PROVINCE OF DEPARTMENT NOVA SCOTIA DEPARTMENT OF MINES ENERGY, MINES AND RESOURCES GEOPHYSICAL SERIES MINERAL RESOURCES GEOLOGICAL SURVEY OF CANADA (HIGH RESOLUTION AEROMAGNETIC VERTICAL GRADIENT) 63°22′30″ 37'30" 30'00" 63°52′30″ 45'00" 45°00′00″ 44°45′00″ 63°22′30″ 63°52′30″ 45'00" 37'30" 30'00" MAP 45,001G Part of Sheets 11D and 11E MAGNETIC CONTOUR LINES NOVA SCOTIA +.5 gammas/metre... +.1 gammas/metre...... -.5 gammas/metre...... SCALE 1:125,000 -.1 gammas/metre..... (1 gamma = 1 nanotesla in SI units) Flight altitude: 150m above ground level IOKILOMETRES

KILOMETRES 3

The index map shown below identifies the individual 1:25,000 aeromagnetic maps used in the compilation of this 1:125,000 map.

IID/14e// and part of // II D/14f/

11 D/14d

/20,247 G/

DARTMOUTH

20,258 G

45°00′

This map has been compiled from digitally-recorded highsensitivity aeromagnetic data obtained by two self-orienting
rubidium-vapour magnetometers installed in twin tail booms mounted
on the GSC Beechcraft B80 aircraft. The magnetometers are vertically
separated by a distance of 2.08 metres with each measuring the total
magnetic field to a resolution of 0.02 gammas.

Flight altitude was 150 m above ground at 300 m average flight
line spacing. Double control lines were flown at an average spacing
of 12 kilometres.

The vertical gradient values, which approximate closely to the
first vertical derivative of the earth's total field, are obtained by dividing the difference between the total field readings of the two magnetometers by their vertical separation.

The vertical gradient data was filtered with a digital operator to
remove instrument noise. The vertical gradient data from the control
lines was not used in the compilation of the map. The data was edited,
compiled, levelled and gradient values for contouring interpolated onto
a square grid (0.25 cm grid spacing at the published map scale) by automatic computer processes. The final data grid was contoured and
plotted using the automatic contouring program and digital plotter
facilities of Dataplotting Services Ltd. The survey data used to compile
this map is available in digital form from the Geological Survey of
Canada at the cost of retrieval and copying.

Airborne survey and digital compilation was carried out by
Resource Geophysics and Geochemistry Division, Geological Survey
of Canada. The survey operations took place in October and November 1976 using Beechcraft Queenair 65-B80 aircraft CF-WZG.

The topography for this map was reproduced from 1:250,000
topographical map sheets, published by the Department of Energy,
Mines and Resources, Ottawa.

Copies of this map may be obtained from the Mineral Resources,
Nova Scotia Department of Mines, Halifax, or from the Geological
Survey of Canada, Ottawa.

MAP 45,001 G part of sheets 11D and 11E