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MACARTHUR MINERALS LIMITED

THE LAKE GILES PROJECT

EXECUTIVE SUMMARY

The Lake Giles Project is located about 450 km east-northeast of the coastal city of Perth, Western Australia. Its contiguous tenements cover a total area of 444 km².

Geologically it is situated in the Southern Cross Province of the Archaean (rocks more than 2,500 million years old) Yilgarn Block of southwestern Western Australia.

Such Archaean “Blocks” or “Cratons” are exposed in many parts of the World e.g. Canada, South Africa, India and Russia. All have similar geology.

The Southern Cross Province is characterized by an anastomosing network of “greenstone” belts between which are large granitic masses. These greenstone belts are generally composed of mafic (dark coloured), ultramafic (very dark coloured) and felsic (light coloured) volcanic flow rocks. During the periods between volcanic activity sediments of various grain sizes were deposited together with iron and silica rich chemical sediments – “banded iron formations” and “cherts”.

After their deposition these greenstone belts were subjected to compression resulting in complex folding and faulting/fracturing.

The Southern Cross Province has been and still is host to many significant mineral deposits that have been or are being mined for gold, nickel sulphides and iron ore.

Gold Deposits

Many small to medium sized gold deposits have been mined in the past. The potential for discovery of new highly prospective gold deposits was highlighted by

the discovery of the Yilgarn Star Gold Deposit about 140 km. south-southwest of the Lake Giles Project in about 1989 - 1990.

Over a period of about 5 years this virgin discovery had grown into a major low cost gold producer. In June 1995 mined gold and reserves were reported to total 1,048,200 ounces with an additional resource of 586,850 ounces. At that stage the deposit remained open to the north and to depth. Mining and exploration continues.

Between 1993 and 1998 several companies conducted gold exploration within the Lake Giles Project area.

In 1993 an Exploration Licence was acquired by Battle Mountain (Australia) Inc who completed a programme of bulk leach extractable gold ("BLEG") sampling. Later that year two Exploration Licences were granted to Aztec Mining Company Limited, a wholly owned subsidiary of Poseidon Gold Limited who also carried out BLRG sampling surveys. Limited follow up included closer spaced soil sampling, rock chip sampling and the drilling of shallow holes within the weathered rocks.

Numerous areas of anomalous gold geochemistry were identified but it was concluded that the potential for discovery of a deposit containing more than 1 million ounces was limited. Exploration was then terminated.

Nickel Sulphide Deposits

The nickel sulphide deposits of the Southern Cross Province occur within high magnesium mafic and ultramafic volcanic rocks known as komatiites. They tend to occur at or near the bases of lava channels. The massive sulphide bodies often overlie bedded sedimentary rocks. In many cases the deposits have been remobilized into low pressure zones relating to subsequent folding and faulting.

The Province was extensively explored during the "Nickel Boom" period from 1966 to 1972. Although understanding of the geology of nickel sulphide deposits was in general poorly understood a number of deposits were located and some were mined.

The nearest known nickel sulphide deposits to the Lake Giles project are in the Trough Well area about 70km to the west-southwest. Recent (2001) drilling returned intersections of 14m averaging 2.74% nickel and 5m averaging 2.4% nickel.

Also in this general area are the Koolyanobbing deposits about 100km south-southwest of the project area. Drilling at the Pavarotti Prospect returned 4.6m averaging 1.3% and at the Jock's Dream Prospect 6.7m averaging 2.6% nickel.

About 250km south southeast of the project are the Maggie Hays (mostly disseminated) and Emily Anne (massive) nickel sulphide deposits. Mining is ongoing.

260km south of the Lake Giles Project are the Forrestania Project nickel sulphide deposits. Although most of these deposits were identified during the late part of the “Nickel Boom” by 1972 they were then considered sub-economic.

Between about 1992 and 1997, at the Flying Fox Prospect Outokumpu delineated and then mined 240,000 tonnes of ore averaging 3.2% nickel.

In about 2000 Western Areas NL acquired a 100% interest in the Forrestania project area and commenced a major drilling programme. By late 2005 two additional Flying Fox ore bodies had been located at depth. Probable Ore Reserves of the upper body are 314,000 tonnes at 4.8% nickel and in the lower body Indicated Mineral Resources of 523,000 tonnes at 5.7% nickel. Exploration continues.

The Lake Giles Project covers an ultramafic komatiite trend length of more than 100 kilometres. These rocks are identical to those that host the various deposits described above and potential host lava channels have been identified. **No systematic nickel sulphide exploration has been done since 1972.**

The results of a recent airborne electromagnetic survey (EM) over about 60% of the project area indicated the presence of numerous conductors many of which are closely related to komatiitic lavas.

Follow up planning and exploration of selected target areas is in progress. This involves soil and rock chip sampling to identify those EM targets that have coincidentally anomalous geochemistry. Follow up of these targets will involve state of the art ground electromagnetics to precisely define conductive targets prior to deep drilling.

Iron Ore Deposits

Iron ore has been mined for many years from the Kooyanobbing area located about 100km west-southwest of the Lake Giles Project. This mining, now by Portman Limited has been a very successful operation with 5 million tonnes of iron ore per annum being shipped by rail from the mine to the coast. The reserves are considered sufficient for a mine life of 13 years and average about 62% iron.

During a recent rock chip sampling programme 25 magnetic banded iron formation samples were collected for analyses. Seven samples contained more than 55% iron with two exceeding 60% iron. The overall chemistry indicated that levels of potentially undesirable contaminants were very low. A more extensive sampling programme is planned.

A large palaeochannel more than 20 kilometres long is located in the central and western parts of the project. Preliminary investigations suggest that high concentrations of magnetite occur within this channel.

Recent Iron Ore Exploration

An initial sampling programme has been completed over some 5 to 7 kilometres of length of palaeochannel. Grid lines at intervals of approximately 1 kilometre along the palaeochannel, with each extending across the width of the palaeochannel. Samples were taken from auger holes at an average depth of 300mm to 500mm. A magnet was used to collect the magnetic fraction (magnetite) from each sample location across the grid. A composite sample representing the magnetic fraction from all auger holes on each grid was prepared and submitted for analysis.

The section of palaeochannel sampled is outlined in white in Figure 5.

Figure 6 shows the magnetic fraction as collected from one of the auger holes.

This bulk of this report was prepared by Keith Fox, with the section “Recent Iron Ore Exploration” compiled by Garry Clark. Both are experienced geologists who are qualified persons as required by National Policy 43-101.

Mr Fox graduated in 1963 with a BSc(Hons) degree from the University of Wales, UK and worked in mineral exploration for coal and base metals in the UK until 1970.

In 1970 he joined Kennecott Exploration (Australia) Pty Ltd as group supervising geologist for an area including Sir Samuel, Leonora and Wiluna in the Norseman – Wiluna Greenstone Belt. Between 1973 and 1975 he was exploration manager for the Yilgarn Shield and between 1975 and 1977 he contributed to successful identification of VHMS deposits in the Halls Creek area of the Kimberley Region, WA.

From 1977 to 1981 he managed exploration programmes for many clients including Aquitaine Australia Minerals Ltd, Northwest Mining NL, Black Hill Minerals NL, Whim Creek Consolidated, Tectonic Resources Ltd and Lynas Gold NL. During the period 1982 to 1989 his main client was Metana Minerals.

From 1990 to 1992 and 1994 to 1996 he was exploration manager for the Roebuck Resources NL / North Flinders Mines Ltd Tennant Creek Joint Venture and then other projects until 1998.

The period 1999 to the present has involved management of exploration programmes for Kanowna Consolidated Gold Mines NL, Kanowna Lights NL, Internickel (Australia) Pty Ltd now Macarthur Minerals Ltd.

Mr Fox is a Member of the Institute of Materials, Minerals and Mining (London), the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists.

Mr Clark graduated in 1964 with a B Sc(Hons) degree from the University of New England in New South Wales and has worked in the mining and exploration industries in Australia and parts of South East Asia since that time. From 1964 to 1985 he was employed by Mount Isa Mines Limited in a number of geological positions. From 1969 to 1978 he was Senior Geologist in charge of surface

exploration including the final evaluation of and the early exploratory development of the Hilton deposit.

From 1985 to 1996 he worked as a consultant geologist in both Eastern and Western Australia. In 1996 as Exploration Director for Eastern Copper Mines he supervised the exploration activities of the company's activities in the Mount Isa area and at T'Boli in Mindanao in the Philippines where the company carried out 7000 metres of diamond drilling resulting in an Inferred Resource containing 420,000 ounces of gold and 1.6 million ounces of silver.

In 2001 he was appointed to the board of Central Kalgoorlie Gold Mines (now Sherlock Bay Nickel Corporation) supervising exploration for both gold and nickel in the Eastern Goldfields of Western Australia.

Mr Clark is a Fellow of the Australasian Institute of Mining and Metallurgy and a Fellow of the Society of Economic Geologists.