

NEW SOUTH WALES

TOMINGLEY GOLD PROJECT (TGP)

Alkane 100% subject to separate royalty agreements with Compass Resources NL, Golden Cross Operations Pty Ltd and Climax Mining Ltd.

Pre-feasibility studies for the optimum development of the **Wyoming** gold deposits continued throughout the quarter with emphasis on modelling of the mineralisation at depth to enable underground mining. Specific targets have been the higher grade zones with the **Porphyry** and '376' structure, and the **Hangingwall Zone (HWZ)**, highlighted by the RC and core drilling late last year.

A review of potentially available CIL/CIP treatment plants was also completed

Total Identified Mineral Resources at Wyoming as at 31 December 2004 are:

WYOMING RESOURCES (>0.75g/t Au cut off)									
DEPOSIT	Measured		Indicated		Inferred		Total		Ounces
	Tonnage (t)	Grade (g/t)							
Wyoming One	4,020,000	2.25	1,010,000	2.77	1,270,000	4.09	6,300,000	2.70	547,700
Wyoming Three	815,000	2.20	15,000	2.32			830,000	2.20	58,700
TOTAL	4,835,000	2.24	1,025,000	2.76	1,270,000	4.09	7,130,000	2.70	606,400

The information in this report that relates to Mineral Resources or Ore Reserves is based upon information compiled by Mr Terry Ransted MAusIMM (Principal, Multi Metal Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were previously documented (see 2004 Annual Report).

Wyoming Resource Development Drilling

Availability of drilling rigs in New South Wales has been severely limited by the increased exploration activity in the region and securing of a diamond core drill has only recently been confirmed. The drill is scheduled to be on site before the end of April.

An initial program of six core holes (~2,500m) will target the high grade shoot within the **HWZ** with the aim of checking its strike length at 000mRL (250m vertical depth) and width/grade distribution down to -200mRL where **WY811D intersected 10m @ 5.39g/t Au, including 4.6m @ 9.85g/t Au**. This drilling should enable a more coherent resource model for the HWZ to be compiled and planning of an underground development.

Additional holes will be programmed to test high grade structures and concepts that are being modelled within the porphyry, exemplified by **WY821D** which **intersected 18.40m @ 5.74g/t Au, including 7.20m @ 11.06g/t Au** at 025mRL .

Regional Targeting

Ground follow up of known prospects and aeromagnetic targets in the area south of Wyoming has commenced, and several are being considered for reconnaissance drill testing.

DUBBO ZIRCONIA PROJECT (DZP)

Australian Zirconia Ltd (AZL) 100%

As advised in the 31 December Quarterly Report, recent discussions with Astron have focussed on the status of the Joint Venture and a proposed work program. Unfortunately the companies were unable to agree on the program and as a result, Alkane and Astron have agreed to terminate the joint venture signed in October 2003.

The slow progress of the DZP during the last year meant that other strategies to accelerate the Project have been examined. One of the options is to float AZL as a public company with its own dedicated management and funding, and this concept will be advanced as soon as practical. This should enable the process optimisation work to be carried out, leading to construction and operation of the Demonstration Pilot Plant and revision of the feasibility study.

Alkane remains convinced of the strategic importance of the DZP as a long term supplier of zirconium and niobium-tantalum products into the developing electronics, advanced ceramics and specialty alloy industries.

PEAK HILL GOLD MINE

Alkane Exploration Ltd 100%

507 ounces of gold were produced for the March Quarter. Decommissioning of the heaps is continuing and gold will be produced from these operations through to the end of June, when full rehabilitation of the heaps will commence.

WELLINGTON (copper-gold)

Alkane Exploration Ltd 100%

During 2004 and early 2005, 26 RC holes and 1 diamond core hole (total 4030m), were completed at the **Galwadgere** prospect within the Wellington Project area. The drilling was designed to test the known copper-gold mineralisation over a strike length of 500 metres on 50 metre sections (figure 1) down to depths ranging from 25 metres to 175 metres. The diamond core hole, GAL030D, was completed early this quarter but unfortunately undershot the shallow north plunging mineralised zone and intersected only low grade copper values.

The deposit is one of several mineral occurrences located within the Silurian aged felsic volcanic Gleneski Formation along a four kilometre long zone adjacent to a major regional structure, the Nindethana Thrust. The well documented deposit of Lewis Ponds lies about 80 km to the south within a similar rock sequence. A small, younger Permian basin is situated immediately to the north of Galwadgere and these sediments cover an area roughly one kilometre in diameter and up to 200 metres deep. Devonian sediments outcrop to the west of the thrust structure. Most of the other mineral occurrences have not been subject to any systematic exploration.

Exploration of Galwadgere by other companies has taken place intermittently since 1967, with the bulk of the work comprising 41 diamond core holes completed during the 1970's. This drilling located an extensively altered felsic to intermediate volcanic sequence hosting base metal sulphide and gold mineralisation. Eleven shallow RC holes were drilled in 1989 to test for a possible supergene oxide gold deposit in the near surface environment but the depth of oxidation was shallower than anticipated and there was no enrichment of gold values. In 1997 two additional core holes were also drilled for metallurgical testing, while one RC hole was drilled to check the mineralised sequence below the Permian cover. Several resource calculations were completed by other companies but these do not comply with JORC guidelines.

Alkane's drilling has enabled an initial shallow resource to be calculated based upon the following parameters. The main zone of mineralisation outcrops over a strike length of approximately 350m and is modelled over a total strike length of about 500m extending below Permian cover to the north. The zone dips east at approximately 55°, plunges north at about 30° and varies in thickness from 5m to 35m. The mineralisation consists of disseminated and stringer pyrite-chalcopyrite lenses within altered felsic volcanic rocks. The system is structurally overturned and appears to be capped by a lead-zinc-silver-gold rich bedded massive sulphide, but to date this has rarely exceeded 2 to 3 metres in width. There is potential for this horizon to increase in thickness to the north and down plunge. The initial resource estimate is:-

INDICATED RESOURCE (0.5% Cu cut off): 2.09 million tonnes grading 0.99% Cu and 0.3g/t Au

The bulk of the resource is located above the 300mRL (150m below plain level) and while the early drilling (1970's) has shown that the system extends to at least 250m vertical depth, no Inferred Resource has been extrapolated due to some doubts on the reliability of the historic data.

A scoping study has commenced to determine if the deposit can be developed as an open pit mine with flotation recovery to produce a copper-gold concentrate. Preliminary metallurgical test work is in progress.

Notes to Accompany Resource Statement for Galwadgere

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- *drilling technique* –the resource is based on reverse circulation drill holes completed by Alkane during 2004;
- *drilling density* - drill holes completed on EW sections. Sections spaced 50m apart with drill holes at variable intervals along these sections. 27 drill holes were used in the estimate;
- *drill locations* - all drill hole collars are surveyed by DGPS to obtain X Y Z position to ± 0.1 m;
- *down hole surveys* – all holes are surveyed down hole using a single shot camera.
- *sampling technique* - samples were collected at one metre intervals and riffle split to assay samples of approximately 3kg in size;
- *sample recovery* - RC sample recovery is usually very good (>95%). Samples are usually dry;
- *assay technique* – samples were submitted to commercial laboratories for preparation by drying, grinding and sub-setting and then analysed by industry standard ICPAES analysis for Ag, As, Cu, Pb, Mo, Zn and 50g fire assay techniques for Au;
- *top cut* – a top cut of 3g/t for Au was used in the resource estimate. No top cut was used for Cu.
- *specific gravity* – no specific gravity measurements have been completed. Values were estimated at 2.95 t/m³ for fresh rock and 2.25 t/m³ for oxidised material;
- *estimation techniques* - estimations used a 3D wireframed geological model as a basis for inverse distance squared grade extrapolation into a block model. Block size is 2.5m x 5.0m x 5.0m. Wireframes/ore zones are constrained by boundaries defined by geology, structure and a multi element grade envelope.

MOORILDA (copper-gold), BODANGORA (gold-copper), CUDAL (gold-copper) and ORANGE-MOLONG (copper-gold) were inactive. .

WESTERN AUSTRALIA

LEINSTER REGION JOINT VENTURE (nickel-gold)

Alkane Exploration Ltd 49%, Jubilee Mines NL 51%

The three prospects - Leinster Downs, Miranda and McDonough Lookout - are subject to a farm-in agreement with Jubilee Mines NL where Jubilee can earn a 75% interest in the properties by spending \$4.5M before March 2006. In March 2002 Jubilee reported expenditures to earn a 51% interest and have elected to continue to earn a further 24%.

Jubilee have advised that they have received multi element results for soil sampling that took place at McDonough Lookout (823) and Leinster Downs (1707) during the quarter. These results are being assessed.

Alkane has received a plaint on M 36/303, Miranda Well, in respect of the validity of the original grant for the tenement. The Company's legal advice is that there is no basis for the plaint and it will be vigorously defended.

Mt KEITH (gold) was inactive.

NULLAGINE DIAMOND PROJECT (diamonds)

Alkane Exploration Ltd 60%, Randolph Resources Syndicate 40%

As advised to the ASX on 8 March, Alkane has previously undertaken a major exploration program aimed at locating the source rocks for alluvial diamonds found at the base of Tertiary palaeochannels at Nullagine in the 1890's. During that time Alkane has discovered three new alluvial diamond locations and several alkaline and kimberlite-like bodies.

Alkane's diamond exploration programs have combined traditional exploration techniques such as air photo and satellite image interpretation, high quality stream sediment sampling, studies of bedrock-derived kimberlitic

indicator minerals, aerial and ground geophysics, reconnaissance drilling and costeaning with a strong geological approach. Exploration also included mapping of both Archaean and Tertiary-aged rocks, the development of a comprehensive bedrock geochemical data base, studies of alteration and weathering, and stratigraphic drilling of Tertiary channel deposits.

This detailed background geological data base has enabled Alkane to review the potential for other minerals in the area from time to time.

Given the increasing demand and prices for iron ore, Alkane-Randolph reviewed its database on the Tertiary palaeochannels and concluded that significant potential exists within the tenements. This work was assisted by the two palaeochannel traverses drilled during the diamond exploration program. The drilling demonstrated that the tops of the palaeochannels were generally composed of pisolitic channel iron deposits (CID) up to 15 metres thick overlying clays, carbonates and other detrital units within a total channel depth of up to 35 metres. The iron content of the CID was not checked at that time.

Review work completed comprised:

- Examination of geological mapping of Archean-aged bedrock and Tertiary-aged deposits originally completed on 1:40,000 and 1:25,000 scale aerial photos respectively and compiled at a scale of 1:100,000 on topographic base maps. This work detailed the nature of the Archean bedrock and the presence of numerous Tertiary deposits largely found within palaeochannels, dominated by the ancestral Bonnie Creek;
- The 1:100,000 scale Tertiary photo geology map was scanned and geopositioned. The **Bonnie Creek** system was estimated to be about 26 kilometres in length within the Alkane tenements;
- Each Tertiary outcrop on the scanned image was digitised and polygonal areas transferred to a spread sheet;
- Thickness of the CID was assumed but was supported by data from the drill traverses and outcrop where recent erosion has exposed the CID as residual mesas; and
- Specific Gravity was assigned as 2.6 tonnes per cubic metre based upon experience with similar deposits, and a tonnage determined for each Tertiary outcrop area. A cumulative total for the CID's ranges from 150 to 220 million tonnes.

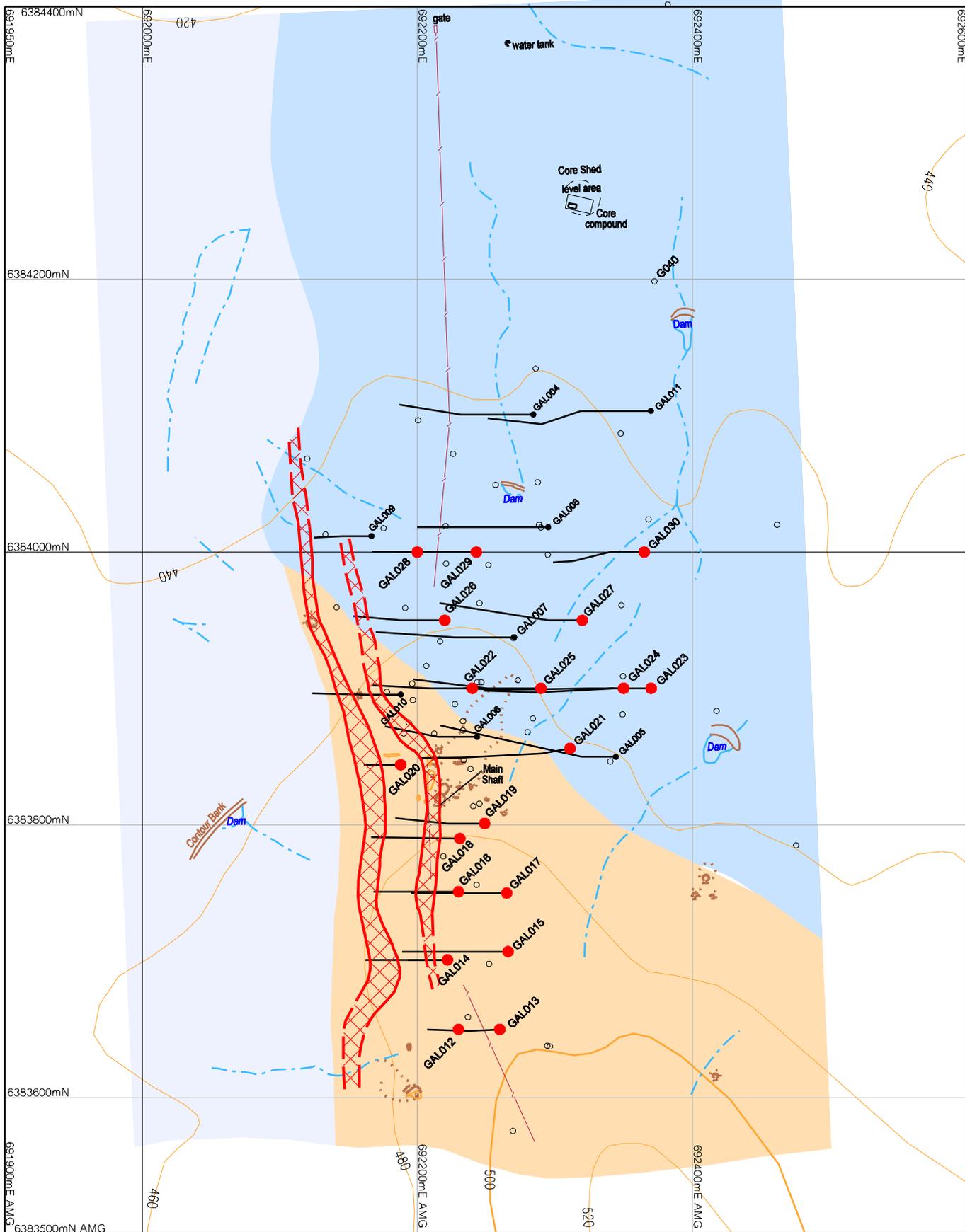
No systematic sampling of the CID's has been completed and hence it is not possible to assign an iron grade, nor identify potential contaminants to the CID volumes measured to date. However experience elsewhere suggests that these deposits could grade above 55% Fe.

While the potential quantity and grade referred to above is conceptual, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource, the **Bonnie Creek** palaeochannel does host potentially significant Channel Iron Deposits.

Discussions have been initiated with parties interested in advancing the potential of the iron deposits with the Alkane-Randolph joint venture.

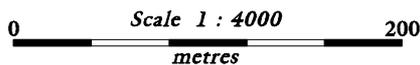
DI Chalmers
Technical Director
ALKANE EXPLORATION LTD

Mr DI Chalmers, FAusIMM, FAIG, (director of the Company) has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ian Chalmers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



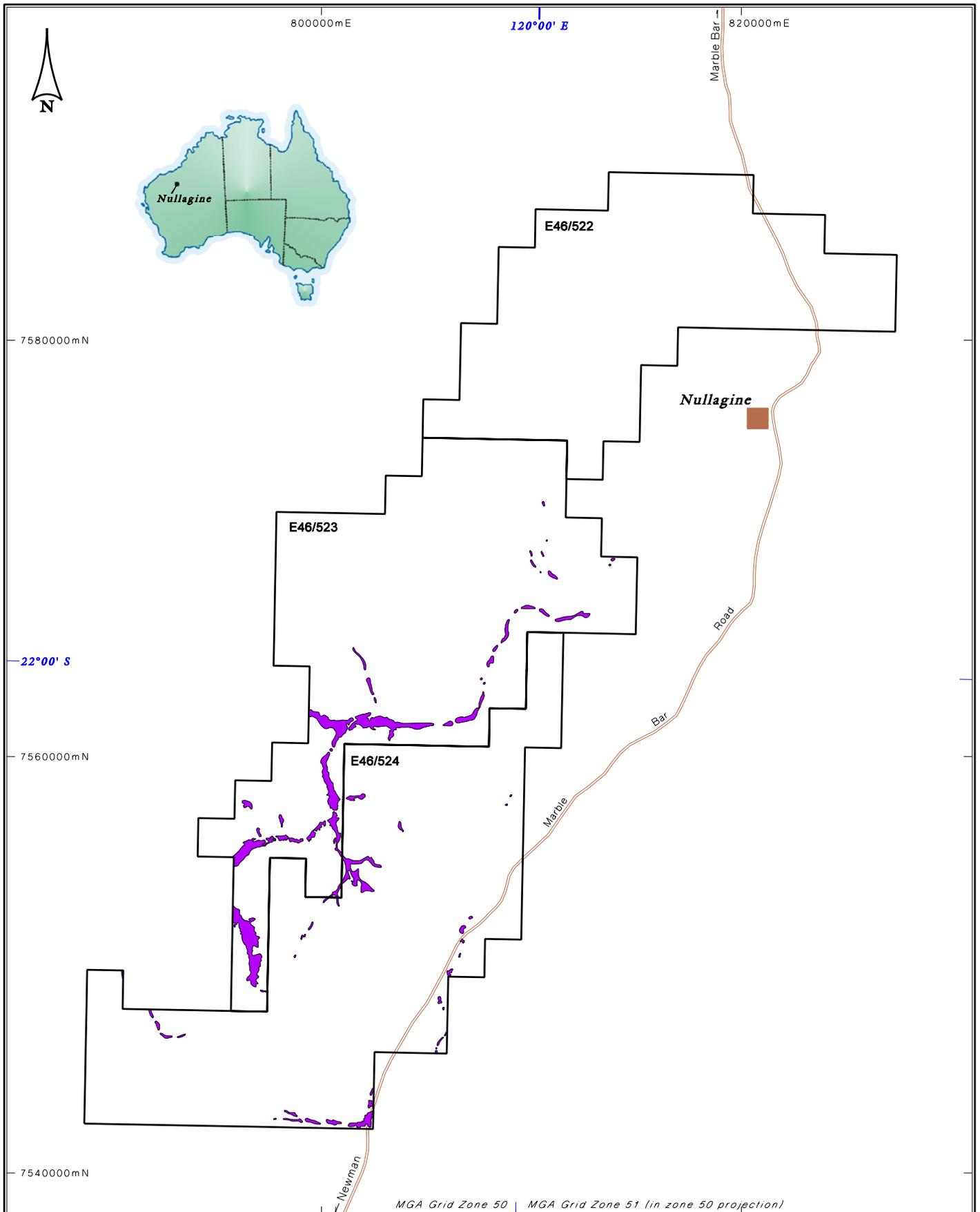
- Permian sediments
- Devonian sediments
- Silurian volcanics and volcanoclastics
- Projection of mineralisation

- Drill hole - Pre Alkane
- Drill hole - Alkane May 2004 (GAL004 - 011)
- Drill hole - Alkane October 2004 (GAL012 - 030)



Projection - AMG Zone 55
Datum (horizontal) - AGD66


ALKANE EXPLORATION LTD
WELLINGTON PROJECT
 NEW SOUTH WALES
Galwadgere Prospect
Drill Hole Locations - Oct. 2004



 Tertiary Palaeochannels

 **ALKANE EXPLORATION LTD**

NULLAGINE PROJECT
 PILBARA MINERAL FIELD
 WESTERN AUSTRALIA

Tertiary Palaeochannels

