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Geology, Mining, Metallurgy

It is always pleasant to buy back books from an old client.
These come from a retired professor of geology in Idaho
who was actively acquiring from us beginning in 1995.

An Important Work on Mining & Metallurgy

1. BERGBAUKUNDE. [Edited by Ignaz von Born & Friedrich Wilhelm Heinrich von Trebra]. Two fine & large mezzotint vignettes on titles, 13 folding engraved plates & maps, three folding printed tables, & one engraving in the text. 4 p.l., 408, [12] pp.; 2 p.l., 468, [4] pp. Two vols. Large 4to, cont. half-calf & dark red boards (corners a bit worn, minor rubbing), flat spines gilt, green morocco lettering pieces on spines. Leipzig: G.J. Goeschen, 1789-90. \$6750.00

First edition and very scarce; this is a complete copy with all thirteen plates. Born and Trebra were the founders in 1786 at Szklono in Hungary of the Societät der Bergbaukunde, which had the purpose of increasing the knowledge in the areas of geology, mining, mineralogy, and metallurgy. It was a very international scientific society and other early members included von Heynitz, Lavoisier, Gmelin, Charpentier, Ferber, Poda, Hawkins, and Goethe.

This is the first (and only?) publication of the Society; "hierin findet sich alles Wissenswerthe des Bergfachs nach dem damaligen Stande der Wissenschaft und Erfahrung vortrefflich und eingehend erörtert."—*A.D.B.*, Vol. 38, p. 551. The first 34 pages of Vol. I print the plans and by-laws of the society. The remainder of the two volumes contain numerous contributions concerning various mining activities in German, Hungary, France, England, Mexico, etc.

Each title-page vignette is an extremely attractive mezzotint and the plates

depict geological cross-sections, maps of mining areas, machinery, etc.

Fine set of this attractive book.

• D.S.B., II, pp. 315-16 & XIII, pp. 455-56. Mikulas Teich, "Born's Amalgamation Process and the International Metallurgic Gathering at Skleno in 1786" in *Annals of Science*, 32 (1975), pp. 305-40.

An Important Geological & Mineralogical Journal

2. BERGMÄNNISCHES JOURNAL. Edited by Alexander Wilhelm Köhler & [from Vol.5] Christian (or Carl) August Siegfried Hoffmann. Numerous plates & tables (many folding). Six vols. in 12. 8vo, cont. pinkish purple boards (spines faded, occasional dampstaining & foxing), printed paper labels on spines. Freiberg: Craz, 1788-94.

[with]:

NEUES BERGMÄNNISCHES JOURNAL. Edited by Alexander Wilhelm Köhler & Christian(or Carl) August Siegfried Hoffmann. Numerous plates & tables (many folding). Three vols. (of 4). 8vo, cont. blue boards, printed paper labels on spines. Freiberg: Craz, 1795-99. \$7500.00

A nearly complete run — lacking only the fourth and final volume of the second series (which was published 18 years after Vol. III) — of this important and rare geological and mineralogical journal, edited by two of Werner's chief disciples, Köhler and Hoffmann. This journal was the chief mouthpiece for spreading the revolutionary ideas of Werner concerning geology and mineralogy. The contributors constitute a roll-call of honor of German scientists and include Werner (numerous contributions), Alexander von Humboldt (several of his earliest appearances in print), C.R.W. Wiedemann, Hoffmann, Köhler, Götting, Karsten, J.F. Widenmann, Gellert, Klaproth, Lempe, etc., etc.

The journal includes book reviews, lists of relevant books recently published, obituaries, reports from American mines, etc.

Fine set. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen with his stamp on the verso of the title of each volume. Lacking the general title in Vol. III of the second series.

• Hoover 116–(Vols. 1-5 only of the *Bergmännisches Journal*). Kronick 348. Poggendorff, I, 1123 & 1291.

A Monumental Work on Mining & Metallurgy

3. CANCRIN, Franz Ludwig von. *Erste Gründe der Berg und Salzwärkskunde*. Engraved vignettes on general titles, 540 (of 548, see Part IX below) folding engraved plates, & 18 folding printed tables on 16 leaves. 12 parts bound in 16 vols. 8vo, cont. vellum over boards (Vols. I-IX) and other good cont. bindings for the rest. Frankfurt am Main: Andrea, 1773-91. \$8500.00

First edition of this great work. Cancrin (1738-1812), was an engineer and high government official, both in Germany and in Russia where he was recruited by

Catherine II to manage the Staraya Russa saltworks. "Despite the press of his civil offices, Cancrin found time (1773-1791) to write an encyclopedic work in twenty-one volumes [actually it is 12 titles in 19 parts] that covered all aspects of the mining of metals and salt — including mineralogy, assaying, mathematics, and mechanics. This work brought him a European reputation."—*D.S.B.*, III, pp. 41-42.

In this set, the binder has removed many of the title-pages for the individual parts as the general titles supply summary titles. In the following description, we have supplied the exact or summary titles:

Part I. *Kurzer Entwurf der Mineralogie*. 10 p.l., 272, [24] pp. 1773. Cancrin's introduction to mineralogy.

Part II. *Probiertkunst*. Ten folding engraved plates. 4 p.l., 296, [14] pp. 1773. On assaying.

Part III. *Erste Begriffe der oberirdischen Erdbeschreibung*. Three folding engraved plates. 4 p.l., 72, [7] pp. 1773. Concerned with subterranean geological formations and ore deposits.

Part IV. *Erste Begriffe der unterirdischen Erdbeschreibung*. Eight folding engraved plates. 4 p.l., 72, [7] pp. 1773. Concerned with surface geological formations.

Part V. *Kurzer Entwurf der Grubenbaukunst*. 57 folding engraved plates. 6 p.l., 244, [16] pp. 1774. This is a richly illustrated work on methods of digging and constructing mines. The plates depict the different kinds of shafts which could be established, the tools used to dig the shafts and remove metals and their ores, methods of securing the shafts, etc.

Part VI, in two vols. *Anleitung zur Markscheidkunst. Erster [-Anderer] Teil. Welcher die Arithmetik, Geometrie und ebene Trigonometrie in sich begreift*. 65 folding engraved plates, and two tables on one folding sheet. 4 p.l., 808, [60] pp.; 4 p.l., 304, xxxi, [24] pp. Two parts in two vols. 1775-76. A very well-illustrated treatise on underground surveying. Many instruments and machines are depicted.

Part VII, in three vols. *Mechanik, Hydrostatik, Aerometrie und Hydraulik*. 110 folding engraved plates. 4 p.l., 276, [36] pp.; 6 p.l., 222, [13] pp.; 4 p.l., 32 pp. Three vols. 1777-78-81. Describes the machinery used in mines. The plates are very detailed.

Part VIII. *Anleitung zur Scheide oder Aufbereitungskunst der Mineralien*. 21 folding engraved plates. 5 p.l., 158, [8] pp. 1782. A complete work on the extraction of metals from ore.

Part IX, in three vols. *Schmelzung und Ausscheidung der Metalle aus ihren Erzen*. 214 (of 222) folding engraved plates. 5 p.l., 432, [18] pp.; 4 p.l., 168, [5] pp.; 6 p.l., 216, [14] pp. 1784-86-88. On smelting and metallurgy. This Part lacks the 12 leaf *Anhang* to the first volume and its eight plates.

Part X, in three vols. *Entwurf der Salzwwerkskunde*. 52 folding engraved plates & five folding printed tables on three leaves. 7 p.l., 270, [26] pp.; 4 p.l., 284, [18] pp.; 4 p.l., 210, [20] pp. 1788-89-89. A complete work on salt mining and refining.

Part XI. *Grundsätze des deutschen Berg- und Salzrechts zum Gebrauch der vorlesungen entworfen*. 1 p.l., x, 210 pp.; 162 pp.; 146 pp.; 110 pp.; [iii]-x, 67, [35] pp. Five parts in one vol. 1790. On the laws concerning mining.

Part XII. *Die Bergkamaral- und Bergpolizeiwissenschaft*. Twelve folding printed tables. 4 p.l., 276, [10] pp. 1791.

A fine and attractive set. The first nine Parts, bound in eleven volumes, are in

fine contemporary vellum with the stamp of "Bibliothek Schloss Miltenberg." The castle is in the town of Miltenberg on the River Main, north of the Odenwald. Most sets are incomplete, lacking parts and/or plates, due to the long span of time which it took to publish the complete work.

Large Paper Copy

4. FORSTER, Westgarth. *A Treatise on a Section of the Strata, from Newcastle-upon-Tyne, to the Mountain of Cross Fell, in Cumberland; with Remarks on Mineral Veins in General. Also, Tables of the Strata, in Yorkshire, Derbyshire, &c. To which is added, A Treatise on the Discovery, the Opening, and the Working of Lead Mines; with the Dressing and Smelting of Lead Ores.* One large folding printed table, 11 engraved plates (of which 10 are folding & 4 are hand-colored), & numerous hand-tinted diagrams in the text. 8, ix-xii, x, [11]-422, xvi, [18] pp. Thickish 8vo, cont. russia (quite well rebacked), sides decorated in gilt. Alston, Cumberland: Printed, for the Author, at the Geological Press, and Sold by John Pattinson, 1821. \$2500.00

"Second edition, greatly enlarged" (1st ed.: 1809). This is a handsome large paper copy; the numerous text diagrams have been hand-tinted (in regular paper copies they are left plain). Forster (1772-1835), was a mining surveyor who had extensive experience in the lead mines of the region.

"Forster's book...is notable for a very long column, some 5 1/2 feet long altogether, which is shown in portions...It is a typical column of 'vertical section', in the Geological Survey's meaning of the term, showing by lines and dots the various kinds of rock, and drawn to scale. On one side are written the 'local names' (which include such curiosities as 'girdles', 'post', 'thill', 'hazle', 'plate', 'tuft') and on the other the 'nature of each stratum' (more ordinary adjectives, such as 'argillaceous', 'siliceous', 'bituminous')."—Challinor, *History of British Geology*, p. 93.

Nice copy.

• Hoover 318—(calling for 12 plates in error). Porter, *The Making of Geology*, p. 179—"Westgarth Forster attempted to depict the geological structure of the same area pictorially, by constructing a gigantic notional vertical column of the strata from Cross Fell to the North Sea, encompassing the lead mining area and the north-eastern coalfield. The section was to scale, used consistent shading, and was accompanied by a physical map and an elaborate verbal key."

5. GERHARD, Carl Abraham. *Versuch einer Geschichte des Mineralreichs.* Engraved vignette on first title & 10 folding engraved plates (7 of which are hand-colored). xxx, 302 pp.; viii, 424 pp. Two vols. 8vo, orig. blue semi-stiff wrappers (ends of spines a bit frayed), uncut. Berlin: C.F. Himburg, 1781-82. \$3000.00

First edition of a scarce work in which Gerhard "held that veins were open fissures which originated through great movements in the earth's crust as well as from other causes, and that they were filled by the action of waters dissolving material out of the surrounding country rock and depositing it in these

fissures.”—Adams, *The Birth and Development of the Geological Sciences*, p. 315.

Vol. I is concerned with the origins and properties of minerals, the variations in the earth’s structure, techniques to locate mineral veins, etc. Vol. II provides a detailed elaboration of the author’s mineral system based on the earlier systems of Bergman, Born, Werner, Wallerius, and Cronstedt.

Gerhard (1738-1821), rose to privy councillor for finance, war, and crown lands in Prussia. He later became commissary for the administration of mines and smelting works and, in 1779, was appointed councillor for mining. Elected to membership in many scientific societies, Gerhard’s chief writings are in mineralogy, but he also wrote on geology, medicine, botany natural history, and chemistry.

Nice set in original state.

♣ Poggendorff, I, 880-81. Schuh, *Mineralogy & Crystallography: A Biobibliography, 1469 to 1920*, 1861.

*The Oldest German Periodical Concerned with Mining,
Mineralogy, Geology, & Metallurgy*

6. LEMPE, Johann Friedrich, ed. *Magazin der Bergbaukunde, Erster [-Dreyzehnter] Theil*. [all published]. Engraved vignette on each title (three different vignettes), 37 folding engraved plates, & numerous printed folding tables. 13 vols. 8vo, cont. half-calf & paste-paper boards (light foxing & dampstaining here & there), final six spines decorated in gilt with red & green leather lettering pieces on spines. Dresden: Walther, 1785-99. \$7500.00

A complete run of the oldest German periodical concerned with mining, mineralogy, geology, and metallurgy; it was one of the leading journals of its kind and the chief mouthpiece for the teachings of A.G. Werner. The articles contain descriptions of the latest developments in mining machinery, local geologies and mineralogies, accounts of geological expeditions, reviews of recently published books, and several rather interesting historical pieces.

Lempe (1757-1801), was professor of mathematics and physics at the Mining Academy at Freiberg and wrote many books on mining and technology.

Very good set. Minor wear to a few volumes. From the library of His Serene Highness Prince Fürstenberg at Donaueschingen, with the library’s stamp on verso of titles.

♣ Kronick 917. Poggendorff, I, 1421.

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