Okanagan Geology South:
Geologic Highlights of the
South Okanagan, British
Columbia

Edited by Murray A. Roed and
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Okanagan Geology Committee
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BC
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Stocks and bonds come with
buy/hold/sell recommendations, but
what is the equivalent for books:
Buy/borrow/shun? At any rate, Okana-
gan Geology South is a definite ‘buy’. A
‘buy and hold’. A ‘buy and bequeath’.
It is usual to say of a book like this
that it belongs in the library of every
home and school. That does not go
far enough. It really belongs in every
car, truck and RV that roams this stor-
ed land, and should be among the
treasured souvenirs of every tourist,
traveller and visitor who has an interest
in its natural history.

Above all, this book must be
kept handy. People should be able
to pull over, grab it and ask: “Now what
does Murray say about that?” But why
‘Murray’, when the book lists eleven
other contributors? The answer is sim-
ple: Murray Roed has done the lion’s
share of the work. Of the book’s ten
chapters, he is sole author of five
(chapters 1, 2, 3, 4 and 10), lead author
of one more (chapter 5, with co-
authors Norman Williams, Jennifer
Clarke and Nigel Skirmer), and con-
tributing author of two more (chapter
6, by Brian Hughes, Roed, and Jennifer
Clarke; and chapter 7, by Laurie Neil-
son-Welch, Diana Allen and Roed). In
only in two chapters (chapter 8 by Don
Dobson and chapter 9 by Robert Ful-
ton) does he take a well-deserved rest
(limiting himself to just one ‘sidebar’ in
chapter 8).

It is not only text that Murray
Roed offers. He is an accomplished
artist as well. I counted no fewer than
eight of his landscapes in acrylic. Not
quite the McMichael Canadian Collection,
but a wonderful addition nevertheless.

This brings me to another
aspect of the book that stands out:
Simply put, it is a work of very great
beauty. Almost every page has an illus-
tration of some sort: a photograph, a
diagram, a map, or a graph. Most are
in colour. Some are hard-edged,
framed or set in shaded relief. Many
others are deliberately faded so that
they dissolve into a misty background
to the text, an effect I find quite evoca-
tive. Some photographs have been
culled from archives; most appear to
have been taken to support this work.
Sources are listed in the Acknowledge-
ments. Illustrations are credited to
Roed and Darcy Senger; design to
Darcy Senger and Jill Webb Veitch.
They have done a fine job: The book
has a pleasing choice of colours, vari-
ety of illustrations, and effective bal-
ance between image and text.

The book aims to be a survey
of ‘geologic highlights’, but it goes
much further than this. Chapter 1
(Geologic Pioneers) describes the early
contributions of those who coax sto-
ries from stones – true stories it is
always to be hoped, but so often
incomplete or incoherent. The chapter
is divided into three sections: the Age
of Discovery (early 1800s to about
1900); the Age of Stabilization (1900
to 1960), and the Age of Destabiliza-
tion (1960 to now), a tribute to the
undoing of settled science by the revo-
lution in plate tectonics.

Chapter 2 addresses basic con-
cepts in geology (time, rock types, tec-
tonics) and some of the tools used in
our craft (e.g. geophysics). This chap-
ter, I think, needs more editing than
any other in the book. It attempts to
cram a great deal into a small space
and suffers for it. The Geologic Time
Scale on page 32 is from a 1999 text
book and should be replaced with the
2004 version by the International
Commission on Stratigraphy. More
urgent than this is the mismatch
between the dates in the Time Scale
and those used in the ‘Okanagan Geo-
logic Events Summary’ on pages
52–53. This will confuse careful read-
ers. ‘Tertiary’ and ‘Quaternary’ crop
up here and there, a testament to the
difficulty of expunging familiar terms.
A pair of colour plates (micropho-
tographs/photomicrographs – both
terms are used) on page 40 should be
replaced. The intent is to illustrate dif-
ferences between extrusive and intru-
sive igneous textures. A photo of a
polished slab would do a better job. It
would also lighten the heavy load
placed on the captions, which now
allude to elements of optical
microscopy, petrography, crystallogra-
phy, mineralogy, alteration and chem-
istry. Too much, I submit, for any lay
reader to digest. The rock in Plate B
can be Jurassic or ‘~90 million years
old’, but not both. The description of
its location (‘east of Okanagan Falls in
the hills’) will not help a geo-sleuth
find the truth.

Chapter 3 sketches a geological history of the region, starting with the Big Bang(!), quickly traversing the Precambrian, Paleozoic, Mesozoic and Cenozoic, before concluding with longer accounts of the Pleistocene and Holocene. (Another typo here: The duration of the Paleozoic should be ‘about 300 million years’, not ‘400’ as stated.) Glacial and postglacial events get a full and satisfactory treatment that links familiar features (lakes, cliffs and creeks) to the processes that formed them. The narrative style is both informal and informative, with appealing touches of humour.

The core of the book is Chapter 4 (Highlights of Residential Centres). Eight areas have been chosen: Osoyoos, Oliver, White Lake Basin, Okanagan Falls, Kaleden, Penticton, Naramata, and Summerland. Here the book fulfils its aim to be a practical field guide. Images, locations and text appear to be carefully cross-referenced. Points of interest (each identified on a brightly coloured geological map) are described with enough detail to interest readers even if they repeat their visits. The mysteries of Giants Head, Crater Mountain and China Wall are all here revealed.

Chapters 5, 7 and 8 show the intimate interplay between geology and our day-to-day world. Chapter 5 (Geological Hazards) could be subtitled with a maxim attributed to historian Will Durant: “Civilization exists by geological consent.” Slides, rock falls, debris torrents (including the 2010 event at Testalinden Creek near Oliver), sink holes, earthquakes, and volcanic ash fall (from active volcanoes of the High Cascades) are given equal, and equally sobering, treatment. Chapters 7 and 8 (Groundwater and Surface Water, respectively) address a vital resource in this arid place. Osoyoos claims to have Canada’s only true desert. Hike off-trail anywhere and you will encounter cactus whose painful barbs drive home this fact. The authors of these chapters take time to deliver messages about scarcity and conservation. Groundwater is an unmanaged resource in BC, and proper care of aquifer recharge areas requires local initiative.

Chapters 6 and 9 have unexploited bacchanalian connections. The former describes the region’s history of mining, and the latter explores the link between geology and wine. Chapter 6 (Mining and Exploration) reads a little like an obituary of a dear old friend. The mineral potential of the area remains good, at least according to assessments by the BC Geological Survey. But … changing patterns of land use, the creation of parks, ever-increasing demand for the same land and resources, and the imperative for conservative management of natural areas (the south Okanagan has the largest number of endangered species in BC, perhaps in all of Canada) seem to have extirpated miners from this area forever. One resource not covered in this chapter is aggregate. This is a little surprising because it is a near-urban extractive industry rife with conflict and ire.

I can guarantee that some readers will head straight to Chapter 9. What better place to read about Geology and Wine than the shaded terrace of a boutique winery with a glass of Gewürztraminer in hand? Few pleasures can match this! Author Robert Fulton describes the concept of terroir, discusses whether it applies to the Okanagan, and if so how. The science of terroir appears to be, well, embryonic, requiring much more research, and, of course, extensive and intensive sampling. I see rivers of Chablis… A chapter like this leaves me wondering: Does Robert Fulton, en route to the US, say to himself: “Remember: I am a geologist; NOT a terroir-ist”? And do UBC Okanagan students get asked to compare and contrast terrace, terrene, terrain, and terroir? Hand me another glass of that Pinot Noir, please, the one with the rock on the label. I’m doing science here!

The last chapter (Chapter 10, Reflections) rounds out the book. It could function equally well as a preface as it describes the purpose of the book, how it is organized and what distinguishes this book from others. The book ends with References, Glossary, Subject Index and About the Authors (brief biographies). References are suggestive, not exhaustive, and encourage further exploration. Historically important works are listed, as well as some current ones. There are website references to mineral deposits. I tried the links to MINFILE but got a 404 error. This could be rectified by using a more generic URL. A few entries in the Glossary may leave lay readers reeling; they seem correct, but invoke technical terms that will confuse rather than inform.

Regional readers may wonder why this book might not have been combined with a future edition of Okanagan Geology (Roed and Greenough 2005). Simple addition may be the answer. Putting these two volumes together would make a tome of over 400 pages. Its heft alone would limit appeal. This volume has a nice size (16.5 by 24 cm) and is only 1 cm thick. It fits the ‘handy’ category well and would slip into the door pocket or glove compartment of any vehicle. Also, one can speculate: This is a labour of love by a man in love with the land. Would the lead author have as much influence over the work if he had to work with a larger editorial board?

I hope this book sees successful sales and future editions. It is a wonderful gift to the region from a large team of authors, contributors and sponsors.

REFERENCE