Paterson TEMPEST AEM Survey, Western Australia, 2010 Complete Final Data Release April 2010

This document outlines the contents of the accompanying AEM digital dataset

The Commonwealth of Australia, through Geoscience Australia (GA), funded an airborne electromagnetic (AEM) survey to be flown over the Paterson region of Western Australia. The survey was flown using the TEMPEST AEM system during 2007 and 2008. The data acquisition and data processing and reductions were carried out by Fugro Airborne Surveys (FAS) under contract to GA.

The 2010 data release includes the entire Paterson Survey area. This data set includes the eight blocks of infill flying that were completed with funding provided by private companies. The Paterson Survey area is shown on the locality map below (Figure 1).

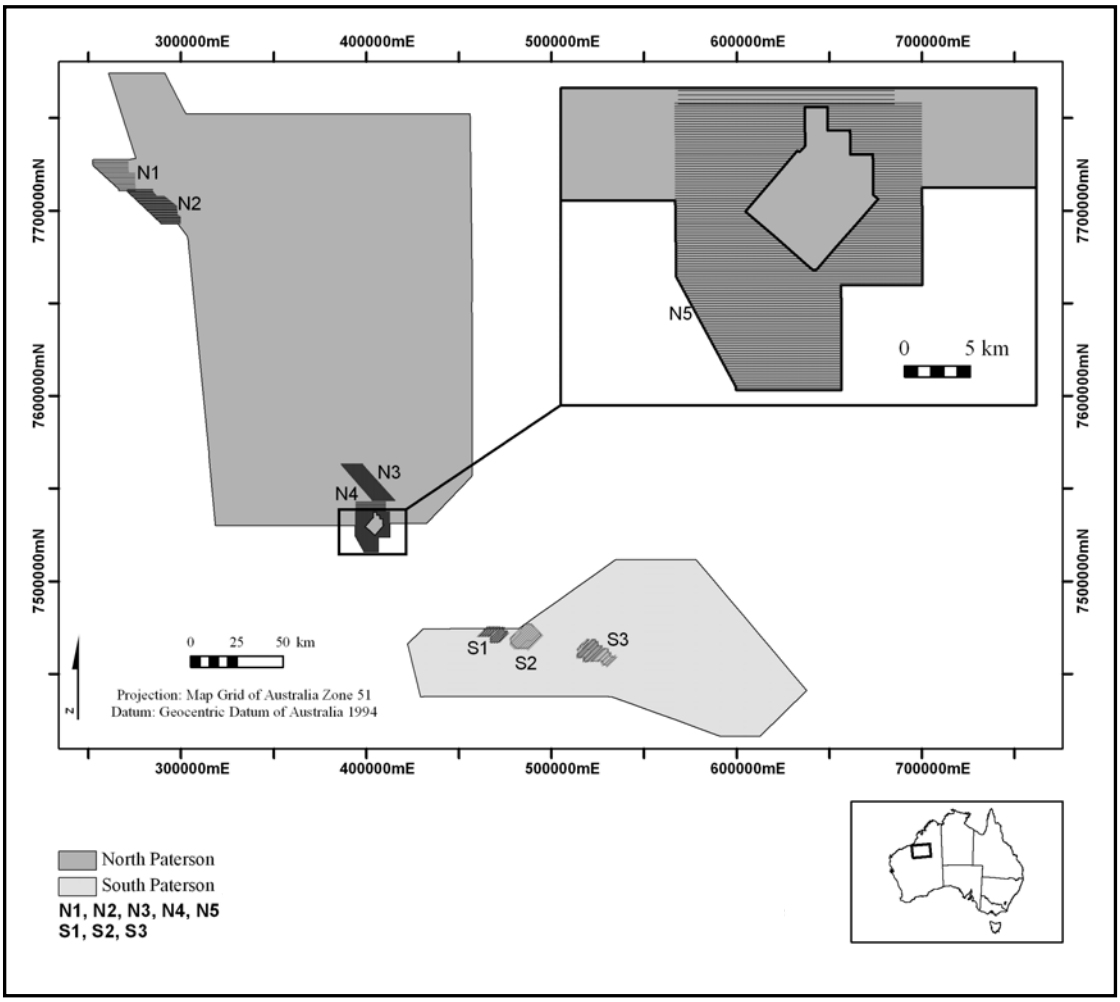

Figure 1: *Paterson Survey boundary locations. Internal survey boundary locations with an N prefix represent data funded by infill companies for North Paterson. Internal Survey boundary locations with an S prefix represent data funded by infill companies for South Paterson, with the exception of the 200 m line spaced-data highlighted in N5 that was funded by GA.*

Dataset Contents

The digital dataset has been arranged into two separate directories or folders according to the two main survey areas Paterson North and Paterson South. Four sub-directories are arranged according to the four main data types which are:

(i) Survey operations and processing report,
(ii) Point located electromagnetic response and derived EM Flow CDI line data,
(iii) Gridded electromagnetic response and CDI data, and
(iv) Graphic profile based multiplots showing electromagnetic, CDI and ancillary data.

The tables below detail the contents of each directory.

linedata/ directory	
Paterson_North_Final_EM_all_lines.asc Paterson_North_Final_EM_all_lines.hdr Paterson_South_Final_EM_all_lines.asc Paterson_South_Final_EM_all_lines.hdr	Point located electromagnetic, magnetic and elevation data. Data are in ASCII column format. The header file (.hdr) provides a complete description of the data in each column.
Paterson_North_Final_CND_all_lines.asc Paterson_North_Final_CND_all_lines.hdr Paterson_South_Final_CND_all_lines.asc Paterson_South_Final_CND_all_lines.hd	Point located EM Flow CDI conductivity estimates and derived conductivity depth slices. Data are in ASCII column format. The header file (.hdr) provides a complete description of the data in each column.

grids/ directory	
Paterson_North_CND_a_tt_bb Paterson_North_CND_a_tt_bb.ers Paterson_South_CND_a_tt_bb Paterson_South_CND_a_tt_bb.ers	Conductivity depth slice grids produced from the EM Flow CDI data. ER Mapper grids and header files (.ers) are named with suffixes in the form ***_a_tt_bb*** where, • ***_a***=3a refers to the ***2,000 m line spacing north western*** part of the survey area • ***_a***=3b refers to the ***6,000 m line spacing northern*** part of the survey area. • ***_a***=4 refers to the ***1,000 m line spacing southern*** part of the survey area. • ***_tt*** refers to the depth to the top of the slice in metres • ***_bb*** refers to the depth to the bottom of the slice in metres • ***tt_bb*** = 00_5, 05_10, 10_15, 15_20, 20_30, 30_40, 40_60, 60_100, 100_150, 150_200.
Paterson_North_DEM_a Paterson_North_DEM_a.ers Paterson_South_DEM_a Paterson_South_DEM_a.ers	Digital elevation model grids. ER Mapper grids and header files (.ers) are named with suffixes in the form ***_a*** where, • ***_a***=3a refers to the ***2,000 m line spacing north western*** part of the survey area • ***_a***=3b refers to the ***6,000 m line spacing northern*** part of the survey area. • ***_a***=4 refers to the ***1,000 m line spacing southern*** part of the survey area.
Paterson_North_TMI_a Paterson_North_TMI_a.ers Paterson_South_TMI_a Paterson_South_TMI_a.er	Total magnetic intensity grids. ER Mapper grids and header files (.ers) are named with suffixes in the form ***_a*** where, • ***_a***=3a refers to the ***2,000 m line spacing north western*** part of the survey area • ***_a***=3b refers to the ***6,000 m line spacing northern*** part of the survey area. • ***_a***=4 refers to the ***1,000 m line spacing southern*** part of the survey area.

multiplots/ directory	
TEM_XZ_llll_nn_fff.pdf	Adobe Portable Document Format (.pdf) graphics files showing X and Z component electromagnetic, monitor channels, ancillary data profiles and CDI conductivity sections for each flight line. Files are named according to the convention _llll_nn_fff where, llll = the line number prefix nn = the line number suffix or attempt number fff = the flight number. For example the multiplot file for line number 30310 from flight number 35 is named TEM_XZ_3031_00_080.pdf

report/ directory	
Paterson_North_AEM_Report_final.doc Paterson_South_AEM_Report_final.doc	Survey operations and processing report in Microsoft Word format.