

INNOVATIVE METHODOLOGY FOR DETECTION
OF
FRACTURE-CONTROLLED SWEET SPOTS
IN THE
NORTHERN APPALACHIAN BASIN

June 1, 2000-March 31, 2007

TOPICAL REPORT #8

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Dr. Robert Jacobi, Principal Author

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CONTRACTOR:

Research Foundation of State University of New York
P. O. Box 9
Albany, New York 12201
on behalf of:
University at Buffalo
The State University of New York
Suite 211, The UB Commons
520 Lee Entrance
Amherst, New York 14228

Dr. Robert Jacobi, Project Director
Dr. John Fountain, Co-Principal Investigator

Mr. Stuart Loewenstein, Subcontractor
Nornew, Inc
1412 Sweet Home Road, Suite 12
Amherst, NY 14228

Dr. Edward deRidder, Subcontractor
Pearson, deRidder and Johnson, Inc.
12640 West Cedar Drive, Suite 100
Lakewood, CO 80228

Dr. Bruce Hart, Subcontractor
Earth and Planetary Sciences
McGill University
3450 University Street
Montreal, Quebec
Canada H3A 2A7

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ABSTRACT

This Topical Report (#8 of 9) consists of the figures 3.7-1 to (and including) 3.7-9b (and appropriate figure captions) that accompany the Final Technical Progress Report entitled: “Innovative Methodology for Detection of Fracture-Controlled Sweet Spots in the Northern Appalachian Basin” for DOE/NETL Award DE-AC26-00NT40698.

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LIST OF GRAPHICAL MATERIALS

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FIGURE CAPTIONS FOR TOPICAL REPORT #8

FIGURE 3.7-1. Total Magnetic Intensity Map.

Map produced by PRJ

FIGURE 3.7-2. Reduced to Pole (RTP) Magnetic Map.

Produced by PRJ

FIGURE 3.7-3. Horizontal Gradient of RTP Magnetism (HG).

Produced by PRJ. EBKL = East Branch Keuka Lake gradient.

FIGURE 3.7-4. Vertical Gradient of RTP Magnetism (VG).

Produced by PRJ

FIGURE 3.7-5. Second Vertical Derivative of RTP Aeromagnetics (SVD).

Produced by PRJ

FIGURE 3.7-6a. Linear Feature Analyses of RTP Aeromagnetics (LFA).

Produced by PRJ

FIGURE 3.7-6b. Linear Feature Analyses of RTP Aeromagnetics (LFA) with Lakes and Selected Gas Fields.

T/BR fields are the Glodes Corners Road Field (GC) and the Muck Farm Field (MF). Extent of the gas fields is that for 2001. Wayne-Dundee is related to an Alleghanian anticline.

FIGURE 3.7-6c. Linear Feature Analyses of RTP Aeromagnetics (LFA) with Lakes and Selected Gas Fields.

T/BR fields are the Glodes Corners Road Field (GC) and the Muck Farm Field (MF). Purple blob indicates the extent of T/BR fields in 2004.

FIGURE 3.7-7. PRJ Interpretation of Gradients in the Aeromagnetic Field

FIGURE 3.7-8. RTP Magnetism and Gas Fields.

Gas fields are the same as in Figure 3.7-6b and 3.7-6c.

FIGURE 3.7-9a. Bouguer Gravity and T/Br Fields.

Gravity contour interval = 5 mgal. Blues are relatively low. T/BR fields same as in Figure 3.7-6b and 3.7-6c. Gravity from Jacobi (2002).

FIGURE 3.7-9b. Bouguer Gravity, RTP Magnetism and T/Br Fields.

Gravity contour interval = 5 mgal. Blue contours are relatively low. T/BR fields same as in Figure 3.7-6b and 3.7-6c. Gravity from Jacobi (2002).

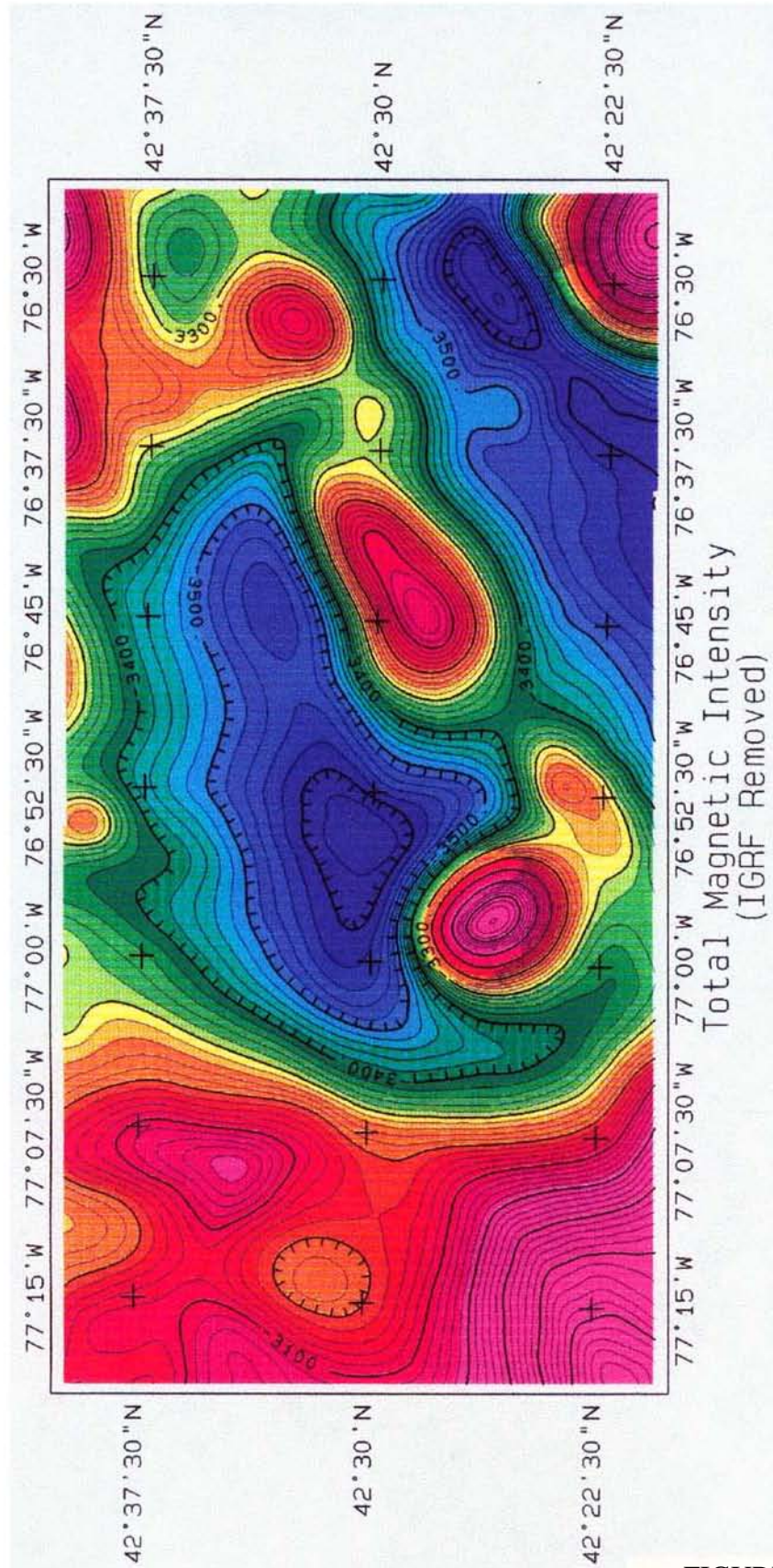


FIGURE 3.7-1

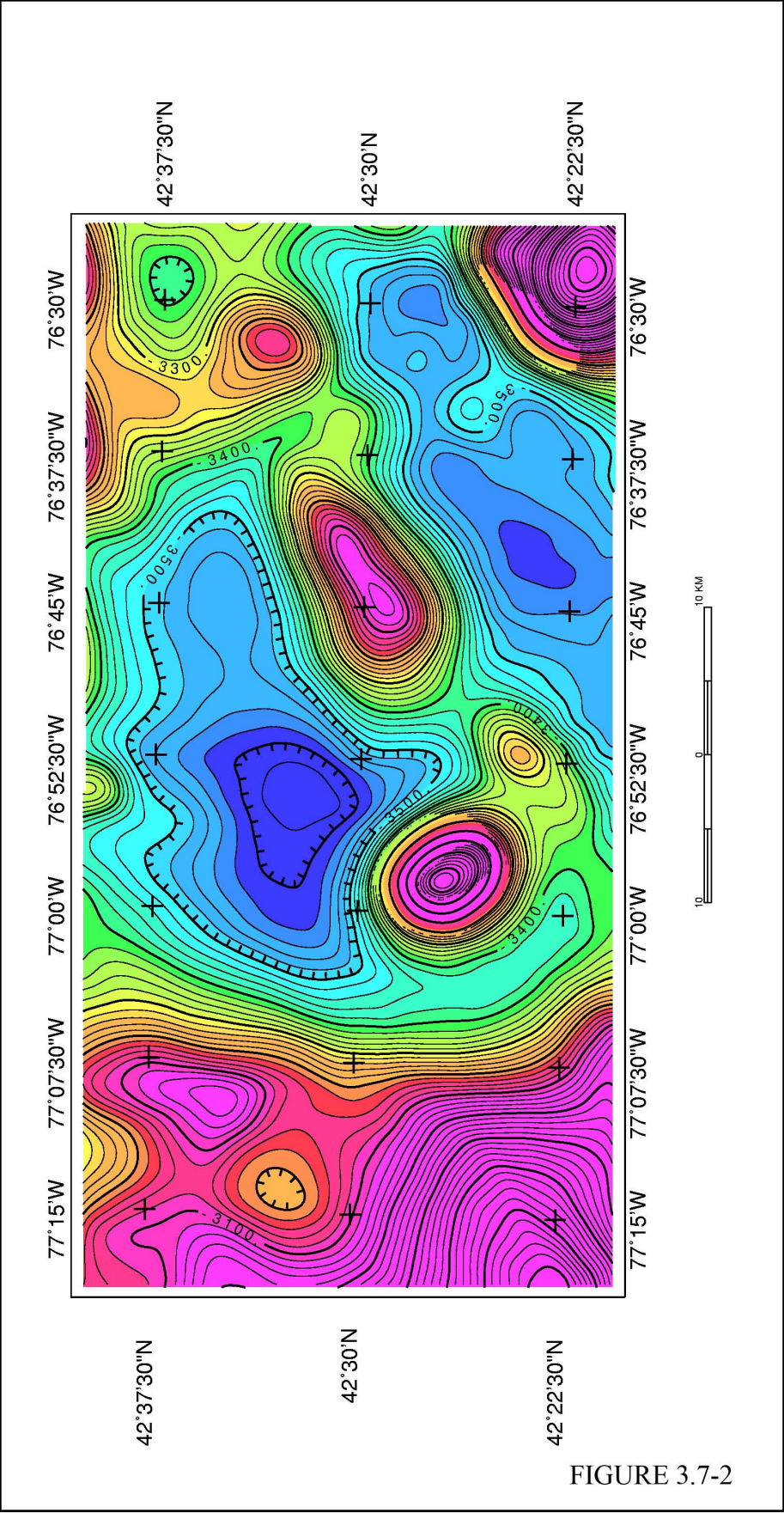


FIGURE 3.7-2

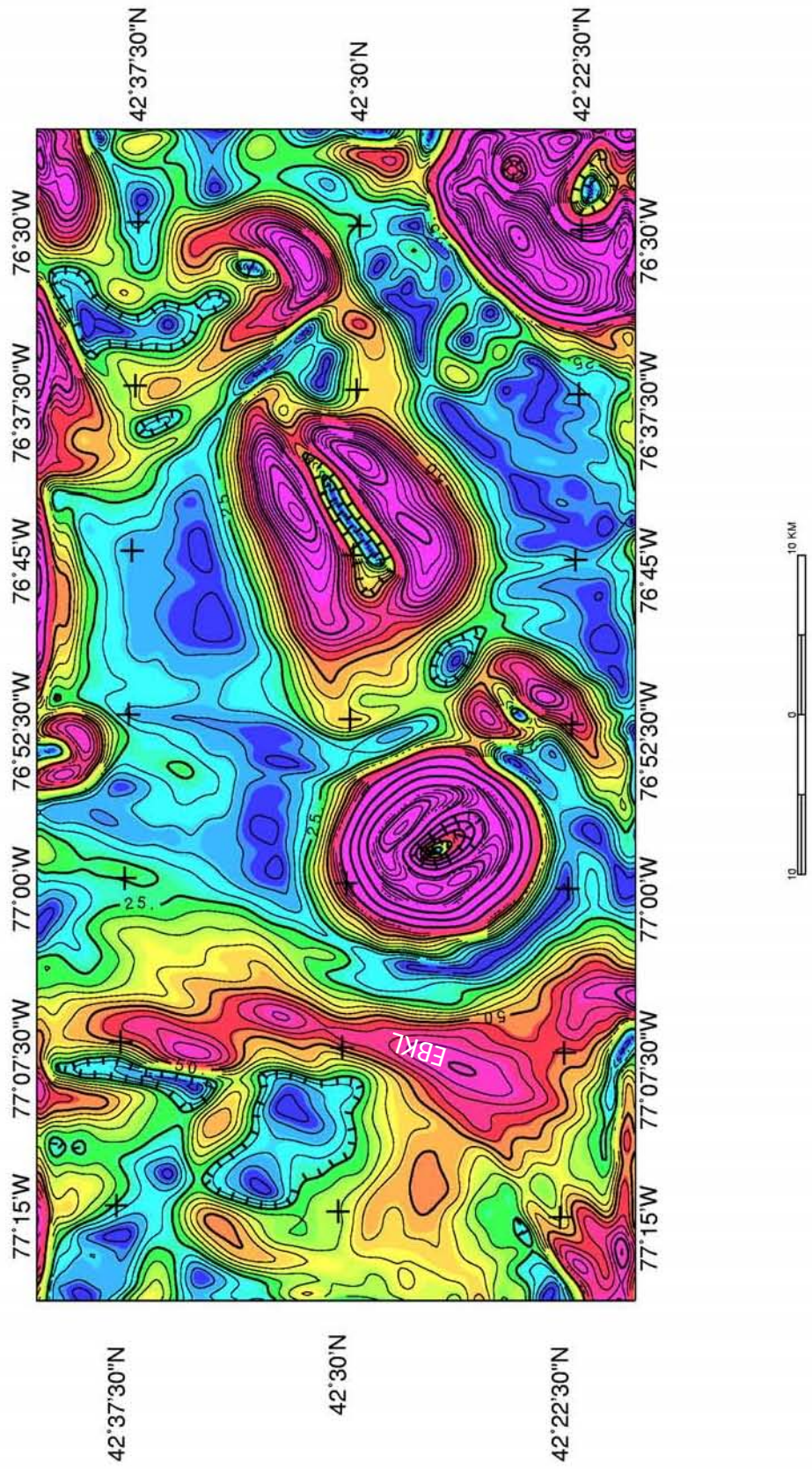


FIGURE 3.7-3

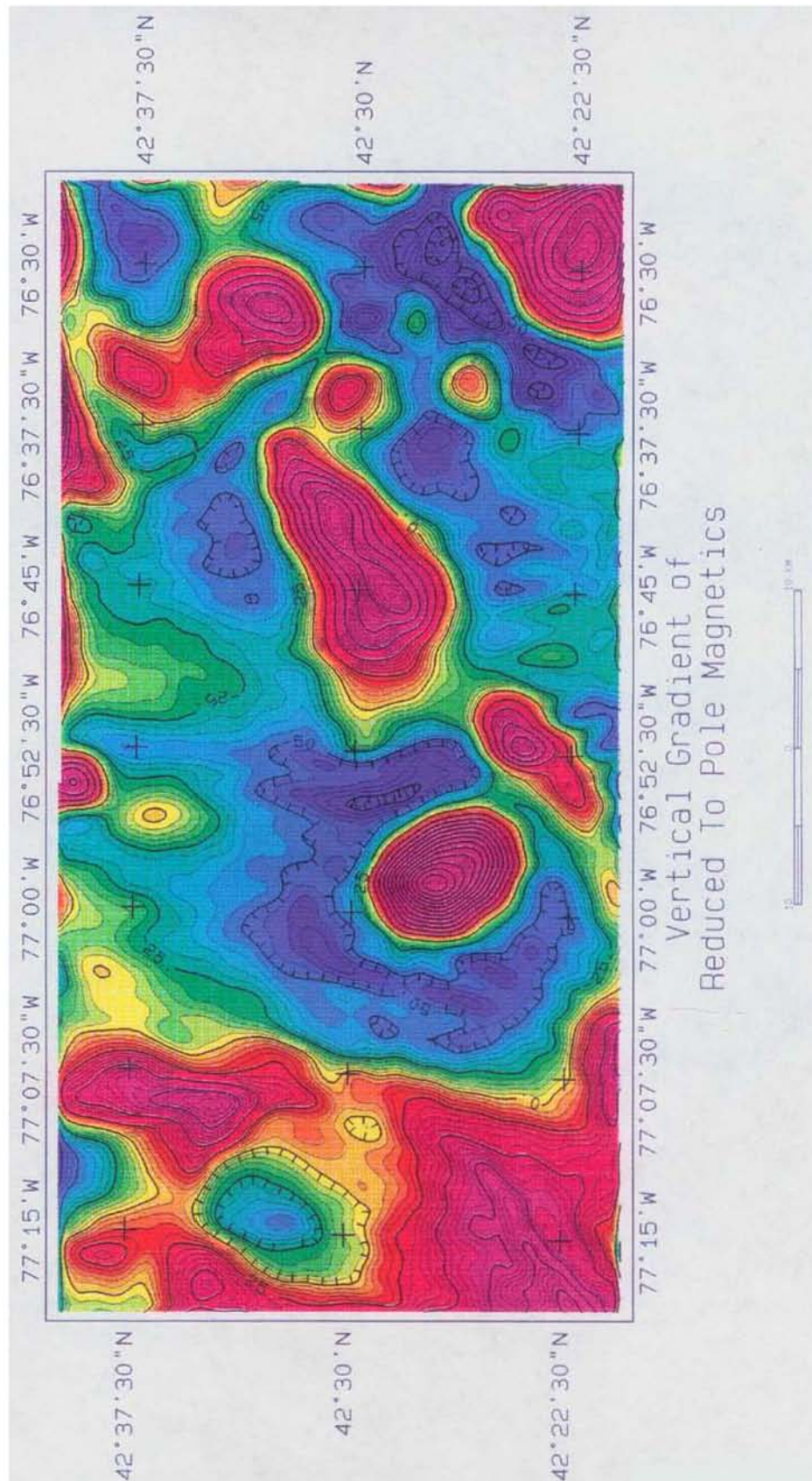


FIGURE 3.7-4

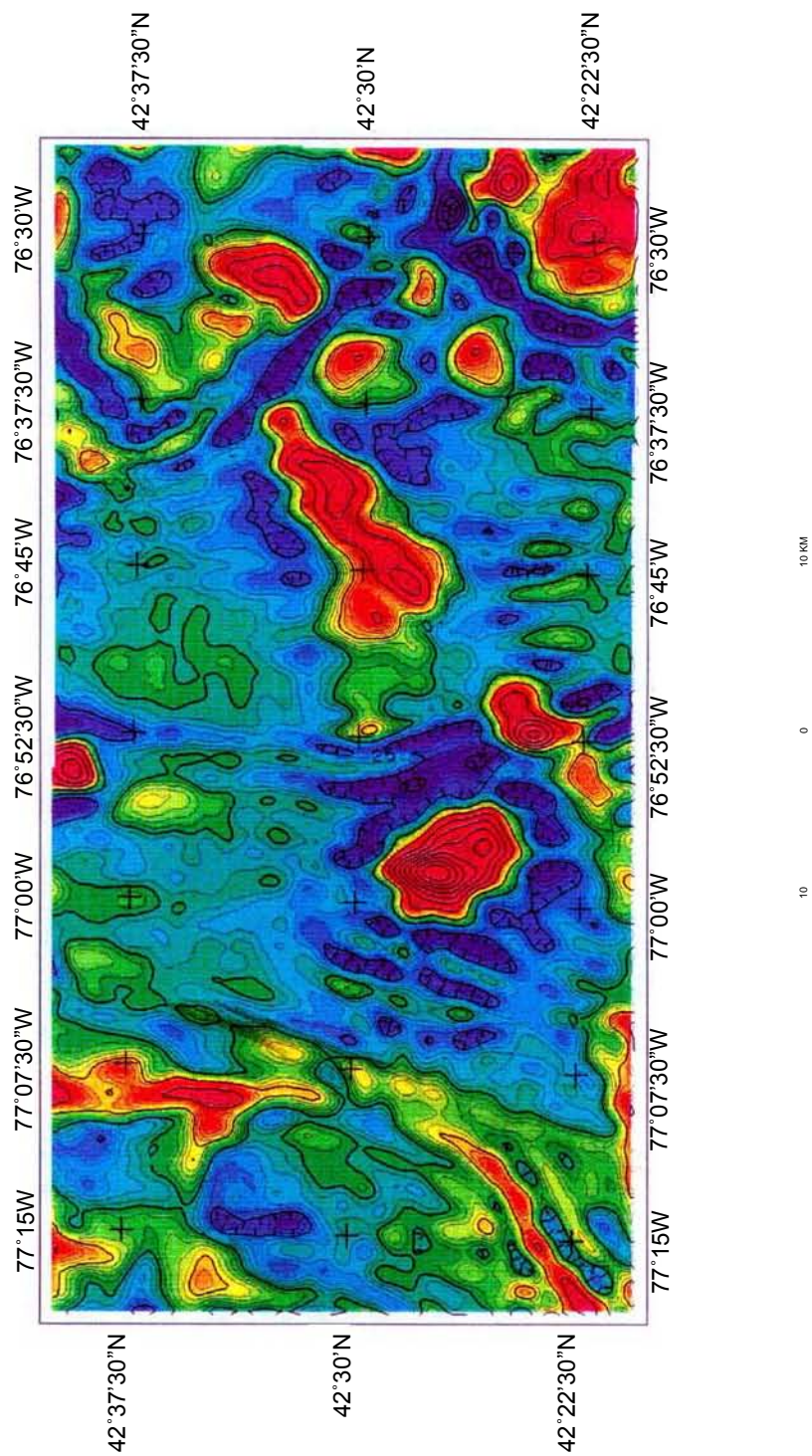


FIGURE 3.7-5

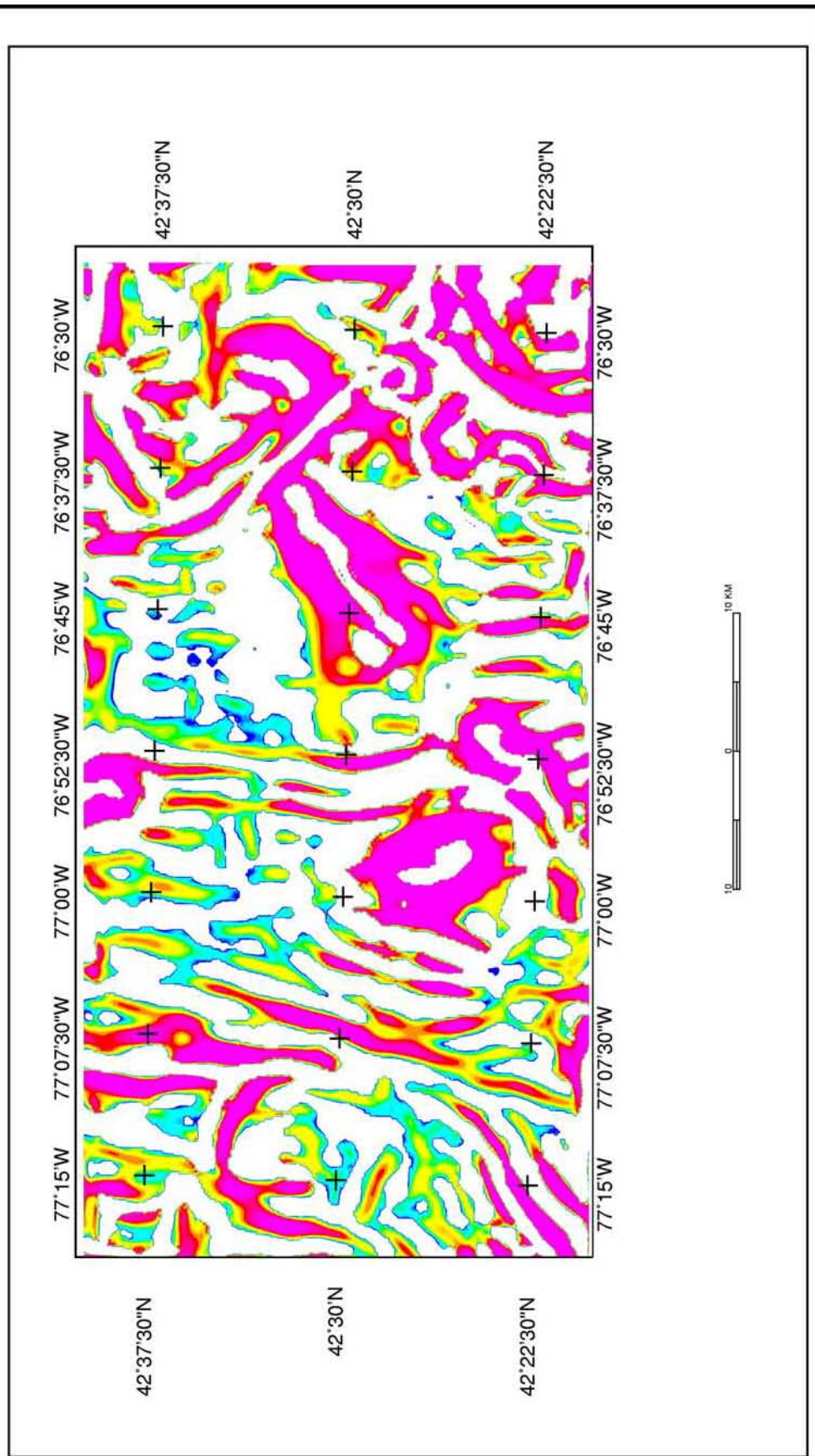


FIGURE 3.7-6a

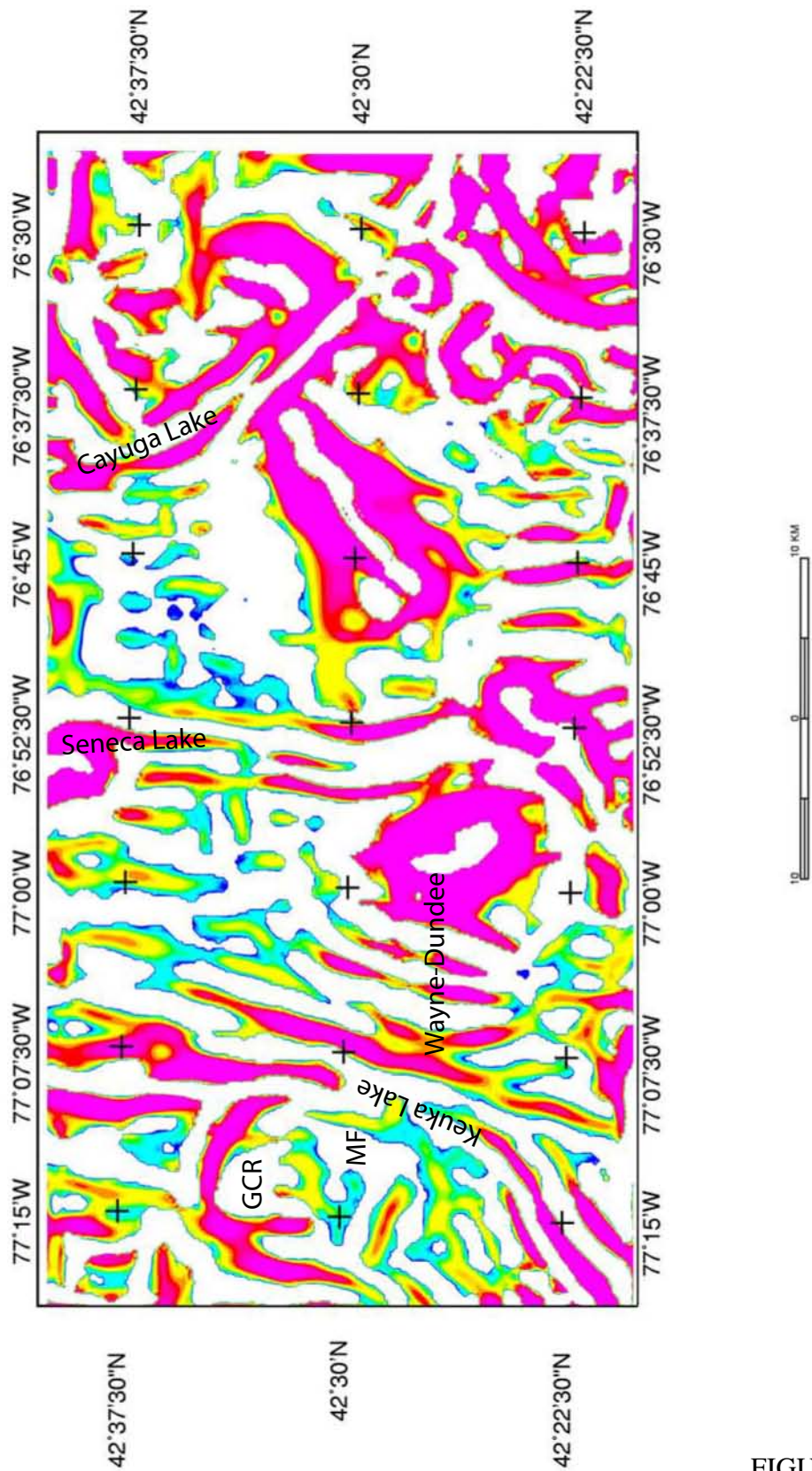


FIGURE 3.7-6b

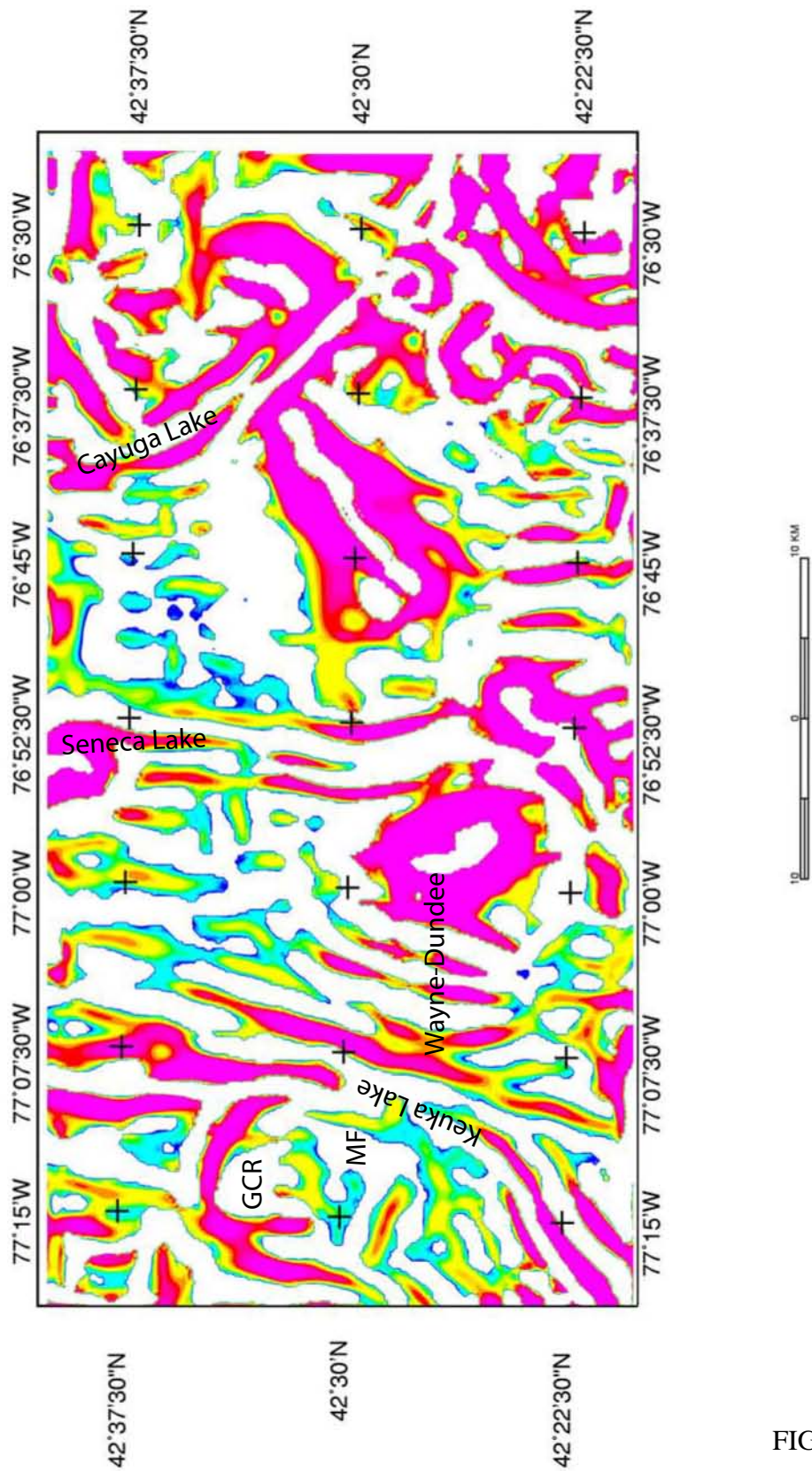


FIGURE 37-6c

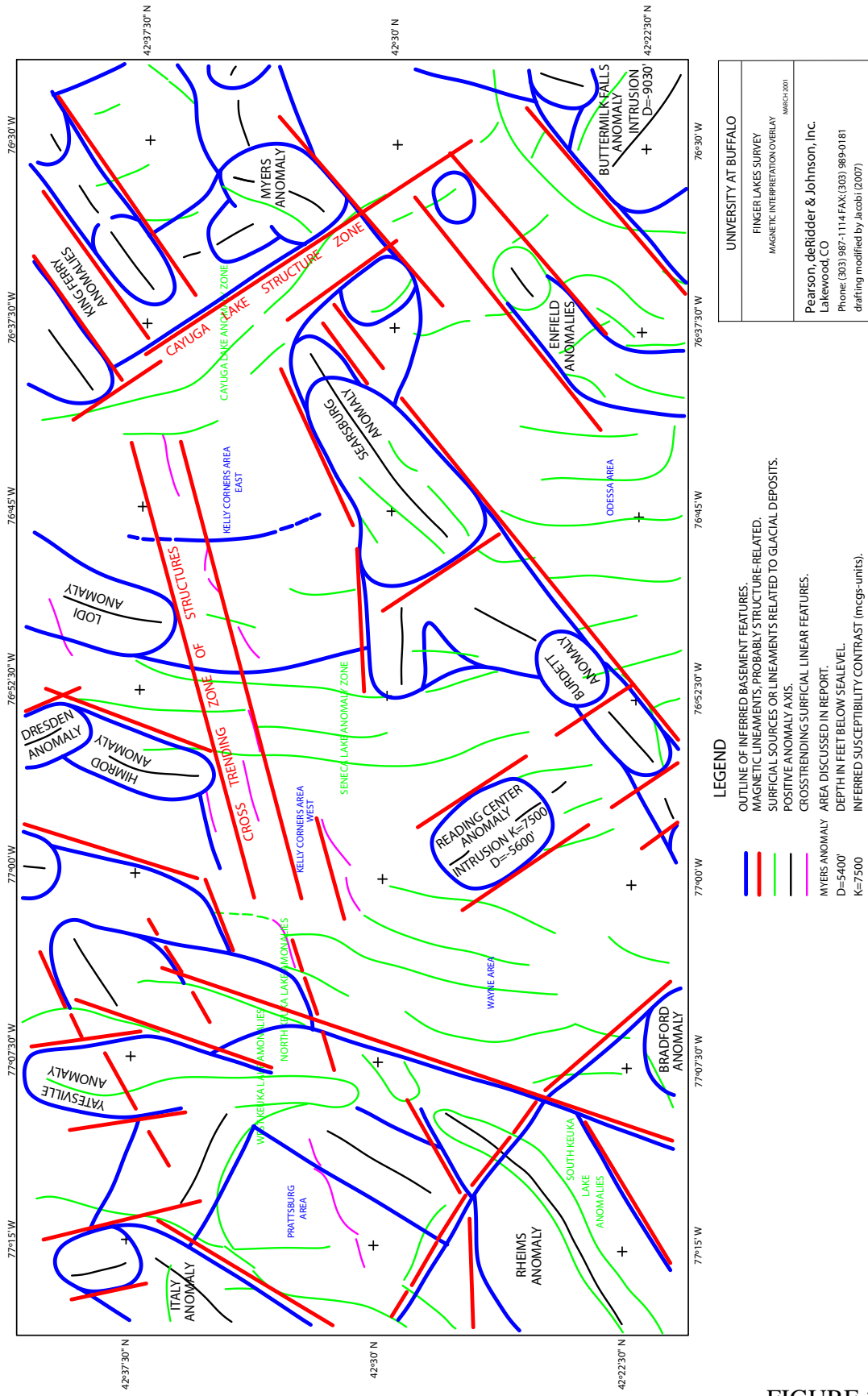
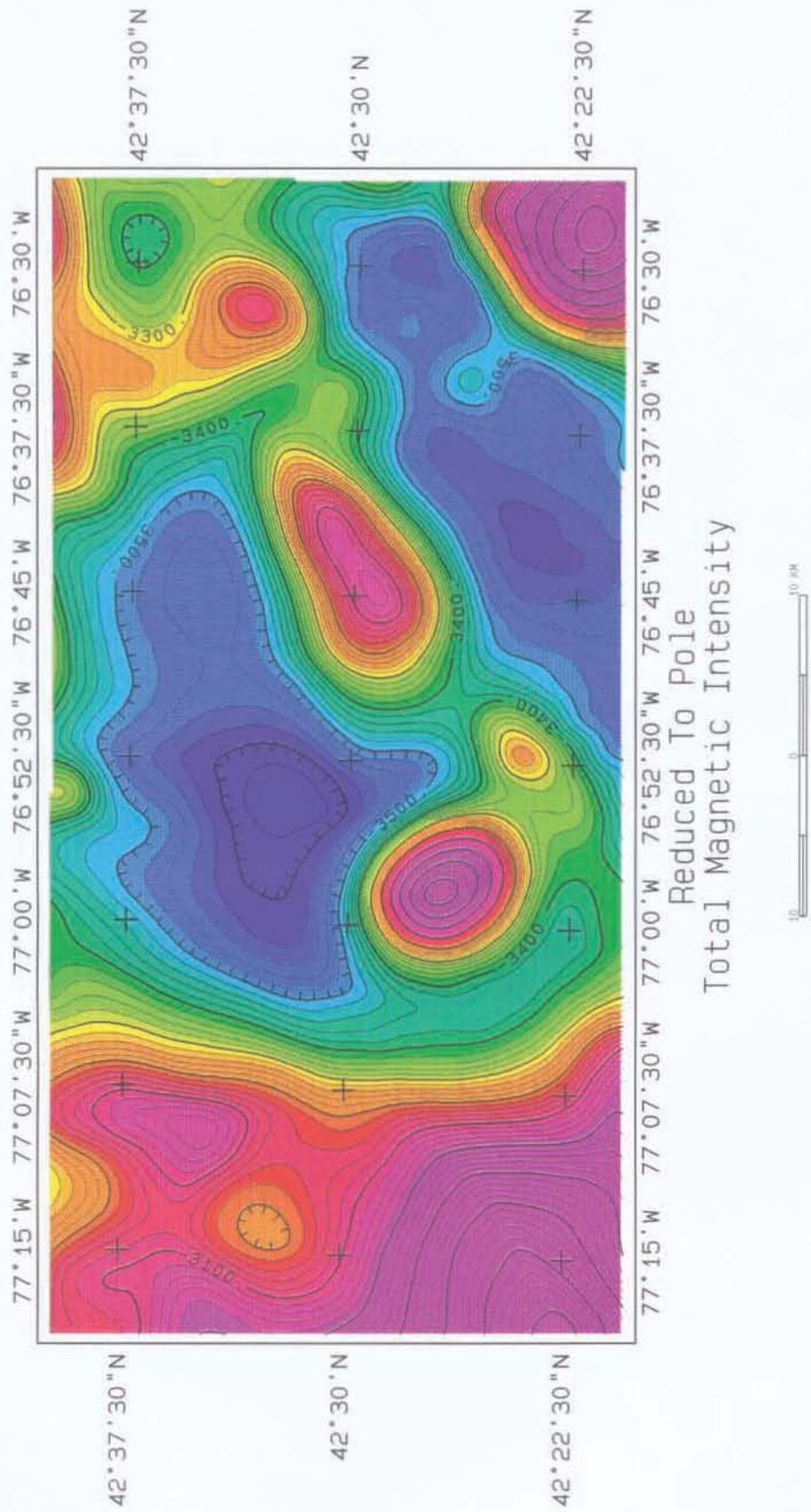


FIGURE 3.7-7



APPENDIX E: FIGURE 2

FIGURE 3.7-8

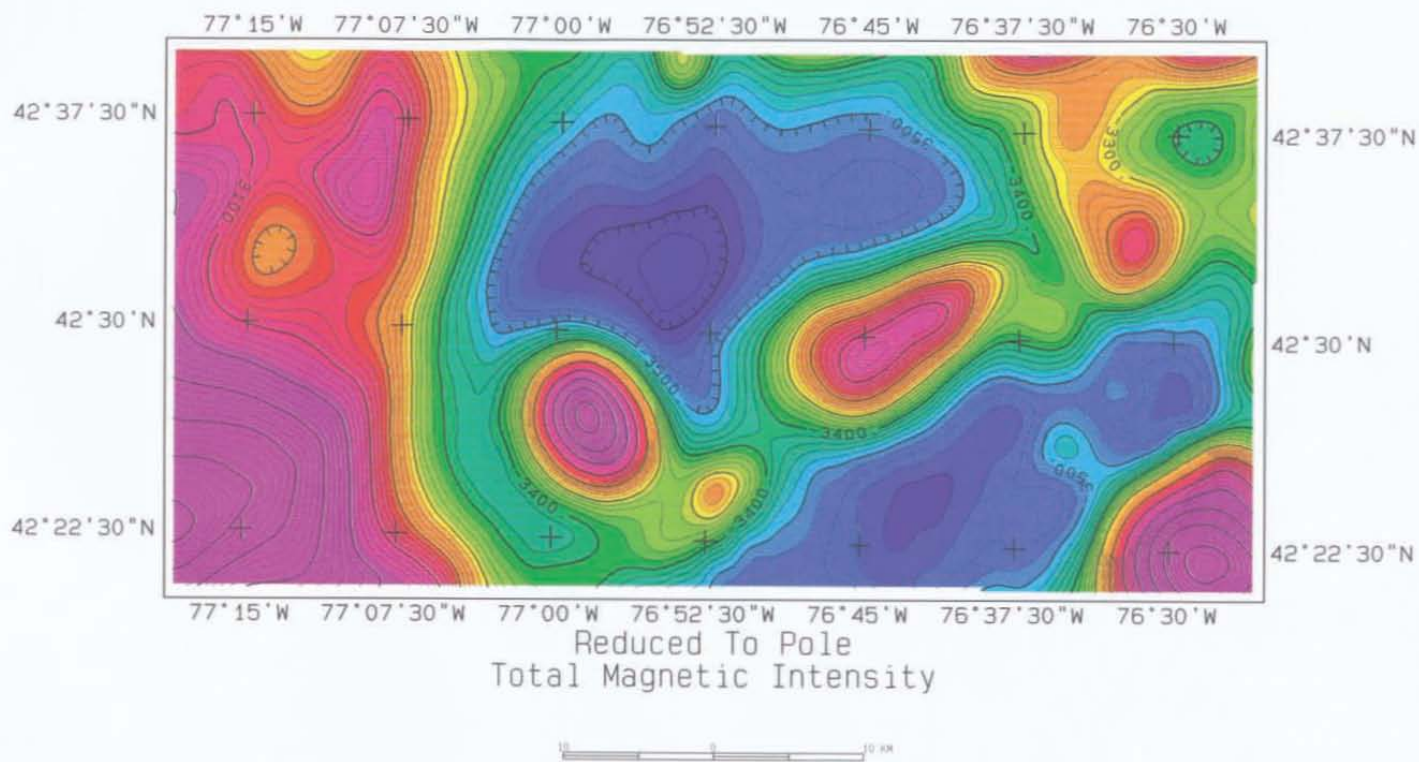


FIGURE 3.7-9a
APPENDIX E: FIGURE 2

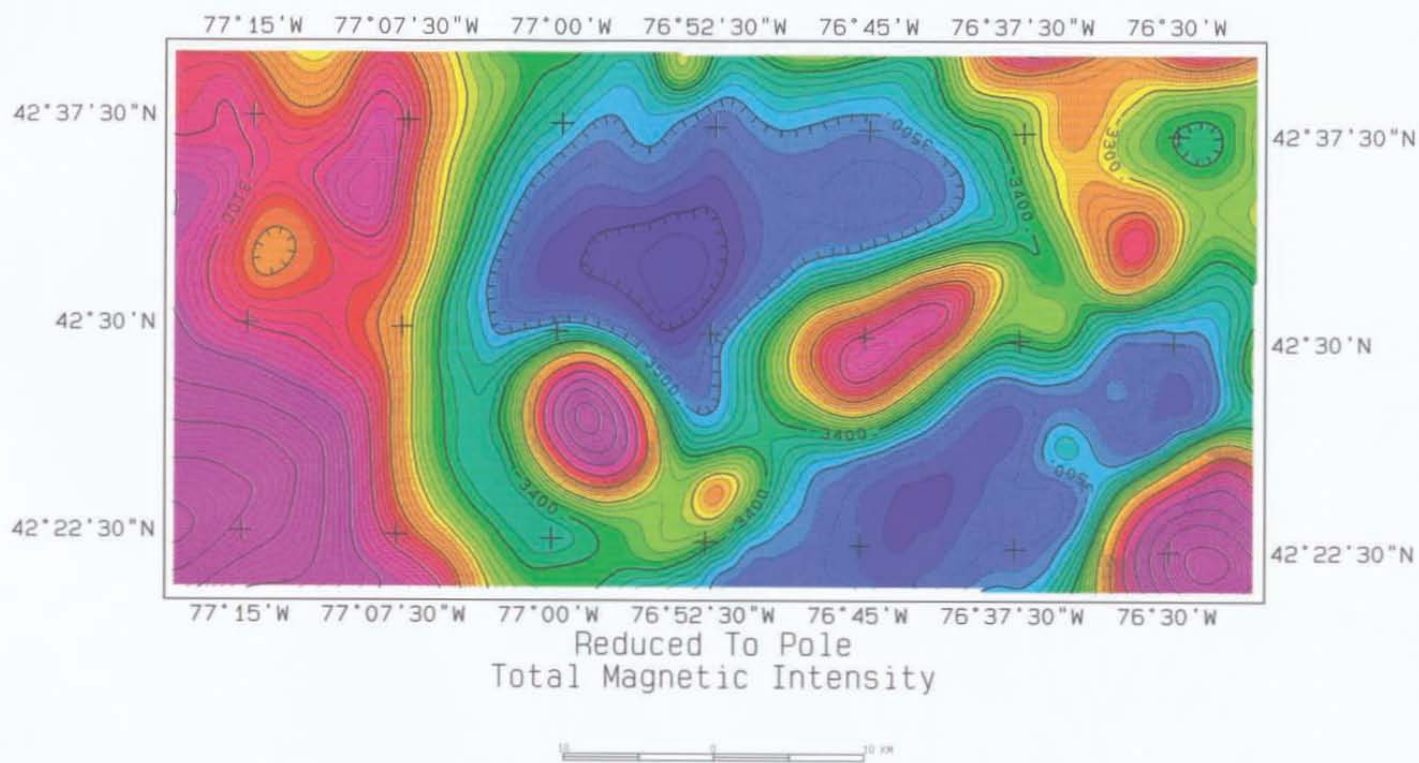


FIGURE 3.7-9b
APPENDIX E: FIGURE 2