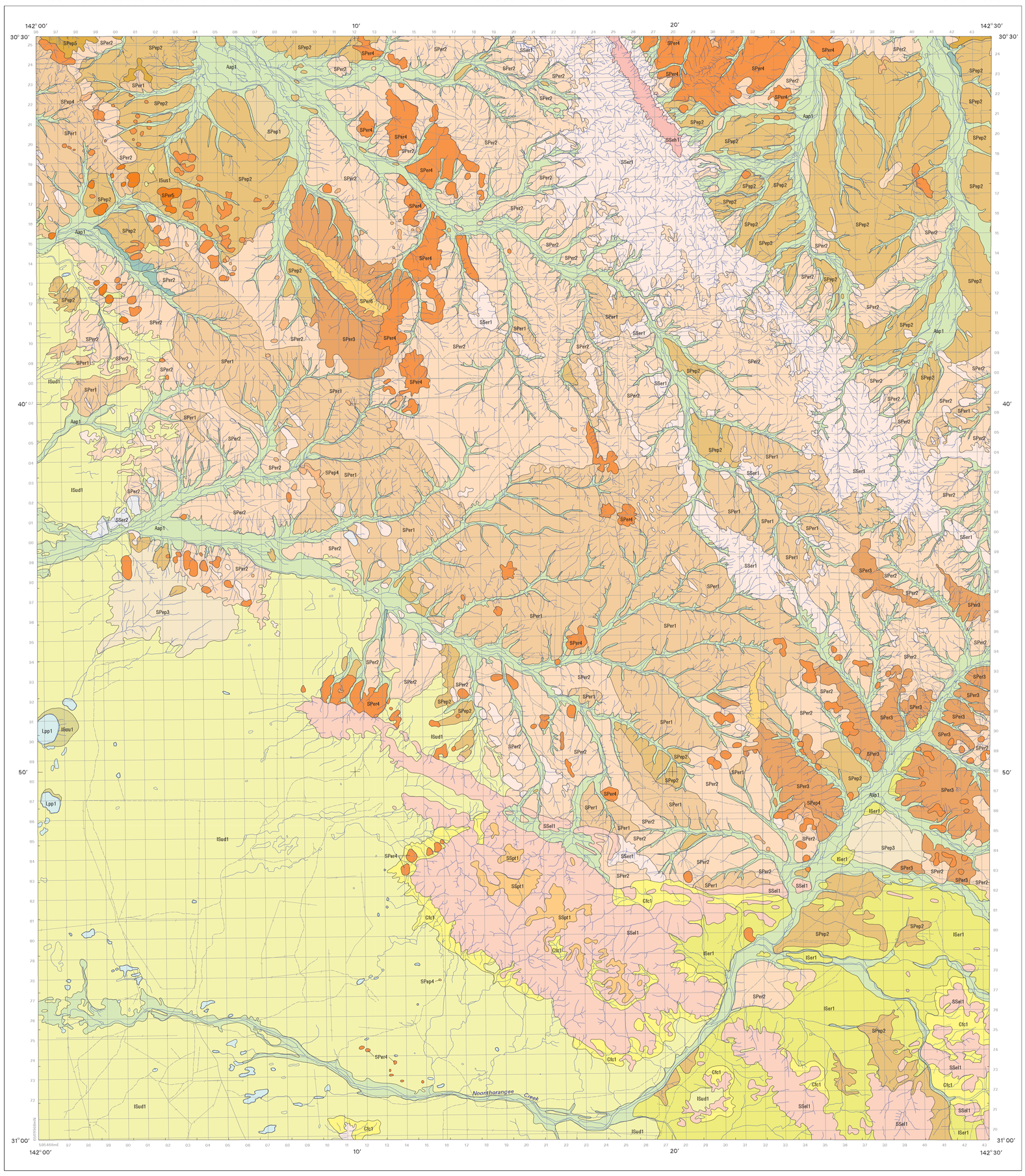
WONNAMINTA

AUSTRALIA 1:100 000 REGOLITH-LANDFORM SERIES

NEW SOUTH WALES

SHEET 7336



TRANSPORTED REGOLITH

Alluvial sediments — *Alluvial sediments*

- **Aap1** — *Red brown sand, silt, clay and gravel in alluvial plains. Sand and gravel in active channel floors.*

Aeolian sediments — *Aeolian sand*

- **ISer1** — *Locally derived aeolian sand forming thin sheets over Devonian sandstone, local mantle of sandstone fragments. Rises and erosional plains.*
- **ISub1** — *Aeolian sand forming source bordering dunes adjacent to watercourses.*
- **ISud1** — *Aeolian sand forming irregular and longitudinal dunes, local areas of stony mantle possibly over saprolith in some swales, minor fine sediment in small claypans, minor alluvium along watercourses and in terminal floodouts.*
- **ISus1** — *Aeolian sand forming thin sheets in areas of stony mantle over basement saprolite.*
- **ISuu1** — *Aeolian sand in lunettes on the east side of larger claypans.*

Colluvial sediment — *Colluvial sediment*

- **Cfc1** — *Sandy to bouldery colluvium in coalescing colluvial fans and slopes adjacent to areas of higher relief. Regolith carbonate hardpans locally exposed.*

Lacustrine sediment — *Lacustrine sediment*

- **Lpp1** — *Fine grained sediment in claypans.*

IN-SITU REGOLITH

Saprolith — *Saprolite*

- **SPep1** — *Basement saprolite with mixed stony mantle. Erosional plains with contour gilgai. Bedding trends apparent on airphotos.*
- **SPep2** — *Basement saprolite with mixed stony mantle. Erosional plains with contour gilgai. Bedding trends not apparent on airphotos.*
- **SPep3** — *Basement saprolite with dominantly ferruginous stony mantle. Erosional plains with contour gigai. Bedding trends not apparent on airphotos.*
- **SPep4** — *Basement saprolite, ferruginised in part, with dense colluvial stony mantle of fragments of ferruginised sediment and/or basement saprolite. Erosional plains.*
- **SPep5** — *Mottled saprolite of Mesozoic sediments with a mantle of fragments of ferruginised sediment. Erosional plains.*
- **SPer1** — *Basement saprolite and minor saprock with mixed stony mantle. Erosional rises with contour gilgai. Bedding trends apparent on airphotos.*
- **SPer2** — *Basement saprolite and minor saprock with mixed stony mantle. Erosional rises with contour gilgai. Bedding trends not apparent on airphotos.*
- **SPer3** — *Basement saprolite and local saprock with dominantly ferruginous stony mantle. Rises with contour gilgai. Bedding trends not apparent on airphotos.*
- **SPer4** — *Weathered Mesozoic sediments (silcreted and ferruginised in part), basement saprolite and gypseous clay of unknown origin, with stony mantle of fragments of silcrete, ferruginised sediment, and clasts (mostly rounded quartz) eroded from Mesozoic conglomerate. Hardpans developed on some scree slopes. Mostly erosional rises, but includes the "Three Hills" (low hills) in the central part of the sheet area.*
- **SPer5** — *Saprolite of Mesozoic sediments (silcreted in part) and basement rocks with stony mantle mostly of fragments of silcrete, and discontinuous veneer of aeolian sand. Rises.*
- **SPer6** — *Saprolite (basement and/or Mesozoic) with stony mantle of ferruginous fragments (smaller fragments are magnetic), silcreted sediment, angular and rounded milky quartz, quartzite and Devonian sandstone. Local outcrop of silcrete, ferruginous sediment (with magnetic ferruginous clasts, quartz granules and silcrete clasts), and basement saprolith. Dark photopattern on broad ridges. Sandy to clayey gypseous soils.*

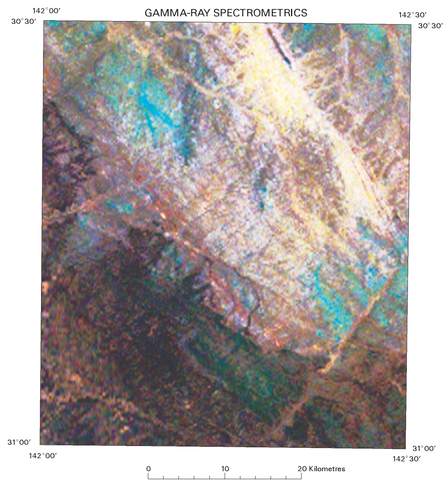
Saprock

- **SSeh1** — *Slightly weathered Devonian sandstone, boulder scree. Steep rocky hills (Koonenberry Mountain).*
- **SSel1** — *Slightly weathered Devonian sandstone, local colluvium and minor aeolian sand. Low hills and rises.*
- **SSer1** — *Basement saprock with lithosols. Rises and low hills.*
- **SSer2** — *Basement saprock with lithosols and partial veneer of aeolian sand. Rises and erosional plains.*
- **SSpt1** — *Slightly weathered Devonian sandstone, with stony mantle of fragments of silcreted sediment, rounded quartz pebbles, and fragments of Devonian sandstone (some with adhering silcrete matrix), over clayey sand soil with regolith carbonate. Low relief summit surface of the Turkaro Range. Sandstone exposed at edges of unit is mostly iron stained, but also has thin white silica-cemented veins.*

LANDFORMS

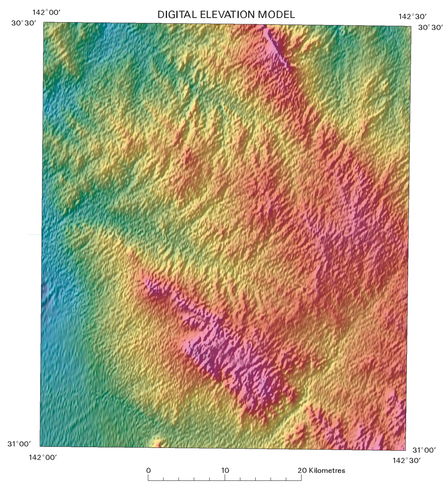
ap	*Alluvial plain*	pp	*Playa plain*		*Regolith-landform unit boundary*
eh	*Hills*	pt	*Plateau*		*Watercourse*
el	*Low hills*	ub	*Source bordering dune*		*Minor road*
ep	*Erosional plain*	ud	*Aeolian dunes*		*Vehicle track*
er	*Rises*	us	*Aeolian sheet*		*Fence*
fc	*Colluvial fan*	uu	*Lunette*		

GAMMA-RAY SPECTROMETRICS



RGB image of gamma-ray spectrometrics (red:potassium, green: thorium, blue: uranium) courtesy of Department of Mineral Resources.

DIGITAL ELEVATION MODEL



Pseudocolour image of the digital elevation model with sun angle shading from the west. Courtesy of Department of Mineral Resources.

UNIVERSAL GRID REFERENCE

GRID ZONE DESIGNATION: 54J

100 000 METRE SQUARE IDENTIFICATION

200	WM	XM
100	WL	XL

IGNORE the SMALLER figures of any grid number: these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid number: example:

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES

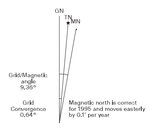
SAMPLE POINT: ● Koonenberry (MM) 56

1. Read letters identifying 100 000 metre square in which the point lies: XM
2. Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 2
3. Estimate tenths from grid line to point: 5
4. Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself: 2
5. Estimate tenths from grid line to point: 4

SAMPLE REFERENCE: XM2524

If reporting beyond 18 Degrees in any direction, prefix Grid Zone Designation, as: 54J XM2524

Grey numbered lines are 1000 metre intervals of the Map Grid of Australia, Zone 54. Grid values are shown in full only at the southwest corner of the map.



SCALE 1:100 000

1 0 1 2 3 4 5 6 7 8 9 10 Kilometres

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
LATITUDE OF ORIGIN: 0°. LONGITUDE OF ORIGIN: 141°
HORIZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994

MAP LOCALITY

INDEX TO ADJOINING SHEETS

1:250 000 maps shown in blue

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TEILTA 7136	SH54-11 BANCANNIA 7236	WONNA-MINTA 7336	KAYRUNNERA 7436	SH54-12 WHITE CLIFFS 7536	WANTABADGEE 7636
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BROKEN HILL 7134	SH54-15 TALTIRUMA 7234	TOPAR 7334	BUNDA 7434	SH54-16 WILCANNIA 7534	MURTEE 7634

141°00′ 30°00′ 142°00′ 30°00′ 32°00′ 141°00′ 32°00′ 142°00′

Compiled by D.L. Gibson (CRC LEME), 2000

Cartography by L.M. Highet (CRC LEME/AGSO - Geoscience Australia), 2000, R.J. Hay (AGSO - Geoscience Australia), 2001.

It is recommended that this map be referred to as:

D.L. Gibson 2001 - Wonnaminta Regolith-Landforms 1:100 000 scale map. Cooperative Research Centre for Landscape Evolution and Mineral Exploration, (CRC LEME) Perth/Canberra

Regolith landform polygons based on interpretation of 1:50 000 colour aerial photographs and reconnaissance field checking. Airborne gamma-ray spectrometrics is Exploration NSW data, 1994-5, Acquired for New South Wales Department of Mineral Resources by Austirex International Ltd with a 33 litre crystal pack, flown with E-W lines. Topographic information shown on this map is provided by the New South Wales Department of Mineral Resources.

This map provides a regional overview of the dominant regolith-landform associations in the Wonnaminta area.

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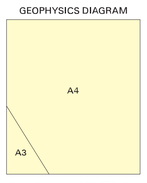
GEOPHYSICS DIAGRAM



Koonenberry area A4 is 250m line spacing 60m above ground level. Bancannia area A3 is 400m line spacing 80m above ground level.

MINERAL RESOURCES NEW SOUTH WALES
Geological Survey of New South Wales

Cooperative Research Centre for Landscape Evolution & Mineral Exploration
CRC LEME

AGSO GEOSCIENCE AUSTRALIA

WONNAMINTA

REGOLITH-LANDFORMS

SHEET 7336

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SUBJECT TO REVISION