NATURAL RESOURCES

Index to Geologic and Geophysical Mapping of Washington, Part II—Theses, 1901 to 2001

compiled by
Connie J. Manson

WASHINGTON
DIVISION OF GEOLOGY
AND EARTH RESOURCES

Revised July 7, 2003

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands

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Note: This index will be periodically revised as new maps become available. The index to published and open-filed mapping has been released separately as Part I of this index.

INTRODUCTION

The first index to thesis mapping of Washington State was prepared by William H. Reichert in 1969. That work was updated to included thesis mapping through 1985 (Manson, 1986), and a supplement was issued to cover thesis mapping 1986 to 1998 (Manson, 1999). This report combines those prior works and includes original thesis mapping received in the Washington Division of Geology and Earth Resources (DGER) library to date. The index shows only pertinent and original mapping at scales from 1:480 through 1:274,000 as issued in theses. Superseded maps, sketch maps, mine maps, maps copied from other sources, and non-geologic or non-geophysical mapping have been excluded.

How to Use This Index

The electronic version of this index is a simple copy of the printed index; it is not an interactive, searchable database. (While we greatly appreciate the advantages of that format, it is not possible for us at this time.) Users might find it easier to print out the maps and text for easy reference. The text and color maps print to standard 8½- by 11-inch paper. The text portion was originally designed for double-sided printing; therefore, a few intentionally blank pages appear within the text. The color maps were designed for single-sided printing.

The geologic mapping has been outlined on 5 sheets, separated by scale. The geophysical mapping has been outlined on 1 sheet. All map outlines are keyed by number to the Bibliography which gives the full citation for each map, numbered and listed alphabetically by author. If a report includes geologic and (or) geophysical mapping at different scales, the maps are outlined on the separate sheets as appropriate.

How to Obtain the Maps

All the theses listed here are held at the DGER library in Olympia, Washington. Materials are not loaned from the library collection, but are available for examination during our office hours.

The theses are also usually held at the university where they were done (contact numbers for those universities are given in The American Geological Institute's *Directory of Geoscience Departments* [Claudy, 2001]).

ACKNOWLEDGMENTS

We are gratified that this map index project continues to be highly valued by the geoscience community. They deserve no less than our best efforts.

Because this has been a long-term project, there are many to thank: cartographers Keith Ikerd, Don Hiller, and Nancy Eberle, and editors Laura Bray, Kitty Reed, and Jari Roloff. We offer special thanks to editor Karen D. Meyers for the web version of the index. As ever, we are grateful to the administrators of the Division of Geology and Earth Resources for their continued support for this long-term project.

While great effort has been made to make this index as complete and accurate as possible, it is inevitable that some mistakes have been made. Any information about omissions or errors will be greatly appreciated.

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Mapped areas are shown on Plates 1 through 6, which are arranged by map type and scale.

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Geologic map: Figure 3, scale 1:62,500.

108. Du, M.-H., 1979, Geology of the Germania tungsten deposits, Stevens County, Washington: Eastern Washington University Master of Science thesis, 58 p., 1 plate.

Geologic map: Plate 2, scale 1:12,000.

109. Du Bois, R. L., 1953, Petrology and genesis of the ores of the Holden Mine area, Chelan County, Washington: University of Washington Doctor of Philosophy thesis, 222 p., 8 plates.

Geologic map: Plate 1, scale 1:21,120.

110. Dubail, G. R., 1938, The Bird vein on the Copper Mining Company's property, Yakima County: University of Washington Bachelor of Science thesis, 41 p., 2 plates.

Geologic map: Plate 12, scale 1:4,800.

111. Duggan, K. M., 1992, Regional significance of the Tonga Formation, North Cascades, Washington: Western Washington University Master of Science thesis, 117 p., 1 plate.

Geologic map: Plate 1, scale 1:48,000.

112. Duncan, C. H., 1998, Geology of the Potlatch and Palouse 7 1/2-minute quadrangles, Idaho and Washington: University of Idaho Master of Science thesis, 98 p., 3 plates.

Geologic map: Plate 2, scale 1:24,000.

113. Duncan, G. W., 1982, Structural geology and stratigraphy of the east half of Township 37 North, Range 38 East, and the southeastern half of Township 37 North, Range 39 East, Stevens County, Washington: Washington State University Master of Science thesis, 68 p., 2 plates.

Geologic maps:

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113b Figure 4, scale 1:24,000.

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Geologic map: Plate 2, scale 1:62,500.

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Geologic maps: Figure 3, scale 1:9,700; Figure 4, scale 1:9,700.

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Geologic map: Plate 25, scale 1:63,360.

117. Ellingson, J. A., 1968, Late Cenozoic volcanic geology of the White Pass–Goat Rocks area, Cascade mountains, Washington: Washington State University Doctor of Philosophy thesis, 112 p.

Geologic map: Figure 30, scale 1:112,640.

118. Elliott, R. C., 1927, A stratigraphical reconnaissance of the Port Crescent and Lake Crescent map areas: University of Washington Bachelor of Science thesis, 27 p., 1 plate.

Geologic map: Plate, scale 1:62,500.

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Geologic map: Appendix 1, scale 1:4,570.

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Geologic map: Figure 44, scale 1:62,500.

121. Ellison, P. J., 1982, Mineralization and alteration of a composite stock in the Gold Hill area, Stevens County, Washington: Washington State University Master of Science thesis, 67 p.

Geologic map: Figure 1, scale 1:600.

122. Erikson, E. H., Jr., 1965, Petrology of an eastern portion of the Snoqualmie batholith, central Cascades, Washington: University of Washington Master of Science thesis, 52 p., 1 plate.

Geologic map: Plate 5, scale 1:21,120.

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Geologic map: Plate 1, scale 1:62,500.

124. Fawcett, T. C., 2001, Geology of the Cooper Mountain pluton, north Cascade mountains, Washington based on magnetic fabrics, magnetic remanence and petrography: Western Washington University Master of Science thesis, 73 p., 1 plate, 1 compact disk.

Geologic map: Plate, scale 1:24,000.

125. Felts, W. M., 1938, A granodiorite stock in the Cascade mountains of south western Washington: University of Cincinnati Doctor of Philosophy thesis, 40 p.

Geologic map: Map II, scale 1:72,000; Map III, scale 1:72,000.

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Geologic maps:

126a Map 1, scale 1:10,000;

126b Map 2, scale 1:15,840;

126c Map 3, scale 1:15,840.

127. Fiksdal, A. J., 1979, Geology for land use planning in part of Pierce County, Washington: Portland State University Master of Science thesis, 90 p., 7 plates.

Geologic map: Plate 1, scale 1:24,000.

128. Fischer, J. F., 1970, The geology of the White River–Carbon Ridge area, Cedar Lake quadrangle, Cascade mountains, Washington: University of California at Santa Barbara Doctor of Philosophy thesis, 200 p., 2 plates.

Geologic map: Plate 1, scale 1:62,500.

129. Fisher, R. V., 1957, Stratigraphy of the Puget Group and Keechelus Group in the Elbe–Packwood area of southwestern Washington: University of Washington Doctor of Philosophy thesis, 157 p., 10 plates.

Geologic map: Plate 5, scale 1:31,680.

130. Fiske, R. S., 1960, Stratigraphy and structure of lower and middle Tertiary rocks, Mount Rainier National Park, Washington: Johns Hopkins University Doctor of Philosophy thesis, 163 p.

Geologic map: Plate 1, scale 1:62,500.

131. Fluke, S. M., 1992, Metamorphism and plutonism of the Mt. Buckindy–Snowking region, North Cascades, Washington: Western Washington University Master of Science thesis, 100 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

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Geologic map: scale 1:24,000.

133. Ford, A. B., 1957, The petrology of the Sulphur Mtn. area, Glacier Peak quadrangle, Washington: University of Washington Master of Science thesis, 103 p., 2 plates.

Geologic map: Plate 2, scale 1:38,000.

134. Ford, A. B., 1959, Geology and petrology of the Glacier Peak quadrangle, northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 2 v., 3 plates.

Geologic map: Plate 5, scale 1:39,600.

135. Foster, R. J., 1955, A study of the Guye Formation, Snoqualmie Pass, King and Kittitas Counties, Washington: University of Washington Master of Science thesis, 57 p., 1 plate.

Geologic map: Plate 1, scale 1:39,600.

136. Foster, R. J., 1957, The Tertiary geology of a portion of the central Cascade mountains, Washington: University of Washington Doctor of Philosophy thesis, 186 p., 2 plates.

Geologic map: Figure 55, scale 1:126,720.

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Geologic map: Figure 6, scale 1:220,000.

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Geologic maps:

138a Plate II, scale 1:200,000;

138b Plate III, scale 1;15,000;

138c Plate IV, scale 1:15,000;

138d Plate V, scale 1:15,000.

139. Franklin, R. J., 1985, Geology and mineralization of the Great Excelsior mine, Whatcom County, Washington: Western Washington University Master of Science thesis, 119 p., 9 plates.

Geologic map: Plate 1, scale 1:12,000.

140. Franklin, W. E., 1974, Structural significance of meta-igneous fragments in the Prairie Mountain area, north Cascade Range, Snohomish County, Washington: Oregon State University Master of Science thesis, 109 p., 3 plates.

Geologic map: Plate 1, scale 1:10,560.

141. Fraser, G. T., 1985, Stratigraphy, sedimentology, and structure of the Swauk Formation in the Swauk Pass area, central Cascades, Washington: Washington State University Master of Science thesis, 219 p., 4 plates.

Geologic map: Plate 2, scale 1:24,000.

142. Frasse, F. I., 1981, Geology and structure of the western and southern margins of Twin Sisters Mountain, North Cascades, Washington: Western Washington University Master of Science thesis, 87 p., 2 plates.

Geologic map: Plate 1, scale 1:31,680.

143. Frisken, J. G., 1965, Pleistocene glaciation of the Brinnon area, east-central Olympic Peninsula, Washington: University of Washington Master of Science thesis, 75 p., 3 plates.

Geologic maps: Plate I, scale 1:24,000; Plate II, scale 1:24,000.

144. Fritz, L. G., 1978, Petrography of the crystalline rocks south of Okanogan, in north central Washington: Eastern Washington University Master of Science thesis, 36 p., 1 plate.

Geologic map: Plate, scale 1:62,500.

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Geologic maps:

145a Plate 1, scale 1:84,480;

145b Plate 2, scale 1:9,500.

146. Fuller, R. E., 1925, The geology of the northeastern part of Cedar Lake quadrangle with special reference to the de-roofed Snoqualmie batholith: University of Washington Master of Science thesis, 96 p., 4 plates.

Geologic map: Map 2, scale 1:125,000.

147. Fullmer, C. Y., 1986, Geology of the SE 1/4 of the Twin Lakes quadrangle, Ferry County, Washington: Eastern Washington University Master of Science thesis, 73 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

148. Gager, B. R., 1982, Stratigraphy, sedimentology, and tectonic implications of the Tiger Formation, Pend Oreille and Stevens Counties, Washington: University of Washington Master of Science thesis, 176 p.

Geologic maps:

148a Plate A, scale 1:125,000;

148b Plate B, scale 1:35,500;

148c Plate C, scale 1:36,000;

148d Plate D, scale 1:22,000.

149. Galster, R. W., 1956, Geology of the Miller–Foss River area, King County, Washington: University of Washington Master of Science thesis, 96 p., 2 plates.

Geologic map: Plate 3, scale 1:31,680.

150. Garcia, A. F., 1996, Active tectonic deformation and late Pleistocene and Holocene geomorphic and soil profile evolution in the Dosewallips River drainage basin, Olympic Mountains, western Washington State: University of New Mexico Master of Science thesis, 152 p., 4 plates.

Geologic maps:

150a Plate 1, scale 1:25,000;

150b Plate 2, scale 1:38,000;

150c Plate 3, scale 1:19,000.

151. Gaskin, C. L., 1994, Crustal structure of the northern Rocky Mountains based on gravity interpretation: University of Montana Master of Science thesis, 65 p., 2 plates.

Geophysical map: Plate 1 (gravity), scale 1:384,000.

152. Gaudette, H. E., 1963, Geochemistry of the Twin Sisters ultramafic body, Washington: University of Illinois (Urbana) Doctor of Philosophy thesis, 104 p.

Geologic map: Figure 2, scale 1:50,688.

153. Getsinger, J. S., 1978, A structural and petrologic study of the Chiwaukum Schist on Nason Ridge, northeast of Stevens Pass, North Cascades, Washington: University of Washington Master of Science thesis, 151 p., 1 plate.

Geologic map: scale 1:24,000.

154. Gladden, S. C., 1981, Landslide hazardous areas, Bellevue, Washington: San Diego State University Master of Science thesis, 76 p.

Geologic map: Plate 1, scale 1:45,000.

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Geologic map: Plate, scale 1:62,500.

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Geologic map: Plate, scale 1:24,000.

157. Goetz, V. L., 1990, Geology and mineralization at the First Thought mine, Stevens County, Washington: University of Idaho Master of Science thesis, 136 p., 5 plates.

Geologic map: Plate 1, scale 1:6000.

158. Goldsmith, Richard, 1952, Petrology of the Tiffany–Conconully area, Okanogan County, Washington: University of Washington Doctor of Philosophy thesis, 356 p., 2 plates.

Geologic map: Plate 50, scale 1:62,500.

159. Goodge, J. W., 1983, Fold reorientation and quartz microfabric in the Okanogan dome mylonite zone, Washington—Kinematic and tectonic implications: University of Montana Master of Science thesis, 65 p.

Geologic map: Plate 3, scale 1:187,000.

160. Graham, D. C., 1988, Hydrothermal alteration of serpentinite associated with the Devils Mountain fault zone, Skagit County, Washington: Western Washington University Master of Science thesis, 125 p.

Geologic map: Fig. 6, scale 1:9,000.

161. Grant, A. R., 1959, Geology and petrology of a portion of the Dome Peak area, northern Cascades, Washington: University of Washington Master of Science thesis, 71 p., 3 plates.

Geologic map: Plate 3, scale 1:31,680.

162. Grant, A. R., 1966, Bedrock geology of the Dome Peak area, Chelan, Skagit and Snohomish Counties, northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 270 p., 3 plates.

Geologic map: Plate 2, scale 1:31,680.

163. Greenman, Celia, 1976, Stratigraphy of the Silurian and Devonian rocks, northwestern Pend Oreille County, Washington: Oregon State University Master of Science thesis, 104 p., 2 plates.

Geologic maps: Plate 1, scale 1:12,000; Plate 2, scale 1:2,570.

164. Greiner, P. R., 1956, Geology and development of the Florence Rae mine, Sultan Basin, Snohomish County, Washington: University of Washington Bachelor of Science thesis, 31 p.

Geologic map: Plate 4, scale 1:480.

165. Griffin, B. E., 1948, The geology of the Monte Cristo district with special reference to ore deposits: University of Washington Master of Science thesis, 60 p., 1 plate.

Geologic map: Plate 1, scale 1:15,000.

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Geologic map: Figure 22, scale 1:24,000.

167. Griffith, R. F., 1949, Economic geology of Peacock Mountain, Okanogan County, Washington: University of Washington Master of Science thesis, 63 p.

Geologic map: Plate 5, scale 1:24,000.

168. Groffman, L. H., 1986, Stratigraphy, sedimentology, and structure of the upper Proterozoic Three Sisters Formation and Lower Cambrian Gypsy Quartzite, northeast Washington: Washington State University Master of Science thesis, 208 p., 2 plates.

Geologic map: Plate 1, scale 1:12,000.

169. Grose, L. T., 1949, A petrogenetic study of the Evans Lake granodiorite, Omak, Washington: University of Washington Master of Science thesis, 90 p., 1 plate.

Geologic map: scale 1:20,000.

170. Growney, L. P., 1995, Landslide inventory and susceptibility mapping of the upper Canyon Creek basin, Cascade Range, Skamania County, Washington: Portland State University Master of Science thesis, 150 p., 6 plates.

Geologic maps: Plate 1, scale 1:24,000; Plate 2, scale 1:24,000.

171. Gulick, C. W., III, 1987, Bedrock geology of the southwest quarter of the Aeneas Valley 15 quadrangle, Okanogan County, Washington: Eastern Washington University Master of Science thesis, 55 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

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Geologic map: Plate 1, scale 1:12,000.

173. Hagen, R. A., 1987, The geology and petrology of the Northcraft Formation, Lewis County, Washington: University of Oregon Master of Science thesis, 252 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

174. Hagood, M. C., 1985, Structure and evolution of the Horse Heaven Hills in south-central Washington: Portland State University Master of Science thesis, 201 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

175. Hamlin, W. H., 1962, Geology and foraminifera of the Mount Walker–Quilcene–Leland Lake area, Jefferson County, Washington: University of Washington Master of Science thesis, 127 p.

Geologic map: Figure 3, scale 1:24,000.

176. Hammond, P. E., 1963, Structure and stratigraphy of the Keechelus volcanic group and associated Tertiary rocks in the west-central Cascade Range, Washington: University of Washington Doctor of Philosophy thesis, 254 p., 2 plates.

Geologic map: Plate 1, scale 1:62,500.

177. Hansen, V. L., 1983, Kinematic interpretation of mylonitic rocks in Okanogan dome, north-central Washington, and implications for dome evolution: University of Montana Master of Science thesis, 53 p.

Geologic map: Plate 3, scale 1:187,000.

178. Hanson, K. L., 1977, The Quaternary and environmental geology of the Uncas–Port Ludlow area, Jefferson County, Washington: University of Oregon Master of Science thesis, 82 p., 5 plates.

Geologic map: Plate 1, scale 1:24,000.

179. Harle, D. S., 1974, Geology of Babyshoe Ridge area, southern Cascades, Washington: Oregon State University Master of Science thesis, 71 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

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Geologic map: Figure B, scale 1:250,000.

181. Hartman, D. A., 1973, Geology and low-grade metamorphism of the Greenwater River area, central Cascade Range, Washington: University of Washington Doctor of Philosophy thesis, 99 p., 2 plates.

Geologic map: Plate 1, scale 1:46,000.

182. Harvey, J. L., 1959, A geologic reconnaissance in the southwest Olympic Peninsula: University of Washington Master of Science thesis, 53 p., 1 plate.

Geologic map: scale 1:62,500.

183. Haugerud, R. A., 1980, The Shuksan Metamorphic Suite and Shuksan thrust, Mt. Watson area, North Cascades, Washington: Western Washington University Master of Science thesis, 125 p., 2 plates.

Geologic map: Plate II, scale 1:15,840.

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Geologic map: Plate, scale 1:2,000.

185. Hawkins, J. W., Jr., 1963, Geology of the crystalline rocks of the northwestern part of the Okanogan Range, north central Washington: University of Washington Doctor of Philosophy thesis, 173 p., 2 plates.

Geologic map: Plate 1, scale 1:31,680.

186. Heath, M. T., 1966, Mineralization of the Silver Star stock, Skamania County, Washington: University of Washington Master of Science thesis, 55 p., 2 plates.

Geologic map: Plate 2, scale 1:62,500.

187. Heath, M. T., 1971, Bedrock geology of the Monte Cristo area, northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 164 p., 1 plate.

Geologic map: Plate 1, scale 1:31,680.

188. Hedderly-Smith, D. A., 1975, Geology of the Sunrise breccia pipe, Sultan Basin, Snohomish County, Washington: University of Washington Master of Science thesis, 60 p., 2 plates.

Geologic maps: Figure 5, scale 1:480; Figure 9, scale 1:480.

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Geologic map: Plate B, scale 1:63,360.

191. Henderson, D. W., 1983, Structure of the Deer Trail anticlinorium, Stevens County, Washington: Eastern Washington University Master of Science thesis, 43 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

192. Hibbard, M. J., 1960, Bedrock geology and petrology of Chopaka Mountain, Okanogan County, Washington: University of Washington Master of Science thesis, 64 p., 1 plate.

Geologic map: Plate 1, scale 1:15,840.

193. Hibbard, M. J., 1962, Geology and petrology of crystalline rocks of the Toats Coulee Creek region, Okanogan County, Washington: University of Washington Doctor of Philosophy thesis, 96 p., 1 plate.

Geologic map: Plate 1, scale 1:48,000.

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Geologic map: Plate 1, scale 1:2,400.

195. Hillman, C. T., 1970, Geology of the Mount Margaret–Green River area, Washington: Miami University Master of Science thesis, 52 p., 2 plates.

Geologic map: Plate 1, scale 1:55,100.

196. Hilpert, L. S., 1937, The stratigraphy and structural relations of northwestern Lewis County, Washington: University of Washington Bachelor of Science thesis, 13 p., 2 plates.

Geologic map: Plate 1, scale 1:31,680.

197. Hogge, C. E., 1982, Geology of the Paleozoic black shale sequence, Moberg Hill, Stevens County, Washington: Washington State University Master of Science thesis, 80 p.

Geologic maps: Figure 2, scale 1:36,000; Figure 3, scale 1:36,000.

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Geologic maps: Plates 1A and 1B, scale 1:50,688.

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Geologic maps:

199a Plate 1, scale 1:141,000;

199b Plate 2, scale 1:42,290;

199c Plate 3, scale 1:96,000.

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Geologic maps:

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200b Plate 2, scale 1:52,800.

201. Hopkins, K. D., 1976, Geology of the south and east slopes of Mount Adams volcano, Cascade Range, Washington: University of Washington Doctor of Philosophy thesis, 143 p., 1 plate.

Geologic map: Plate 1, scale 1:63,360.

202. Hopkins, W. N., 1987, Geology of the Newby Group and adjacent units in the southern Methow trough, northeast Cascades, Washington: San Jose State University Master of Science thesis, 95 p.

Geologic map: Plate 1, scale 1:24,000.

203. Hopkins, W. S., Jr., 1962, The geology of a portion of the Skagit delta area, Skagit County, Washington: University of British Columbia Master of Science thesis, 135 p., 1 plate.

Geologic map: Plate 1, scale 1:15,840.

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Geologic maps:

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205b Plate 2, scale 1:12,000.

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Geologic maps: Plate 2, scale 1:23,760; Plate 3, scale 1:6,300.

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Geologic map: Figure 6, scale 1:50,000.

208. Hougland, Everett, 1933, The stratigraphy of the "Orient gneiss": State College of Washington Master of Science thesis, 37 p., 1 plate.

Geologic map: Plate 2, scale 1:31,680.

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Geologic map: Plate 1, scale 1:15,840.

210. Howd, F. H., 1956, Geology and geochemistry of the wolframite deposits in southern Stevens County, Washington: State College of Washington Doctor of Philosophy thesis, 81 p.

Geologic map: Plate 2, scale 1:135,168.

211. Hubbard, P. S., 1968, Geology of the Saddle Butte quadrangle, southeastern Washington: University of Hawaii Master of Science thesis, 75 p., 1 plate.

Geologic map: Plate 1, scale 1:62,500.

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Geologic map: Figure 4, scale 1:96,000.

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Geologic map: Plate 1, scale 1:48,000.

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215. Ivanoff, B. B., 1949, The Germania Consolidated Mines, Inc., Stevens County, Washington: University of Washington Bachelor of Science thesis, 31 p.

Geologic map: Plate 2, scale 1:274,000.

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Geologic map: Plate 1, scale 1:6,000.

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Geologic map: Plate 4, scale 1:43,200.

218. James, E. W., 1980, Geology and petrology of the Lake Ann stock and associated rocks: Western Washington University Master of Science thesis, 57 p., 1 plate.

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219. Janbaz, J. E., Jr., 1972, Petrology of the Upper Cretaceous strata of Sucia Island, San Juan County, Washington: Washington State University Master of Science thesis, 104 p.

Geologic map: Figure 2, scale 1:19,500.

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Geologic map: Plate 1, scale 1:25,000.

221. Jenne, D. A., 1978, Structural geology and metamorphic petrology of the Gold Mountain area, Snohomish County, Washington: Oregon State University Master of Science thesis, 177 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

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Geologic map: Plate, scale 1:26,400.

223. Johnson, Harold, 1933, The geology of the Copper King mine, Safety Harbor Creek, Chelan County, Washington: University of Washington Bachelor of Science thesis, 23 p., 3 plates.

Geologic map: Plate VIII, scale 1:480.

224. Johnson, S. Y., 1978, Sedimentology, petrology, and structure of Mesozoic strata in the northwestern San Juan Islands, Washington: University of Washington Master of Science thesis, 105 p., 4 plates.

Geologic map: Plate 1, scale 1:12,000.

225. Johnson, S. Y., 1982, Stratigraphy, sedimentology, and tectonic setting of the Eocene Chuckanut Formation, northwest Washington: University of Washington Doctor of Philosophy thesis, 221 p., 4 plates.

Geologic map: Plate 1 (on two sheets), scale 1:50,000.

226. Jones, J. T., 1984, The geology and structure of the Canyon Creek–Church Mountain area, North Cascades, Washington: Western Washington University Master of Science thesis, 125 p., 2 plates.

Geologic map: Plate 1, scale 1:15,840.

227. Jones, R. W., 1957, Petrology and structure of the Higgins Mountain area, northern Cascades, Washington: University of Washington Master of Science thesis, 186 p., 1 plate.

Geologic map: Plate, scale 1:62,500.

228. Jones, R. W., 1959, Geology of the Finney Peak area, northern Cascades of Washington: University of Washington Doctor of Philosophy thesis, 186 p., 2 plates.

Geologic map: Plate 2, scale 1:62,500.

229. Jung, J. G., 1967, A geologic and magnetic study of the Copper Bell property, Goldbar, Washington: University of Washington Master of Science thesis, 38 p.

Geologic map: Figure 7, scale 1:9,600.

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Geologic map: Map 1, scale 1:6,000.

231. Kent, M. H., 1978, Stratigraphy and petrography of the Selah member of the Ellensburg Formation in south-central Washington, and north-central Oregon: Portland State University Master of Science thesis, 118 p., 3 plates.

Geologic map: Plate 1, scale 1:31,680.

232. Knaack, C. M., 1991, Geology and geochemistry of the Long Alec Creek pluton, Ferry County, Washington: Washington State University Master of Science thesis, 93 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

233. Knoll, K. M., 1967, Surficial geology of the Tolt River area, Washington: University of Washington Master of Science thesis, 91 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

234. Koch, A. J., 1968, Petrology of the "Hoh formation" of Tertiary age in the vicinity of the Raft River, western Washington: University of Washington Master of Science research paper, 41 p., 1 plate.

Geologic map: scale 1:13,000.

235. Koesters, D. B., 1984, A structural and hydrocarbon analysis of the central Cascade Range, Washington: Texas Christian University Master of Science thesis, 120 p., 4 plates.

Geologic map: Plate C, scale 1:250,000.

236. Krauskopf, K. B., 1938, The geology of the northwest quarter of the Osoyoos quadrangle, Washington: Stanford University Doctor of Philosophy thesis, 286 p., 2 plates.

Geologic maps:

236a Plate 1, scale 1:62,500;

236b Plate 2, scale 1:125,000.

237. Kremer, D. E., 1959, The geology of the Preston–Mt. Si area: University of Washington Master of Science thesis, 103 p., 1 plate.

Geologic map: Plate XXIX, scale 1:42,240.

238. Kriens, B. J., 1988, Tectonic evolution of the Ross Lake area, northwest Washington–southwest British Columbia: Harvard University Doctor of Philosophy thesis, 214 p., 7 plates.

Geologic maps:

238a Plate 5, scale 1:62,500;

238b Plate 6, scale 1:100,000.

Note: Plates 1, 2, 3, 4a, and 4b, are all scale 1:12,000, are all within the area of Plate 5, and are not individually outlined.

239. Kuenzi, W. D., 1961, Geology of the Kelly Hill area, Stevens County, Washington: Montana State University Master of Science thesis, 111 p., 2 plates.

Geologic map: Plate 1, scale 1:16,800.

240. Kuhns, M. J. P., 1980, Late Cenozoic deposits of the lower Clearwater valley, Idaho and Washington: Washington State University Master of Science thesis, 71 p., 1 plate.

Geologic map: Plate, scale 1:12,000.

241. Lance, D. M., Jr., 1981, Sulfide mineralization of the Midnite uranium mine, Stevens County, Washington: Washington State University Master of Science thesis, 167 p., 2 plates.

Geologic maps: Plate 3.1, scale 1:4,700; Plate 3.2, scale 1:600; Plate 3.3, scale 1:600.

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Geologic map: Map, scale 1:9,700.

243. Laravie, J. A., 1976, Geologic field studies along the eastern border of the Chiwaukum graben, central Washington: University of Washington Master of Science thesis, 56 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

244. Laskowski, E. R., 1982, Geology of the black shale belt of the Bruce Creek area, Stevens County, Washington: Washington State University Master of Science thesis, 113 p.

Geologic map: Figure 2A, scale 1:24,000.

245. Laval, W. N., 1956, Stratigraphy and structural geology of portions of south-central Washington: University of Washington Doctor of Philosophy thesis, 223 p., 11 plates.

Geologic maps:

245a Plate XXI, scale 1:62,500;

245b Plate XXIII, scale 1:31,680;

245c Plate XXIV, scale 1:62,500;

245d Plate XXVII, scale 1:62,500;

245e Plate XXVIII, scale 1:62,500;

245f Plate XXIX, scale 1:62,500;

245g Plate XXX, scale 1:62,500;

245h Plate XXXI, scale 1:62,500.

246. Lawrence, D. P., 1967, Structure and petrology of the Castle Peak stock, northeastern Cascade mountains, Washington: University of Washington Master of Science thesis, 67 p., 2 plates.

Geologic map: Plate 1, scale 1:15,840.

247. Lawrence, R. D., 1968, The Eightmile Creek fault, northeastern Cascade Range, Washington: Stanford University Doctor of Philosophy thesis, 66 p., 4 plates.

Geologic map: Plate 1, scale 1:101,376.

248. Lea, P. D., 1984, Pleistocene glaciation at the southern margin of the Puget lobe, western Washington: University of Washington Master of Science thesis, 96 p., 3 plates.

Geologic maps:

248a Plate 1, scale 1:24,000;

248b Plate 2, scale 1:24,000.

249. Leiggi, P. A., 1986, Structure and petrology along a segment of the Shuksan thrust fault, Mount Shuksan area, Washington: Western Washington University Master of Science thesis, 207 p., 6 plates.

Geologic map: Plate 1, scale 1:15,840.

250. Lewellen, D. G., 1983, The structure and depositional environment of the Manastash Formation, Kittitas County, Washington: Eastern Washington University Master of Science thesis, 107 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

251. Libby, W. G., 1964, Petrography and structure of the crystalline rocks between Agnes Creek and the Methow Valley, Washington: University of Washington Doctor of Philosophy thesis, 133 p., 2 plates.

Geologic map: Plate 27, scale 1:31,680.

252. Lindquist, J. W., 1961, Geology and paleontology of the Fork area, Dungeness and Graywolf Rivers, Clallam County, Washington: University of Washington Master of Science thesis, 185 p., 7 plates.

Geologic map: Figure 11, scale 1:31,680.

253. Link, J. E., 1985, Gold and copper mineralization in the McCoy Creek district, Skamania County, Washington: Washington State University Master of Science thesis, 176 p., 4 plates.

Geologic map: Plate 1, scale 1:12,000.

254. Liszak, J. L., 1982, The Chilliwack Group on Black Mountain, Washington: Western Washington University Master of Science thesis, 104 p.

Geologic map: Map, scale 1:15,000.

255. Lofgren, D. C., 1974, The bedrock geology of the southwestern part of the Kachess Lake quadrangle, Washington: Portland State University Master of Science thesis, 73 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

256. Loney, R. A., 1951, Geology of the Crescent Bay area, Olympic Peninsula, Washington: University of Washington Master of Science thesis, 113 p., 3 plates.

Geologic map: Plate 1, scale 1:31,680.

257. Longtine, M. W., 1991, Mid- to Late Cretaceous structural, metamorphic, and magmatic evolution of the Sloan Peak area, North Cascades, Washington: University of Texas at Austin Master of Arts thesis, 139 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

258. Lounsbury, R. W., 1951, Petrology of the Nighthawk–Oroville area, Washington: Stanford University Doctor of Philosophy thesis, 90 p., 1 plate.

Geologic map: scale 1:20,000.

259. Lovseth, T. P., 1975, The Devils Mountain fault zone, northwestern Washington: University of Washington Master of Science thesis, 29 p.

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260. Lucas, H. E., 1980, Geology of part of the Dunn Mountain and Arden 7 1/2-minute quadrangles, Stevens County, Washington: Eastern Washington University Master of Science thesis, 36 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

261. Lupe, R. D., 1971, Stratigraphy and petrology of the Swauk Formation in the Wenatchee Lake area, Washington: University of Washington Master of Science thesis, 27 p. 1 plate.

Geologic map: Figure 13, scale 1:125,000.

262. Lyons, D. J., 1967, Structural geology of the Boulder Creek metamorphic terrane, Ferry County, Washington: Washington State University Doctor of Philosophy thesis, 115 p.

Geologic map: Figure 2, scale 1:84,480.

263. Magloughlin, J. F., 1986, Metamorphic petrology, structural history, geochronology, tectonics and geothermometry/geobarometry in the Wenatchee Ridge area, North Cascades, Washington: University of Washington Master of Science thesis, 343 p., 2 plates.

Geologic map: Map 1, scale 1:24,000.

264. Major, J. J., 1984, Geologic and rheologic characteristics of the May 18, 1980 southwest flank lahars at Mount St. Helens, Washington: Pennsylvania State University Master of Science thesis, 225 p., 12 plates.

Geologic map: Plate 4, scale 1:24,000.

265. Marcus, K. L., 1981, The rocks of Bulson Creek—Eocene–Oligocene sedimentation and tectonics in the Lake McMurray area, Washington: Western Washington University Master of Science thesis, 84 p., 1 plate.

Geologic map: Plate, scale 1:62,500.

266. Marshall, A. G., 1971, An alluvial chronology of the lower Palouse River canyon and its relation to local archaeological sites: Washington State University Master of Arts thesis, 73 p., 1 plate.

Geologic map: Plate, scale 1:6,600.

267. Mason, G. W., 1953, Interbasalt sediments of south central Washington: State College of Washington Master of Science thesis, 116 p., 3 plates.

Geologic maps: Plate 6, scale 1:62,500; Plate 7–8, scale 1:62,500.

268. Maurer, D. L., 1958, Biostratigraphy of the Buck Mountain member and adjacent units in the Winthrop area, Washington: University of Washington Master of Science thesis, 111 p.

Geologic map: Figure 11, scale 1:62,500.

269. McAndrews, K. P., 1986, Copper–molybdenum potential of parts of the Colville Indian Reservation, north central Washington: Colorado State University Master of Science thesis, 100 p., 4 plates.

Geologic maps:

269a Plate 1, scale 1:24,000;

269b Plate 2, scale 1:18,000.

270. McCleary, M. D., 1963, Magnetometer and geologic survey of the Finney Creek iron deposit, Skagit County, Washington: University of Washington Bachelor of Science thesis, 55 p., 4 plates.

Geologic map:

270a Plate IX, scale 1:600.

Geophysical map:

270b Plate VIII (magnetic), scale 1:600.

271. McClincy, M. J., 1986, Tephrostratigraphy of the middle Eocene Chumstick Formation, Cascade Range, Douglas County, Washington: Portland State University Master of Science thesis, 125 p., 2 plates.

Geologic map: Plate 1, scale 1:100,000.

272. McCulla, M. S., 1986, Geology and metallization of the White River area, King and Pierce Counties, Washington: Oregon State University Doctor of Philosophy thesis, 213 p., 5 plates.

Geologic maps: Plate 1A, scale 1:24,000; Plate 1B, scale 1:12,000.

273. McDougall, J. W., 1980, Geology and structural evolution of the Foss River–Deception Creek area, Cascade mountains, Washington: Oregon State University Master of Science thesis, 86 p., 1 plate.

Geologic map: Appendix A, scale 1:24,000.

274. McGowan, K. I., 1985, Geochemistry of alteration and mineralization of the Wind River gold prospect, Skamania County, Washington: Portland State University Master of Science thesis, 136 p., 3 plates.

Geologic map: Plate 1,scale 1:24,000.

275. McKague, H. L., 1960, The petrology of the Hatchery Creek serpentinite, Chelan County, Washington: Washington State University Master of Science thesis, 42 p.

Geologic map: Plate 5, scale 1:16,500.

276. McKeever, Douglas, 1977, Volcanology and geochemistry of the south flank of Mount Baker, Cascade Range, Washington: Western Washington State College Master of Science thesis, 126 p.

Geologic map: Plate, scale 1:24,000.

277. McKiness, J. P., 1988, The Quaternary system of the eastern Spokane Valley and the lower, northern slopes of the Mica Peak uplands, eastern Washington and northern Idaho: University of Idaho Master of Science thesis, 100 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

278. McKnight, E. F. T.; Ward, A. H., 1925, Geology of the Snohomish quadrangle: University of Washington Master of Science thesis, 95 p., 5 plates.

Geologic maps:

278a Plate 3, scale 1:15,840;

278b Map, scale 1:125,000;

278c Map, scale 1:62,500.

279. McLean, Hugh, 1968, Petrography and sedimentology of the Blakeley Formation, Kitsap County, Washington: University of Washington Master of Science thesis, 56 p.

Geologic map: Figure 2, scale 1:24,000.

280. McLeod, A. A., 1923, The geology of Silver Hill district, Spokane County, Washington: University of Idaho Bachelor of Science thesis, 33 p., 1 plate.

Geologic map: Plate, scale 1:12,000.

281. McMichael, L. B., 1946, Geology of the northeastern Olympic Peninsula: University of Washington Master of Science thesis, 33 p., 1 plate.

Geologic map: Plate 6, scale 1:62,500.

282. McMillen, D. D., 1979, The structure and economic geology of Buckhorn Mountain, Okanogan County, Washington: University of Washington Master of Science thesis, 68 p., 2 plates.

Geologic map: Figure 7, scale 1:31,680.

283. McNeely, W. L., 1969, Gravity survey of the Shelton–Grays Harbor area, Washington: University of Puget Sound Master of Science thesis, 38 p., 6 plates.

Geologic map:

283a Plate 3, scale 1:250,000.

Geophysical map:

283b Plate 1 (gravity), scale 1:250,000.

284. McPhee, J. A.; Baumann, H. N., Jr., 1911, The geology and mining of the western part of Index mining district: University of Washington Bachelor of Science thesis, 42 p., 3 plates.

Geologic map: Plate IX, scale 1:31,680.

285. McWilliams, R. G., 1965, Geology and biostratigraphy of the Lake Crescent area, Clallam County, Washington: University of Washington Master of Science thesis, 165 p., 4 plates.

Geologic map: Figure 9, scale 1:48,000.

286. Menzer, F. J., Jr., 1964, Geology of the crystalline rocks west of Okanogan, Washington: University of Washington Doctor of Philosophy thesis, 64 p., 1 plate.

Geologic map: Plate 7, scale 1:44,000.

287. Mercier, J. M., 1977, Petrology of the upper Cretaceous strata of Stuart Island, San Juan County, Washington: Washington State University Master of Science thesis, 157 p., 1 plate.

Geologic map: Figure 4, scale 1:10,000.

288. Miers, J. H., 1970, Ultramafic dikes on Jumbo Mountain, Snohomish County, Washington: University of Washington Master of Science thesis, 54 p., 1 plate.

Geologic map: Plate 1, scale 1:31,680.

289. Miller, M. S., 1967, The bedrock geology of the southeast quarter of Mount Steel quadrangle, Washington: University of Washington Master of Science thesis, 78 p.

Geologic map: Figure 11, scale 1:62,500.

290. Miller, R. B., 1975, Structure and petrology of the Ingalls peridotite and associated pre-Tertiary rocks southwest of Mount Stuart, Washington: University of Washington Master of Science thesis, 90 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

291. Miller, R. B., 1980, Structure, petrology and emplacement of the ophiolitic Ingalls Complex, north-central Cascades, Washington: University of Washington Doctor of Philosophy thesis, 422 p., 5 plates.

Geologic maps:

291a Plate I, scale 1:24,000;

291b Plate II, scale 1:24,000.

292. Milliken, M. D., 1981, Geology of the Peter Dan Creek area, Okanogan County, Washington with a gravity survey across the Koontzville lineament: Eastern Washington University Master of Science thesis, 76 p., 2 plates.

Geologic map: Figure 4, scale 1:12,000.

293. Milnes, P. T., 1976, Structural geology and metamorphic petrology of the Illabot Peaks area, Skagit County, Washington: Oregon State University Master of Science thesis, 118 p., 2 plates.

Geologic map: Plate 1, scale 1:12,000.

294. Mitchell, T. E., 1981, Uranium mineralization of the metamorphic aureole of the Spirit pluton, Stevens County, Washington: Oregon State University Master of Science thesis, 109 p., 2 plates.

Geologic maps: Plate 1, scale 1:6,000; Plate 2, scale 1:1,200.

295. Mogk, D. W., 1978, Contact metamorphism of carbonate rocks at Cave Ridge, Snoqualmie Pass, Washington: University of Washington Master of Science thesis, 110 p., 2 plates.

Geologic map: Plate 1, scale 1:2,000.

296. Moore, J. L., 1965, Surficial geology of the southwestern Olympic Peninsula: University of Washington Master of Science thesis, 63 p., 1 plate.

Geologic map: Plate 1, scale 1:125,000.

297. Moore, S. C., 1972, Layered igneous rocks and intrusive units of the Tapto Lakes area, Whatcom County, Washington: University of Washington Master of Science thesis, 104 p., 2 plates.

Geologic map: Plate 1, scale 1:10,400.

298. Moothart, S. R., 1993, Geology of the middle and upper Eocene McIntosh Formation and adjacent volcanic and sedimentary rock units, Willapa Hills, Pacific County, southwest Washington: Oregon State University Master of Science thesis, 265 p., 3 plates.

Geologic map: Plate 1, scale 1:24,000.

299. Morrison, M. E., 1954, The petrology of the Phelps Ridge–Red Mountain area, Chelan County, Washington: University of Washington Master of Science thesis, 95 p., 3 plates.

Geologic map: Plate 2, scale 1:21,120.

300. Morrison, M. L., 1977, Structure and stratigraphy of the Shuksan Metamorphic Suite in the Gee Point Finney Peak area, North Cascades: Western Washington State College Master of Science thesis, 69 p., 1 plate.

Geologic map: Plate, scale 1:15,840.

301. Moser, K. R., 1978, Structural analysis of Cambrian rocks in the Bowen Lake area, Stevens County, Washington: Washington State University Master of Science thesis, 64 p., 1 plate.

Geologic map: Plate, scale 1:6,400.

302. Moye, F. J., 1984, Geology and petrochemistry of Tertiary igneous rocks in the western half of the Seventeenmile Mountain 15 minute quadrangle, Ferry County, Washington: University of Idaho Doctor of Philosophy thesis, 242 p., 3 plates.

Geologic map: Plate 1, scale 1:62,500.

303. Mulcahey, M. T., 1975, The geology of Fidalgo Island and vicinity, Skagit County, Washington: University of Washington Master of Science thesis, 49 p., 1 plate.

Geologic map: scale 1:42,000.

304. Mullen, T. F., 1995, Lithofacies and Cambrian grand cycles of the Metaline Formation, Pend Oreille County, Washington: University of Idaho Master of Science thesis, 138 p., 2 plates.

Geologic maps: Plates 1 and 2, scale 1:24,000.

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Geologic maps: Plate 1, scale 1:24,000; Plate 2, scale 1:24,000; Plate 3, scale 1:24,000.

306. Mumby, J. I., 1959, Oligocene stratigraphy and foraminifera of the Porter Bluffs area, Washington: University of Washington Master of Science thesis, 137 p., 3 plates.

Geologic map: Figure 2, scale 1:20,833.

307. Murphy, M. T., 1989, The crystallization and transport of intermediate-composition magma: Johns Hopkins University Doctor of Philosophy thesis, 154 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

308. Myers, C. W., 1973, Yakima Basalt flows near Vantage, and from core holes in the Pasco Basin, Washington: University of California at Santa Cruz Doctor of Philosophy thesis, 147 p.

Geologic map: Figure 4, scale 1:31,680.

309. Neitzel, T. W., 1972, Geology of the Van Stone mine, Stevens County, Washington: Washington State University Master of Science thesis, 47 p.

Geologic map: Figure 3, scale 1:4,800.

310. Newcomb, R. C., 1933, Underground water of the upper Spokane River valley: State College of Washington contest paper, 16 p., 3 plates.

Geologic map: Plate III, scale 1:125,000.

311. Newcomb, R. C., 1937, Geology of a portion of the Okanogan highlands, Washington: University of Cincinnati Master of Science thesis, 62 p., 1 plate.

Geologic map: Plate 9, scale 1:42,240.

312. Nimick, D. A., 1977, Glacial geology of Lake Wenatchee and vicinity, Washington: University of Washington Master of Science thesis, 52 p.

Geologic maps: Figure 5, scale 1:24,000; Figure 6, scale 1:24,000; Figure 7, scale 1:24,000.

313. Norbisrath, Hans, 1939, The geology of the Mount Vernon area: University of Washington Bachelor of Science thesis, 28 p.

Geologic map: Plate 2, scale 1:62,500.

314. Nordstrom, H. E., 1972, Mesoscopic and macroscopic structural analysis of tectonites in the Northport district, Washington: Washington State University Master of Science thesis, 77 p.

Geologic map: Figure 2, scale 1:480.

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Geologic map: scale 1:31,250.

316. O'Keefe, M. E., 1980, Structural geology and mineral deposits of Red Top Mountain, Stevens County, Washington: Washington State University Master of Science thesis, 152 p., 1 plate.

Geologic map: Figure 1, scale 1:5,500.

317. Oles, K. F., 1951, The petrology of the Stevens Pass–Nason Ridge area, Washington: University of Washington Master of Science thesis, 92 p., 2 plates.

Geologic map: Plate B, scale 1:62,500.

318. Oles, K. F., 1956, The geology and petrology of the crystalline rocks of the Beckler River–Nason Ridge area, Washington: University of Washington Doctor of Philosophy thesis, 192 p., 2 plates.

Geologic map: Plate B, scale 1:76,000.

319. Oliver, L. A., 1986, Geology and mineralization in the Republic district, Ferry County, Washington: University of Washington Master of Science thesis, 97 p., 2 plates.

Geologic map: Plate [1], scale 1:31,680.

320. Olson, D. F., 1995, Geology and geochemistry of the Lockwood volcanogenic massive sulfide deposit, Snohomish County, Washington: Western Washington University Master of Science thesis, 118 p., 8 plates.

Geologic map: Plate 1, scale 1:1200.

321. Olson, T. M., 1975, The geology and groundwater resources of part of the Hangman and Marshall Creek drainage basins, Spokane County, Washington: Eastern Washington State College Master of Science thesis, 70 p., 1 plate.

Geologic map: Plate 1, scale 1:63,360.

322. Orazulike, D. M., 1982, Igneous petrology and petrochemical variation in the Coyote Creek pluton, Colville batholith and its relation to mineralization at Squaw Mountain, Colville Indian Reservation, Washington: Washington State University Doctor of Philosophy thesis, 275 p., 1 plate.

Geologic map: Figure 6, scale 1:24,000.

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Geologic map: Plate, scale 1:25,000.

324. Orr, K. E., 1985, Structural features along the margins of Okanogan and Kettle Domes, northeastern Washington and southern British Columbia: University of Washington Doctor of Philosophy thesis, 109 p.

Geologic maps:

324a Map A, scale 1:24,000;

324b Map B, scale 1:24,000;

324c Map C, scale 1:24,000.

325. Ott, L. E., 1988, Economic geology of the Wenatchee mining district, Chelan County, Washington: University of Idaho Doctor of Philosophy thesis, 270 p., 2 plates.

Geologic map: Plate 1, scale 1:12,000.

326. Page, B. M., 1939, Geology of a part of the Chiwaukum quadrangle, Washington: Stanford University Doctor of Philosophy thesis, 203 p., 2 plates.

Geologic map: Figure 3, scale 1:62,500.

327. Palmer, L. A., 1960, Pleistocene and Recent geology of the western foothills of Mount Rainier: University of Washington Master of Science thesis, 65 p., 2 plates.

Geologic map: Plate 1, scale 1:48,000.

328. Parrott, Gwynn, 1932, A study of the fresh water sediments north of Leavenworth, Washington: State College of Washington Bachelor of Science thesis, 21 p., 1 plate.

Geologic map: Plate, scale 1:25,000.

329. Patton, T. C., 1967, Economic geology of the L-D mine, Wenatchee, Washington: University of Washington Master of Science thesis, 29 p., 9 plates.

Geologic map: Plate 1, scale 1:56,740.

330. Patton, T. C., 1971, Geology and hydrothermal alteration of the Middle Fork copper prospect, King County, Washington: University of Washington Doctor of Philosophy thesis, 83 p.

Geologic map: Figure 3, scale 1:12,800.

331. Payne, C. W., 1998, Lithofacies, stratigraphy, and geology of the middle Eocene type Cowlitz Formation and associated volcanic and sedimentary units, eastern Willapa Hills, southwest Washington: Oregon State University Master of Science thesis, 253 p., 3 plates.

Geologic map: Plate I, scale 1:24,000.

332. Pelton, H. A., 1957, Geology of the Loomis–Blue Lake area, Okanogan County, Washington: University of Washington Master of Science thesis, 92 p., 1 plate.

Geologic map: Plate 1, scale 1:18,000.

333. Peterson, J. J.,1999, Stratigraphy and sedimentology of the Pipestone Canyon Formation, north central Washington: Western Washington University Master of Science thesis, 122 p., 3 plates.

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Geologic map: Plate, scale 1:9,600.

336. Phillips, W. M., 1979, Structural geology and Cambrian stratigraphy of the Crown Creek–Bowen Lake area, Stevens County, Washington: Washington State University Master of Science thesis, 82 p., 1 plate.

Geologic map: scale 1:6,000.

337. Pierson, T. C., 1972, Petrologic and tectonic relationships of Cretaceous sandstones in the Harts Pass area, north Cascade mountains, Washington: University of Washington Master of Science thesis, 37 p.

Geologic map: Figure 2, scale 1:78,000.

338. Pine, K. A., 1985, Glacial geology of the Tonasket–Spectacle Lake area, Okanogan County, Washington: Western Washington University Master of Science thesis, 130 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

339. Pitard, A. M., 1958, Geology of the Mazama area, Methow Valley, Washington: University of Washington Master of Science thesis, 61 p., 2 plates.

Geologic map: Plate 16, scale 1:62,500.

340. Plummer, C. C., 1964, The geology of the Mount Index area of Washington State: University of Washington Master of Science thesis, 62 p., 1 plate.

Geologic map: Plate 1, scale 1:31,680.

341. Plummer, C. C., 1969, Geology of the crystalline rocks, Chiwaukum Mountains and vicinity, Washington Cascades: University of Washington Doctor of Philosophy thesis, 137 p., 3 plates.

Geologic map: Plate III, scale 1:60,000.

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Geologic map: Plate 1, scale 1:24,000.

343. Pongsapich, Wasant, 1974, The geology of the eastern part of the Mount Stuart batholith, central Cascades, Washington: University of Washington Doctor of Philosophy thesis, 170 p., 4 plates.

Geologic map: Plate 1, scale 1:63,360.

344. Powell, J. E., 1982, Geology of the Columbia Hills, Klickitat County, Washington: University of Idaho Master of Science thesis, 56 p., 8 plates.

Geologic maps: Plate 1, scale 1:24,000; Plate 2, scale 1:24,000; Plate 3, scale 1:24,000; Plate 4, scale 1:24,000.

345. Powers, M. W., 1976, Sand and gravel deposits in parts of the Spokane (SE and SW) quadrangles, Washington: Eastern Washington State College Master of Science thesis, 52 p., 3 plates.

Geologic map: Plate 1, scale 1:12,000.

346. Pratt, R. M., 1954, Geology of the Deception Pass area, Chelan, King and Kittitas Counties, Washington: University of Washington Master of Science thesis, 58 p., 1 plate.

Geologic map: scale 1:31,680.

347. Pratt, R. M., 1958, The geology of the Mount Stuart area, Washington: University of Washington Doctor of Philosophy thesis, 229 p., 4 plates.

Geologic map: Plate 7, scale 1:62,500.

348. Price, E. H., 1982, Structural geometry, strain distribution, and mechanical evolution of eastern Umtanum Ridge and a comparison with other selected localities within Yakima fold structures, south-central Washington: Rockwell Hanford Operations RHO-BWI-SA-138; Washington State University Doctor of Philosophy thesis, 199 p., 6 plates.

Geologic map: Plate 4, scale 1:4,760.

349. Price, S. M., 1991, Geology of the Klondike Mountain Formation and upper Sanpoil Volcanics in the Republic mining district, Ferry County, Washington: Washington State University Master of Science thesis, 98 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

350. Provant, A. P., 1995, Geology and hydrogeology of the Viola and Moscow West quadrangles, Latah County, Idaho and Whitman County, Washington: University of Idaho Master of Science thesis, 116 p., 3 plates.

Geologic maps:

350a Plate 1, scale 1:24,000;

350b Plate 2, scale 1:24,000.

351. Pytlak, S. R., 1970, Geology of the Blanca Lake area, Snohomish County, Washington: University of Washington Master of Science thesis, 45 p., 1 plate.

Geologic map: Map, scale 1:16,900.

352. Rady, P. M., 1980, Structure and petrology of the Groat Mountain area, North Cascades, Washington: Western Washington University Master of Science thesis, 132 p., 1 plate.

Geologic map: Plate 1, scale 1:15,840.

353. Ragan, D. M., 1961, The geology of the Twin Sisters Dunite in the northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 88 p., 1 plate.

Geologic map: scale 1:62,500.

354. Raleigh, C. B., 1963, Fabrics of naturally and experimentally deformed olivine: University of California, Los Angeles Doctor of Philosophy thesis, 215 p.

Geologic map: Figure 1, scale 1:144,820.

355. Rasmussen, M. G., 1993, The geology and origin of the Overlook gold deposit, Ferry County, Washington: University of Washington Doctor of Philosophy thesis, 154 p., 1 plate.

Geologic map: Plate A, scale 1:12,000.

356. Rasrikriengkrai, Piyamit, 1971, Petrographic investigation of hydrothermal alteration in the Quartz Creek, Middle Fork, Snoqualmie River, King County, Washington: University of Washington Master of Science thesis, 86 p., 4 plates.

Geologic map: Figure 3, scale 1:6,000.

357. Raviola, F. P., 1988, Metamorphism, plutonism and deformation in the Pateros–Alta Lake region, north-central Washington: San Jose State University Master of Science thesis, 181 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

358. Ream, L. R., 1972, Economic geology of the Silver Creek mining district, Snohomish County, Washington: Washington State University Master of Science thesis, 59 p.

Geologic map: Figure 19, scale 1:24,000.

359. Rector, R. J., 1958, Some lithologic and paleontologic observations on the Quillayute Formation: University of Washington Bachelor of Science thesis, 40 p.

Geologic map: Plate 3, scale 1:31,250.

360. Rector, R. J., 1962, Geology of the east half of the Swauk Creek mining district: University of Washington Master of Science thesis, 73 p., 2 plates.

Geologic map: Plate 2, scale 1:24,000.

361. Reeve, William, 1979, Bedrock geology of the Blue Hills, Kitsap County, Washington: Colorado School of Mines Master of Science thesis, 58 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

362. Reidel, S. P., 1978, The stratigraphy and petrogenesis of the Grande Ronde Basalt in the lower Salmon and adjacent Snake River canyons: Washington State University Doctor of Philosophy thesis, 415 p., 1 plate.

Geologic map: scale 1:62,500.

363. Reller, G. J., 1986, Structure and petrology of the Deer Peaks area, western North Cascades, Washington: Western Washington University Master of Science thesis, 106 p., 2 plates.

Geologic map: Plate I, scale 1:15,840.

364. Rhodes, B. P., 1980, Structure of the east flank of Kettle dome, Ferry and Stevens Counties, Washington: University of Washington Master of Science thesis, 97 p., 2 plates.

Geologic maps: Plate 1, scale 1:24,000; Plate 2, scale 1:24,000.

365. Riedell, K. B., 1979, Geology and porphyry copper mineralization of the Fawn Peak intrusive complex, Methow Valley, Washington: University of Washington Master of Science thesis, 52 p., 4 plates.

Geologic map: Plate 1, scale 1:24,000.

366. Roback, R. C., 1993, Late Paleozoic to middle Mesozoic tectonic evolution of the Kootenay Arc, northeastern Washington and southeastern British Columbia: University of Texas at Austin Doctor of Philosophy thesis, 192 p., 3 plates.

Geologic map: Plate 3, scale 1:24,000.

367. Roberts, J. W., 1985, Stratigraphy, sedimentology, and structure of the Swauk Formation along Tronsen Ridge, central Cascades, Washington: Washington State University Master of Science thesis, 188 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

368. Robertson, C. A., 1981, Petrology, sedimentology, and structure of the Chuckanut Formation, Coal Mountain, Skagit County, Washington: University of Washington Master of Science thesis, 41 p., 2 plates.

Geologic map: Plate 1, scale 1:15,840.

369. Robinson, C. F., 1966, Stratigraphy and structural geology of Ahtanum Ridge, Yakima, Washington: University of Washington Master of Science thesis, 35 p., 1 plate.

Geologic map: Plate 1, scale 1:72,412.

370. Robinson, J. W., 1938, The general geology of the Lake Cushman and Hama Hama River area of the Olympic Mountains: University of Washington Bachelor of Science thesis, 32 p.

Geologic map: Plate, scale 1:144,820.

371. Rogers, W. P., 1970, A geological and geophysical study of the central Puget Sound lowland: University of Washington Doctor of Philosophy thesis, 123 p., 9 plates.

Geophysical map: Plate 1 (gravity), scale 1:31,250.

372. Roper, M. W., 1973, Geology of the Kelsey copper–molybdenum property, Okanogan County, Washington: Montana State University Master of Science thesis, 97 p., 5 plates.

Geologic map: Plate I, scale 1:4,800.

373. Rosenberg, E. A., 1961, Geology and petrology of the northern Wenatchee Ridge area, northern Cascades, Washington: University of Washington Master of Science thesis, 109 p., 1 plate.

Geologic map: Plate II, scale 1:31,680.

374. Rosengreen, T. E., 1965, Surficial geology of the Maple Valley and Hobart quadrangles, Washington: University of Washington Master of Science thesis, 71 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

375. Rosenmeier, F. J., 1968, Stratigraphy and structure of the Table Mountain–Mission Peak area in the Wenatchee Mountains, central Washington: University of Washington Master of Science thesis, 44 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

376. Ross, M. E., 1978, Stratigraphy, structure, and petrology of Columbia River basalt in a portion of the Grande Ronde River–Blue Mountains area of Oregon and Washington: University of Idaho Doctor of Philosophy thesis, 407 p., 1 plate.

Geologic map: Figure 1, scale 1:63,360.

377. Roth, R. I., 1926, Geology of the central part of the Mount Vernon quadrangle: University of Washington Master of Science thesis, 65 p., 1 plate.

Geologic map: Plate, scale 1:31,250.

378. Rothschild, Stanley, 1951, Investigations of nickel occurrences in western Skagit County, Washington: University of Washington Bachelor of Science thesis, 51 p., 1 plate.

Geologic map: scale 1:100,000.

379. Royce, P. R., 1995, Stratigraphy, provenance and facies analysis of the Albian–Turonian Virginian Ridge Formation and Winthrop Sandstone, Methow Basin, northeastern Cascades, Washington: Western Washington University Master of Science thesis, 105 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

380. Ruzicka, J. F., 1967, Geology of the Santiago Shafter mine area, Kettle Falls, Stevens County, Washington: Washington State University Master of Science thesis, 67 p.

Geologic map: Figure 15, scale 1:8,000.

381. Ryason, D. J., 1959, The stratigraphy and structure of the Pipestone Canyon area in north central Washington: University of Washington Master of Science thesis, 45 p., 2 plates.

Geologic map: Figure 11, scale 1:15,580.

382. Sans, J. R., 1983, Mafic mineral chemistry and oxygen isotope composition of the Cloudy Pass batholith, Washington: University of Chicago Doctor of Philosophy thesis, 376 p.

Geologic maps:

382a Figure 7, scale 1:180,000;

382b Figure 8, scale 1:109,000;

382c Figure 9, scale 1:24,000.

383. Schmidt, S. L., 1972, Geology of the south part of Chuckanut Mtn., a structural and petrological study: Western Washington State College Master of Science thesis, 51 p., 1 plate.

Geologic map: Plate, scale 1:11,927.

384. Schreiber, S. A., 1981, Geology of the Nelson Butte area, south-central Cascade Range, Washington: University of Washington Master of Science thesis, 81 p., 1 plate.

Geologic map: Plate, scale 1:38,000.

385. Schriber, C. N., 1981, Structural geology in the Northport area, Stevens County, Washington: Washington State University Master of Science thesis, 99 p.

Geologic map: Figure 3, scale 1:16,000.

386. Schriener, Alexander, Jr., 1977, General geology and selected base metal distributions in the southern Cascade Range, Washington: University of Washington Bachelor of Science thesis, 17 p., 1 plate.

Geologic map: Plate 1, scale 1:250,000.

387. Schriener, Alexander, Jr., 1978, Geology and mineralization of the north part of the Washougal mining district, Skamania County, Washington: Oregon State University Master of Science thesis, 135 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

388. Schroeder, M. C., 1953, Pre-Cambrian stratigraphy of the Bead Lake district, Pend Oreille County, Washington: State College of Washington Doctor of Philosophy thesis, 92 p.

Geologic map: Plate 1, scale 1:168,960.

389. Sevigny, J. H., 1983, Structure and petrology of the Tomyhoi Peak area, north Cascade Range, Washington: Western Washington University Master of Science thesis, 203 p., 3 plates.

Geologic map: Plate 1, scale 1:15,840.

390. Shelley, J. R., 1971, Geology of the western San Juan Islands, Washington State: University of Washington Master of Science thesis, 64 p., 1 plate.

Geologic map: Plate 6, scale 1:56,320.

391. Shepard, R. J., 1980, Geology and mineralization of the southern Silver Star stock, Washougal mining district, Skamania County, Washington: Oregon State University Master of Science thesis, 113 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

392. Sheppard, R. A., 1960, Petrology of the Simcoe Mountains area, Washington: Johns Hopkins University Doctor of Philosophy thesis, 153 p., 3 plates.

Geologic map: Plate 1, scale 1:125,000.

393. Sherman, D. K., 1960, Upper Eocene biostratigraphy of the Snow Creek area, northeastern Olympic Peninsula, Washington: University of Washington Master of Science thesis, 116 p.

Geologic map: Figure 5, scale 1:48,275.

394. Shideler, J. H., Jr., 1965, The geology of the Silver Creek area, northern Cascades, Washington: University of Washington Master of Science thesis, 94 p., 1 plate.

Geologic map: Plate 1, scale 1:31,680.

395. Shore, F. E., 1991, The structural geology of the Squaw Creek area, Stevens County, Washington: Washington State University Master of Science thesis, 91 p., 1 plate.

Geologic map: Plate, scale 1:6,000.

396. Shultz, J. M., 1988, Mid-Tertiary volcanic rocks of the Timberwolf Mountain area, south-central Cascades, Washington: Western Washington University Master of Science thesis, 145 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

397. Shumway, R. D., 1960, Geology of the Lime Hill area, Asotin County, Washington: Washington State University Master of Science thesis, 54 p.

Geologic map: Figure 11, scale 1:15,600.

398. Siegfried, R. T., 1978, Stratigraphy and chronology of raised marine terraces, Bay View Ridge, Skagit County, Washington: Western Washington University Master of Science thesis, 52 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

399. Silverberg, D. S., 1985, Structure and petrology of the Whitechuck Mountain–Mount Pugh area, north Cascade Range, Washington: Western Washington University Master of Science thesis, 173 p., 3 plates.

Geologic map: Plate 1, scale 1:24,000.

400. Simmons, G. C., 1950, The Russell Ranch Formation: State College of Washington Master of Science thesis, 26 p., 2 plates.

Geologic map: Plate 1, scale 1:125,000.

401. Simon, R. B., 1972, Geology of the Camp Creek area, northern Skamania County, Washington: University of Washington Master of Science thesis, 33 p., 1 plate.

Geologic map: Figure 13, scale 1:24,000.

402. Simonson, E. R., 1981, The Tertiary volcanic rocks of the Mt. Daniel area, central Washington Cascades: University of Washington Master of Science thesis, 81 p.

Geologic map: Plate, scale 1:24,000.

403. Sims, F. R., 1984, Bedrock geology of the Omak quadrangle and the northeast portion of the Ruby quadrangle, Okanogan County, Washington: University of Idaho Master of Science thesis, 93 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

404. Singer, S. H., 1984, Geology of the west half of the Disautel 15 quadrangle, Okanogan County, Washington: University of Idaho Master of Science thesis, 101 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

405. Smith, B. L., 1982, Geology of the southeastern portion of the Inchelium quadrangle, Stevens County, Washington: Eastern Washington University Master of Science thesis, 60 p., 2 plates.

Geologic map: Plate 1, scale 1:12,000.

406. Smith, C. L., 1961, Stratigraphy of the Red Mountain Formation (lower Pennsylvania) of northwestern Washington: University of British Columbia Master of Science thesis, 96 p., 5 plates.

Geologic maps:

406a Plate II, scale 1:4,800;

406b Plate VII, scale 1:2,400;

406c Plate XII, scale 1:62,500;

406d Plate XVIII, scale 1:6,400;

406e Plate XXIV, scale 1:3,000.

407. Smith, M. T., 1986, Structure and petrology of the Grandy Ridge–Lake Shannon area, North Cascades, Washington: Western Washington University Master of Science thesis, 156 p., 2 plates.

Geologic map: Plate 1, scale 1:15,840.

408. Smith, M. T., 1990, Stratigraphic, structural and U-Pb geochronologic investigation of lower Paleozoic eugeoclinal strata in the Kootenay arc, NE Washington and SE British Columbia: University of Arizona Doctor of Philosophy thesis, 262 p., 2 plates.

Geologic maps:

408a Plate 1, scale 1:12,000;

408b Plate 2, scale 1:24,000.

409. Smith, Mackey, 1972, Stratigraphy and chronology of the Tacoma area, Washington: Western Washington State College Master of Science thesis, 38 p., 1 plate.

Geologic map: Plate, scale 1:23,000.

410. Smith, W. S., 1913, The geology and mineral resources of northeastern King County, Washington: Columbia University Master of Arts thesis, 35 p., 1 plate.

Geologic map: scale 1:84,480.

411. Smith, W. S.; Carr, Delbert Earl, 1912, The geology and economic resources of the Lake Dorothy region, Washington: University of Washington Bachelor of Science thesis, 62 p., 3 plates.

Geologic maps:

411a Plate II, scale 1:62,500;

411b Plate III, scale 1:12,000.

412. Snook, J. D., 1981, Geology of the north half of the Arden 7 1/2-minute quadrangle, Stevens County, Washington: University of Idaho Master of Science thesis, 51 p., 2 plates.

Geologic map: Plate 1, scale 1:6,000.

413. Snook, J. R., 1962, Petrology of parts of the Tonasket and Omak Lake quadrangles, north central Washington: University of Washington Doctor of Philosophy thesis, 158 p., 2 plates.

Geologic map: Plate A, scale 1:62,500.

414. Sondergaard, J. N., 1979, Stratigraphy and petrology of the Nooksack Group in the Glacier Creek–Skyline Divide area, North Cascades, Washington: Western Washington University Master of Science thesis, 103 p., 2 plates.

Geologic map: Plate 1, scale 1:15,840.

415. Sorensen, M. L., 1971, Petrology of some sandstones from the eastern Olympic Peninsula: San Jose State College Master of Science thesis, 57 p., 1 plate.

Geologic map: Plate 1, scale 1:33,800.

416. Soule, R. P., 1976, A gravity survey and analysis of the Republic graben of northeastern Washington: Western Washington State College Master of Science thesis, 72 p., 11 plates.

Geologic map:

416a Map 1, scale 1:250,000.

Geophysical maps:

416b Map 2 (magnetic), scale 1:250,000; Map 3 (gravity), scale 1:250,000.

417. Southwick, D. L., 1962, Mafic and ultramafic rocks of the Ingalls–Peshastin area, Washington, and their geologic setting: Johns Hopkins University Doctor of Philosophy thesis, 2 v., 4 plates.

Geologic map: Plate I, scale 1:50,688.

418. Spencer, P. K., 1984, Lower Tertiary biostratigraphy and paleoecology of the Quilcene–Discovery Bay area, northeast Olympic Peninsula, Washington: University of Washington Doctor of Philosophy thesis, 173 p., 2 plates.

Geologic map: Figure 3, scale 1:63,000.

419. Stewart, R. J., 1970, Petrology, metamorphism and structural relations of graywackes in the western Olympic Peninsula, Washington: Stanford University Doctor of Philosophy thesis, 123 p., 5 plates.

Geologic map: Plate 1, scale 1:63,360.

420. Stine, C. M., 1987, Stratigraphy of the Ohanapecosh Formation north of Hamilton Buttes, southcentral Washington: Portland State University Master of Science thesis, 92 p., 3 plates.

Geologic map: Plate I, scale 1:24,000.

421. Stout, M. L., 1957, Geology of the southwestern portion of the Mt. Stuart quadrangle, Washington: University of Washington Master of Science thesis, 115 p., 1 plate.

Geologic map: Plate 1, scale 1:63,360.

422. Stout, M. L., 1959, Geology of a part of the south-central Cascade mountains of Washington: University of Washington Doctor of Philosophy thesis, 183 p., 4 plates.

Geologic map: Plate 2, scale 1:63,360.

423. Strain, L. A., Jr., 1964, Eocene and Oligocene biostratigraphy of the Twin Rivers area, Clallam County, Washington: University of Washington Master of Science thesis, 131 p., 4 plates.

Geologic map: Figure 3, scale 1:40,550.

424. Stricklin, C. R., 1975, Geophysical survey of the Lemei Rock–Steamboat Mountain area, Washington: University of Puget Sound Master of Science thesis, 23 p., 11 plates.

Geophysical map: Figure 3 (gravity), scale 1:62,500.

425. Strong, C. P., Jr., 1967, Geology of the Pe Ell–Doty area, Washington: University of Washington Master of Science thesis, 150 p., 3 plates.

Geologic map: Figure 2, scale 1:62,500.

426. Stull, R. J., 1969, The geochemistry of the southeastern portion of the Golden Horn batholith, northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 127 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

427. Swan, V. L., 1980, The petrogenesis of the Mount Baker volcanics, Washington: Washington State University Doctor of Philosophy thesis, 652 p., 1 plate.

Geologic map: Plate 1, scale 1:52,000.

428. Swanberg, C. A., 1968, A gravity survey over the central part of the Okanogan Range, Washington: Southern Methodist University Master of Science thesis, 68 p., 1 plate.

Geophysical map: Figure 10 (gravity), scale 1:63,360.

429. Swanson, D. A., 1964, The middle and late Cenozoic volcanic rocks of the Tieton River area, south-central Washington: Johns Hopkins University Doctor of Philosophy thesis, 329 p., 3 plates.

Geologic map: Plate 1, scale 1:50,688.

430. Sylvester, K. J., 1978, Geophysical investigations of the hydrogeology of the Goldendale–Centerville areas, Washington: Washington State University Master of Science thesis, 160 p., 1 plate.

Geologic map: Figure 5, scale 1:84,480.

431. Tabor, R. W., 1958, The structure and petrology of the Magic–Formidable region in the northern Cascades of Washington: University of Washington Master of Science thesis, 81 p., 2 plates.

Geologic map: Plate 6, scale 1:31,680.

432. Tabor, R. W., 1961, The crystalline geology of the area south of Cascade Pass, northern Cascade mountains, Washington: University of Washington Doctor of Philosophy thesis, 205 p., 1 plate.

Geologic map: Plate 24, scale 1:31,680.

433. Tallyn, L. A. K., 1981, Scabland mounds of the Cheney quadrangle, Spokane County, Washington: Eastern Washington University Master of Science thesis, 94 p., 1 plate.

Geologic map: Plate 1, scale 1:62,500.

434. Taylor, C. M., 1968, Mineralogical applications of the electron beam microprobe in the study of a gold–silver deposit, Knob Hill mine, Republic, Washington: Stanford University Doctor of Philosophy thesis, 258 p.

Geologic map: Plate 1, scale 1:480.

435. Taylor, S. B., 1985, Stratigraphy, sedimentology, and paleogeography of the Swauk Formation in the Liberty area, central Cascades, Washington: Washington State University Master of Science thesis, 199 p., 2 plates.

Geologic map: Plate 2, scale 1:24,000.

436. Taylor, T. L., 1976, The basalt stratigraphy and structure of the Saddle Mountains of south-central Washington: Washington State University Master of Science thesis, 116 p., 1 plate.

Geologic map: Plate, scale 1:18,000.

437. Tennyson, M. E., 1974, Stratigraphy, structure, and tectonic setting of Jurassic and Cretaceous sedimentary rocks in the west-central Methow–Pasayten area, northeastern Cascade Range, Washington and British Columbia: University of Washington Doctor of Philosophy thesis, 112 p., 3 plates.

Geologic map: Figure 2, scale 1:48,000.

438. Tepper, J. H., 1985, Petrology of the Chilliwack composite batholith, Mt. Sefrit area, North Cascades, Washington: University of Washington Master of Science thesis, 102 p., 1 plate.

Geologic map: Plate 1, scale 1:12,000.

439. Tepper, J. H., 1991, Petrology of mafic plutons and their role in granitoid genesis, Chilliwack batholith, North Cascades, Washington: University of Washington Doctor of Philosophy thesis, 307 p., 2 plates.

Geologic maps:

439a Map 1, scale 1:100,000;

439b Map 2, scale 1:24,000.

440. Thackray, G. D., 1996, Glaciation and neotectonic deformation on the western Olympic Peninsula, Washington: University of Washington Doctor of Philosophy thesis, 139 p., 2 plates.

Geologic map: Plate 1, scale 1:24,000.

441. Tharp, J. A., 1961, Geology and ore deposits of the Red Bird mining claims, Whatcom County, Washington: University of Washington Bachelor of Science thesis, 49 p.

Geologic map: Plate 3, scale 1:1,320.

442. Thoms, R. E., 1959, The geology and Eocene biostratigraphy of the southern Quimper Peninsula area, Washington: University of Washington Master of Science thesis, 102 p.

Geologic map: Figure 14, scale 1:40,550.

443. Thorsen, G. W., 1966, The geology of an amphibolite unit in northern Stevens and Pend Oreille Counties, Washington: Washington State University Master of Science thesis, 71 p., 1 plate.

Geologic map: Figure 11, scale 1:63,360.

444. Todd, M. R., 1939, The glacial geology of the Hamma Hamma Valley and its relation to the glacial history of the Puget Sound basin: University of Washington Master of Science thesis, 48 p., 1 plate.

Geologic map: Figure 10, scale 1:31,680.

445. Todd, W. A., 1961, Geology of the Bald Hornet claims: University of Washington Bachelor of Science thesis, 29 p.

Geologic map: Plate 2, scale 1:2,400.

446. Tolan, T. L., 1982, The stratigraphic relationships of the Columbia River Basalt Group in the lower Columbia River Gorge of Oregon and Washington: Portland State University Master of Science thesis, 151 p., 1 plate.

Geologic map: Plate, scale 1:21,120.

447. Treasher, R. C., 1925, Geology of the Pullman quadrangle: State College of Washington Master of Science thesis, 74 p., 3 plates.

Geologic map: Plate 1, scale 1:125,000.

448. Treat, C. L., 1987, Metamorphic and structural history of the Hicks Butte inlier, south-central Cascades, Washington: San Jose State University Master of Science thesis, 93 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

449. Twiss, S. N., 1933, Stratigraphy of Saddle Mountains: State College of Washington Master of Science thesis, 35 p., 1 plate.

Geologic map: Plate 1, scale 1:62,500.

450. Van Diver, B. B., 1964, Petrology of the metamorphic rocks, Wenatchee Ridge area, central northern Cascades, Washington: University of Washington Doctor of Philosophy thesis, 140 p., 2 plates.

Geologic map: Plate 2, scale 1:46,080.

451. Vance, J. A., 1957, The geology of the Sauk River area in the northern Cascades of Washington: University of Washington Doctor of Philosophy thesis, 312 p., 1 plate.

Geologic map: Plate 1, scale 1:62,500.

452. Vande Kamp, B. D., 1986, The geology of the Smith Canyon area, Okanogan County, Washington: Eastern Washington University Master of Science thesis, 46 p., 1 plate.

Geologic map: Figure 4, scale 1:12,000.

453. Vaugeois, L. M., 1998, Stratigraphic, petrographic, and paleogeographic analysis of the upper Eocene Hoko River Formation, Olympic Peninsula, Washington: Western Washington University Master of Science thesis, 98 p., 2 plates, 1 CD-ROM.

Geologic map: Plates 1 and 2, scale 1:100,000.

454. Villalobos, H. A., 1982, Engineering geology reconnaissance of five damsites and reservoir study areas, Similkameen River, Okanogan County, Washington: San Jose State University Master of Science thesis, 136 p., 3 plates.

Geologic maps:

454a Plate 1, scale 1:10,000;

454b Plate 2, scale 1:10,000;

454c Plate 3, scale 1:62,500.

455. Wade, W. M., 1988, Geology of the northern part of the Cooper Mountain batholith, north-central Cascades, Washington: San Jose State University Master of Science thesis, 88 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

456. Waggoner, G. L., 1981, Sedimentary analysis of gravel deposits in the vicinity of Clarkston, Washington: Washington State University Master of Science thesis, 107 p., 1 plate.

Geologic map: Plate, scale 1:24,000.

457. Wagoner, L. C., 1992, Geochemistry of the Eocene Klondike Formation lavas of the Republic graben, northeast Washington: Washington State University Master of Science thesis, 192 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

Note: mapped areas are separated

458. Waldron, R. L., 1986, Hydrothermal alteration of the Gamma Ridge rocks, on Glacier Peak, and their relation to hot spring activity: Western Washington University Master of Science thesis, 57 p.

Geologic map: Figure 2, scale 1:18,000.

459. Wallace, W. K., 1976, Bedrock geology of the Ross Lake fault zone in the Skymo Creek area, North Cascades National Park, Washington: University of Washington Master of Science thesis, 111 p., 1 plate (on two sheets).

Geologic map: Plate I, scale 1:6,000.

460. Warren, W. C., 1933, Age of certain andesites in the Mount Aix (Washington) quadrangle: State College of Washington Master of Science thesis, 24 p.

Geologic map: Plate II, scale 1:125,000.

461. Waters, A. C., 1930, Geology of the southern half of the Chelan quadrangle, Washington: Yale University Doctor of Philosophy thesis, 256 p., 2 plates.

Geologic map: Plate 1, scale 1:72,410.

462. Webb, R. T., 1957, Petrography, structure and mineralization of the Meadow Creek area, Chelan County, Washington: University of Arizona Master of Science thesis, 51 p., 8 plates.

Geologic map: Plate 1, scale 1:9,600.

463. Wegmann, K. W., 1999, Late Quaternary fluvial and tectonic evolution of the Clearwater River basin, western Olympic Mountains, Washington State: University of New Mexico Master of Science thesis, 217 p., 4 plates.

Geologic maps: Plates 1, 2, 3, and 4, scale 1:12,000.

464. Wells, R. E., 1982, Paleomagnetism and geology of Eocene volcanic rocks in southwest Washington—Constraints on mechanisms of rotation and their regional tectonic significance: University of California at Santa Cruz Doctor of Philosophy thesis, 229 p., 1 plate.

Geologic map: Plate, scale 1:62,500.

465. West, J. R., 1976, First Thought Mountain, Stevens County, Washington—A volcano within a caldera: Eastern Washington State College Master of Science thesis, 30 p., 2 plates.

Geologic map: scale 1:12,000.

466. White, P. J., 1986, Geology of the Island Mountain area, Okanogan County, Washington: University of Washington Master of Science thesis, 80 p., 1 plate.

Geologic map: Figure 3,scale 1:24,000.

467. White, R. O., 1981, The geology of the Schminski molybdenum deposit (Colville Indian Reservation), Ferry County, Washington: Washington State University Master of Science thesis, 103 p., 2 plates.

Geologic map: Plate 3.1, scale 1:5,200.

468. Wicklund, M. A., 1984, Geology and genesis of the rocks of the Graeber uranium area, Stevens County, Washington: Eastern Washington University Master of Science thesis, 160 p., 2 plates.

Geologic map: Plate 1, scale 1:1,200.

469. Wiebe, R. A., 1963, The geology of Mount Pilchuck: University of Washington Master of Science thesis, 53 p.

Geologic map: Plate 1, scale 1:29,000.

470. Wiedenhoeft, G. R., 1986, Structural geology of parts of the Metaline district, N.E. Washington: Washington State University Master of Science thesis, 115 p., 4 plates.

Geologic maps:

470a Plate I, scale 1:12,000;

470b Plate II, scale 1:9,000;

470c Plate III, scale 1:6,000;

470d Plate IV, scale 1:6,000.

471. Williams, R. K., 1952, The geology of Cape Disappointment quadrangle and a portion of Fort Columbia quadrangle, Washington: University of Oregon Master of Science thesis, 56 p., 1 plate.

Geologic map: scale 1:62,500.

472. Williams, V. S., 1971, Glacial geology of the drainage basin of the Middle Fork of the Snoqualmie River: University of Washington Master of Science thesis, 45 p., 1 plate.

Geologic map: Plate 1, scale 1:24,000.

473. Willis, C. L., 1950, Geology of the northeastern quarter of Chiwaukum quadrangle, Washington: University of Washington Doctor of Philosophy thesis, 158 p., 4 plates.

Geologic map: Plate 46, scale 1:62,500.

474. Wilson, D. L., 1978, The origin of serpentinites associated with the Shuksan Metamorphic Suite near Gee Point, Washington: Western Washington University Master of Science thesis, 64 p., 1 plate.

Geologic map: Plate, scale 1:15,840.

475. Wilson, J. R., 1975, Geology of the Price Lake area, Mason County, Washington: North Carolina State University Master of Science thesis, 79 p., 2 plates.

Geologic map: Plate 1, scale 1:10,000.

476. Winters, W. J., 1984, Stratigraphy and sedimentology of Paleogene arkosic and volcaniclastic strata, Johnson Creek–Chambers Creek area, southern Cascade Range, Washington: Portland State University Master of Science thesis, 162 p., 2 plates.

Geologic map: Plate 1a, scale 1:24,000.

477. Wise, W. S., 1961, The geology and mineralogy of the Wind River area, Washington, and the stability relations of celadonite: Johns Hopkins University Doctor of Philosophy thesis, 2 v., 2 plates.

Geologic map: Plate 1, scale 1:62,500.

478. Woodward, A. F., 1936, The geology of the Whitestone Mountain area, Washington: Stanford University Master of Arts thesis, 35 p., 1 plate.

Geologic map: Plate 2, scale 1:62,500.

479. Wright, T. L., 1960, The mineralogy and petrogenesis of the southern part of the Tatoosh pluton, Mount Rainier National Park, Washington: Johns Hopkins University Doctor of Philosophy thesis, 2 v., 4 plates.

Geologic maps: Plate 2, scale 1:12,000; Plate 4, scale 1:1,200.

480. Yeaton, W. J., 1923, The geology of the Zillah quadrangle, Washington: University of Chicago Master of Science thesis, 88 p., 6 plates.

Geologic map: Sheet 1, scale 1:125,000.

481. Yeats, R. S., Jr., 1956, Petrology and structure of the Mt. Baring area, northern Cascades, Washington: University of Washington Master of Science thesis, 80 p., 2 plates.

Geologic map: scale 1:56,320.

482. Yeats, R. S., Jr., 1958, Geology of the Skykomish area in the Cascade mountains of Washington: University of Washington Doctor of Philosophy thesis, 270 p., 2 plates.

Geologic map: Plate 1, scale 1:62,500.

483. Yost, C. R., 1976, Gravity survey of the Cheney quadrangle, Washington: Eastern Washington State College Master of Science thesis, 37 p., 6 plates.

Geophysical map: Figure 3 (gravity), scale 1:53,360.

484. Young, R. E., 1963, Geology of the Swauk Formation in the Leavenworth, Washington area: University of Washington Bachelor of Science thesis, 49 p.

Geologic map: scale 1:63,360.

485. Young, R. E., 1966, Geology and biostratigraphy of the Knappton, Washington area: University of Washington Master of Science thesis, 186 p., 2 plates.

Geologic map: scale 1:40,800.

486. Zamboras, R. L., 1979, The geology and hydrothermal mineralization at the Molly property and vicinity, Snohomish County, Washington: Western Washington University Master of Science thesis, 88 p., 2 plates.

Geologic map: Plate 3, scale 1:15,840.

487. Ziegler, C. B., 1985, The structure and petrology of the Swift Creek area, western North Cascades, Washington: Western Washington University Master of Science thesis, 191 p., 5 plates.

Geologic maps:

487a Plate 1A, scale 1:15,840;

487b Plate 3B, scale 1:100,000.

488. Kleibacker, D. W., 2001, Sequence statigraphy and lithofacies of the middle Eocene upper McIntosh and Cowlitz Formations, geology of the Grays River volcanics, Castle Rock-Germany Creek area, southwest Washington: Oregon State University Master of Science thesis, 219 p., 1 compact disk, 3 plates.

Geologic map: Plate I, scale 1:24,000.

489. Alsleben, Helge, 2000, Structural analysis of the Swakane terrane, North Cascades core, Washington: San Jose State University Master of Science thesis, 168 p., 3 plates.

Geologic map: Plates 2 and 3, scale 1:2,500. ■

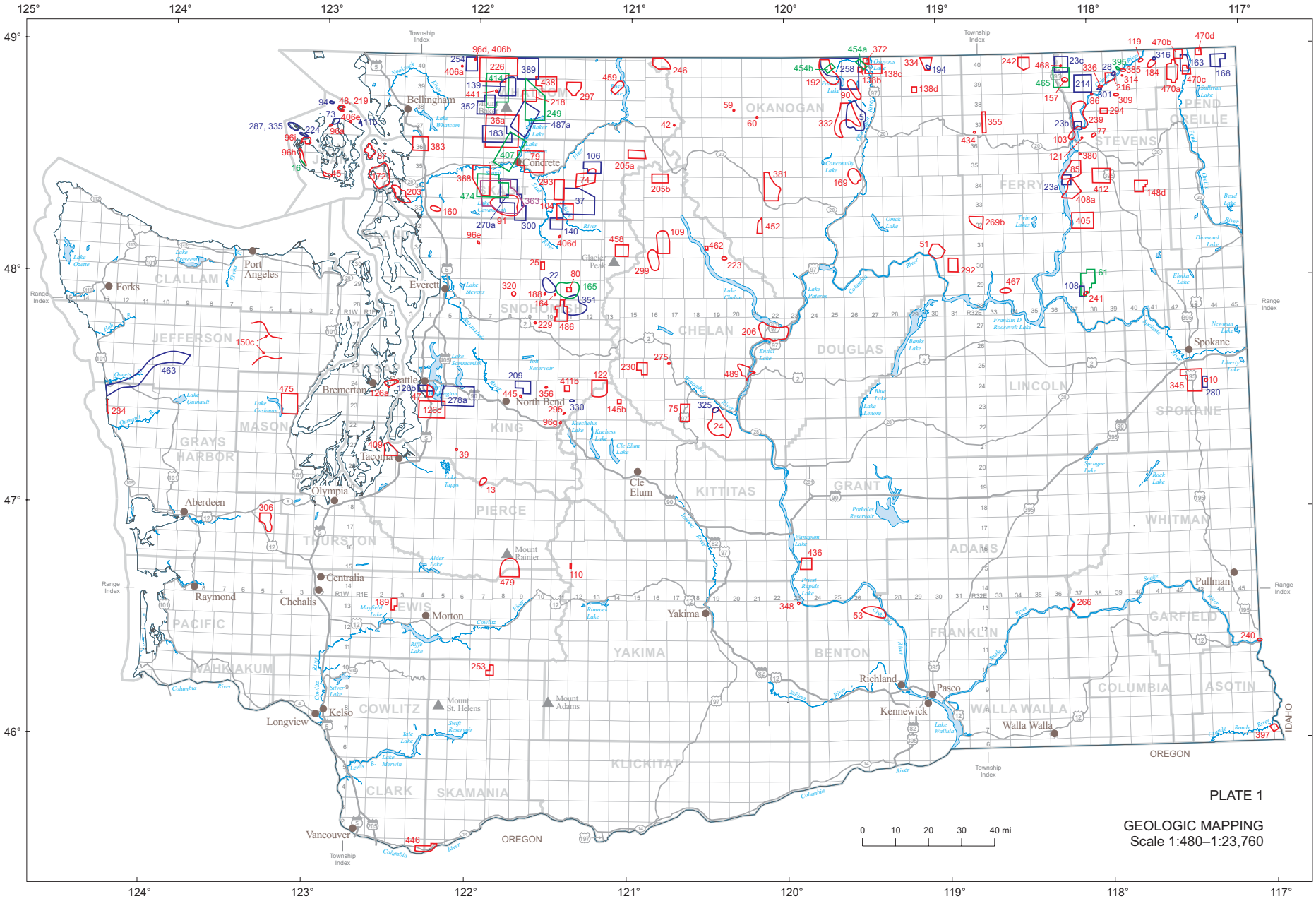
PLATE 1
GEOLOGIC MAPPING
Scale 1:480–1:23,760
0 10 20 30 40 mi
125° 124° 123° 122° 121° 120° 119° 118° 117°
49° 48° 47° 46°
Bellingham
Concrete
Port Angeles
Forks
Everett
Seattle
Bremerton
Tacoma
Olympia
Aberdeen
North Bend
Cle Elum
Spokane
Centralia
Chehalis
Raymond
Morton
Yakima
Pullman
Richland
Pasco
Kennewick
Walla Walla
Kelso
Longview
Vancouver
Mount Rainier
Mount St. Helens
Mount Adams
Glacier Peak
CLALLAM
JEFFERSON
GRAYS HARBOR
MASON
KITSAP
SNOHOMISH
KING
PIERCE
THURSTON
PACIFIC
LEWIS
WAHKIAKUM
COWLITZ
CLARK
SKAMANIA
KLICKITAT
YAKIMA
OKANOGAN
CHELAN
DOUGLAS
KITTITAS
GRANT
ADAMS
BENTON
FRANKLIN
WALLA WALLA
COLUMBIA
ASOTIN
GARFIELD
WHITMAN
LINCOLN
SPOKANE
STEVENS
FERRY
PEND OREILLE
OREGON
IDAHO
Township Index
Range Index

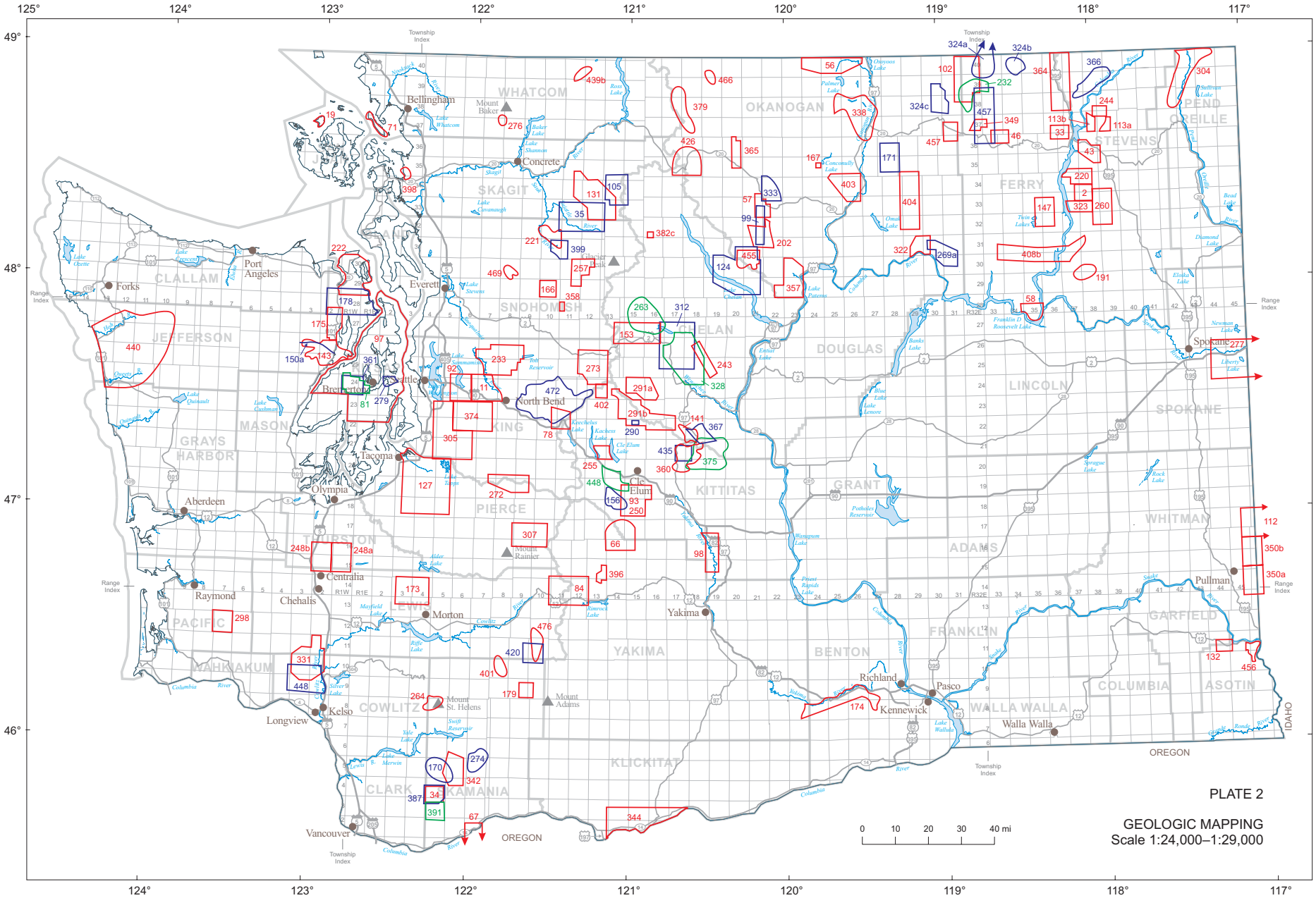
PLATE 2
GEOLOGIC MAPPING
Scale 1:24,000–1:29,000
0 10 20 30 40 mi
WHATCOM
SKAGIT
SNOHOMISH
OKANOGAN
CHELAN
DOUGLAS
FERRY
STEVENS
PEND OREILLE
LINCOLN
SPOKANE
CLALLAM
JEFFERSON
KING
KITTITAS
GRANT
ADAMS
WHITMAN
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
FRANKLIN
BENTON
YAKIMA
KLICKITAT
CLARK
SKAMANIA
COWLITZ
WAHKIAKUM
PACIFIC
LEWIS
THURSTON
PIERCE
MASON
GRAYS HARBOR
Bellingham
Mount Baker
Concrete
Port Angeles
Forks
Everett
Seattle
Bremerton
North Bend
Tacoma
Olympia
Aberdeen
Centralia
Chehalis
Raymond
Morton
Kelso
Longview
Vancouver
Mount St. Helens
Mount Adams
Mount Rainier
Glacier Peak
Cle Elum
Yakima
Richland
Pasco
Kennewick
Walla Walla
Pullman
Spokane
OREGON
IDAHO
Township Index
Range Index

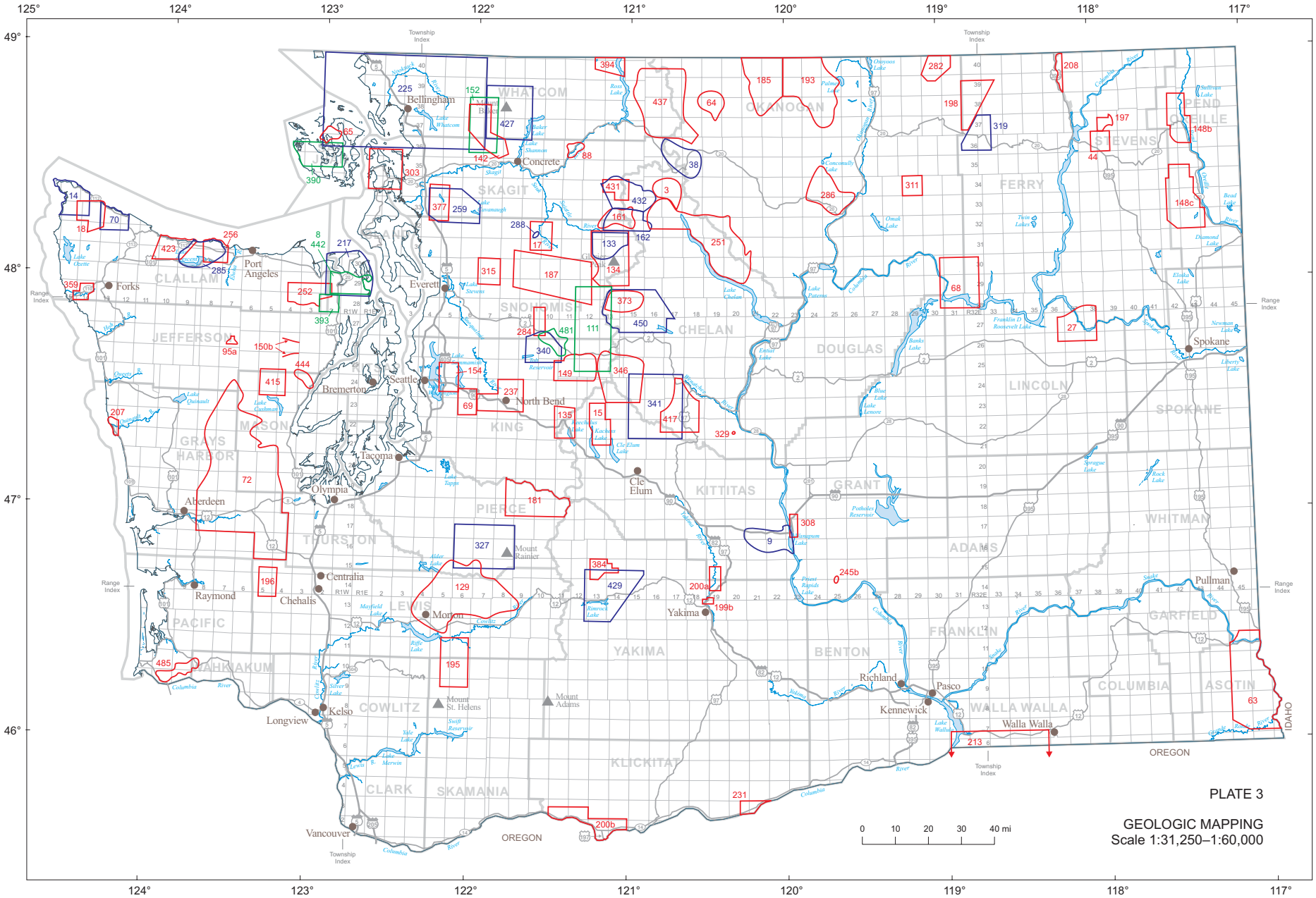
PLATE 3
GEOLOGIC MAPPING
Scale 1:31,250–1:60,000
0 10 20 30 40 mi
125° 124° 123° 122° 121° 120° 119° 118° 117°
49° 48° 47° 46°
Bellingham
Concrete
Port Angeles
Forks
Everett
Seattle
Bremerton
North Bend
Tacoma
Olympia
Aberdeen
Centralia
Chehalis
Raymond
Morton
Kelso
Longview
Vancouver
Cle Elum
Yakima
Richland
Pasco
Kennewick
Walla Walla
Spokane
Pullman
Mount Rainier
Mount St. Helens
Mount Adams
WHATCOM
SKAGIT
SNOHOMISH
CLALLAM
JEFFERSON
KING
MASON
GRAYS HARBOR
THURSTON
PIERCE
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
CLARK
SKAMANIA
KITTITAS
YAKIMA
KLICKITAT
CHELAN
DOUGLAS
OKANOGAN
GRANT
BENTON
FRANKLIN
ADAMS
LINCOLN
SPOKANE
WHITMAN
GARFIELD
COLUMBIA
WALLA WALLA
ASOTIN
FERRY
STEVENS
PEND OREILLE
OREGON
IDAHO
Range Index
Township Index

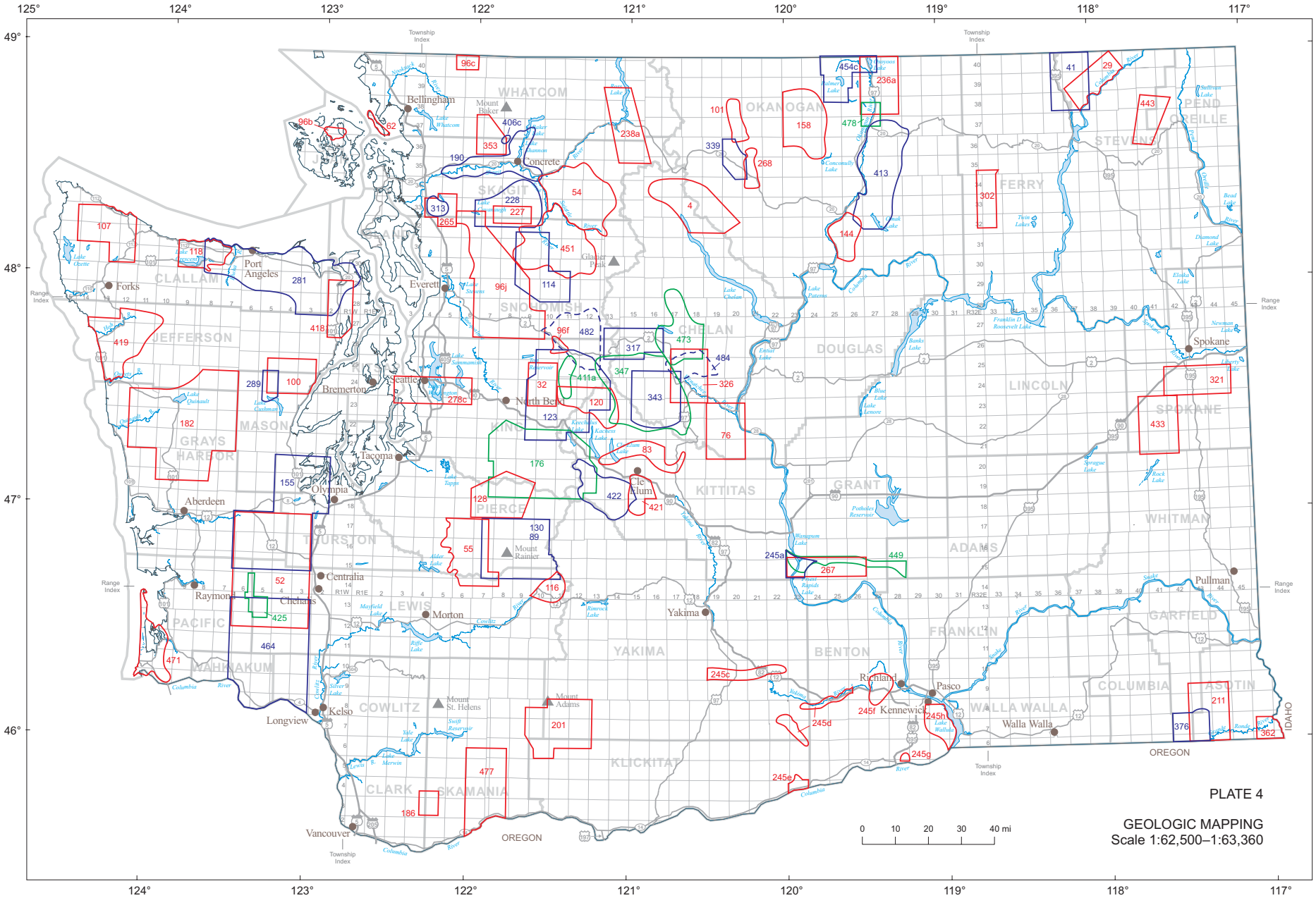
PLATE 4
GEOLOGIC MAPPING
Scale 1:62,500–1:63,360
0 10 20 30 40 mi
125° 124° 123° 122° 121° 120° 119° 118° 117°
49° 48° 47° 46°
WHATCOM
SKAGIT
SNOHOMISH
CHELAN
OKANOGAN
DOUGLAS
FERRY
STEVENS
PEND OREILLE
LINCOLN
SPOKANE
CLALLAM
JEFFERSON
KING
KITTITAS
GRANT
ADAMS
WHITMAN
GRAYS HARBOR
MASON
THURSTON
PIERCE
LEWIS
PACIFIC
WAHKIAKUM
YAKIMA
BENTON
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
COWLITZ
CLARK
SKAMANIA
KLICKITAT
Bellingham
Mount Baker
Concrete
Glacier Peak
Port Angeles
Forks
Everett
Seattle
Bremerton
North Bend
Tacoma
Olympia
Aberdeen
Cle Elum
Mount Rainier
Centralia
Chehalis
Raymond
Morton
Yakima
Kelso
Longview
Mount St. Helens
Mount Adams
Vancouver
Richland
Pasco
Kennewick
Walla Walla
Spokane
Pullman
OREGON
IDAHO
Township Index
Range Index

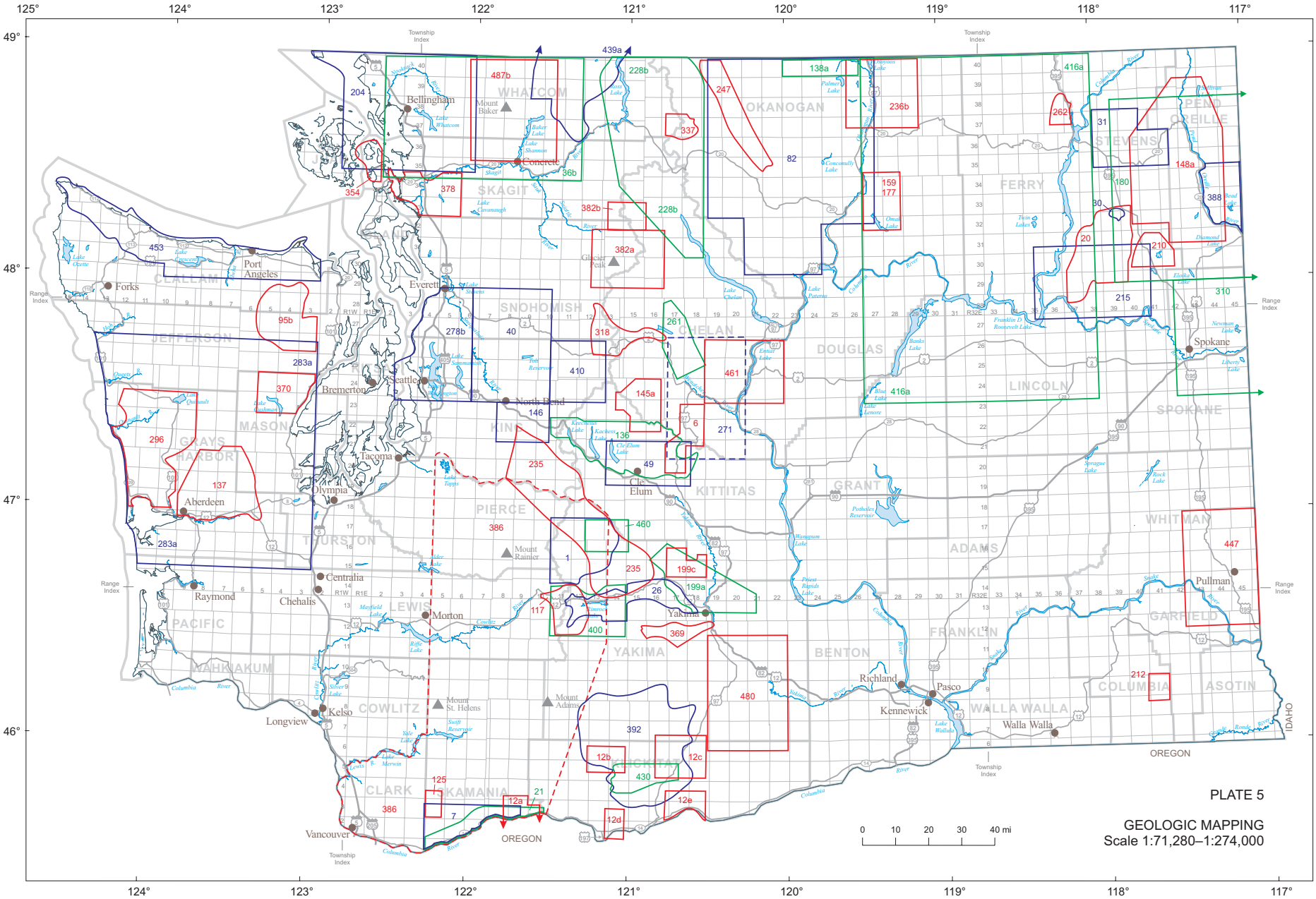
PLATE 5
GEOLOGIC MAPPING
Scale 1:71,280–1:274,000
0 10 20 30 40 mi
125° 124° 123° 122° 121° 120° 119° 118° 117°
49° 48° 47° 46°
WHATCOM
SKAGIT
SNOHOMISH
OKANOGAN
CHELAN
DOUGLAS
FERRY
STEVENS
PEND OREILLE
LINCOLN
SPOKANE
JEFFERSON
CLALLAM
KING
KITTITAS
GRANT
ADAMS
WHITMAN
GARFIELD
MASON
GRAYS HARBOR
THURSTON
PIERCE
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
YAKIMA
BENTON
FRANKLIN
COLUMBIA
ASOTIN
WALLA WALLA
CLARK
SKAMANIA
KLICKITAT
Bellingham
Mount Baker
Concrete
Port Angeles
Forks
Everett
Glacier Peak
Seattle
Bremerton
North Bend
Tacoma
Olympia
Aberdeen
Cle Elum
Centralia
Chehalis
Raymond
Morton
Yakima
Mount Rainier
Mount St. Helens
Mount Adams
Kelso
Longview
Vancouver
Spokane
Pullman
Richland
Pasco
Kennewick
Walla Walla
OREGON
IDAHO
Township Index
Range Index

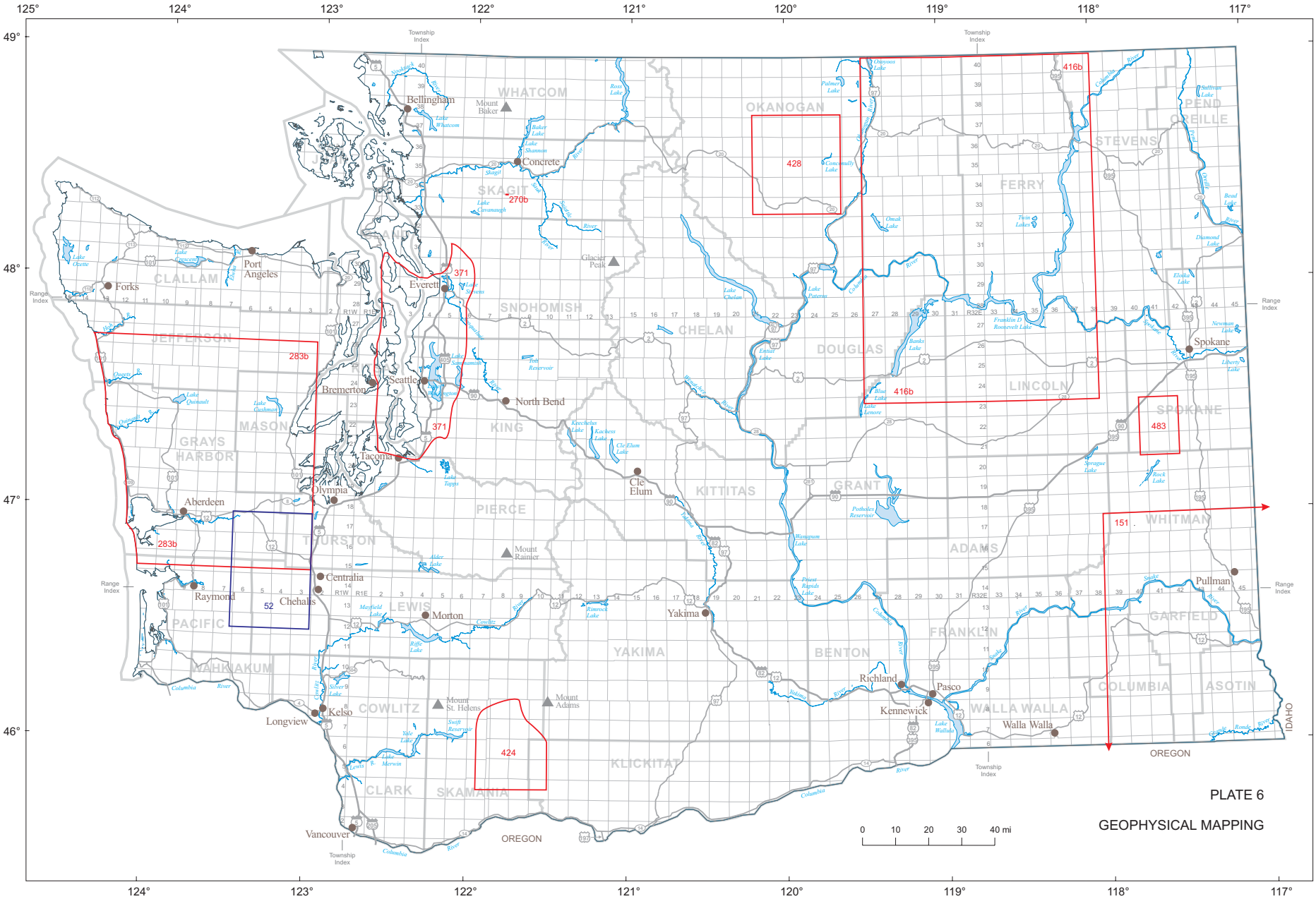
PLATE 6
GEOPHYSICAL MAPPING
WHATCOM
SKAGIT
SNOHOMISH
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
KING
CHELAN
DOUGLAS
LINCOLN
SPOKANE
GRAYS HARBOR
MASON
PIERCE
KITTITAS
GRANT
ADAMS
WHITMAN
THURSTON
LEWIS
YAKIMA
FRANKLIN
BENTON
GARFIELD
PACIFIC
WAHKIAKUM
COWLITZ
KLICKITAT
COLUMBIA
ASOTIN
WALLA WALLA
CLARK
SKAMANIA
Bellingham
Mount Baker
Concrete
Port Angeles
Forks
Everett
Seattle
Bremerton
North Bend
Tacoma
Olympia
Aberdeen
Centralia
Chehalis
Raymond
Morton
Kelso
Longview
Vancouver
Mount St. Helens
Mount Adams
Mount Rainier
Glacier Peak
Cle Elum
Yakima
Richland
Pasco
Kennewick
Walla Walla
Spokane
Pullman
Range Index
Township Index
OREGON
IDAHO
0 10 20 30 40 mi
283b
371
270b
416b
428
424
483
151
52