

# GEOGRAPHIC BASE MAP OF NORTHEAST ASIA

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## INTRODUCTION

A digital geographic base map for Northeast Asia and adjacent offshore areas is prepared in digital format using ARC/Info (ESRI, 1991a, b) on a Sun SPARC 10 workstation and converted into Adobe Illustrator<sup>1</sup> and Corel Draw<sup>2</sup> formats on Windows<sup>3</sup> (IBM PC) and Macintosh compatible computers. The base map is intended primarily for use in compiling geologic and mineral resource data at 1:5,000,000 scale. This base map was recently published separately by Miller and others (1998).

The base map is converted from digital data published as The Digital Chart of the World (DCW) (U.S. Defense Mapping Agency, 1992a, b, c, DMA and ESRI, 1991a, b) in which the source data are at a scale of 1:1,000,000. These data were converted into ARC/Info using a procedure developed for this purpose. The data were merged and edited with ARC/Info, converted to Adobe Illustrator format through the use of MapPublisher, and subsequently converted into Corel Draw format. This report describes the base map and various aspects of as compiled in Corel Draw.

This map is the first of a series of maps, explanations, tables, and interpretative articles for a project on the *Mineral Resources, Metallogenesis, and Crustal Origin and Evolution of Mineralizing Systems of Northeast Asia (Eastern and Southern Siberia, Mongolia, Northeastern China, South Korea, and Japan)*. Data from the new project will benefit participants by: (1) providing a comprehensive international data base on the mineral resources of the region that will be the first, extensive knowledge available in English; (2) providing major new interpretations of the origin and crustal evolution of mineralizing systems and their host

rocks, thereby enabling enhanced, broad-scale tectonic reconstructions and interpretations; and (3) promoting trade and scientific and technical exchanges between North America and Eastern Asia. The new project will extend and build on data and interpretations from a prior project on the *Major Mineral Deposits, Metallogenesis, and Tectonics of the Russian Far East, Alaska, and the Canadian Cordillera* (Figure 1) that is being completed by the U.S.G.S., Russian Academy of Sciences, ROSKOMNEDRA, the Alaska State Geological Survey, and the Geological Survey of Canada. Information about both projects can be obtained from the Internet/Web at:

<http://minerals.er.usgs.gov/wr/projects/minres.html> or  
<http://minerals.er.usgs.gov/wr/projects/majdeps.html>

## MAP PARAMETERS

**Map Area:** Region within 75°E to 144°E, 30°N to 82°N that comprises Eastern and Southern Siberia, Mongolia, Northeastern China, Korea, Japan, and adjacent offshore areas.

**Map Projection:** Lambert Equal Area Azimuthal.

### Projection Parameters:

Spheroid: Clarke 1866 (default)  
Semi-major & Semi-minor Axes: 6,378,206.4  
m & 6,356,583.8 m  
Central Longitude: 110°  
Central Latitude: 60°  
False Northing: 0  
False Easting: 0  
Map Units: meters  
Map Coordinates: Are defined as meters on the ground, *not* digitizer units such as inches.

## MAP LAYERS

Name	Color	Comment
lettering	Black	All map lettering.
qdlab	Black	Lines for large grid for 4 by 6 degree quadrants of latitude and longitude.
latlon	Black	Latitude and longitude lines at 4 spacing for latitude and 6 degree spacing for longitude.
city	Black	Points for cities and names for cities.
grid1	Black	Lines for grids bounded by 4 by 6 degree quadrants of latitude and longitude.
edge	Black	Map edge.
rail	Purple	Selected larger railroad lines.
shoreline	Black	Coastline.
lakes	Blue	Lake polygons.
rvnm	Black	Names of major rivers.
ocean	Blue	Ocean polygons.
Layer 1	–	Blank

## FEATURES OF THE DIGITAL BASE MAP

### Coordinate Grid

The base map has a grid of lines of equal latitude and longitude. These lines are spaced 6° apart horizontally and 4° vertically.

### Sectors

The map area is divided by the primary geographic grid into sectors 6° horizontally (east-west) and 4° vertically (north-south). The ends of grid lines bounding sectors are labeled with latitude and longitude values. Sector rows and columns are as follows:

ROWS		COLUMNS	
Label	Latitude Range	Label	Longitude Range
U	80 - 82*	43	75 - 78*
T	76 - 80	44	78 - 84
S	72 - 76	45	84 - 90
R	68 - 72	46	90 - 96
Q	64 - 68	47	96 - 102
P	60 - 64	48	102 - 108
O	56 - 60	49	108 - 114
N	52 - 56	50	114 - 120
M	48 - 52	51	120 - 126
L	44 - 48	52	126 - 132
K	40 - 44	53	132 - 138
J	36 - 40	54	138 - 144
I	32 - 36	55	144 - 150
H	30 - 32*		

\* The map contains only part of the usual width/height of these columns/rows.

### Rivers and Lakes

Selected larger rivers and lakes are shown for reference. Selected major rivers are named.

### Cities and Towns

Selected large cities (CAPITAL LETTERS) and towns (Upper and Lower Case) are shown for reference.

### Railroads

The map displays major and some regional/local rail lines. Most small rail lines and spurs present in the original DCW data have been removed.

### Plotting Scale

The base map is designed for plotting at 5.0 million scale. However, plotting at this scale requires an

oversize plotter. To plot the map on a plotter that employs 36 inch-wide paper, the width and height (plotting scale in Corel Draw) should be set to 66.667 (5.0 M divided by 7.5 M).

## Files

This part of this CD-ROM contains the following digital data:

- GEOGMAP3.TXT- ASCII (TXT) file describing base map publication.
- GEOGMAP3.DOC- same as TXT file describing base map publication in Microsoft Word 6<sup>3</sup> format (DOC).
- GEOGMAP3.PDF- same as TXT file describing base map publication in Adobe Acrobat<sup>2</sup> Portable Document format (PDF).
- GEOGMAP2.DOC - This pamphlet with map explanation in Microsoft Word 6<sup>3</sup> format (DOC).
- GEOGMAP2.PDF - This pamphlet with map explanation in Adobe Acrobat<sup>2</sup> Portable Document format (PDF). (Adobe Acrobat Reader supplied on this CD-ROM).
- GEOGMAP1.AI - Digital base map in Adobe Illustrator<sup>2</sup> 7 format.
- GEOGMAP1.CDR - Digital base map in Corel Draw<sup>3</sup> 7 format.
- GEOGMAP1.EPS - Digital base map in Encapsulated PostScript format.
- GEOGMAP1.PDF - Digital base map in Adobe Acrobat<sup>2</sup> Portable Document (PDF) format (Adobe Acrobat Reader supplied on this CD-ROM).

## System Requirements

The data and text for this part of this CD-ROM require either a Windows (IBM or compatible) personal computer or a Macintosh or compatible computer. The Windows computer should have a 486 or higher processor (Pentium recommended), Windows<sup>1</sup> 3.1 or higher (Windows 95, 98, or Windows NT recommended), 16 megabytes RAM (32 or more MB recommended), and a VGA color monitor that can display 256 colors. The Macintosh should have a 68020 or higher processor (PowerPC recommended), 8 megabytes RAM (16 MB recommended), Apple System Software version 7.0 or later (7.1.2 or later recommended), and a 13-inch color monitor that can display 256 colors.

<sup>1</sup> Registered trademark of Microsoft Corporation.

<sup>2</sup> Registered trademark of Adobe Systems, Inc.

<sup>3</sup> Registered trademark of Corel Corporation.

## Assistance

Questions, suggestions, and comments regarding this CD-ROM should be addressed to:

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## REFERENCES CITED

- Environmental Systems Research Institute (ESRI), 1991a, ARC/INFO command reference—ARC command references: Redlands, California, Environmental Systems Research Institute, sections variously paged. [Note: This published reference is to ARC version 6.0. Version 7 and later have on-line documentation.]
- Environmental Systems Research Institute (ESRI), 1991b, ARC/INFO user's guide—AML user's guide—Application programming language reference: Redlands, California, Environmental Systems Research Institute, sections variously paged.
- Miller, R.J., Koch, R.D., Nokleberg, W.J., Hwang, Duk-Hwan, Ogasawara, Masatsugu, Orolmaa, Demberel, Prokopiev, A.V., Sudo, Sadahisa, Vernikovsky, V.A., and Ye, Mao, 1998, Geographic base map of Northeast Asia: U.S. Geological Survey Open-File Report 98-769, scale 1:5,000,000, 2 floppy disks.
- U.S. Defense Mapping Agency (DMA), 1992a, MIL-D-89009 Military specification—Digital chart of the world (DCW): U.S. Defense Mapping Agency, 204 p. [Available from the Defense Printing Service, 700 Robbins Avenue (Building 4D), Philadelphia, PA 19111-5094. Voice: (215) 697-4107, FAX: (215) 697-1462]
- U.S. Defense Mapping Agency (DMA), 1992b, Digital chart of the world, Edition 1, 4 CD-ROMs [Available from U.S. Geological Survey EROS Data Center, Mundt Federal Building, Sioux Falls, SD 57198. Voice telephone: (605) 594-6511, extension 6151; FAX: (605) 594-6589]
- U.S. Defense Mapping Agency (DMA), 1992c, MIL-STD-600006—Military standard—Vector Product Format: U.S. Defense Mapping Agency, 212 pg. [Available from the Defense Printing Service, 700 Robbins Avenue (Bldg 4D), Philadelphia, PA 19111-5094. Voice telephone: (215) 697-4107, FAX: (215) 697-1462]
- U.S. Defense Mapping Agency (DMA) and Environmental Systems Research Institute (ESRI), 1992, Development of the Digital Chart of the World, 91 pg. [Available for \$19.50 plus \$4.00 handling as NTIS Report ADA265097 from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Voice telephone: (703) 487-4600.]