AUSTRALIA 1:100 000 REGOLITH-LANDFORM SERIES SHEET 8731 TRANSPORTED REGOLITH Depositional plains Tpd1, Locally derived sediments with high salt content; noxious weeds A Alluvial sediments Aaf1, Present floodplains with some terraces in upper river reaches IN-SITU REGOLITH RL Lag RLel1, Quartz lag associated with large quartz veins on upper slopes of north-south aligned open low hills, colluvium in valleys; significant headward erosion and land degradation due to erosion, overgrazing and salinity RC Residual clay Erosional plains RCep1, Residual clay remanence of prior lava plain on saprolite; some marshy lower lying areas s Saprolite Ser2, Variably weathered bedrock partly exhumed from lava plain, some intervening alluvial sediments; broad rises on partly eroded lava plain Sel1, Sub-basaltic weathering along inverted palaeodrainage lines, variably weathered depending on bedrock lithology, some colluvium with basalt goulies; flat-topped low hills to hills, gentle to steep slopes, narrow valleys; erosion potential on steeper slopes due to clearing SvI1, Variably weathered to fresh multiple basalt flows with some peat interbeds; plain with low rises Lava plateaus Svp1, Inverted relief lava flows; often multiple flows with underlying alluvial sediments and intervening variably weathered basalt or trachyte, silcrete in places sv Very highly weathered bedrock Rises SVer1, Deep saprolite with deep red soils and ferruginous induration, clay in drainage lines; some remanence of basalt weathering north of Orange; conical rises with long slopes; part of extensive plateau with steep escarpments towards the south SVel1, Deep saprolite, mainly metasedimentary bedrock, with areas of granite weathered to residual clay and corestones, some ferricrete and ferruginous nodules; broad conical low hills with long gentle slopes; part of extensive plateau with steep escarpments towards the south SVel2, Weathered granite within western perimeter of Bathurst Granite erosion bowl; high erosion potential SVel7, Sub-lava weathering; erosion potential SH Highly weathered bedrock SHer2, Alluvium and palaeosols in underfit trunk streams, lower colluvial slopes; north-northwest trending structurally controlled wide u-shaped valley SHer3, Remnant basalt on scattered crests, bedrock close to surface in places; rounded crests SHer4, Weathered granite with alluvial black soil veneer in places; alluvium, colluvium and residual clay in low areas; open rises and depressions (swampy in places) and channels; remnant palaeoplain of Macquarie River SHer6, Erosion amphitheatres with rises ramping down from, and including some, lava remnants SHer9, Includes erosional plains in places; plateau edge on western rim of Bathurst Granite erosion bowl SHel2, Stripping of regolith from upper slopes, deeper regolith downslope; duplex soils, some granite corestones and tors; sub-rounded to sub-angular crests SHel6, Deep saprolite, colluvium, minor alluvium; low hills to rises with rounded crests; landslides and slumps common on unstable slopes due to clearing and waterlogging SHel7, Weathered granite with iron concretions at depth covered in part by rounded cobbles of mixed lithology in clayey red soils; open rolling rises and terraces, minor colluvial fans SHeh3, Bathurst Granite saprolite and colluvium; escarpment edge on western rim of erosion bowl, dense drainage lines and sharp ridges; very high erosion potential due to steep slopes and friable materials SHeh4, Colluvium downslope, some remnant sub-basaltic weathering; rounded crests, steep sides; below drainage escarpments of Bell River and Kerrs Creek Moderately weathered bedrock Rises SMer5, Includes areas of slightly weathered bedrock, more highly weathered on flanks of rises; plateau remnants bounded SMer8, Remnant palaeovalley sediments and adjacent sub-basaltic saprolite slopes; prior channel of Macquarie River (higher and to northeast of present entrenched course) SMer9, Some colluvium; a few low hills Low hills SMel3, Minimal soil on rounded closely spaced low hills, minor surface wash and alluvium in depressions; incised poor country SMel13, Granite derived alluvium and sandy to gravelly colluvium; south sloping back slopes off metamorphic aureole scarp on northern edge of Bathurst Granite, wide alluvial south flowing intermittantly active channels SMel15, Colluvium on lower slopes, sub-angular to sub-rounded crests, long slopes with rounded spurs; soil erosion potential from extensive clearing SMel16, Widened river valleys with footslopes, strath terraces, and alluvial terraces on more highly weathered bedrock, especially in the Sofala area; colluvium on lower slopes SMel18, Low hills and open rises with colluvial slopes on plateau remnants bounded by high steep escarpments SMel20,Sub-rounded open low hills with colluvial slopes in places SMel21, Some colluvium on lower slopes; north-west trending ridges with sub-angular to sub-rounded crests SMel37, Deep colluvium in valleys, skeletal soils on crests, duplex soils on slopes; sub-rounded open low hills trending north-south SMel38, North-west trending ridges with sub-angular crests SMeh1, Minimal soil, colluvium at base of slopes, minor ferruginous induration; steep hills with sharp to sub-rounded crests and narrow interlocking valleys with narrow strips of alluvium SMeh13,Shallow sandy granitic soils; rolling to steep hills SMeh18, Sub-rounded hills with some footslope colluvium; possible lava remanence ss Slightly weathered bedrock Erosional plains SSep1, Includes moderately weathered bedrock; flat and sloping north-south elongated plains with some rises; bevelled plateau edge on north and south sides of Bathurst Granite erosion bowl SSer3, Elevated bevelled benches adjacent to Macquarie River SSel2, Some colluvium at base of slopes; north-west oriented low hills to hills, sharp ridges and closely spaced drainage lines on steep slopes SSel7, Some areas with deeper profiles; steep sided spiny low hills, closely spaced drainage lines; minimal soils easily eroded; high salinity, especially in minor areas of deeper saprolite and sediments SSeh4, Steep slopes, angular crests; metamorphic aureole, western rim of Bathurst Granite erosion bowl SSem4, Weathered remnants of Mt Canobolas trachytic volcanic core, moderately weathered in places; steep mountains and BU Unweathered bedrock BUeh1, Stony scree soils at base of slopes, slightly weathered bedrock and skeletal soils in places, minor area of remnant soil on flat ridges; very steep hills and mountains, a few remnant flat-topped ridges on higher terrain; part of metamorphic aureole around Bathurst Granite BUem2, North-south aligned sinuous sharp ridges, steep slopes, narrow valleys, dense drainage lines; a few narrow, **INDURATION** Notable occurrences (not necessarily widespread) Ferruginous induration Multiple weathering profiles associated with lava flows LANDFORMS DEPOSITIONAL LANDFORMS 86 <sup>687000mE</sup> 88 89 <sup>6</sup>90 91 92 93 94 95 96 97 98 99 <sup>7</sup>00 01 02 03 04 05 06 07 08 09 <sup>7</sup>10 11 12 13 14 15 16 17 18 19 <sup>7</sup>20 21 22 23 24 25 26 27 28 29 <sup>7</sup>30 31 32 149°30′ 149°30′ Flood plains Terraced land Alluvial swamp Colluvial fans For definitions of regolith types, landform types, induration and geomorphic features refer to: Pain, C., Chan, R., Craig, M., Hazell, M., Kamprad, J., and Wilford, J. (1991). RTMAP: BMR Regolith database field handbook. BMR Record 1991/29 pd Depositional plains EROSIONAL LANDFORMS UNIVERSAL GRID REFERENCE GRID ZONE DESIGNATION TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES Pediments 100 000 METRE SAMPLE POINT: A MOUNT BULGA

SQUARE IDENTIFICATION

1 Read letters identifying 100 000 metre GD Low hills DIGITAL DATA square In which the point lies:

2 Locate first VERTICAL grid line to
LEFT of point and read LARGE fligures
labelling the line either in the top or
bottom margin, or on the line itself: em *Mountains* The digital data for this map were compiled SCALE 1:100 000 on the AGSO Arc/Info System and may be suitable for transfer to other digital systems. VOLCANIC LANDFORMS bottom margin, or on the line itself:

Setimate tenths from grid line to point:

Locate first HORIZONTAL grid line able to point to set the small tenth and read LARGE figures of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid number; example:

SAMPLE REFERENCE:

GD0351

If reporting beyond 18 Degrees in any direction, prefix Grid Zone Designation, as: 55H6D035176 Watercourse 1 0 1 2 3 4 5 6 7 8 9 10 Kilometres Information on formats, release conditions, vl Lava plains Lake and costs, can be obtained from the AGSO Sales Centre vp *Lava plateaus* Erosional scarp, palaeosurface boundary ----- Main road UNIVERSAL TRANSVERSE MERCATOR PROJECTION  $\frac{\Lambda}{\Lambda}$  Erosional scarp, unrelated to palaeosurface boundary ----- Minor road LATITUDE OF ORIGIN: 0°. LONGITUDE OF ORIGIN: 129° Structural scarp This map shows the type and distribution of regolith-landform units and indicates their dominant regolith-landform associations. These units are distinct patterns of recurring \_\_\_\_\_\_\_ Metamorphic aureole scarp ORANGE Town Fault line scarp Grey numbered lines are 1000 metre intervals of the Australian Map Grid, Zone 55. Grid values are shown in full only at the Trigonometrical station Geomorphic symbols indicate the location and type of geomorphic activity. This map presents a systematic analysis and interpretation of 1:89 000 scale RC9 aerial photography, 1:100 000 scale topographic maps (AUSLIG), and field mapping data. High resolution (250m line spacing) Erosional and structural scarp, palaeosurface boundary southwest corner of the map Erosional and metamorphic aureole scarp, palaeosurface boundary Erosional and fault line scarp, palaeosurface boundary airborne gamma-ray spectrometry and magnetics (Geoterrex) were used where applicable It is recommended that this map be referred to as: Chan, R.A., Flemming, C., 1995 - Orange Regolith-Landforms: 1:100 000 scale map. Australian ----- Major drainage divide **NGMA** — — — — Minor drainage divide Geological Survey Organisation, Canberra  $\Longrightarrow$ Entrenched superimposed drainage, indicating direction Copies of this map may be obtained from: AGSO Sales Centre, GPO Box 378, Canberra City, ACT, 2601; Ph (06) 249 9519, Fax (06) 249 9982 Product of the National Geoscience Mapping Accord Entrenched superimposed drainage between upstream and downstream limits, indicating direction Site and direction of beheaded stream where no wind gap Regolith and geomorphology interpreted and compiled 1992-1994 by R.A. Chan, AGSO, MAP LOCALITY INDEX TO ADJOINING SHEETS **⊗** > C Site and direction of river capture 147°00′ 1:250 000 maps shown in blue 150°00′ 150°00′ **⊗**→>R Site and direction of river reversal Cartography by T. Brennan, N. Corby, G. Scott, Cartographic Services Unit, AGSO  $\equiv$ Wind gap TOTTENHAM DANDALOO NARROMINE DUBBO COBBORA GULGONG | B333 | B453 | B533 | B633 | B633 | B833 | MINERAL DEPOSITS Knick point Magnetic declination information for 1995 supplied by Geomagnetic Section, AGSO NEW SOUTH WALES Armidale Bathurst Mineral Deposit Database, Department of Mineral Resources, NSW. Topographic base map compiled from digital data supplied by Australian Surveying and Land Information Group, © AUSLIG 1994, with modifications — — > Palaeodrainage, indicating trend Published by the Australian Geological Survey Organisation, Department of Primary Industries and Energy, Canberra. Issued under the authority of the Minister for Primary Industries and Energy, Canberra Polymetallic Inverted palaeodrainage, indicating trend CONDO-BOGAN PARKES MOLONG DRANGE BATHURST BATHUR Cu and Au Fe and Mn Major lava flow direction © Commonwealth of Australia 1995 ≭V Major volcanic centre **ORANGE** This work is copyright. Apart from any fair dealings for the purposes of study, research, criticism or review, as permitted under the Pyrite Cu ×∨ Volcanic plug residual 34°00′ 8330 8430 8530 8630 8750 8830 34°00′ 147°00′ MAGNETIC DECLINATION Copyright Act, no part may be reproduced by any process without Eroded volcanic plug written permission. Copyright is the responsibility of the Executive Director, Australian Geological Survey Organisation. Inquiries should be directed to the Principal Information Officer, Australian Geological Survey Organisation, GPO Box 378, REGOLITH-LANDFORMS Sn, W, Mo ×В Basalt capped residual hill MAGNETIC DECLINATION

**SHEET 8731** 

PRELIMINARY EDITION 1995

SUBJECT TO AMENDMENT

Coal and Oil

Industrial

Ag and (Au)

Gems

Ag and (Gems)

× R Residual hill

The Commonwealth does not warrant that this map is definitive,

nor free of error and does not accept liability for loss caused or

arising from reliance upon information provided herein

Blue lines show magnetic declination for epoch 1995.0 derived from 1990 AGRF model. Annual change is 2'4"

WARNING: Colours will fade with prolonged exposure to light.

per year easterly at the centre of the map. Information is current to 1995