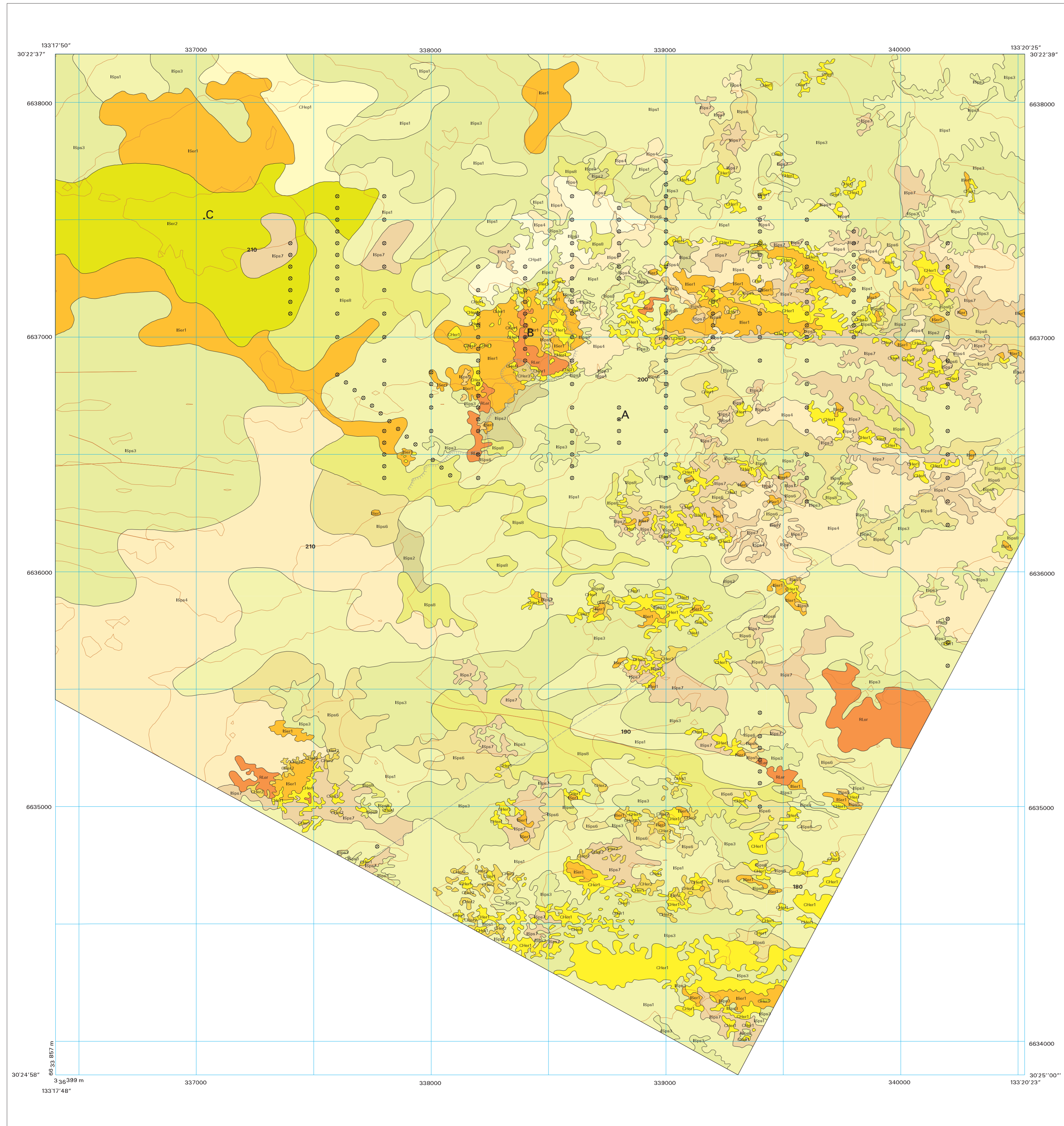


ET GOLD PROSPECT, GAWLER CRATON - SOUTH AUSTRALIA

REGOLITH-LANDFORMS

AUSTRALIA 1:10 000 REGOLITH-LANDFORM SERIES

Derived from 1:50 000 SHEET 5537-2



UTM PROJECTION, AGD66 MAP LOCALITY

INDEX TO ADJOINING SHEETS	
1:50 000 map sheet to 1:10 000	
TALARRIGA	COOPER POND
BARTON	TANZANIA
...	...



Regolith field observations 2000 by M.A. Craig CRCLEME/AGSO
 Completed 2001 by M.A. Craig CRCLEME/AGSO
 Regolith compilation scanned and vectorised by AGSO Spatial Information Mapping Services (SIMS).
 Map constructed using ArcInfo software by PKignou, CRCLEME/AGSO
 Orthophoto base information: AUSLIS 1984.
 It is recommended that this map be referred to as:
 Craig, M.A., 2001: ET Gold Prospect Regolith Landforms (1:10 000) scale map. CRC for Landscape Evolution and Mineral Exploration, Perth/Canberra.
 CRCLEME is an unincorporated joint venture between the Australian National University, University of Canberra, Australian Geological Survey Organisation (Geoscience Australia) and CSIRO Exploration and Mining, established and supported under the Australian Government's Cooperative Research Centres Program.

This map is derived from data supplied in a comprehensive GIS dataset of the ET Gold Prospect, SA and it shows the type and distribution of regolith-landform units.
 These units are distinct patterns of recurring landform elements with characteristic regolith associations.
 The map represents a systematic analysis and interpretation of 1:50 000 aerial photography, processed Landsat Thematic Mapper (TM) satellite imagery, processed Hyperspectral imagery, a custom digital elevation model and field mapping.
 Copies of this map may be obtained from:
 CRCLEME
 C/- CSIRO Division of Exploration and Mining
 Private Bag
 Post Office, WEMBLEY WA 6014
 Tel (08) 9336272 Fax: (08) 9336146

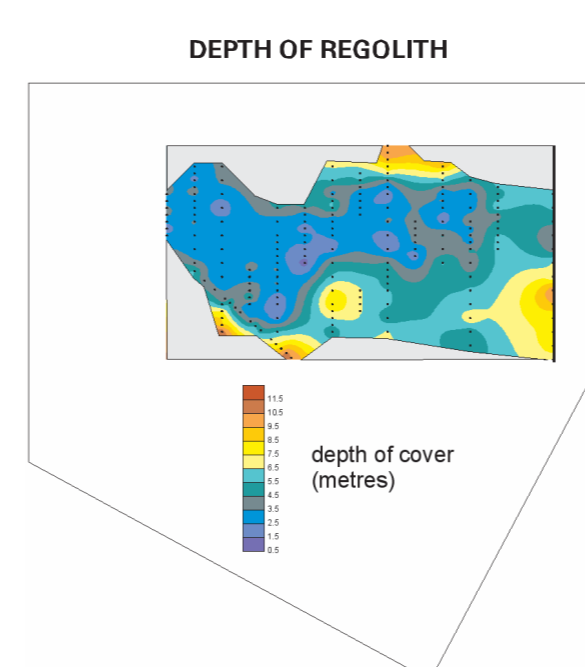
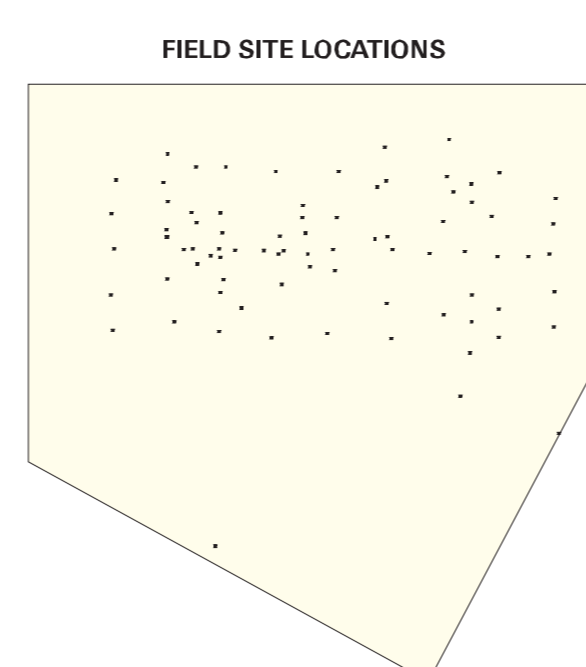
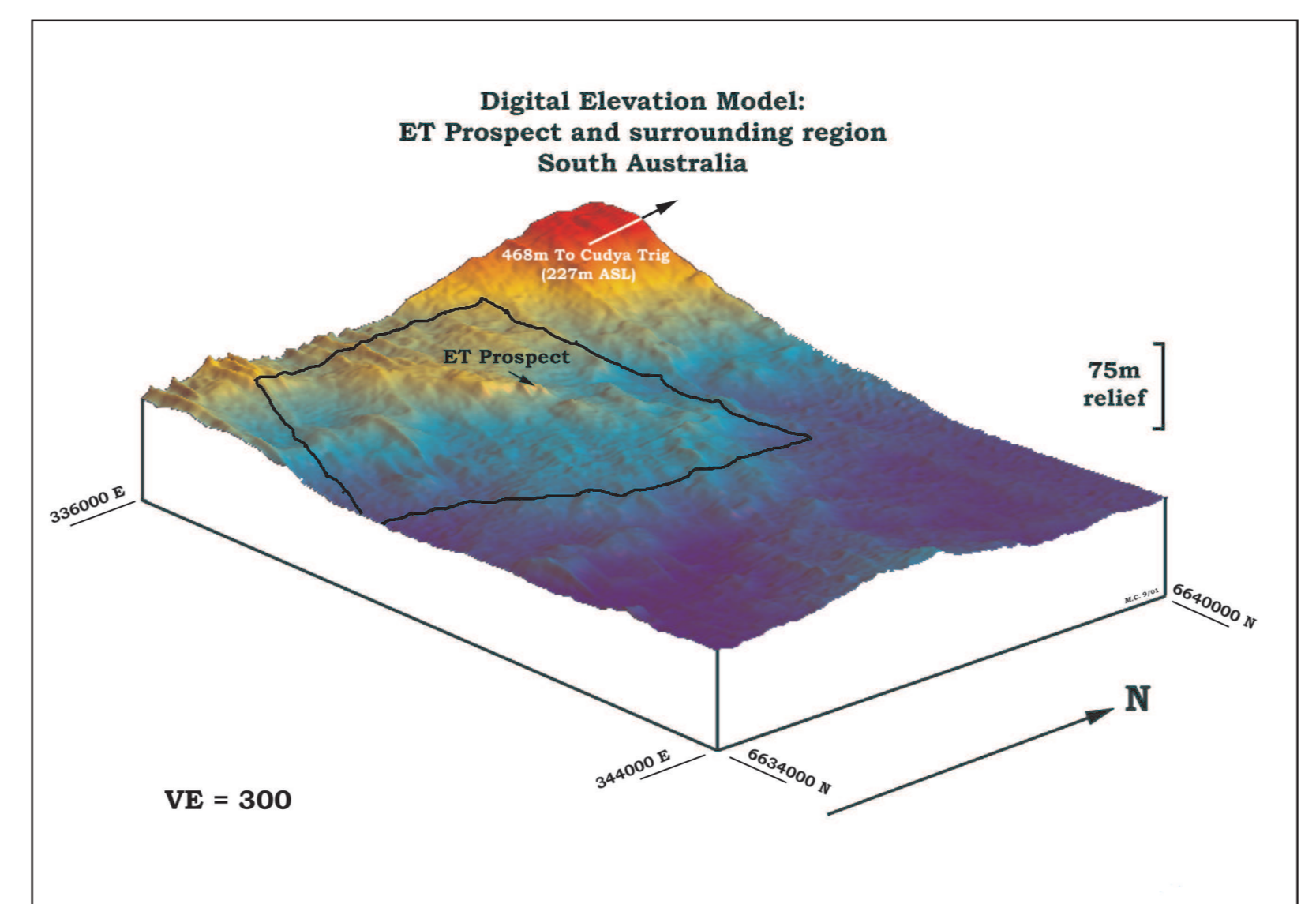
TRANSPORTED REGOLITH

- Aeolian sediments**
- Aeolian sand**
 Sandblown on rises - thin and patchy, thicker on lower slopes. Sheetflow and deflation modified crests and flanks exposing silcrete pebbles, gravel lags with Fe-stained lithic fragments, some calcareous nodules, very rare silcrete cobbles and very rounded quartz pebbles.
 Sandblown with some exposed bedrock rises and adjacent sheetflow affected flanks. Aeolian sand - crests clayey medium grained, red-brown to yellow. Gravelly lags - crests and/or calcareous nodules rare, sparse, with quartz pebbles, silicified and Fe stained lithic fragments.
 Sandblown consisting of aeolian medium to fine grained sand, red-brown, slightly calcareous. Scattered calcareous nodules and some minor sheet calcareous exposures. Bedrock may be close to surface but not exposed.
 Inverted sandblown consisting of medium grained quartz sand - red-brown, with no evidence of lags, pedolith or spherolith exposures. Some dunes and hummocks.
 Extensive areas of aeolian sand - fine, medium, red-brown to yellowish. Forms sandblown with low dunes hummocks and some low longitudinal duneforms. Sandblown bluffs, escarpments and high ground on rises - lag composition is variable. Minor sheetflow components.
 Homocyclic rises and low dune sandblown consisting of aeolian fine to medium grained sand, red-brown to buff to yellow, slightly calcareous, sometimes clayey. Some sheetflow modification of sandblown along rise flanks. Bedrock may be close to surface but not exposed.
 Sandblown consisting of aeolian red-brown slightly calcareous medium fine sand. Scattered calcareous nodules and some minor sheet calcareous exposed. Bedrock may be close to surface but not exposed.
 Sandblown fine to medium grained sand, sometimes silty and calcareous, red-brown to yellowish. Modified in places by sheetwash erosion and deflation effects - best observed at plain bases. Some rare scattered calcareous nodules.
 Aeolian sand - silty, clayey fine to medium grained, red-brown to buff, sometimes yellowish, calcareous. Variable thickness, but sometimes < 2m. Often modified by sheetflow processes forming a depositional plain or modified sandblown.
 Sandblown consisting of aeolian sand - fine to medium grained, red-brown to yellowish and sometimes buff coloured/calcareous. Sheetflow modified slopes and deflated crests exposing surface lags consisting of > 40% calcareous. Silcrete and Fe stained lithic fragments also within 1m of surface.
- Colluvial sediments**
- Sheet flow deposit**
 Sheetflow on sandblown on low slopes. Silty clayey, to medium to fine sand, red-brown to yellow, calcareous. Lags consist of: Siliceous greens to 70%; quartz up to 20% and calcareous nodules to 10%.
 Silty fine sandy clayey, silty clayey sand and medium to fine sand - red-brown to buff or yellowish, calcareous. Pebble and rare cobble lags create a maximum of 40% cover, where silcrete and Fe stained lithic fragments each contribute 40%, quartz green and angular pebbles > 5% and calcareous nodules > 5%.
 Inverted minor rises, associated with undulating sandblown. Some rises associated with minor surface lags - probably concentrated by deflation. Some sheetflow at crests and flanks and linked to weathered bedrock near to surface.
 Silty fine sandy clayey - red-brown to buff to yellowish, calcareous. Extensive sheetwash gravels on flanks of a low hill. Lag cover to 50% and consisting of silcrete and Fe stained lithic fragments to 40% each. Silcrete and calcareous nodules 10%, quartz 10% and very rare calcareous pebbles/spheroliths.
 Widespread scattered small sheetflow patches over weathered bedrock. Some distinct may also be present. Aeolian sand - medium grained, red-brown to yellow, in part calcareous, and generally > 2m thick and contains dispersed calcareous nodules.

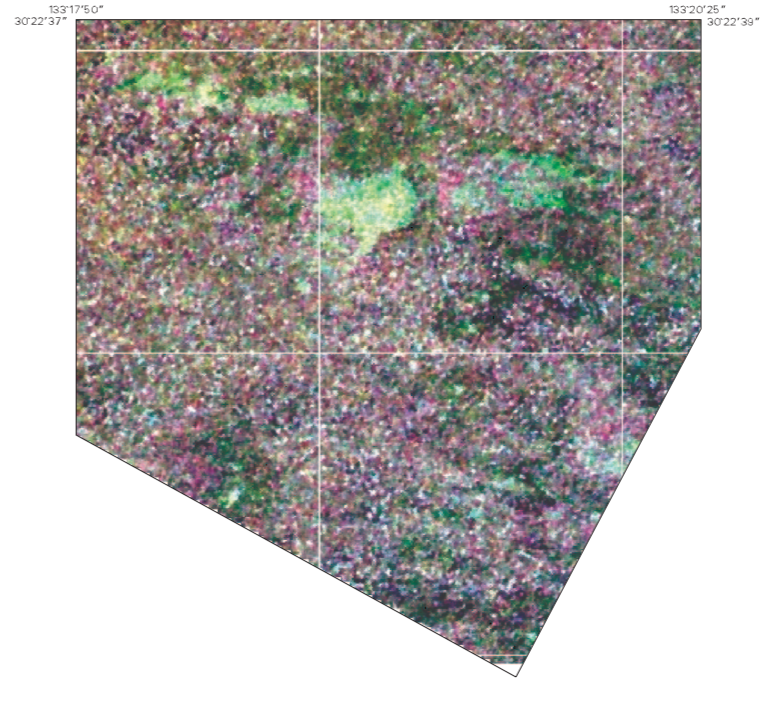
IN-SITU REGOLITH

- Residual material**
- Lag**
 Fragmental fine to silty sand cover this, patchy, red-brown to yellowish, calcareous. Mostly deflated exposing a 60% lag cover. Lag consists of 50% calcareous, 20% Fe stained lithic fragments, 10% calcareous nodules and 10% quartz. Some calcareous impregnated pebbles/spherolith exposures. Rare very round quartz clasts.

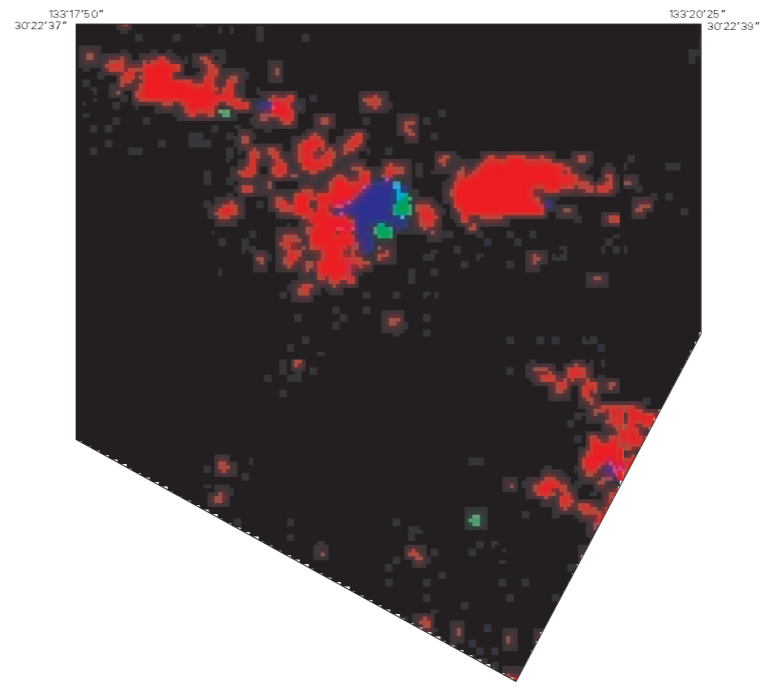
- DEPOSITIONAL LANDFORMS**
- pd Depositional plain
 - ps Sandplain
 - ep Erosional plain
 - er Rise
- EROSIONAL LANDFORMS**
- Escarpment
 - Sand ridge
 - Topographic contour, interval 5m
 - Drift axis



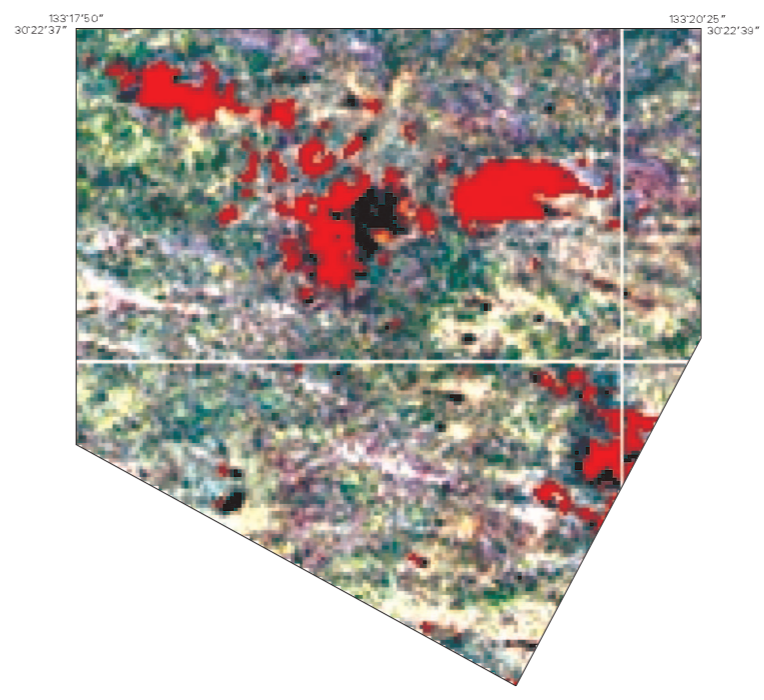
EXAMPLES OF SUPPLEMENTARY DATASETS USED IN REGOLITH MAP GENERATION



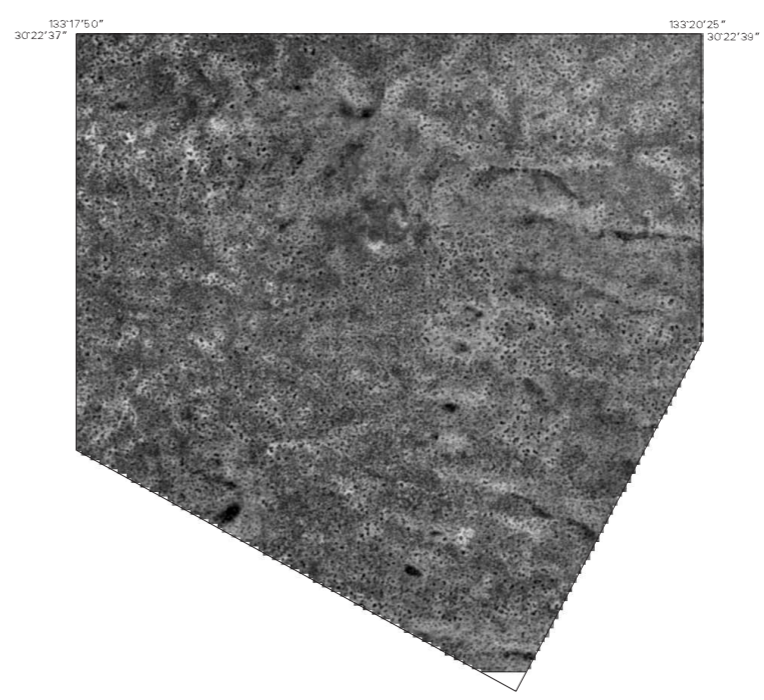
Colour composite image of AIRSAR bands highlighting the location of calcareous greens to light green hues. (Image processing by L.J. Tapley and A. Cornelius.)



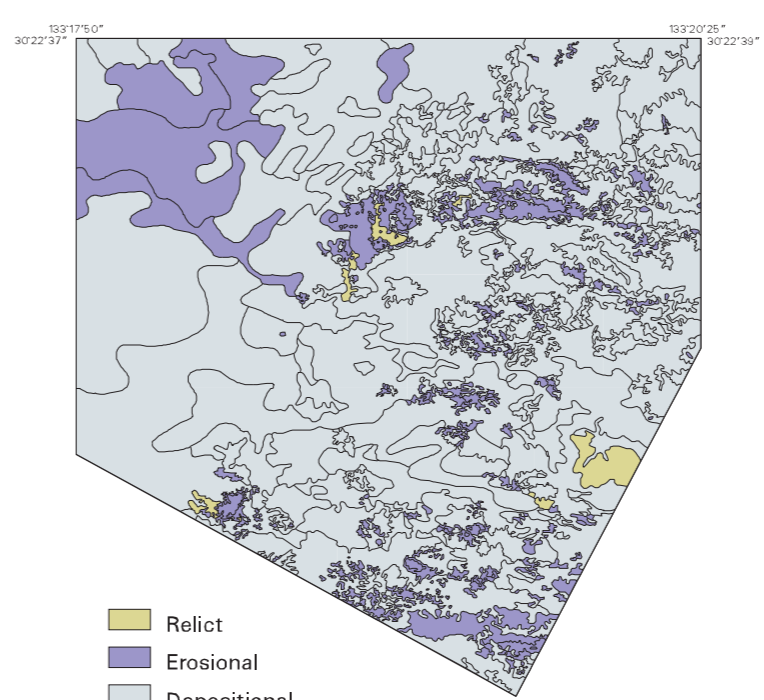
Combined silcrete, calcareous and lag derived from processed TM imagery. (Image processing by L.J. Tapley and A. Cornelius.)



Combined silcrete and calcareous image derived from processed TM imagery. (Image processing by L.J. Tapley and A. Cornelius.)



Orthophoto of the ET Region derived from ET aerial photography.

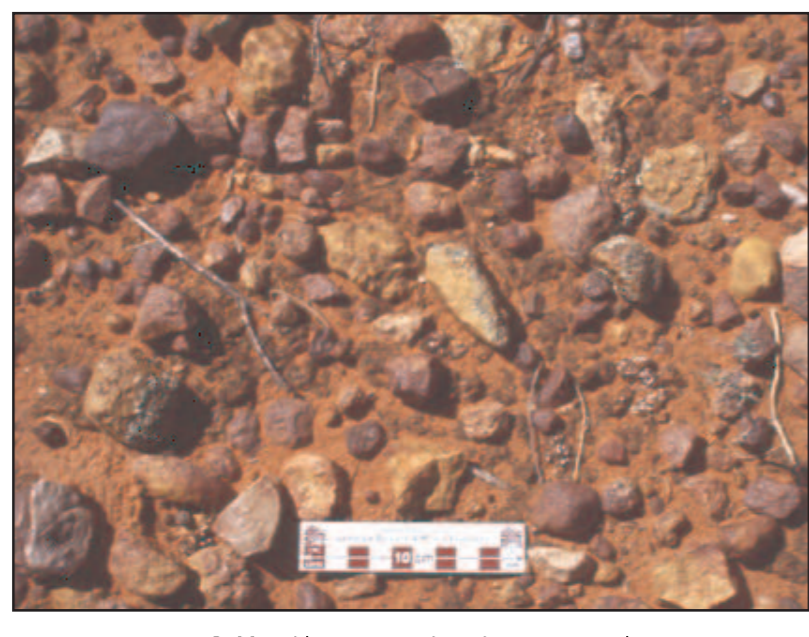


Interpreted landscape classes using the CSIRO 'RED' classification.

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A. Calcareous pit in well-vegetated sandblown, east of main spherolite rise. (E338500, N6536650)



B. Mixed lags exposed on the main spherolite rise within the broader sandblown. (E337000, N6637000)



C. Silcrete cobble with surrounding silcrete lag exposed on the north-facing flank of the main spherolite rise. (E337000, N6637000)



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REGOLITH-LANDFORMS
 PART OF SHEET 5537-2

PRELIMINARY EDITION VERSION 1

June 2001
 WARNING: Calcareous nodules with pinkish exposed to light