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U.S. GEOLOGICAL SURVEY

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Geological Survey of Canada Open File 3446
sheet 1 of 7

U.S. Geological Survey Open File Report 97-161
sheet 1 of 7

Prepared in collaboration with:
Russian Academy of Sciences
Geological Committee of Russia
Alaska Division of Geological and Geophysical Surveys

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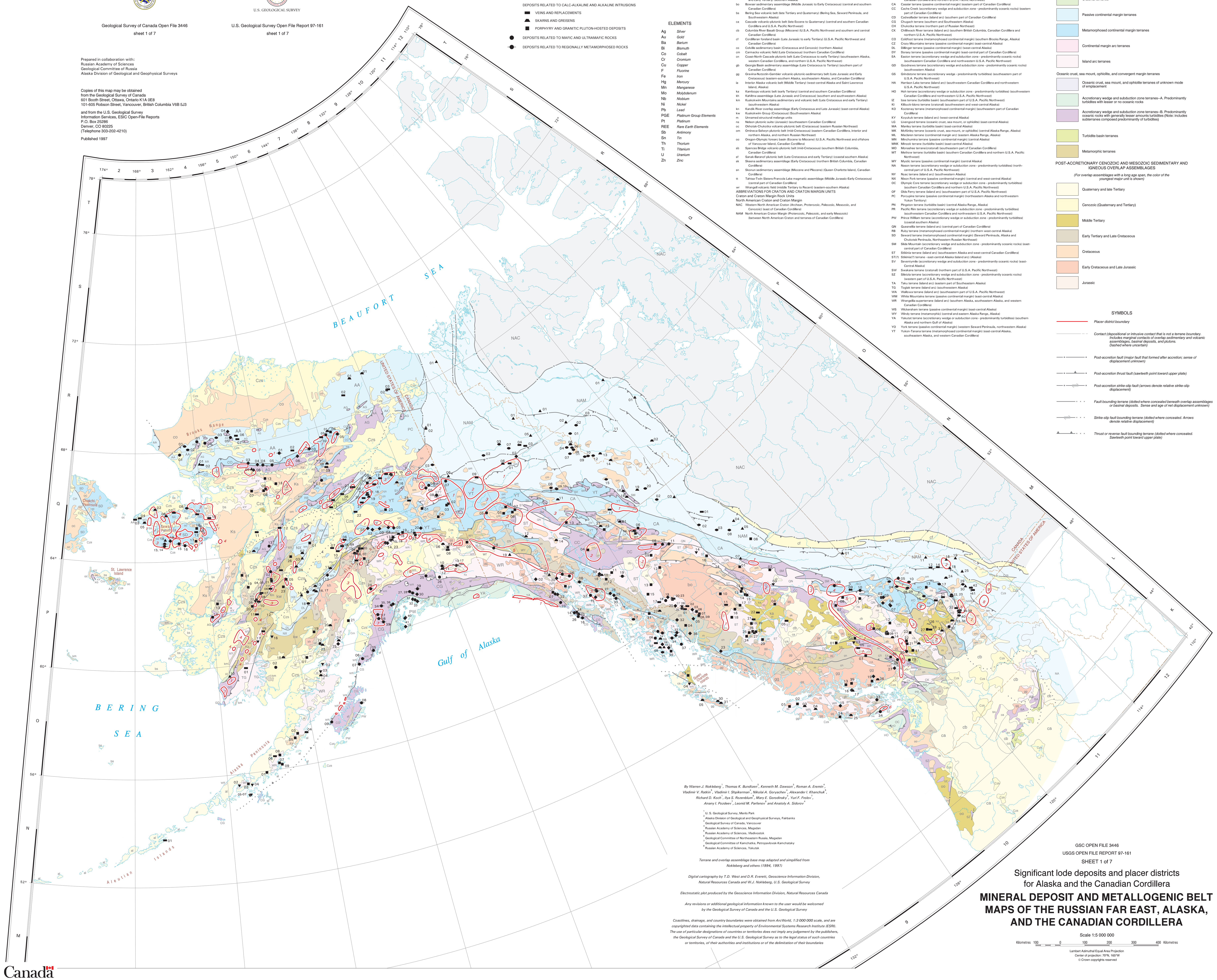

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Terrane and overlap assemblage base map adapted and simplified from Nokleberg and others (1994, 1997)

Digital cartography by T.D. West and D.R. Everett, Geoscience Information Division, Natural Resources Canada and W.J. Nokleberg, U.S. Geological Survey

Electrostatic plot produced by the Geoscience Information Division, Natural Resources Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada and the U.S. Geological Survey

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SHEET 1 of 7

Significant lode deposits and placer districts for Alaska and the Canadian Cordillera

MINERAL DEPOSIT AND METALLOGENIC BELT MAPS OF THE RUSSIAN FAR EAST, ALASKA, AND THE CANADIAN CORDILLERA

Scale 1:5 000 000

Kilometres 100 0 100 200 300 400 Kilometres

Lambert Azimuthal Equal Area Projection
Center of projection: 70°N, 165°W
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DESCRIPTIVE NOTES

This map (Sheet 1) and Sheet 2 depict at 5.0 million scale the significant lode mineral deposits and placer districts for the Russian Far East, Alaska, and the Canadian Cordillera. Also part of this map publication are five metallogenic belt maps at 10.0 million scale that depict pre-accretionary metallogenic belts (Sheets 3-5), accretionary metallogenic belts (Sheet 6), and post-accretionary metallogenic belts (Sheet 7). All seven sheets depict lode deposits on a simplified version of the Circum-North Pacific tectonostratigraphic terrane map (Nokleberg and others, 1994, 1997). This display of mineral deposit and metallogenic belt patterns on a simplified terrane map allows the interpretation of the origin of individual and belts of mineral deposits with respect to geologic host rocks.

Sheets 1 and 2 also contain a summary table for lode mineral deposits that states the mineral deposit number for each quadrant, deposit name, deposit model, and major metals. A similar summary table for placer districts states mineral deposit number for each quadrant, deposit name, deposit model, major metals. Lode deposits and placer districts are numbered separately within individual quadrants bounded by integer values of 4° of latitude and 6° of longitude. The quadrants are numbered from west to east, and are lettered from south to north. In the summary mineral deposit tables, the major metals are the known potentially valuable metals reported for each deposit, and are listed in order of decreasing abundance and (or) value, and are shown by standard chemical symbols. The type of lode deposit is an interpretation that was made by examining the summary of the deposit and then classifying the deposit using the deposit models previously described.

A metallogenic belt is defined as geologic unit (area) that either contains or is favorable for a group of coeval and genetically-related, significant lode and placer deposit models. Metallogenic belts are subdivided into (1) pre-accretionary deposits that formed early in the geologic history of each tectonostratigraphic terrane and are thereby unique to each terrane; (2) (syn)accretionary deposits that formed during periods of major structural juxtaposition, regional deformation, and penetrative deformation that generally occurred during collision of now adjacent terranes; and (3) post-accretionary deposits that consist mainly of igneous-arc-related deposits that formed late in the geologic history of groups of terranes, and generally occur in two or more adjacent terranes. The metallogenic belts defined in this report are based on the significant deposits of the region which were selected to be representative of the metallogeny of the region.

Additional detailed information on mineral deposits is available in U.S.G.S. Open-File Report 96-513-A on lode mineral deposits and placer districts of the Russian Far East, Alaska and the Canadian Cordillera (Nokleberg and others, 1996).

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DEPOSIT MODEL	MAJOR METALS
Pb-Zn skarn and manto	Pb, Zn, Ag
Pb-Zn skarn	Pb, Zn, Cu, Sn, Ag
Ag polymetallic vein and replacement	Ag, Zn
Pb-Zn-(Cu)-Ag skarn	Pb, Zn, Ag, (Cu)
Sn silicate-sulfide vein	Sn
Fe-Pb-Zn-Sn skarn	Fe, Pb, Zn, Sn
Pb-Zn skarn	Pb, Zn, Cu, Ni

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