Contents

Dedication
James W. Sears and John S. MacLean

Introduction
John S. MacLean and James W. Sears

STRATIGRAPHY AND SEDIMENTOLOGY

1. Sheetflood sedimentology of the Middle Proterozoic Revett Formation, Belt Supergroup, northwestern Montana, USA
   Don Winston

2. Crinkle cracks in the Proterozoic Piegan Group, Belt Supergroup, Montana and Idaho: A descriptive style of sand-filled cracks hypothetically formed by subaqueous solitary-like waves
   Don Winston and Shane V. Smith

3. A review of molar-tooth structures with some speculations on their origin
   A.G. Smith

4. Paleoenviromental implications of an expanded microfossil assemblage from the Chamberlain Formation, Belt Supergroup, Montana
   Zachary R. Adam, Mark L. Skidmore, and David W. Mogk

LEMHI SUBBASIN

5. Stratigraphy of the Lemhi subbasin of the Belt Supergroup
   Russell F. Burmester, Jeffrey D. Lonn, Reed S. Lewis, and Mark D. McFadden

6. Giant folds and complex faults in Mesoproterozoic Lemhi strata of the Belt Supergroup, northern Beaverhead Mountains, Montana and Idaho
   Jeffrey D. Lonn, Russell F. Burmester, Reed S. Lewis, and Mark D. McFadden

7. Detrital zircons in the Mesoproterozoic upper Belt Supergroup in the Pioneer, Beaverhead, and Lemhi Ranges, Montana and Idaho: The Big White arc
   Paul K. Link, Eric D. Stewart, Travis Steel, Jo-Ann Sherwin, Lee T. Hess, and Catherine McDonald

8. Geologic history of the Blackbird Co-Cu district in the Lemhi subbasin of the Belt-Purcell Basin
   Arthur A. Bookstrom, Stephen E. Box, Pamela M. Cossette, Thomas P. Frost, Virginia S. Gillerman, George R. King, and N. Alex Zirakparvar
GEOCHEMISTRY AND GEOCHRONOLOGY

9. Iron mineralogy and redox conditions during deposition of the mid-Proterozoic Appekunny Formation, Belt Supergroup, Glacier National Park
   Sarah P. Slotznick, Don Winston, Samuel M. Webb, Joseph L. Kirschvink, and Woodward W. Fischer

10. Mafic magmatism in the Belt-Purcell Basin and Wyoming Province of western Laurentia
    C. Rogers, A. Mackinder, R.E. Ernst, and B. Cousens

11. U-Pb ages of zircons from the Lower Belt Supergroup and proximal crystalline basement:
    Implications for the early evolution of the Belt Basin
    Paul Mueller, David Mogk, Joseph Wooden, and Drew Spake

GEOPHYSICS AND STRUCTURAL GEOLOGY

12. Highly conductive horizons in the Mesoproterozoic Belt-Purcell Basin: Sulfidic early basin strata
    as key markers of Cordilleran shortening and Eocene extension
    P.A. Bedrosian and S.E. Box

13. Unkinking the Lewis and Clark tectonic zone, Belt Basin, Idaho and Montana
    Brian G. White

14. Belt-Purcell Basin: Template for the Cordilleran magmatic arc and its detached carapace,
    Idaho and Montana
    James W. Sears