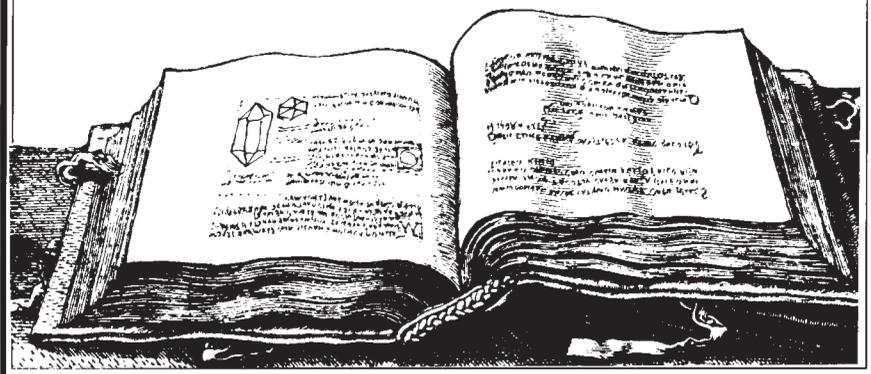


Book Reviews



or specimen-quality beryl for each several thousand cubic meters of rock, albeit there were locally numerous beryl segregations around pockets in the frozen zone. I strongly doubt that the mined part of the vein would have yielded dozens of tons of beryl. Another example is the Staraja Mylnitsa mine, where, as noted on page 58, 2.8 kg of pocket beryl were recovered during recent work in 1987–1991—not much in terms of bulk percentage! Instead of 1–10% beryl as stated in the table, a figure of 0.1% beryl or less should probably be substituted; this beryl is localized in pockets and frozen in pocket-rich zones of the pegmatites. Rarely, a couple of kilograms have been found in large pockets, such as pocket 133, encountered in 1990 at a depth of 14 meters in the Staraja Mylnitsa mine.

Topaz is noted as constituting 10% to 20% of the Mokrusha vein. This may be true for parts of the topaz-horizon pocket zone (the upper pocket zone) which were extremely rich in topaz and also rather rich in lepidolite: 1200 kg of topaz were produced during a few years of operation of the Mokrusha vein. However, a figure of 10% to 20% is not plausible for the vein as a whole, including the lower two pocket zones; one of these zones only very rarely yielded topaz, and the other carried no gem species. Most of the accessory minerals are moderately to very rare.

Indeed, the percentages given for all species in the table for the Mokrusha vein add up to more than 121%, counting the minimum percentage given for each species, and excluding the rare ones. Nevertheless, the list gives a good proportional idea of the mineralogy of the 12 veins, and it certainly conveys the richness of the Mokrusha vein in rarer species.

The Kazennitsa vein comes in a close second to the Mokrusha in species diversity, perhaps because it was the last vein to be actively worked (until November 1993), and provided much material for study at the mining company and on the small dumps before they could be overgrown. In general it must be said that accessory species are quite rare in the Alabashka pegmatites, in comparison with other well-known pegmatite districts of the world.

Perhaps it would have been better to place this table at the start of the geology or mineralogy section, rather than in the Introduction.

The first chapter of the main text, “History of Exploration and Mining,” is 19 pages long, and is ushered in by photographs of fine and typical Alabashka topaz and beryl specimens. The chapter is illustrated further with pictures of old documents, mine workings, and people, includ-

kilometers north of the village of Murzinka, but is topographically and geographically somewhat separated from the pegmatites that are clustered around Murzinka.

The issue is the finest of the recent softcover Mineralogical Almanac publications, not only because its superb photography and printing quality are much better than in previous issues, but even more importantly because its text, written by dedicated experts in the field, is very detailed and thorough.

The introduction is short and easily read. Perhaps a small-scale map pointing out the location of the Urals in Russia could have been provided, but three good maps do show the region’s location within the Urals, and pinpoint specific mines of the Alabashka Pegmatite Field. However, one caption reads “Scheme showing location of mines in the Murzinka region,” and this is incorrect, since the Murzinka region really covers a much vaster area to the south.

Included in the introduction is also a table covering twelve of the Alabashka Granite pegmatites and the minerals which have been found in the respective mines, and indicating each mineral’s abundance in volume or weight percent. This reviewer, having studied the veins and dumps in the field, has the impression that some of the species are, in fact, less abundant than noted in the table. For example, the table notes beryl as being 1% to 10% of the material in five of the veins, but in none of the four veins out of the five that I have visited have I seen any signs suggesting a beryl content of even 1%. The Kazennitsa mine has produced a few kilograms of gem



Murzinka

By Valentina I. Popova, Vladimir A. Popov, A. Kanonerov. Editor Igor V. Pekov, *Mineralogical Almanac, Volume 5, 2002* (www.webcenter.ru/~minbooks).

Volume 5 of *Mineralogical Almanac*, the Murzinka issue, does not describe the Murzinka pegmatites or hydrothermal quartz veins but rather the most important mines of the Alabashka Pegmatite Field, Murzinka region. On page 3 the authors explain that specimens from this field have historically been labeled simply “Murzinka” rather than “Alabashka (Granitic) Pegmatite Field, Murzinka”; the publisher has chosen “Murzinka” as the book’s title simply because this well-known name so often appears on Alabashka specimen labels in collections. The Alabashka Pegmatite Field is a few

ing two of the best known miners of the Alabashka Field, Kraushkin and Orlov/Yuzhakov. The type of hoist illustrated on page 19 was still being used in the 1980's in the Adui district. Six more color photographs of specimens are offered, with detailed information in their captions, and there are good photographs of the Kazennitsa headframe and the Murzinka Museum.

It is regrettable that the names of the miners pictured on page 27 have been omitted; such personal names are never superfluous, and should, for historical reasons, be preserved. The man to the left is probably Vladimir P. Dyomyochkin, the miner who found several very important pieces, including the aquamarine on this book's cover, which he collected on November 12, 1992 from pocket number 4 at a depth of 28 meters in the Kazennitsa mine.

The picture caption on page 28 is lacking the information that it was geologist Sergei Borshev who collected the famous Pobeda topaz at 28 meters depth in the Mokrusha mine in 1985. At one point during the removal process, the specimen was poised to drop out of the pocket, and Sergei, standing below, stopped its fall with his hand and mouth, thus losing several of his front teeth. We all owe gratitude to these miners and geologists for conserving the specimen-wonders of nature during mining operations.

All of these well-chosen pictures accompany an adequate text, which could, of course, have been even richer in information, but which provides a good, clear summary of the history of the Alabashka field. The account of past and recent explorations of the field is anchored by well-chosen citations from Ihrmann, Fersman, Shaskolskaya and several hard-to-find old documents in the Russian State Archives in Ekaterinburg (Sverdlovskaya Oblast). It is clear that the authors have spent much more time searching old archives and literature for each part of this chapter than the size of the chapter suggests, and for this the reader can be most thankful to them. One very important source has been the book *Miarolitic Pegmatites of the Urals*, written in Russian by the now-deceased Professor Anatoly Stepanovich Talantsev, dealing with the geology of all the gem-carrying miarolitic pegmatite areas of the Urals, excluding the Ilmen/Miass area. We hope that the authors of the present book will consider publishing a monograph on the famous Ilmen pegmatites as well.

The next chapter, "Geological Review," is a five-page summary of the local geology, with a simplified geological map of the Alabashka vein field.

Chapter 4, "Pegmatites, Morphology and

Structures," is an exceptionally well-illustrated and up-to-date presentation of eight of the most important granitic pegmatites of the Alabashka field. The descriptions are very thorough, and the geological cross-sections are excellent. Several very fine photographs of mineral samples, field views, and rare underground scenes add to the beauty of the chapter. Note that the heliodor crystal from the Mokrusha mine, illustrated on page 39, is associated with a tourmaline-group mineral, probably elbaite.

Perhaps it should have been pointed out that the Golodnaja mine is very famous for deep golden-colored heliodor crystals; a photograph of a specimen would have been nice to see. The famous Startseva Yama beryl found in 1828 (mentioned as 1824 on page 91 of the text) is illustrated on page 49. A more recent picture would have been welcome, and although the text says that this beryl can be seen in the Mining Institute, it is not on display there, but has long since been "locked up in a safe place."

An accurate and very valuable cross section of the Kazennitsa Pegmatite, showing local mineralization, is found on page 56. Small concentrations of beryl and topaz were found in two sections of the vein, whereas its middle part was almost completely barren of pockets and gem species. From a collector's point of view it is a pity that pockets containing gem species are generally not illustrated.

There are a few small errors in the text and figure captions in this chapter. What is called "almost colorless amethyst like" from the Bolshaya Tyazhelovesniy mine would be better called very pale, almost colorless amethyst overgrowths. "*Rauchtopaz*," a German term meaning smoky topaz, should have been corrected to "smoky quartz." On page 43 there is a drawing of a topaz mined in 1825, purportedly the same specimen as is shown in a color photograph, but it is hard to reconcile the drawing with the photograph. The dimensions given ("25 x 27 cm") for the clear blue topaz crystal pictured on page 47 are incorrect; according to editor Igor V. Pekov, the dimensions of the crystal are actually 7 by 10 cm. Please note, though, that very large topaz crystals have indeed been encountered in the Mokrusha mine—the large Pobeda specimen on page 28 and 29, for instance. Another large crystal is in the Museum of Natural History in Milano (several cleavages of one large, blue, translucent crystal). Topaz crystals already broken in the pocket, with diameters of 15 cm or more, were not uncommonly encountered during recent work in 1976 and 1985 (reviewer's collection). Although this book perhaps does not make it sufficiently clear, the fact is that

99.99% of all fine blue topaz from "the Urals" is from the Mokrusha vein; other topaz occurrences in the region are negligible by comparison. The beryl spray from the Starzeva Yama mine was collected 1.5 meters under the turf during exploratory digging in 1991, not in 1993 as noted (page 51). It is not entirely clear what the authors mean in the last sentence on page 57, describing the Kazennitsa mine: "This was a first steep-dipping vein whose druse material does not exceed in beauty the lumps of Mokrusha."

I will note here that several fantastic beryl specimens were found in the Kazennitsa mine; they are probably better than most of those that have been found in the Mokrusha mine during recent operations. As already mentioned, one of these Kazennitsa mine beryls is shown on the cover of the book. It is a 15.6-cm aquamarine crystal weighing 950 grams, appearing blue in daylight and greenish blue to green in incandescent light. A couple of fabulous heliodor crystals (one on smoky quartz), a flawless electric-green "aquamarine" beryl, and a 23.5-cm, doubly terminated green "cat's-eye" beryl were among other superb finds in the Kazennitsa mine.

When it comes to topaz the Kazennitsa produced some small blue crystals to 3 cm growing on albite, with smoky quartz. These were found in 1991 at the 20-meter level, and one pocket was also found there containing champagne-colored topaz in association with green elbaite (the latter two illustrated on page 55). The Kazennitsa Pegmatite is 2 to 3 meters wide in its central section where mining was conducted, although the central core zone/zones (two parallel core zones exist) reach only 1 to 1.5 meters in width. The two largest pockets found in the Kazennitsa mine measured 4 and 6 meters across and yielded smoky quartz crystals to 45 cm in association with stilbite and albite, but no gem minerals.

One additional comment for this chapter: geologist Sergei Borshev, in the middle of the picture on page 53, is wearing his "good luck outfit," which he was wearing when he found the Pobeda Topaz in 1985, and has worn while collecting ever since.

The book's Chapter 5, the last and most extensive chapter, is "Mineralogy." Please note that, although they are not discussed in the book, the Alabashka area also includes numerous genetically different hydrothermal amethyst veins, as well as other interesting non-pegmatitic mineralization (such as gem corundum in marble and in alluvial deposits).

Specimens of feldspars, micas, beryl and topaz from Alabashka are generously illustrated throughout the book; the mineralogy

chapter also offers many crystal drawings. Each mineral species is very well described as to occurrence, sizes of crystals, and paragenesis with reference to veins. In many cases, extensive chemical analytical data are provided. The authors have made a major effort to describe the crystal forms of the fabulous blue topaz of the Mokrusha vein.

The authors, editors and publisher must be thanked for this chapter's numerous pictures of beautiful crystals, many of which clearly show diagnostic morphological features and interesting phenomena such as etching, and for the pictures of specimens of rare species. The real rare-mineral freak (including this reviewer) will want to see pictures, including SEM pictures, of each rare species, but it is understandable that limitations on production costs and on the final sale price had to be taken into account.

Foitite from the Kazennitsa mine has previously been described by this reviewer and Frank Hawthorne; it formed as thin needle-crystals to 8 cm during the very late stage of pocket formation. Foitite crystals are orange-brown to cola colored in incandescent light and purplish brown in daylight. The beryl on lepidolite pictured on page 93 and the hambergite pictured on page 96 were collected by the former geologist of the Mokrusha mine, Igor Gurkov.

The "Mineralogy" chapter concludes with a detailed sequence of formation for the main minerals of the Mokrusha vein, and a reproduction of Wendell E. Wilson's fascinating painting, "The Czar's Pocket, Mursinka 1915." This is, of course, a fantasy painting as no such pocket is known to have been discovered in 1915, although very large topaz crystals (weighing up to 30 kg) were discovered in 1911 at Mokrusha, and a large pocket with 800 kg of gem aquamarine was discovered in 1930 at the Semenichinskaja mine in the Adui Pegmatite Field (not described in this book) to the south, in addition to the pocket of 1899–1900 which yielded 500 kg of aquamarine.

At the end of the book there is a valuable glossary of Russian names of Alabashka Pegmatite-related words, with their equivalents in English. There is also an extensive reference list with many rare and hard to find references, although some which perhaps should have been included are missing. Finally, there is an index of minerals, with references to page numbers both for descriptions and photos.

The layout of the book is very attractive, the text format easy to read, and only a few minor flaws have escaped the editing process. All informational contents have been very thoroughly researched. In summary, this is an excellent book, the best one ever

written about the Alabashka Pegmatite field in a mineralogical and geological context. Its richness of illustrations—colored drawings, geological maps and cross sections of veins, and numerous and lovely mineral photographs—adds to its impressiveness.

The book is highly recommended for anyone interested in mineralogy or geology, and it is absolutely a must-have for anyone seriously interested in classical deposits, Russian mineralogy or history, or pegmatites. The gemologist will also benefit from this publication, although there are no gem-production statistics. Unfortunately, most of the beautiful beryl and topaz crystals produced in Russia in recent decades up to the early 1990's have been cut and sold within the country, and probably much valuable source information about them has been lost.

This book (despite the need for a few small corrections and additions as noted), is a real "classic," indispensable for any serious private or public geological/mineralogical library. We hope that the publisher will consider publishing similar monographs on the other famous pegmatite and greisen deposits of Russia and perhaps other ex-Soviet states including Ukraine, Kazakhstan, Uzbekistan and Tajikistan, as well as the Ilmen Mountains pegmatites.

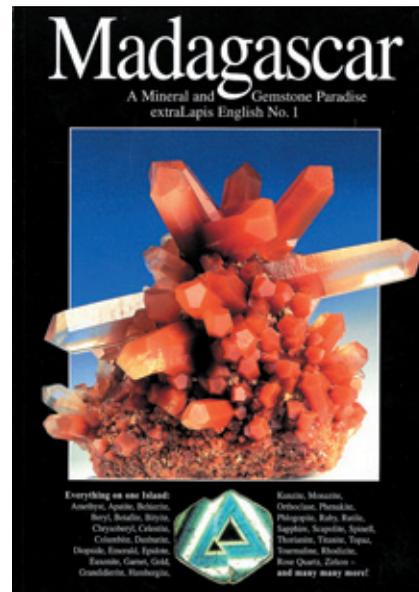
Peter Lyckberg*
Sweden/Luxembourg

*In 1992 this reviewer was the first Westerner since George F. Kunz (1915) and Gustav Flink (1916) to visit the mines of the Alabashka field, and by then the mining company had almost nothing left uncut of the gem minerals recovered. Exceptions were 8 kg of non-cutting-quality blue Mokrusha topaz, a few beautiful beryl specimens and lots of poor-quality amethyst. All gem-quality amethyst scepter crystals recovered from the hydrothermal veins east of Mursinka (Wattika, Artemjeva, etc.) had either been cut or at least heavily damaged by sawing.

Madagascar, A Mineral and Gemstone Paradise

by Federico Pezzotta. Published (2001) by Lapis International LLC, available from the *Mineralogical Record*, P.O. Box 35565, Tucson, AZ 85740; e-mail order: minrec@aol.com. Stiff softcover, 8.25 x 11.7 inches, 98 pages, price: \$25 postpaid in the U.S. (+\$8 shipping foreign).

This special publication on Madagascar inaugurates Lapis publisher Christian Weise's new series of English-language



versions of his popular ExtraLapis monographs (originally published in German). As usual for the German ExtraLapis issues, the production quality is superb, and the photographs excellent.

The book leads off with indexes of Madagascar localities and mineral species mentioned, then launches into a history of gem hunting and mineral collecting on the big island. Alfred Lacroix (the French mineralogist and author of the monumental three-volume *Minéralogie de Madagascar, 1922–1923*) figures prominently, of course, along with later workers such as Jean Behier; a bibliographical list covers all of the major references. The introductory chapter also discusses sociopolitical problems specific to Madagascar and how the relevant laws have changed in recent years. The most important modern collections of Madagascar minerals are identified, not surprisingly, as those of the Musée National d'Histoire Naturelle, the Musée de Minéralogie at the School of Mines, and the Sorbonne (Université Pierre et Marie Curie), all located in Paris. Also noted are the collections of the Museo Civico di Storia Naturale in Milan, Italy (source of many of the illustrated specimens), the Kristallmuseum Riedenburg in Altmühlal, Germany, and the mineralogical museum of the Service des Mines in Antananarivo, Madagascar.

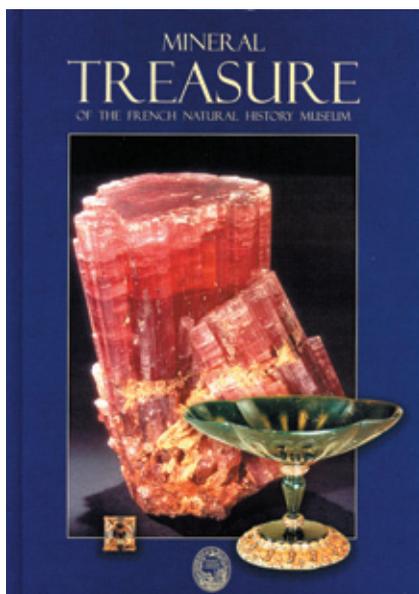
A brief review of Madagascar geology in general is then followed by a succession of brief notes (usually only a page or two each) and many color photos on the many interesting localities in Madagascar, including the Itrongay gem orthoclase occurrence; the Betroka-Bekily uranothorianite skarns; the pegmatites at Lake Alaotra, Betafo-Antsirabéé, Sahatany, Antandrokomby, Anjanabonoina, and Antsongombato;

the many occurrences of fine quartz and amethyst crystals, the Sakoany celestite geode locality, and many others.

In keeping with *Lapis*'s usual style, these locality and mineral descriptions don't go far into the technical mineralogical details. The text is designed to be entirely understandable by most average collectors without a professional mineralogical background.

This is a valuable collector's review of an area difficult to acquire information about; and it is very reasonably priced; and, as a service to our readers, it is available directly from the *Mineralogical Record*.

Wendell E. Wilson



Mineral Treasure of the French Natural History Museum

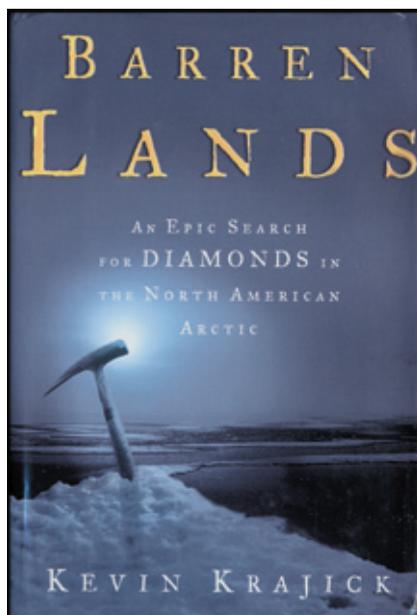
by Henri-Jean Schubnel, Pierre-Jacques Chiappero and Erik Gonthier. Published (ca. 2001) by Muséum d'Histoire Naturelle, Paris, France and available from the *Mineralogical Record*, P.O. Box 35565, Tucson, AZ 85740; send e-mail orders to minrec@aol.com. Hardcover, 8.5 x 12 inches, 120 pages; price: \$18 plus \$4 shipping.

Great mineral museums are few in the world, and they hold a special place of honor and awe in the minds of mineral collectors. Consequently it is always happy news when one of these museums comes out with a new book on their collection, like this beautiful yet modestly priced hardcover edition on the minerals of the famous Natural History Museum in Paris. Actually this is the new English-language edition of the French version published in 1998, now made easier to read for non-francophones.

It begins with a historical review, "from the pharmacist of Louis XIII to the Museum of 1793"; then leads into a section showing and discussing many precious historical lapidary objects and also some interesting early mineral specimens in the collection. At page 47 begins the section on minerals, filling the rest of the book with lavish illustrations supported by substantial discussions of the rich historical background of the specimens from early collections. Following the initial historical subsection comes a remarkable photo series devoted to the many superb specimens acquired by the museum in modern times through the support of the TotalFinaElf Group. Fortunate indeed is the museum that can lay claim to one of the most historically significant collections of early mineral specimens in the world, and have the financial resources necessary to purchase top-quality museum specimens from modern occurrences and discoveries on today's pricey market!

This is a highly affordable and immensely enjoyable book that every collector will want to own.

Wendell E. Wilson



Barren Lands: an Epic Search for Diamonds in the North American Arctic

By Kevin Krajick. Published (2001) by Times Books, Henry Holt & Company, New York. Hardcover, 442 pages, ISBN 0-7167-4026-5. \$26.00.

This book covers literally a very great deal of ground. In its early chapters it ranges from Europe to India to Brazil to the Soviet Union to South Africa before settling on North America; historically, its account of the quest for diamonds begins

with the New World explorations of the 16th century and ends in 1998, with the opening of the Ekati diamond mine in the tundra of far northern Canada. Along its way the book is a chronicle of the romance of diamonds in the human imagination, and hence a history of diamond rushes, with all their predictable avarice, cruel and obsessive competitiveness, and glory. But Krajick's own particular quest is to tell how diamonds were found in Canada's "Barren Lands," hundreds of miles north of any road and well beyond even the northernmost treeline. This region, the cratonic nucleus of North America, is now known to contain one of the planet's greatest swarms of diamondiferous kimberlite pipes. Over an area larger than many European countries, among glacial eskers and lakes and caribou trails, whole diamond-mining cities are even now being airlifted in, and Krajick's lively style does a fine job of showing how this odd fact came to be.

The book's 20 chapters, grouped in four parts, tell a historical story which gradually settles into the personal stories of Chuck Fipke and Stewart Blusson, the two prospectors who found the Ekati pipe on Lac de Gras, Northwest Territories, in 1997, and were made billionaires by it. Two helpful maps, 35 pages of chatty endnotes, and a thorough index anchor the book in its sources—although bibliographical data are somewhat hard to retrieve, buried as they are in the endnotes rather than being offered separately in an alphabetized list.

The earliest chapters take us from glimpses of diamonds brought back to France in 1541 by Jacques Cartier; through random and tantalizing discoveries made (mostly by children) in such unlikely places as Ithaca, New York and Brindletown Creek, North Carolina; through a notorious Great Diamond Hoax perpetrated in Colorado in 1872; through the discovery in 1906 of the kimberlite pipe under what is now Crater of Diamonds National Park in Arkansas. In this part of the book we meet the famous mineralogist George Fredrick Kunz, enthusiast of American gemstones and "perpetual 10-year-old," rushing about the United States to appraise every gem find of which rumor told. Kunz and others at last came vaguely to understand that the southern alluvial finds of diamonds implied a source somewhere far to the north, which the glaciers had scoured.

The great international diamond cartel called De Beers, we learn, took its name from a pair of simple Boer farmers in South Africa, the De Beers brothers, who sold their diamond-rich land for almost nothing, then fretted that they couldn't think what to do with the money except maybe buy "a new wagon and some ox yokes." In South

Africa, De Beers evolved a fairly accurate understanding of the intrusive peridotite rock now called kimberlite, and learned how to look for “indicator minerals” which can signal diamonds. Some years later, Chuck Fipke, a young Canadian, acquired a precious jar full of grains of these minerals, and it is more or less at this point that Krajick’s narrative of the Barren Lands and its explorers/exploiters takes over.

We learn to admire and respect Stew Blusson, an eccentric Ph.D. geologist with a helicopter pilot’s license, a death wish, and a worried mother. But the most vividly drawn character is Chuck Fipke: a hard-driving, barely articulate, downright fanatical quester from Kelowna, British Columbia. He is, on balance, likable, and yet so

“difficult” that the reader unfailingly sides with his opponent in whatever argument is going on—Chuck against his wife, his son, his brother, his business partners or long-suffering field employees or trusting investors, or even his innocent neighbors. For many chapters we follow Fipke and Blusson as they move from one crackpot diamond claim to the next, always just ahead of De Beers agents (or so their paranoia insists), and a hairsbreadth from ruin. But Chuck has a certain genius with a binocular microscope, and a feeling for “indicator” minerals . . . I’ll not divulge here what these minerals are, but will say that parts of the book are immensely instructive mineralogically.

The general story told by the book has a certain anti-authoritarian, David-vs-Goliath

appeal, for the Fipke/Blusson partnership beat De Beers, finally, to the Ekati pipe, although it only could do so after Chuck’s own Dia Met Exploration Company allied itself with a large, powerful Australian concern called BHP: Broken Hill Proprietary. The book ends with an alcohol-soaked, on-site ceremony marking the official opening of the Ekati mine in 1998; a few pages earlier, though, we saw Chuck Fipke heading off into another quest, pursuing King Solomon’s lost gold mines in the deserts of Yemen.

You will likely not find a more outrageous-character-filled, interesting, true tale of mineral prospecting than the one offered here.

Thomas P. Moore