

## METADATA RECORD

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### **Identification:**

**Title:** Satellite Image Maps, northwestern Ontario

**Acronym:** MRD-117

**Author(s):** Singhroy, V.H., Barnett, P.J., Assouad, P., Molch, K. and Leney, S.J.

**Abstract:** A series of 47, 1:100 000-scale image maps were produced as a result of co-operative research done by the Ontario Geological Survey, Ministry of Northern Development and Mines and the Canada Centre for Remote Sensing, Natural Resources Canada. The series of Satellite Image Maps portray enhanced terrain conditions as viewed from space. They provide a pseudo-three-dimensional overview of the terrain and its conditions. The Satellite Image Maps are products of the fusion of a shaded digital elevation model (Hillshade) and Landsat Extended Thematic Mapper (Landsat ETM) or Landsat Thematic Mapper (Landsat TM) image. Image maps are useful for orienting and planning various types of ground survey operations. The series of Satellite Image Maps covers a large part of the northern boreal forest region of northwestern Ontario between latitudes 51° and 54° N and between longitude 87° W and the Manitoba-Ontario provincial boundary.

**Purpose or Objective:** Satellite Image Maps are a series of 47, 1:100 000-scale image maps produced as a result of co-operative research done by the Ontario Geological Survey, Ministry of Northern Development and Mines and the Canada Centre for Remote Sensing, Natural Resources Canada. The overall goal of the joint research was to develop a process for terrain analysis that would produce maps similar to the Northern Ontario Engineering Geology Terrain Studies (NOEGTS) of the 1980's (Gartner et.al., 1981). Digital Elevation Models (DEMs), their derivatives and remotely-sensed imagery are used to delineate areas with different terrain conditions. The process to do terrain analysis uses a Geographic Information System (GIS) to analyze the DEM and remotely-sensed data and is particularly useful for terrain analysis of large areas or areas with limited access and/or financial resources. The Satellite Image Maps are products of the fusion of a shaded digital elevation model (Hillshade) and Landsat Extended Thematic Mapper (Landsat ETM) or Landsat Thematic Mapper (Landsat TM) image.

The NOEGTS terrain maps produced previously have been quite useful in providing regional information on geological conditions of the landscape. These conditions affect or determine resource capability of an area as well as identify and outline possible constraints (Gartner et.al., 1981). They have been used extensively for regional planning purposes in forest management, drift exploration and in ecological land classification studies completed by both private and public organizations. The area north of 51° N latitude is in need of such terrain information. It is a part of Ontario's new frontier for the mineral and forest industries.

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**Restrictions or Legal Prerequisites:** No restrictions

**Usage constraints:**

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Singhroy, V.H., Barnett, P.J., Assouad, P., Molch, K. and Leney, S.J. 2003. Satellite Image Maps, Northwestern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 117.

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### **Time Period Information:**

**Time Period Coverage:** The satellite images used in the creation of the Satellite Image Maps were taken between 1999 and 2002. The actual date of image acquisition is given in the surround of the Preliminary Map files (Pxxxx.tif).

**Status of Data Set:** Complete

**Data Maintenance Cycle:** None Planned

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### **Keywords:**

**Chosen Keywords:** Remote sensing, spatial analysis, G.I.S., digital maps, landforms, topography,

**Business Theme(s):** Remote sensing applications, analysis, development

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### **Geographic Extent:**

#### **Rectangular Bounding Coordinates:**

**North Latitude:** 54° 00' 00" N  
**East Longitude:** 87° 00' 00" W

**South Latitude:** 51° 00' 00" N  
**West Longitude:** 95° 12' 00" W

**Named Regions:** (townships, regions or municipalities)

**User-defined region(s):**

Point:

Line:

Polygon:

**Geographic Completeness:** 100% Complete

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**Mapping Information:**

**Grid Coordinate System Used:** Universal Transverse Mercator (False Easting = 0, False Northing = 0)

**Map Projection:** Transverse Mercator

**Horizontal Geodetic Datum:** NAD 83

**Vertical Datum:** Not Applicable

**Horizontal Position Accuracy of Features:** Approximate +/- 500m

**Vertical Position Accuracy of Features:** Not Applicable

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**Data Source Information:**

**Data Source Type:** Digital map file, Satellite Image

**Source Contribution:** The Satellite Image Map files are products of the fusion of a shaded digital elevation model (Hillshade) and Landsat Extended Thematic Mapper (Landsat ETM) or Landsat Thematic Mapper (Landsat TM) image.

**Time Period:** 1999 to 2002

**Name of Source Data Set:** Landsat ETM and TM images; Shaded digital elevation model (Hillshade)

**Acronym of Source Data Set:**

**Source Data Set Description:** Landsat ETM and TM images are Satellite Images; Shaded digital elevation model (Hillshade)

**Organization that created Source Data Set:** Landsat ETM image: Received by the Canada Centre for Remote Sensing (CCRS). Processed and distributed by RADARSAT International under licence from CCRS, Acknowledgements EROS Data Centre; Ontario Geomatics Service Centre.

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**Distribution:**

**General Distribution Information:**

Ministry of Northern Development and Mines  
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**Distribution Fees:** This data is available on a 4-CD set: \$175.00 plus applicable taxes

**Language:** English

**Distribution Methods:**

**Off-line Digital:** Data Size: CD 1 – 655 Mb in compressed format, CD 2 – 530 Mb in compressed format and CD 3 – 400 Mb in compressed format, CD 4 – 520 Mb in compressed format.

**Distributed Data Formats:** .tif files and .doc files

**Media Format:** CD-R 700 Mb

**On-Line Distribution:**

**Instructions for On-Line Browsing:**

**File Size:**

**File Format:**

**URL:**

**Non-Digital Data:**

**Data Format:** 47 pre-released Satellite Image Maps, Preliminary maps P.3464 to P.3510.

**Nominal Mapping Scale:** 1:100 000 scale

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**Additional Metadata:**

**Server Name:**

**URL:**

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**Contacts:**

**General Contact:**

**Contact:** Peter Barnett

**Phone:** (705) 670-5963

**Fax:** (705) 670-5818

**Address:**

Willet Green Miller Centre  
933 Ramsey Lake Road, Level B7  
Sudbury, Ontario, P3E 6B5

**Distribution Contact:**

**Contact:** Publication Sales Representative

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**Address:**

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Sudbury, Ontario, P3E 6B5

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