

## Final project report

<i>Project ID</i>	2004/3.02
<i>Title</i>	Wilkes Basin/Transantarctic Mountains System Exploration (WISE)
<i>Principal investigator</i>	Prof. Emanuele Bozzo
<i>Institution</i>	Dipartimento per lo Studio del Territorio e delle sue Risorse, Universita' di Genova
<i>Email</i>	bozzo@dipteris.unige.it
<i>Duration</i>	3 years
<i>Assigned funding</i>	100.000,00 Euro

---

### Activities and results

Within the framework of *WISE/ISODYN* we undertook a joint Italian-British investigation over northern Victoria Land and the adjacent Wilkes Subglacial Basin (WSB). Extensive new geophysical and geological datasets were acquired over the study region during the 2005-06 Antarctic field season.

Our main objectives were:

- 1) to provide new geophysical constraints for the WSB, to help comprehend the influence of basal boundary conditions (i.e topography, hydrology and geology) on the stability of the East Antarctic Ice Sheet (EAIS);
- 2) to acquire new geophysical data to study crustal architecture and tectonic evolution of the TAM and WSB;
- 3) to deduce the Neogene environmental and geodynamic history of the TAM, by investigating coeval magmatic rocks;
- 4) to gain new insight into the Ross-Orogen and the transition to the East Antarctic Craton;
- 5) to extend studies of Cenozoic tectonics towards the "backside" of the TAM;
- 6) to fly some aerogeophysical profiles over the Dome C subglacial lake district.

To address these objectives we utilised a multi-disciplinary approach including: airborne geophysics (radar, aeromagnetic and aerogravity methods); seismology; deep electrical conductivity techniques; petrological and paleoenvironmental studies of Cenozoic volcanics; petrological and petromagnetic investigations of Ross-age and Precambrian basement rocks and; structural geology and thermochronology.

Field activities, techniques and preliminary results were reported in a special issue of *Terra Antarctica Reports* in 2007. Scientific results have been presented at several international conferences, e.g. IUGG 2007, ISAES 2007, AGU Fall Meeting 2006, 2007 & 2009, SCAR Meeting 2008, and in several peer-reviewed publications. An international workshop entitled "Geological and Geophysical Investigations from the Transantarctic Mountains to Dome C" was organised in Genoa in September 2008.

The most significant results from the airborne geophysics component are: 1) the discovery of much deeper and more extensive subglacial basins beneath the EAIS than previously mapped, which may make the ice-sheet more vulnerable to climate and ocean warming. Tracing these deep basins from the interior to the coast is the focus of a major new international proposal; 2) the interpretation that the WSB is linked to Neoproterozoic rifting and early Ross-age back-arc basin formation. Recognition of this tectonic setting has significant implications for reconstructions of East Antarctica within Rodinia and Gondwana.

New glacio-volcanic studies over NVL shed new light into the age of the transition from a wet-based and more dynamic ice-sheet to a more stable ice-sheet. The major switch occurred between 9.7 and 7.5 Ma in NVL, although temporary switches in thermal regime occurred both before and after the main event. This has significant implications for Neogene ice-sheet mass balance and global sea-level.

## Products

### A – papers in scientific magazines

1. L. Crispini, Federico L., G. Capponi, F. Talarico - The Dorn gold deposit in northern Victoria Land, Antarctica: structure, hydrothermal alteration, and implications for the Gondwana Pacific margin (2010). *Gondwana research*, in press
2. R. Palmeri, F. Talarico, C. A. Ricci - Ultrahigh-pressure metamorphism at the Lanterman Range (northern Victoria Land, Antarctica) (2010). *Geological Journal*, in press
3. Jordan, T.A., Ferraccioli, F., Corr, H., Graham, A., Armadillo, E., and Bozzo, E., 2010. Hypothesis for megaburial flooding from a palaeo-subglacial lake beneath the East Antarctic Ice Sheet. *Terra Nova* xxx, 1-6, doi: 10.1111/j.1365-3121.2010.00944.x.
4. Ferraccioli, F., Armadillo, E., Jordan, T., Bozzo, E., Corr, H., 2009. Aeromagnetic exploration over the East Antarctic Ice Sheet: a new view of the Wilkes Subglacial Basin. *Tectonophysics*, 478, 62-77, doi:10.1016/j.tecto.2009.03.013.
5. Ferraccioli, F., Armadillo, E., Zunino, A., Bozzo, E., Rocchi, S., Armienti, P., 2009. Magmatic and tectonic patterns over the Northern Victoria Land sector of the Transantarctic Mountains from new aeromagnetic imaging. *Tectonophysics*, 478, 43-61, doi:10.1016/j.tecto.2008.11.028.
6. Faccenna, C., Rossetti, F., Becker, T.W., Danesi, S., Morelli, A., 2008. Recent extension driven by mantle upwelling beneath the Admiralty Mountains (East Antarctica). *Tectonics* 27, TC4015. doi:10.1029/2007TC002197.
7. Di Vincenzo, G., Talarico, F., Kleinschmidt, G., 2007. An <sup>40</sup>Ar–<sup>39</sup>Ar investigation of the Mertz Glacier area (George V Land, Antarctica): implications for the Ross Orogen–East Antarctic Craton relationship and Gondwana reconstructions. *Precambrian Research* 152, 93–118. doi:10.1016/j.precamres.2006.10.002.
8. R. Palmeri, R. Chmielowski, S. Sandroni, F. Talarico, C. A. Ricci - 'Petrology of the eclogites from western Tasmania: Insights into the Cambro-Ordovician evolution of the paleo-Pacific margin of Gondwana ' ( 2009) *LITHOS*, Vol.109, 223 - 239  
Talarico, E. Armadillo, E. Bozzo - 'Antarctic Rock Magnetic Properties: New Susceptibility Measurements in the Daniels Range, Outback Nunataks and in the Rennick Glacier Area ' ( 2007) *Terra Antarctica Reports*, Vol.13, 87 - 96  
R. Carosi, F. Giacomini, F. Talarico, E. Stump - 'Geology of the Byrd Glacier Discontinuity (Ross Orogen): New survey data from the Britannia Range, Antarctica ' (2007) *U.S. Geological Survey and The National Academies; USGS OF-2007-1047*, Vol.1047, 1 – 6
9. Stump, B. Goozee, F. Talarico - 'Tectonic model for development of the Byrd Glacier discontinuity and surrounding regions of the Transantarctic Mountains during the Neoproterozoic-early Paleozoic' (pubblicazione su volume collettaneo, 2006) , 181 - 190 Volume: *Antarctic: Contributions to Global Earth Sciences*, Casa Editrice: Springer-Verlag, New York and Heidelberg
10. R. Palmeri, B. Ghiribelli, G. Ranalli, F. Talarico, C. A. Ricci - 'Ultrahigh-Pressure Metamorphism And Exhumation Of garnet-Bearing Ultramafic Rocks From The Lanterman Range (Northern Victoria Land, Antarctica)' (Pubblicazione Su Rivista, 2007) *Journal Of Metamorphic Geology*, Vol.25, 34 - 53
11. F. Talarico, R. Findlay, N. Rastelli - 'Metamorphic evolution of the Koettlitz Group in the Koettlitz-Ferrar Glaciers region (southern Victoria Land, Antarctica)' (pubblicazione su rivista, 2005) *Terra Antarctica*, Vol.12, 3 - 23  
D. Castelli, G. Oggiano, F. Talarico, E. Belluso, F. Colombo - 'Mineral Chemistry and Petrology of the Wilson Terrane Metamorphics from Retreat Hills to Lady Newnes Bay, Northern Victoria Land, Antarctica' (pubblicazione su rivista, 2005) *Geologisches Jahrbuch*, B85 , Vol.b85, 67 – 88
12. Stump, B. Goozee, F. Talarico, . W. Van Schmus, P. Brand, . K. Foland, M. Fanning - 'Correlation of Byrd and Selborne Groups, with implications for the Byrd Glacier discontinuity, central Transantarctic Mountains, Antarctica' (pubblicazione su rivista, 2004) *New Zealand Journal Of Geology And Geophysics*, Vol.47, 157 – 171
13. U. Schüssler, B. Henjes-Kunst, F. Talarico, T. Flöttmann - 'High-grade crystalline basement of the northwestern Wilson Terrane at Oates Coast: new petrological and geochronological data and implications for its tectonometamorphic evolution' (pubblicazione su rivista, 2004) *Terra Antarctica*, Vol.11, 15 – 34
14. F. Talarico, R. Palmeri, C. A. Ricci - 'Regional metamorphism and P-T evolution of the Ross Orogen in Northern Victoria Land (Antarctica): a review.' (pubblicazione su rivista, 2004) *Periodico di mineralogia*, Vol.73, 185 – 196
15. Armadillo E., F. Ferraccioli, A. Zunino And E. Bozzo (2007). Aeromagnetic anomaly patterns reveal buried faults along the eastern margin of the Wilkes Subglacial Basin (East Antarctica). In: Alan Cooper, Carol Raymond, And The Th Isaes Editorial Team. *Antarctica: A Keystone in a Changing World*, Online Proceedings of the 10th ISAES. USGS, ISBN/ISSN: 978-1-411-31788-8, doi: 10.3133/of2007-1047.srp091
16. Armadillo E., F. Ferraccioli, A. Zunino, E. Bozzo, S. Rocchi, P. Armienti (2007). Aeromagnetic search for Cenozoic magmatism over the Admiralty Mountains Block (East Antarctica). In: Alan Cooper, Carol Raymond, And The Th Isaes Editorial Team. *Antarctica: A Keystone in a Changing World*, Online Proceedings of the 10th ISAES. USGS, ISBN/ISSN: 978-1-411-31788-8, doi: 10.3133/of2007-1047.srp075
17. Armadillo E., E. Bozzo, G. Caneva, A. Manzella, G. Ranieri (2007). Imaging deep and shallow structures by

## Programma Nazionale di Ricerche in Antartide (PNRA)

- electromagnetic sounding moving from the Transantarctic Mountain to the Wilkes Subglacial Basin. *Terra Antarctica Reports*, vol. 13; p. 65-74, ISSN: 1723-7211
18. Corr H, Ferraccioli F, Frearson N, Jordan T, Robinson C, Armadillo E., Caneva G, Bozzo E, Tabacco I (2007). Airborne radio-echo sounding of the Wilkes Subglacial Basin, the Transantarctic Mountains, and the Dome C region. *Terra Antarctica Reports*, vol. 13; p. 55-63, ISSN: 1723-7211
  19. Ferraccioli, F, Jordan T, Armadillo E., Bozzo E, Corr H, Caneva G, Robinson C, Frearson N, Tabacco I (2007). Collaborative Aerogeophysical Campaign targets the Wilkes Subglacial Basin, the Transantarctic Mountains and the Dome C region. *Terra Antarctica Reports*, vol. 13; p. 1-36, ISSN: 1723-7211
  20. Jordan T, Ferraccioli F, Corr H, Robinson C, Caneva G, Armadillo E., Bozzo E, Frearson N (2007). Linking the Wilkes Subglacial Basin, the Transantarctic Mountains, and the Ross Sea with a new airborne gravity survey. *Terra Antarctica Reports*, vol. 13; p. 37-54, ISSN: 1723-7211
  21. Armadillo E., E. Bozzo, G. Caneva, F. Ferraccioli, G. Tabellario (2006). Recent aeromagnetic and deep electromagnetic exploration project in East Antarctica. *Terra Antarctica Reports*, vol. 12; p. 167-176, ISSN: 1122-8628
  22. Armadillo E., F. Ferraccioli, G. Tabellario, E. Bozzo (2004). Deep electrical resistivity sounding across a major ice covered fault belt in Northern Victoria Land (East Antarctica). *Geophysical Research Letters*, vol. 31, ISSN: 0094-8276

### B – book chapters

--

### C - proceedings of international conferences

1. Armadillo, E., Ferraccioli, F., Zunino A., and Bozzo E., (2007). Aeromagnetic anomaly patterns reveal buried faults along the eastern margin of the Wilkes Subglacial Basin (East Antarctica), in *Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES*, A.K. Cooper and C.R. Raymond et al. (eds.), *USGS Open-File Report 2007-1047*, Short Research Paper 091, 4 p.; doi:10.3133/of2007-1047.srp091.
2. Armadillo, E., Ferraccioli, F., Zunino, A., Bozzo, E., Rocchi, S., and Armienti P., (2007). Aeromagnetic search for Cenozoic magmatism over the Admiralty Mountains Block (East Antarctica), in *Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES*, A.K. Cooper and C.R. Raymond et al. (eds.), *USGS Open-File Report 2007-1047*, Short Research Paper 075, 4 p.; doi: 10.3133/of2007-1047.srp075.
3. Ferraccioli, F., Jordan, T., Armadillo, E., Bozzo, E., Corr, H., Caneva, G., Robinson, C., and Tabacco, I. (2007). Exploring under the East Antarctic Ice Sheet with new aerogeophysical surveys over the Wilkes Subglacial Basin, the Transantarctic Mountains and Dome C, in *Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES X*, A. K. Cooper and C. R. Raymond et al. (eds.), *USGS Open-File Report 2007-1047*, Extended Abstract 074, 4 p.
4. Golynsky, A., D. Blankenship, M. Chiappini, D. Damaske, F. Ferraccioli, C. Finn, D. Golynsky, A. Goncharov, T. Ishihara, S. Ivanov, W. Jokat, H. R. Kim, M. König, V. Masolov, Y. Nogi, M. Sand, M. Studinger, R. von Frese and the ADMAP Working Group, 2007. New magnetic anomaly map of East Antarctica and surrounding regions in *Proceedings of the 10th ISAES*, edited by A. K. Cooper and C. R. Raymond et al., *USGS Open-File Report 2007-1047*, Short Research Paper 050, 4 p.; doi:10.3133/of2007.srp050.
5. von Frese, R.R.B., et al. (2007), The next generation Antarctic Digital Magnetic Anomaly Map (ADMAP), in *Antarctica: A Keystone in a Changing World – Online Proceedings of the 10th ISAES*, edited by A.K. Cooper and C.R. Raymond et al., *USGS Open-File Report 2007-1047*, Short Research Paper 093, 4 p.; doi:10.3133/of2007-1047.srp093.
6. Zunino, F. Benvenuto, Armadillo E., M. Bertero, E. Bozzo (in stampa). Nonlinear apparent susceptibility mapping. In: *Geophysical Research Abstracts*, Vol. 11, EGU2009-5505, 2009
7. Bozzo E, Armadillo E., M.Gambetta (in stampa). Electrical Conductivity Imaging Of Crustal Structures In Northern Victoria Land, Antarctica. In: *IAGA 2009*
8. Armadillo E., Ferraccioli F, Bozzo E (2009). Deep electrical conductivity studies in East Antarctica. In: *Exploring Frontier regions in East Antarctica during IPY and beyond – Cambridge*
9. Armadillo E., F. Ferraccioli, E. Bozzo (2008). Exploring deep electrical conductivity from the Transantarctic Mountains to the Wilkes Subglacial Basin. In: *Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova*
10. Armadillo E., F. Ferraccioli, E. Bozzo, A. Zunino (2008). New Aeromagnetic Anomaly Compilation Over Northern Victoria Land (East Antarctica). In: *SCAR/IASC IPY Open Science Conference - St. Petersburg, Russia*
11. C. Moss, F. Ferraccioli, T. Jordan, A.B. Watts, Armadillo E., E. Bozzo (2008). Using New Airborne Gravity Data To Evaluate Uplift Mechanisms For The Transantarctic Mountains. In: *SCAR/IASC IPY Open Science Conference - St. Petersburg, Russia*
12. F. Ferraccioli, Armadillo E., A. Zunino, E. Bozzo, S. Rocchi, P. Armienti (2008). Magmatic and tectonic patterns over the Transantarctic Mountains region in light of new aeromagnetic imaging. In: *Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova*
13. F. Ferraccioli, Armadillo E., A. Zunino, E. Bozzo, S. Rocchi, P. Armienti (2008). Magmatic and tectonic patterns over the Northern Victoria Land sector of the Transantarctic Mountains from new aeromagnetic imaging. In: *Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova*
14. Ferraccioli F, Armadillo E., T. A. Jordan, E. Bozzo, H. F. J. Corr, C. Robinson (2008). Exploring a frontier region

## Programma Nazionale di Ricerche in Antartide (PNRA)

- in East Antarctica with new geophysical data: the Wilkes Subglacial Basin. In: Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova
15. Hugh C, F. Ferraccioli, T. Jordan, Armadillo E., C. Robinson (2008). Newly identified subglacial lakes along the eastern margin of the Wilkes Subglacial Basin, East Antarctica. In: Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova
  16. Jordan T. A, F. Ferraccioli, Armadillo E., H. F. J. Corr (2008). Crustal structure and sediment distribution within the Wilkes Subglacial Basin. In: Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova
  17. Moss T, T. A. Jordan, F. Ferraccioli, A. B. Watts, Armadillo E., E. Bozzo (2008). Using new airborne gravity data to evaluate uplift mechanisms for the Transantarctic Mountains. In: Geological and Geophysical investigations from the Transantarctic Mountains to Dome C – Genova
  18. T.A. Jordan, F. Ferraccioli, Armadillo E., E. Bozzo, H.F.J. Corr (2008). Crustal Structure And Sediment Distribution Within The Wilkes Subglacial Basin: A New Airborne Gravity Perspective. In: SCAR/IASC IPY Open Science Conference - St. Petersburg, Russia.
  19. Armadillo E., F. Ferraccioli, A. Zunino, E. Bozzo (2007). Aeromagnetic evidence for a major fault belt at the transition between the
  20. Transantarctic Mountains and the Wilkes Subglacial Basin. In: IUGG XXIV General Assembly. Perugia Armadillo E., F. Ferraccioli, Zunino A, E. Bozzo, P. Armienti, S. Rocchi (2007). Tracing a Cenozoic magmatic province over the Transantarctic Mountains with aeromagnetic anomaly data. In: Proceedings of IUGG XXIV General Assembly, ISBN/ISSN: 978-88-95852-25-4
  21. F. Ferraccioli, Armadillo E., J. Tom, E. Bozzo, H. Corr, G. Caneva, C. Robinson (2007). New aeromagnetic view of the Wilkes subglacial Basin (East Antarctica). In: IUGG XXIV General Assembly. Perugia
  22. T. Jordan, F. Ferraccioli, A. B. Watts, Armadillo E., C. Moss, H. Corr, E. Bozzo, G. Caneva, C. Robinson (2007). Exploring Linkages Between The Wilkes Subglacial Basin And The Transantarctic Mountains With New Airborne Gravity Data. In: Proceedings of IUGG XXIV General Assembly, ISBN/ISSN: 978-88-95852-25-4
  23. Armadillo E., E. Bozzo, G. Caneva, G. Tabellario (2004). GDS investigations from the Rennick Graben to the Western side of the Wilkes Subglacial Basin , Antarctica. In: EGS-2004
  24. F. Talarico, G. Kleinschmidt - 'Chapter 7 The Antarctic Continent in Gondwanaland: A Tectonic Review and Potential Research Targets for Future Investigations ' (pubblicazione su volume collettaneo, 2009) , 257 - 308 Volume: Developments in Earth and Environmental Sciences, 8 , Casa Editrice: Elsevier, Netherlands
  25. E. Stump, Gehrels G., F. Talarico, R. Carosi - 'Constraints from detrital zircon geochronology on the early deformation of the Ross Orogen, Transantarctic Mountains, Antarctica ' (atto di convegno, 2007) , 1 - 4, ISAES X, Santa Barbara (USA) dal 26/8/2007 al 1/9/2007
  26. Crispini L., G. Capponi, Federico L., F. Talarico - 'Gold bearing veining linked to transcrustal fault zones in the Transantarctic Mountains (northern Victoria Land, Antarctica) ' (atto di convegno, 2007) , 1 - 4, ISAES X, Santa Barbara (USA) dal 26/8/2007 al 1/9/2007
  27. E. Armadillo, F. Ferraccioli, Gambetta M., F. Talarico, Zunino A., Zangani M., E. Bozzo - 'A high-resolution aeromagnetic survey over the Cape Roberts Rift Basin: Correlations with seismic reflection and magnetic susceptibility log data ' (atto di convegno, 2006) , 1 - 4, ISAES X, Santa Barbara (USA) dal 26/8/2007 al 1/9/2007
  28. L. Crispini, G. Capponi, Federico L., F. Talarico - 'Gold-Bearing Veining in Transcrustal Fault Zone in the Transantarctic Mountains (Northern Victoria Land, Antarctica): Implications for the Paleo-Pacific Margin of Gondwana ' (abstract di convegno, 2008) , V13C- 2132, Eos Trans. AGU 2008, 89(53), Fall Meet. Suppl., San Francisco (USA) dal 14/12/2008 al 21/12/2008
  29. L. Crispini, Federico L., G. Capponi, F. Talarico - 'Gold-bearing veins in transcrustal fault zone in the Transantarctic Mountains (northern Victoria Land, Antarctica) ' (abstract di convegno, 2008) , 12 - 12, 33rd International Geological Congress, Oslo (Norvegia) dal 6/8/2008 al 14/8/2008
  30. B. Lombardo, Ottolini L., Alberico A., F. Talarico - 'A SIMS Investigation of REE and other trace elements in minerals of granulites from the Wilson Terrane of Northern Victoria Land, Antarctica ' (abstract di convegno, 2007) , 1 - 2, EMAS 2007. 10th European Workshop. on. MODERN DEVELOPMENTS. AND. APPLICATIONS. IN. MICROBEAM ANALYSIS , Antwerpen (Belgio) dal 6/5/2007 al 10/5/2007
  31. R. Palmeri, R. Chmielowski, S. Sandroni, F. Talarico, C. A. Ricci - 'Eclogite-facies rocks at the paleo-pacific margin of Gondwana: Tasmania and Antarctica connection during the Cambro-Ordovician Ross/Delamerian Orogeny.' (abstract di convegno, 2007) , 89 - 90, International Eclogite Field symposium, Lochalsh-Sky island (United Kingdom) dal 29/6/2007 al 6/7/2007
  32. R. Palmeri, F. Talarico, C. A. Ricci - 'UHP metamorphic conditions in garnet-bearing pyroxenites from Lanterman Range (northern Victoria Land): Petrology and P-T path' (pubblicazione su rivista, 2005) Mitteilungen der Osterreichischen Mineralogischen Gesellschaft, Vol. B150, 124 – 124
  33. E. Armadillo, F. Ferraccioli, Gambetta M., F. Talarico, Zunino A., E. Bozzo - 'Integrating drilling results adjacent to the Transantarctic Mountains from high-resolution aeromagnetic data: an example from Cape Roberts ' (abstract di convegno, 2007) , 1 - 2, EOS Trans. AGU, 88 (52), San Francisco (USA) dal 10/12/2007 al 16/12/2007
  34. R. Palmeri, R. Chmielowski, S. Sandroni, F. Talarico, C. A. Ricci - 'The eclogite facies rocks from Antarctica and Tasmania: Different geodynamic settings within the Cambro-Ordovician Ross/Delamerian Orogeny. ' (abstract di convegno, 2007) , 109 - 109, 10th International Symposium on Antarctic Earth Sciences, Santa Barbara

## Programma Nazionale di Ricerche in Antartide (PNRA)

(California) dal 26/8/2007 al 1/9/2007

35. R. Palmeri, R. Chmielowski, S. Sandroni, F. Talarico, C. A. Ricci - 'The high-pressure metamorphic belts from Tasmania and Antarctica: different petrological evolutions within the Cambro-Ordovician Ross/Delamerian Orogeny. ' (abstract di convegno, 2007) , 445 - 445, FIST Geoitalia 2007, Rimini (Italia) dal 12/9/2007 al 14/9/2007
36. E. Stump, F. Talarico, G. Gehrels - 'New U-Pb Zircon Data Bearing On The Development Of The Ross Orogen And Byrd Glacier Discontinuity, Transantarctic Mountains, Antarctica' (abstract di convegno, 2006) , 110 - 110, Geological Society of America , Philadelphia (USA) dal 22/10/2006 al 25/10/2006
37. S. Sandroni, F. Talarico - 'Quantitative Provenance Analyses Of Crp Cores: Implications For Erosion/Uplift Models Of The Transantarctic Mountains In Southern Victoria Land' (abstract di convegno, 2006) , 221 - 221, SCAR Open Conference, Hobart (Australia) dal 12/7/2006 al 14/7/2006
38. F. Talarico, G. Di Vincenzo, G. Kleinschmidt - 'A Major Crustal Discontinuity in George V Land: New Petrological and <sup>40</sup>Ar-<sup>39</sup>Ar Data and New Research Opportunities' (abstract di convegno, 2004) , 23 - 23, workshop Frontiers and Opportunities in Antarctic Earth Sciences, Siena (Italia) dal 29/8/2004 al 31/8/2004

### D – proceedings of national meetings and conferences

1. L. Crispini, G. Capponi, Federico L., F. Talarico - 'Gold-Bearing Vein Networks In Transcrustal Fault Zone In The Transantarctic Mountains (Northern Victoria Land, Antarctica) ' (abstract di convegno, 2008) , 89 - 89, 84° Congresso Nazionale Società Geologica Nazionale, Sassari (Italia) dal 15/9/2008 al 17/9/2008

### E – thematic maps

--

### F – patents, prototypes and data bases

1. New database of aeromagnetic anomalies for the TAM and WSB. To be released to ADMAP-community at SCAR meeting (August 2010).
2. New databases of subglacial topography and gravity anomalies. To be released in 2011 for BEDMAP II and AntGP initiatives.

### G – exhibits, organization of conferences, editing and similar

1. The Italian-British Antarctic Geophysical and Geological Survey in northern Victoria Land 2005-06- towards the International Polar Year 2007-08. *Terra Antartica Reports* 13, 2007, edited by E. Bozzo and F. Ferraccioli, 110 pp.
2. International workshop: *Geological and Geophysical Investigations from the Transantarctic Mountains to Dome C* Organised by E. Bozzo and F. Ferraccioli (September 2008- Univ. of Genova- DIPTERIS).

### H - formation (PhD thesis, research fellowships, etc.)

1. NERC-funded PhD on "New aerogeophysical interpretations in East Antarctica" (3 years). Started in 2009.

---

## Research units

### Research Unit n. 1

- Egidio Armadillo (Responsabile)
- Gambetta Marco
- Caneva Giorgio
- Zunino Andrea
- Zunino Enzo
- Rizzello Daniele

### Research Unit n. 2

- Emanuele Bozzo (Responsabile)
- Fausto Ferraccioli
- Philip Jones
- Armadillo Egidio
- Caneva Giorgio
- Zunino Andrea

## Programma Nazionale di Ricerche in Antartide (PNRA)

- Gambetta Marco
- Ron Hackney
- Hugh Corr
- Nick Freason
- Aiden O'Hare

### Research Unit n. 3

- Franco Talarico (Responsabile)
- Sonia Sandroni
- Rubatto Daniela
- Francesco Fasano
- Paolo Senserini
- Eleonora Strada
- Rosaria Palmeri

### Research Unit n. 4

- Federico Rossetti (Responsabile)
- Claudio Faccenna
- Gianluca Vignaioli
- Frank Lisker

### Research Unit n. 5

- Marco Cattaneo (Responsabile)
- Alberto Delladio
- Martina Demartin
- Diego Franceschi
- Valentino Lauciani

### Research Unit n. 6

- Gaetano Ranieri (Responsabile)
- Stefano Erriu
- Gian Piero Deidda
- Adele Manzella
- Marco Nuvoli
- Federica Ardaù
- Luigi Noli
- Diego Franceschi
- Valentino Lauciani

---

**Date: 2010-05-11**

---

*Notes*