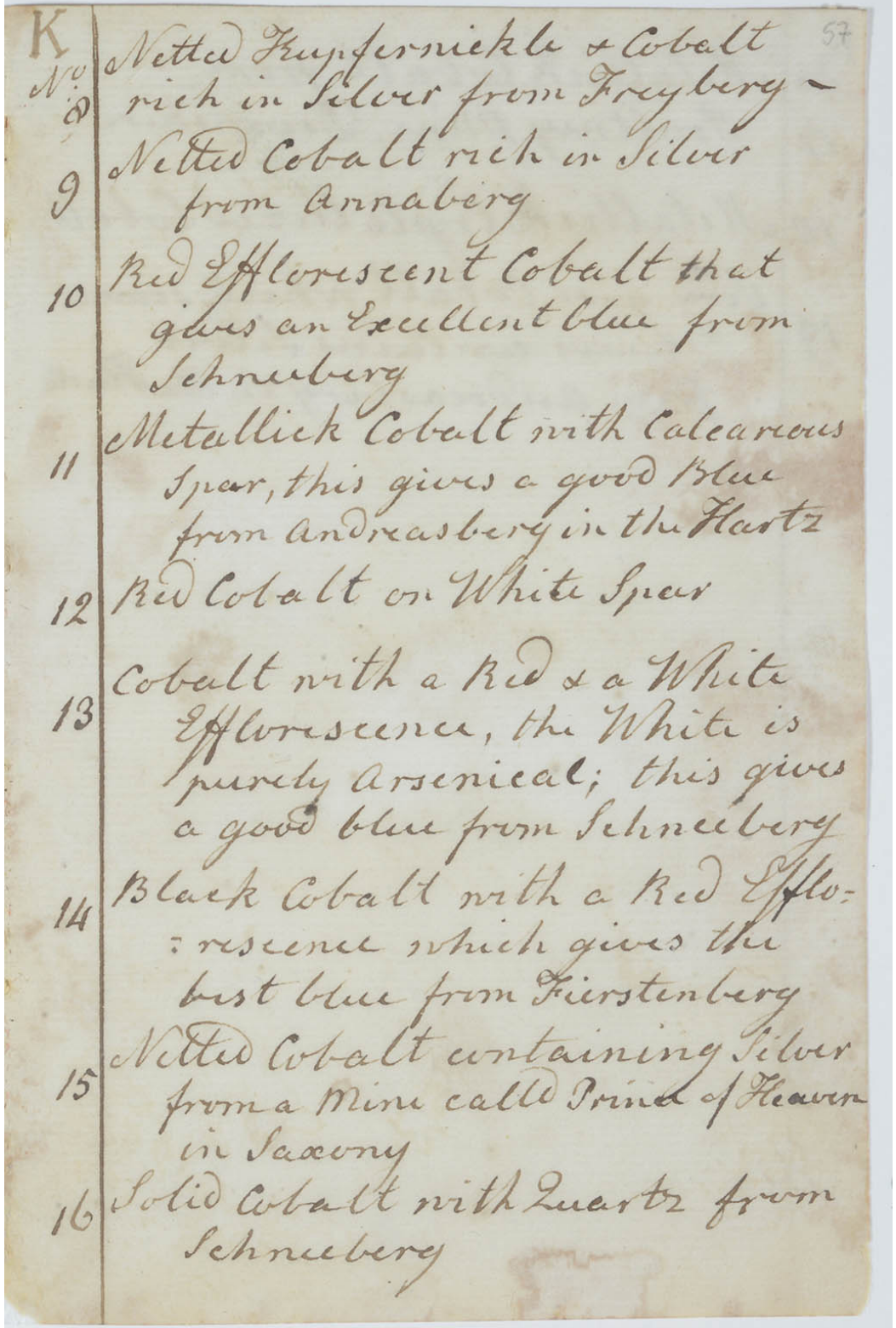

K Cobalt

Nº	
1	Striated red Cobalt upon Quartz from Schneeberg in Saxony
2	Metallick Cobalt partly Crys=tallized, 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 Crystal=lized which gives a fine blue from Schneeberg
7	Metallick Cobalt which gives but an indifferent blue from Salzbourg

K *Cobalt*

Nº	
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

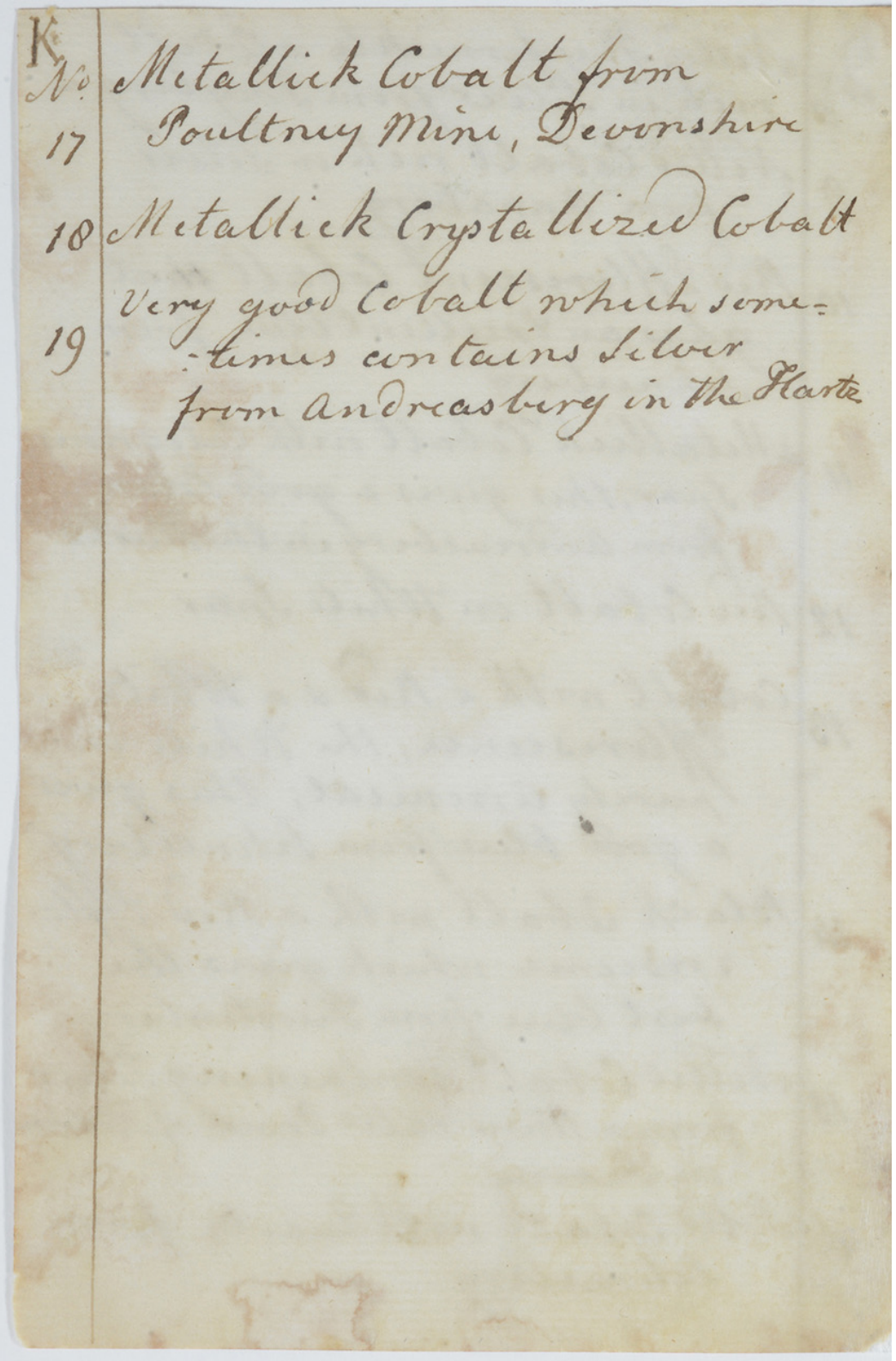
NOTE: Red Cobalt = Erythrite ($Co_3(AsO_4)_2 \cdot 8H_2O$)
Metallick Cobalt = Skutterudite ($CoAs_3$) or Cobaltite (CoAsS)
Fluor is a synonym of Fluorite (CaF_2)



K

No	
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 ($CaCO_3$)


K
No
17 Metallick Cobalt from
Poultney Mine, Devonshire
18 Metallick Crystallized Cobalt
19 Very good Cobalt which some-
-times contains Silver
from Andreasberg in the Hartz

K

No	
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 ($CoAs_3$) or Cobaltite (CoAsS)

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 Annaberg-Buchholz, 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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