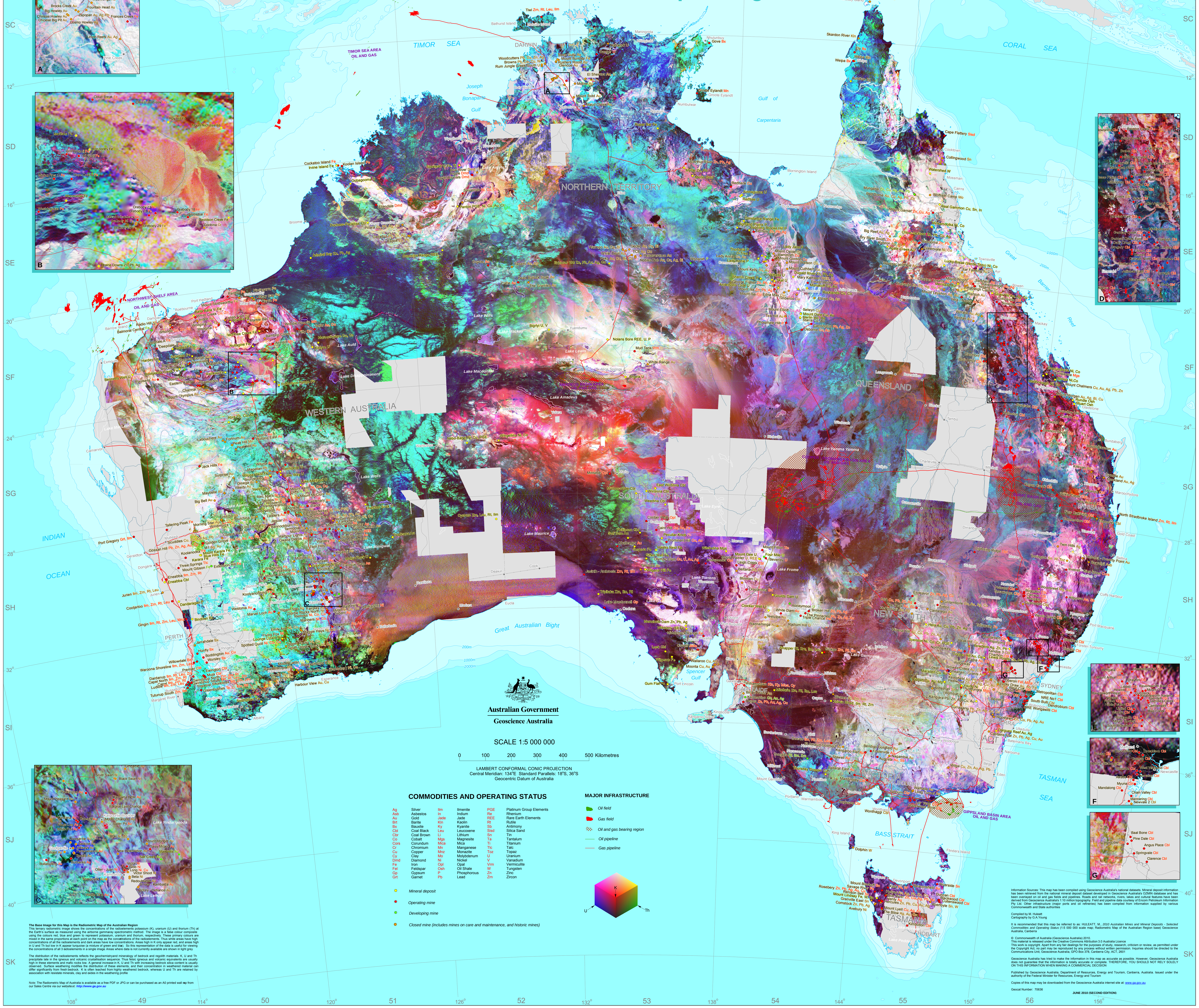
AUSTRALIAN MINES AND MINERAL DEPOSITS
Selected Commodities and Operating Status



SCALE 1:5 000 000

0 100 200 300 400 500 Kilometres

LAMBERT CONFORMAL CONIC PROJECTION
Central Meridian: 134°E Standard Parallels: 18°S, 36°S
Geocentric Datum of Australia

COMMODITIES AND OPERATING STATUS

Ag	Silver	Ilm	Ilmenite	PGE	Platinum Group Elements
Asb	Asbestos	In	Indium	Re	Rhenium
Au	Gold	Jade	Jade	REE	Rare Earth Elements
Brt	Barite	Kln	Kaolin	Rt	Rutile
Bx	Bauxite	Ky	Kyanite	Sb	Antimony
Cbl	Coal Black	Leu	Leucoxene	Sisd	Silica Sand
Cbr	Coal Brown	Li	Lithium	Sn	Tin
Co	Cobalt	Mgs	Magnesite	Ta	Tantalum
Cors	Corundum	Mica	Mica	Ti	Titanium
Cr	Chromium	Mn	Manganese	Tlc	Talc
Cu	Copper	Mnz	Monazite	Toz	Topaz
Cy	Clay	Mo	Molybdenum	U	Uranium
Dmd	Diamond	Ni	Nickel	V	Vanadium
Fe	Iron	Opl	Opal	Vrm	Vermiculite
Fel	Feldspar	Osh	Oil Shale	W	Tungsten
Gp	Gypsum	P	Phosphorous	Zn	Zinc
Grt	Garnet	Pb	Lead	Zrn	Zircon

Mineral deposit

Operating mine

Developing mine

Closed mine (includes mines on care and maintenance, and historic mines)

MAJOR INFRASTRUCTURE

Oil field

Gas field

Oil and gas bearing region

Oil pipeline

Gas pipeline

K U Th

The Base Image for this Map is the Radiometric Map of the Australian Region
This ternary radiometric image shows the concentrations of the radioelements potassium (K), uranium (U) and thorium (Th) at the Earth's surface as measured using the airborne gammaray spectrometric method. The image is a false colour composite using the colours red, blue and green to represent potassium, uranium and thorium, respectively. These primary colours are mixed in the same proportions at each point on the map as the concentrations of the radioelements. Thus white areas have high concentrations of all the radioelements and dark areas have low concentrations. Areas high in K only appear red, and areas high in U and Th but low in K appear turquoise (a mixture of green and blue). So this representation of the data is useful for viewing the concentrations of all 3 radioelements in a single image. Areas where data is not currently available are shown in light grey

The distribution of the radioelements reflects the geochemistry and mineralogy of bedrock and regolith materials. K, U and Th precipitate late in the igneous and volcanic crystallisation sequence. Thus felsic igneous and volcanic equivalents are usually high in these elements and mafic rocks low. A general increase in K, U and Th with increasing bedrock silica content is usually observed. Surface weathering modifies the distribution of these elements, and their concentration in weathered material can differ significantly from fresh bedrock. K is often leached from highly weathered bedrock, whereas U and Th are retained by association with resistate minerals, clay and oxides in the weathering profile

Note: The Radiometric Map of Australia is available as a free PDF or JPG or can be purchased as an A0 printed wall map from our Sales Centre via our website at: ***http://www.ga.gov.au***

Information Sources: This map has been compiled using Geoscience Australia's national datasets. Mineral deposit information has been retrieved from the national mineral deposit dataset developed in Geoscience Australia's OZMIN database and has been overlayed on oil and gas fields and pipelines. Roads and rail networks, rivers, lakes and cultural features have been derived from Geoscience Australia's 1:10 million topography. Field and pipeline data courtesy of Encom Petroleum Information Pty Ltd. Other infrastructure (major ports and oil refineries) has been compiled from information supplied by various Commonwealth and State authorities

Compiled by M. Huleatt
Cartography by G.A.Young

It is recommended that this map be referred to as: HULEATT, M., *2010 Australian Mines and Mineral Deposits - Selected Commodities and Operating Status* (1:5 000 000 scale map; Radiometric Map of the Australian Region base) Geoscience Australia, Canberra

Geoscience Australia has tried to make the information in this map as accurate as possible. However, Geoscience Australia does not guarantee that the information is totally accurate or complete. THEREFORE, YOU SHOULD NOT RELY SOLELY ON THIS INFORMATION WHEN MAKING A COMMERCIAL DECISION

Published by Geoscience Australia, Department of Resources, Energy and Tourism, Canberra, Australia. Issued under the authority of the Federal Minister for Resources, Energy and Tourism

Copies of this map may be downloaded from the Geoscience Australia internet site at: www.ga.gov.au

Geocat Number: 70636

JUNE 2010 (SECOND EDITION)