



Dr Allan Hawke
Government Review of the Woomera Prohibited Area
Secretariat
R7-1-045
Russell Offices
Department of Defence
CANBERRA ACT 2600

Dear Sir,

ERO Mining Ltd (ERO) makes the following comments on the "Government Review of the Woomera Prohibited Area – Interim Report".

We agree with most of your findings and recommendations in relation to the Woomera Prohibited Area (WPA) and in particular welcome your recognition that:

- *The value of known deposits is considerable; but there is also significant potential for discovery of further valuable deposits;*
- *Sixty-two percent of Australia's known copper resources are estimated to be located in the area, as well as 78 per cent of Australia's known uranium resources;*
- *The development of multiple deposits could transform the WPA into one of Australia's most significant resources provinces;*
- *The resources sector needs confidence in the arrangements governing resources related access to, and use of, the WPA to enable informed business decision-making;*
- *To facilitate further exploration in the WPA, Defence needs to appreciate the differences between exploration and development;*
- *The resources sector needs Defence to develop a management framework that encompasses: policy, processes, operational matters, consultation and communications, and redress;*
- *All user objectives for the WPA will be better served by the introduction of a time-sharing arrangement;*
- *.... The Review is not convinced that Defence requirements justify an exclusive area in the south-east corner commensurate with the size of the core area of operations currently depicted in the Minister for Defence's 17 May 2010 statement.*

ERO believes that consideration also needs to be given to the following:



Military Strategic Importance of Rare Earth Elements

Advanced industrial and military products need to use REEs. Some of the major end uses for REEs include use in automotive catalytic converters, fluid cracking catalysts in petroleum refining, phosphors in colour television and flat panel displays (cell phones, portable DVDs, and laptops), permanent magnets and rechargeable batteries for hybrid and electric vehicles, and generators for wind turbines, and numerous medical devices. There are important defence applications, such as jet fighter engines, missile guidance systems, antimissile defence, and space-based satellites and communication systems. Rare earth magnesium alloys are strong and lightweight, making them ideal for aircraft.

There are 17 rare earth elements (REEs), 15 within the chemical group called lanthanides, plus yttrium and scandium. The lanthanides consist of the following: lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium. Rare earths are moderately abundant in the earth's crust, some even more abundant than copper, lead, gold, and platinum. While more abundant than many other minerals, REEs are not concentrated enough to make them easily exploitable economically.

Currently China produces over 97% of the world's REE supply. China bans foreign investment in its rare-earth mining industry, but allows foreign investors to participate in joint ventures with Chinese companies.

A 30 September 2010 Report prepared for Members and Committees of the United States Congress – "*Rare Earth Elements: The Global Supply Chain*" – makes the following observations:

- *Chinese producers are also seeking to expand their production capacity in areas around the world, particularly in Australia;*
- *Supporting/encouraging greater exploration for REE efforts in the United States, Australia, Africa, and Canada could be part of a broad international strategy;*
- *... in the case of REEs, the dominance of China as a single or dominant supplier of the raw material, downstream oxides, associated metals and alloys, is a cause for concern because of China's growing internal demand for its REEs;*
- *In July 2010, the China Ministry of Commerce announced that China would cut its export quota for rare earth minerals by 72%, raising concerns because of estimates that China controls approximately 97% of the global production of rare earth minerals;*
- *Legislative proposals **H.R. 6160** (Dahlkemper) **H.R. 4866** (Coffman) and **S. 3521**(Murkowski) have been introduced to support domestic production of REEs, because of congressional concerns over access to rare earth raw materials and downstream products used in many national security applications and clean energy technologies. The House approved H.R. 6160 on September 29, 2010, by a vote of 325-98.*

The United States *National Defense Authorization Act* for Fiscal Year 2010, Section 843, directed the United States Government Accountability Office (GAO) to submit a report on rare earth materials in the United States Department of Defense (DOD) supply chain.



A consequent 1 April 2010 *Briefing for Congressional Committees* prepared by the United States Government Accountability Office – “*Rare Earth Materials in the Defense Supply Chain*” – makes the following observations:

- *The less-abundant, and more-valuable, heavy rare earth ore deposits are currently found in southern China, but such deposits have also been identified in Australia, Greenland, Canada, and the United States;*
- *China’s dominant position in the rare earths market gives it market power, which could affect global rare earth supply and prices;*
- *DOD has not yet identified department wide national security risks due to rare earth material dependencies and is in the process of assessing such risks;*
- *Air Force’s Materials and Manufacturing Directorate examined the availability of rare earth materials and manufacturers of rare earth magnets in a 2003 internal report, which raised concerns about U.S. dependency on Chinese rare earth materials and U.S. industry’s lack of intellectual property rights to produce neodymium iron boron magnets.*

There is a strong argument that there is the military strategic imperative for Australia to source its own rare earth elements required for industrial and military products.

The term *rare earth* is actually a misnomer - these elements are not rare at all, being found in low concentrations throughout the earth's crust and in higher concentrations in certain minerals. REEs often occur with other elements, such as copper, gold, uranium, phosphates and iron and have often been produced as a by-product. However, their concentrations range from ten to a few hundred parts per million by weight. Therefore, finding them where they can be economically mined and processed presents a challenge. The WPA is a known source of REEs in concentrations that are potentially able to be economically mined.

Core Area of Operations

An Australian Defence Department Core Area of Operations that offers no flexibility for negotiating exploration and mining may be in neither the best interests of Defence nor the Australian people.

As an example, an Exploration Licence held by ERO extends slightly (14km) into the currently defined Core Area of Operations (see Appendix A). ERO has five exploration licences covering an area of 3,164 km² located east of the Stuart Highway and approximately 70 km north-northwest of Olympic Dam. The licences lie entirely within the WPA.

Exploration activity during 2007 and 2008 failed to locate significant mineralisation. ERO has no further interest in the project area with the exception Exploration Licence 3338 located in the Millers Creek area. In particular, ERO is interested in a geophysical anomaly, referred to as the Peeweenaa Dam Gravity Feature, which is located near the western boundary of this exploration licence.



Further exploration of Licence 3338 has been prevented due to restricted access to the WPA. Peeweena Dam is only slightly (14km) within the Core Area of Operations. Our interest in exploring this Licence area is due to the following facts:

- The gravity amplitude of Peeweena Dam at 10MGal comparing favourably with Prominent Hill 7MGal, and Olympic Dam 14MGal (gravity amplitude is the key identification criteria in the discovery of Iron oxide copper gold ore deposits (IOCG) deposits). Peeweena Dam is geographically located between these two deposits;
- Peeweena Dam is the largest amplitude gravity anomaly on the Gawler Craton that is yet to be drill tested;
- IOGU deposits are long life, significant employers and significant contributors to both the Australian and South Australian economies.

Should the current Core Area of Operations depicted in the Minister for Defence's 17 May 2010 statement not be amended then exploration of Peeweena Dam would be threatened. Defence Department denial of the opportunity to explore the extent of this resource could deny Australian economic activity and jobs as well as the possibility of discovering economically mineable REEs. We urge a conciliatory approach that seeks to balance uses of the WPA across its entire area and does so through a considered process.

Thank you for your attention to these matters and for the opportunity to comment on your Interim Report.

Yours sincerely

Robert Kennedy
Chairman
ERO Mining Ltd

3 December 2010



SOUTH AUSTRALIA
BILLA KALINA
PROJECT

Tenement Status

Appendix A

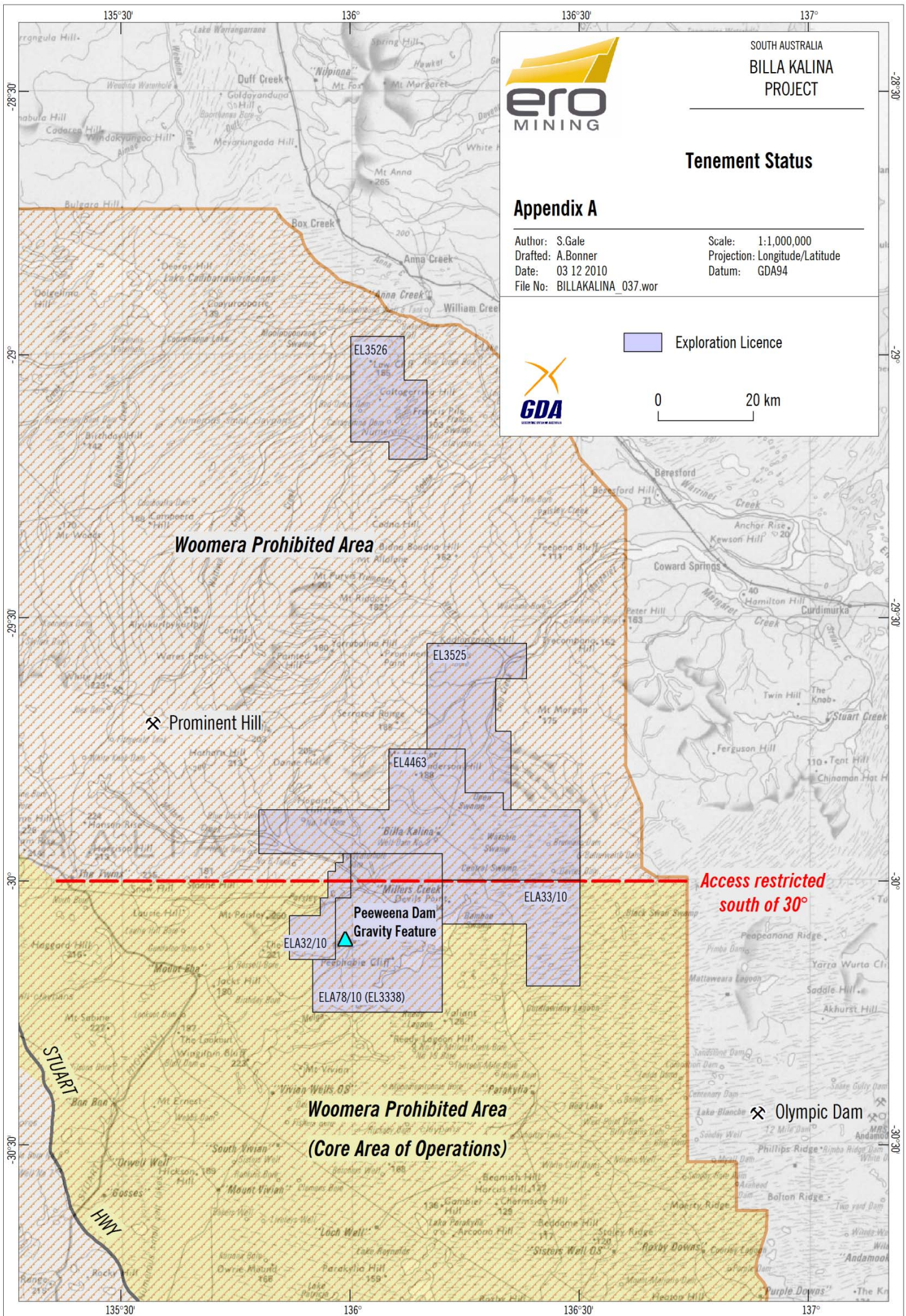
Author: S.Gale
Drafted: A.Bonner
Date: 03 12 2010
File No: BILLAKALINA_037.wor

Scale: 1:1,000,000
Projection: Longitude/Latitude
Datum: GDA94



 Exploration Licence

0 20 km



Woomera Prohibited Area

✕ Prominent Hill

Access restricted south of 30°

**Woomera Prohibited Area
(Core Area of Operations)**

✕ Olympic Dam