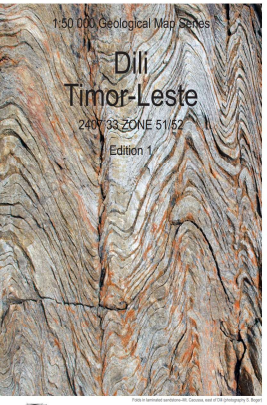


Folds in laminated sandstone-silt. Carcasa, east of Dili (photography: S. Boger)

THE UNIVERSITY OF MELBOURNE

DATUM NOTES

ELLIPSOID ..... WORLD GEODETIC SYSTEM 1984
GRID ..... 5000 METRE UTM ZONE 51 (GREY NUMBERED LINES)
5000 METRE UTM ZONE 52 (BLUE NUMBERED TICKS)
PROJECTION ..... TRANSVERSE MERCATOR
VERTICAL DATUM ..... MEAN SEA LEVEL
HORIZONTAL DATUM ..... WORLD GEODETIC SYSTEM 1984

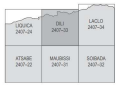
GN 3014.5 MILS
0.04°E
(changing by 0.033°W/year)

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH SUBTRACT 54 MILS

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH ADD 54 MILS

MAP LOCATION

INDEX TO ADJOINING MAPS



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MAP LAYOUT

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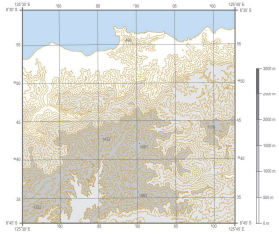
REFERENCE MATERIAL

Berry, R.F. and Grady, A.E., 1981. Deformation and metamorphism of the Aileu Formation, north coast, East Timor and its tectonic significance. Journal of Structural Geology, 3: 143-167.

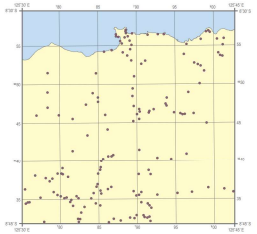
Bladon, K.D., Sandiford, M., Phillips, D. and Boger, S.D. 2014. Detrital zircon U-Pb and $^{40}Ar/^{39}Ar$ hornblende ages from the Aileu Complex, Timor-Leste: provenance and metamorphic cooling history. Journal of the Geological Society, 171, 477–493.

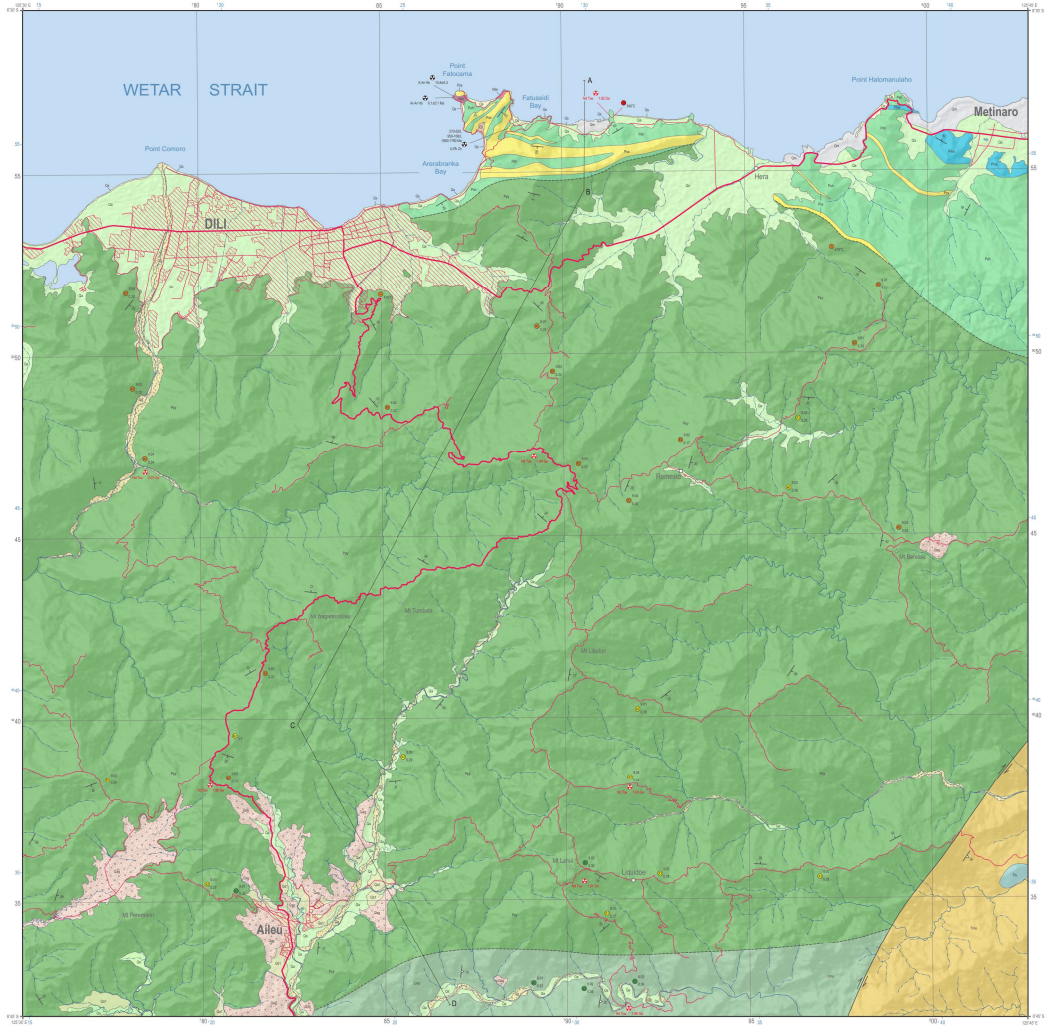
Harris, R., Kaiser, J., Hurford, A. and Carter, A., 2000. Thermal history of the Australian passive margin cover sequences accreted to Timor during the Late Neogene arc–continent collision, Indonesia. Journal of Asian Earth Sciences, 18, 47–69.

ELEVATION GUIDE



RELIABILITY DIAGRAM

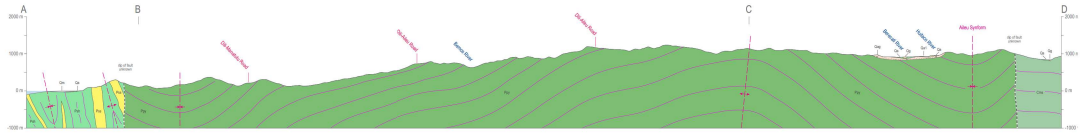




SCALE 1:50 000

0 1 2 3 4 5 10 15

KILOMETRES



SYMBOL LEGEND

TOPOGRAPHY

Spot elevation .....

POPULATED PLACES

Built up area .....
Village .....

ROADS

All weather – hard surface .....
Fair or dry weather – loose surface .....

STRUCTURAL GEOLOGY

Fault, normal, hanging wall indicated: position known/inferred .....
Fault, reverse, hanging wall indicated: position known/inferred .....
Fault, strike-slip, sense of movement indicated: position known/inferred .....
Fault, motion unknown: position known/inferred .....
Strike and dip: bedding (S_0) .....
Strike and dip: composite foliation (S_0/S_1) .....
Trend and plunge of fold axis or intersection lineation: generation known .....
Trend and plunge of fold axis or intersection lineation: generation unknown .....
Fold axis: antiform: existence and position certain .....
Fold axis: antiform: existence and position inferred .....
Fold axis: antiform: existence and position certain .....
Fold axis: antiform: existence and position inferred .....
Fold axis: fold plunge direction indicated .....
Structural form surface .....

DRAINAGE

Watercourse: perennial .....
intermittent .....
Hot spring .....

GEOCHRONOLOGY

Isotopic age in millions of years .....
Model age in billions of years .....
Fossil locality and age .....

METAMORPHIC GEOLOGY

Kübler Index .....
Vitrinite Reflectance .....
Graphite temperature .....
Pressure-Temperature estimate .....
Metamorphic isograde .....

FACIES

Zeolite .....
Prehnite-pumpellyite .....
Greenschist .....
Amphibolite .....

STRATIGRAPHIC LEGEND

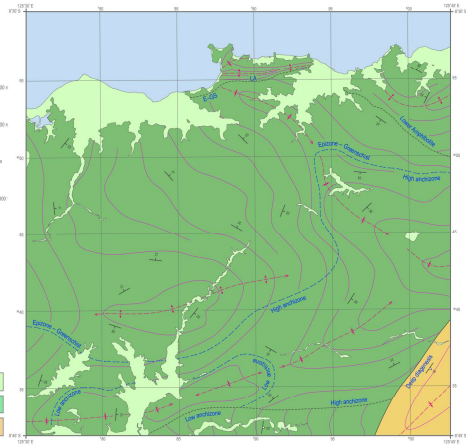
		SEDIMENTARY ROCKS	VOLCANIC AND INTRUSIVE ROCKS
QUATERNARY	HOLOCENE	Flood plain alluvium: sand, gravel and silt (Qa)	
		River bed alluvium: poorly sorted silty and sandy gravel often with poor sorting and limited rounding of course constituents (Qa)	
		Beach and lagoonal sand flats, lesser gravel (Qa)	
		Grey lagoonal silt, mud and minor sand, intermittantly inundated (Qm)	
		Talus: poorly sorted and rounded boulder and gravel	
		Alluvial terraces: sand gravel and silt (Qa1)	
	PLEIST	Layered grey, tan, orange or white poorly sorted alluvial gravel, sand and silt. Dissected by the modern drainage system. (Qag) Ainaro Formation	
		UNCONFORMITY	
		AILEU COMPLEX	**GONDWANA SEQUENCE**
		SEDIMENTARY ROCKS / VOLCANIC/INTRUSIVE ROCKS	SEDIMENTARY ROCKS / VOLCANIC/INTRUSIVE ROCKS
NEOGENE	PLIOC	OROGENESIS ~ 6.8±0.1 Ma	
	MIOCENE	Black to dark green medium to very-course grained amphibolite. Protoliths were mostly of sub-alkali to weakly alkali basaltic composition. Emplaced mostly as sills. (Nfa) Fatocama Suite 8.5±0.1 Ma	
		DISCONFORMITY	
JURASSIC	Early		Mt. Lilu Fm. (Tls, Tms) Aitutu-Wai Luli Formation: Well-layered pale-green, tan and locally red mudstone interbedded locally with fine- to medium-grained tan or purple sandstone and layered dark grey, grey, green or pink limestone. Fossiliferous.
TRIASSIC	Late		
	Middle		
	Early		
PERMIAN	Late	Metinaro Fm. (Pma) / Fatussidi Fm. (Pss, Psh): Dili Formation: Silver grey mu>bi (rarely g) bearing schist, intercalated with lesser sandstone	
	Middle	Aileu Formation: Finely laminated dark grey slate and phyllite. Rare horizons of sandstone. (Pzs)	
	Early		
CARBONIFEROUS	Late	Hartolelet Formation: Ten to green finely laminated mudstone. Rare horizons of sandstone. Discontinuous layers of grey to pink cryocoidal limestone become more common near to top of the sequence (Cms)	

Mt. Lilu Formation (Tls): Grey and locally pink mostly massive fossiliferous limestone. Typically forms thick lenticidal layers within the Aitutu-Wai Lui Formation

Metinaro Formation (Pma): Grey massive to thinkly bedded limestone

Fatussidi Formation (Pss): Fine-grained quartzitic and arkosic sandstone intercalated with lesser mu>bi bearing

MAJOR STRUCTURAL AND METAMORPHIC FEATURES



HOLOCENE COVER ROCKS
AILEU COMPLEX
GONDWANA SEQUENCE

BIBLIOGRAPHIC REFERENCE: Boger, S.D., Spaldrink, L., Lee, R. & Sandiford 2013. Dili 1:50 000 geological map. The University of Melbourne