



MONTEZUMA

MINING COMPANY LTD

June 2013 quarter highlights

- ◆ **Receipt of departmental approvals for proposed work programs at Butcherbird (manganese)**
- ◆ **Development of a proprietary scrubber to assist with metallurgical testing at Butcherbird**
- ◆ **Review of historic literature indicating high prospectivity of mineralisation at Barite Range (gold and base metals)**
- ◆ **Lodgement of exploration licence applications over two prospective new project areas – Tropicana (gold) and Green Dam (nickel and gold)**
- ◆ **Commencement of heap leaching studies at Peak Hill.**

Montezuma Mining Company Limited (ASX: MZM) continued to make further progress in relation to its exploration activities during the quarter ended 30 June 2013.

Butcherbird (100%)

During the June 2013 quarter, approvals were received from the Department of Mines and Petroleum for a number of proposed work programs covering diamond and RC drilling as well as surface auger sampling. These work programs are designed to explore and further delineate known mineralisation for both copper and manganese.

Requests have been submitted to three Aboriginal representative bodies to undertake required heritage surveys prior to the commencement of several of the proposed work programs.

Plans for the 15 hole infill metallurgical diamond drilling program at the Yanneri Ridge, Richies Find and Bindi Bindi Hill deposits have been further refined with the assistance of Dr Tony Mason from Mineral Processors (WA) Pty Ltd (Mineral Processors). This work has necessitated a minor delay to the commencement of drilling until the next quarter.

Montezuma engaged Dr Mason to design the metallurgical test work program for the material recovered in the diamond drilling work to be

30 June 2013 Quarterly Report

Market data

ASX code:	MZM
Share price:	\$0.093
Shares on issue:	70,464,350
Market cap	\$7.05m
Cash @ 30 June 13	\$6.7m

Share price



Substantial shareholders

Shareholder	Holding	% held
JPMorgan Nominees	6,326,070	8.98
Duketon Mining Ltd	5,382,500	7.64
Ranguta Ltd	5,326,375	7.56
Zero Nominees	4,475,000	6.35
Alpha Boxer Ltd	4,002,500	5.68

Board & management

Chairman	Seamus Cornelius
Exec. Director	Justin Brown
Non-exec Director	John Ribbons
CEO	Mike Moore



undertaken next quarter. The aim of this program is to establish the amenability of the ore to be economically upgraded on a large scale from an in ground grade of between 10-12% Manganese to a marketable grade of 35-36% Manganese.

Montezuma is constructing a small laboratory scrubber capable of producing results that can be scaled to a full-sized production scrubber and, at the same time, use a small enough mass of scrubber feed per test to allow halved diamond drill hole core in relatively short intercept lengths. Mineral Processors has designed scrubbers to perform this type of work previously, notably for Anglovaal Laboratory on the Witwatersrand.

Scrubbing will disintegrate schistose material to leave manganese particles intact. Preliminary tests performed at Nagrom and ALS Iron Ore have demonstrated that Montezuma’s weathered schist hosted manganese mineral lamellae are amenable to significant upgrading by scrubbing. Montezuma’s test scrubber will be 950mm in internal diameter and large enough for direct scaling. The Montezuma ore is to be crushed to a top size in the range 8-12mm and hence a scrubber “length” of only 50mm (inside liners) is adequate to perform tests without the wall effect of the scrubber impacting the measured result.

The ore is expected to be very variable both with depth and location, hence numerous small samples can be tested. It will be preferable that a single scrubber charge is about 10 kg but a charge as small as 6 kg will be adequate. The scrubber has been designed to fit an alternative 165mm long shell that will allow a 50mm top size lump feed to be tested.

The scrubber unit has a carefully designed open front which allows samples to be extracted during operation. This facility will make the determination of “degree of scrubbing” with energy input with time much quicker than on “traditional” equipment.

Test work to date has indicated that “charge enhanced” scrubbing can be beneficial to some ores. Hence this scrubber has been design to be able to operate with a 45% charge of 6mm steel balls and at 65% of critical speed.

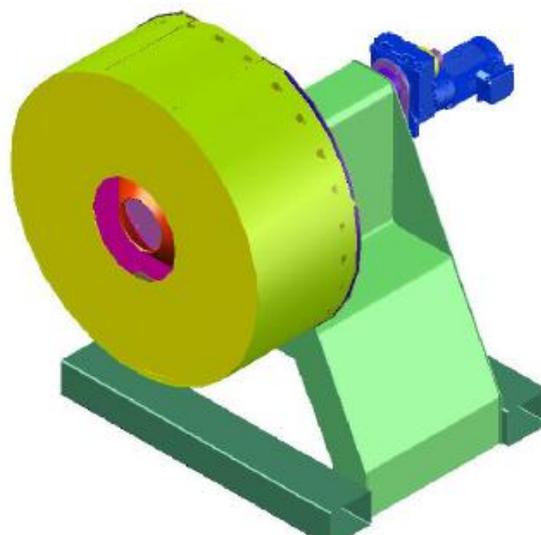


Figure 1. Laboratory scrubber design by Mineral Processors.

Barite Range (100%)

The Barite Ridge Project is comprised of a single Exploration Licence (E45/3793) with an area of 58 blocks (185.4km²). By road, Barite Ridge is some 150km south east of Port Hedland, and 55km west of Marble Bar.

The Project covers the northern section of the Panorama Greenstone Belt and is underlain by volcanics comprising the Mt Ada Basalt and felsic Panorama Formation (both Warrawoona Group) and the Euro Basalt (Kelly Group). This sequence has been folded into a dome structure (North Pole Dome) with E45/3793 located on the northern and eastern sides of the dome.

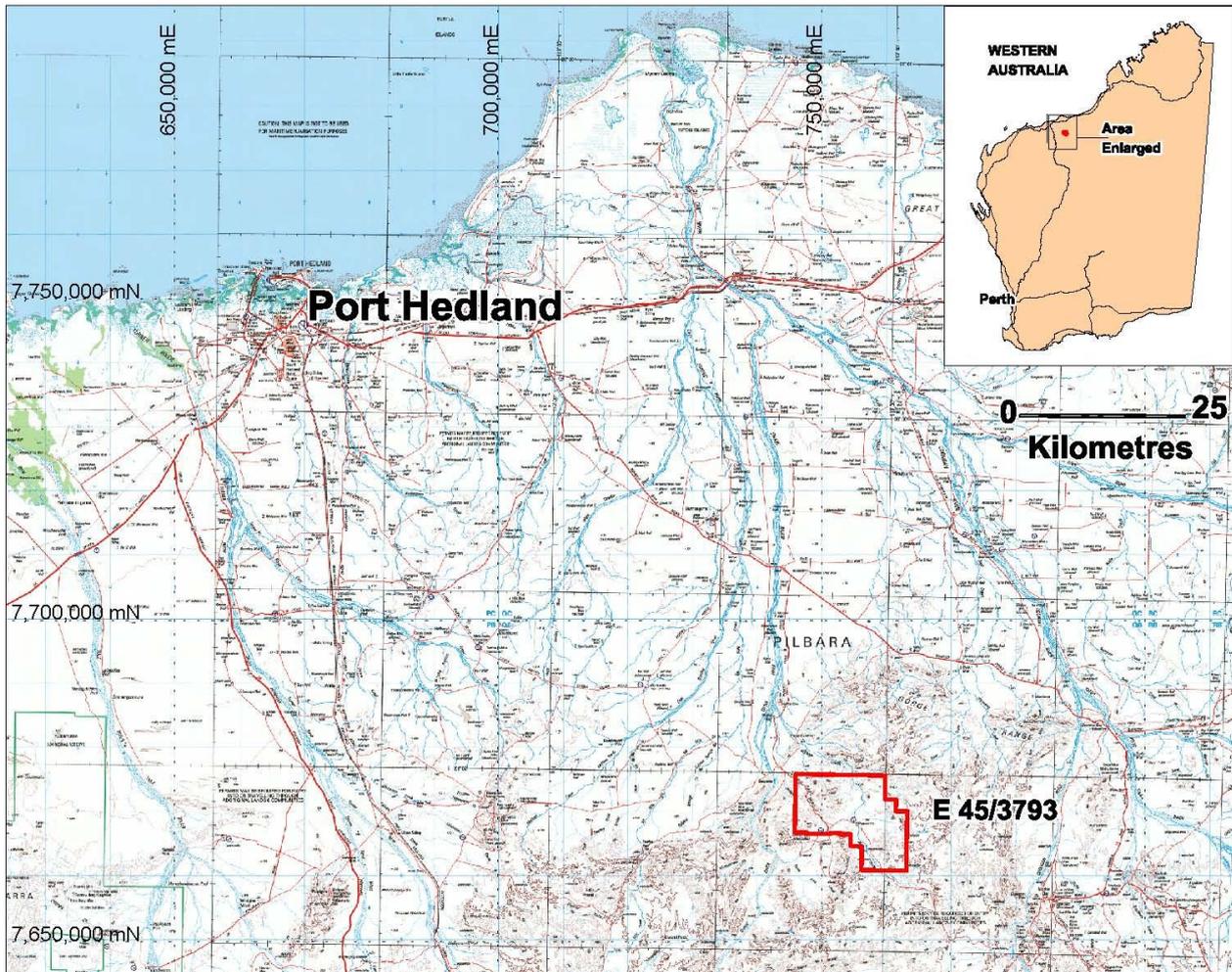


Figure 2. Barite Range Project over Greenstone Belt in Northern Pilbara.

A review of historic literature covering the previous exploration and other geological technical work over the area was completed during the June 2013 quarter. This has highlighted that the area is highly prospective for porphyry-related gold, base metal and barite hydrothermal styles of mineralisation.

Three main grassroots prospect areas have been delineated within the project area. Initial exploration within these prospects by previous operators have returned rock chip sample assays up to 21 g/t Au, 1.8% Pb, 7.5% Cu and 3% Zn and drill hole intercepts including 3m of 2.10 g/t from 5m with associated Ag, Cu, Pb and Zn anomalism. Further follow up work will be completed.

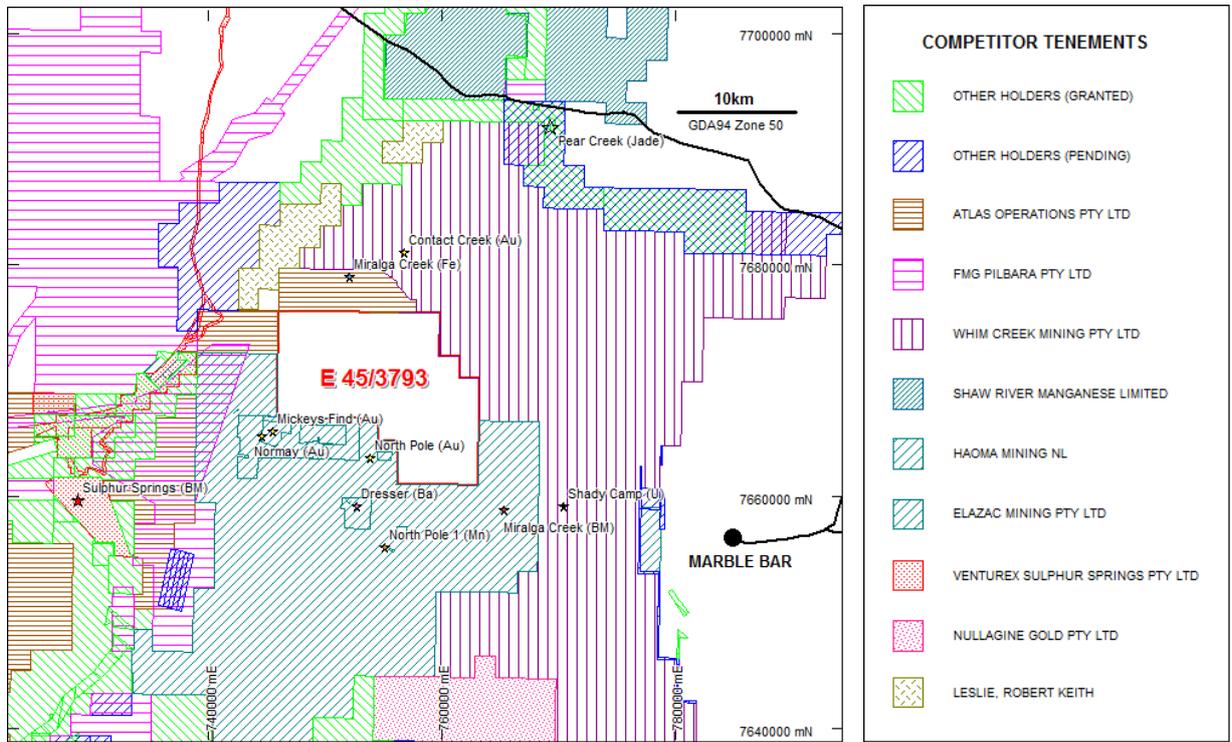


Figure 3. Neighbouring Tenement Holdings Barite Range Project.

Recent Tenement Applications

Exploration licence applications have been lodged over two prospective new project areas – Tropicana (EL39/1746) and Green Dam (E28/2302 and 2313).

The Tropicana Project (EL39/1746) offers Montezuma the opportunity to explore within a highly desirable gold belt, lying within the highly prospective Albany-Frazer Province approximately 22km northeast of the Tropicana gold mine (Joint Venture between AngloGold Ashanti Limited and Independence Group NL).

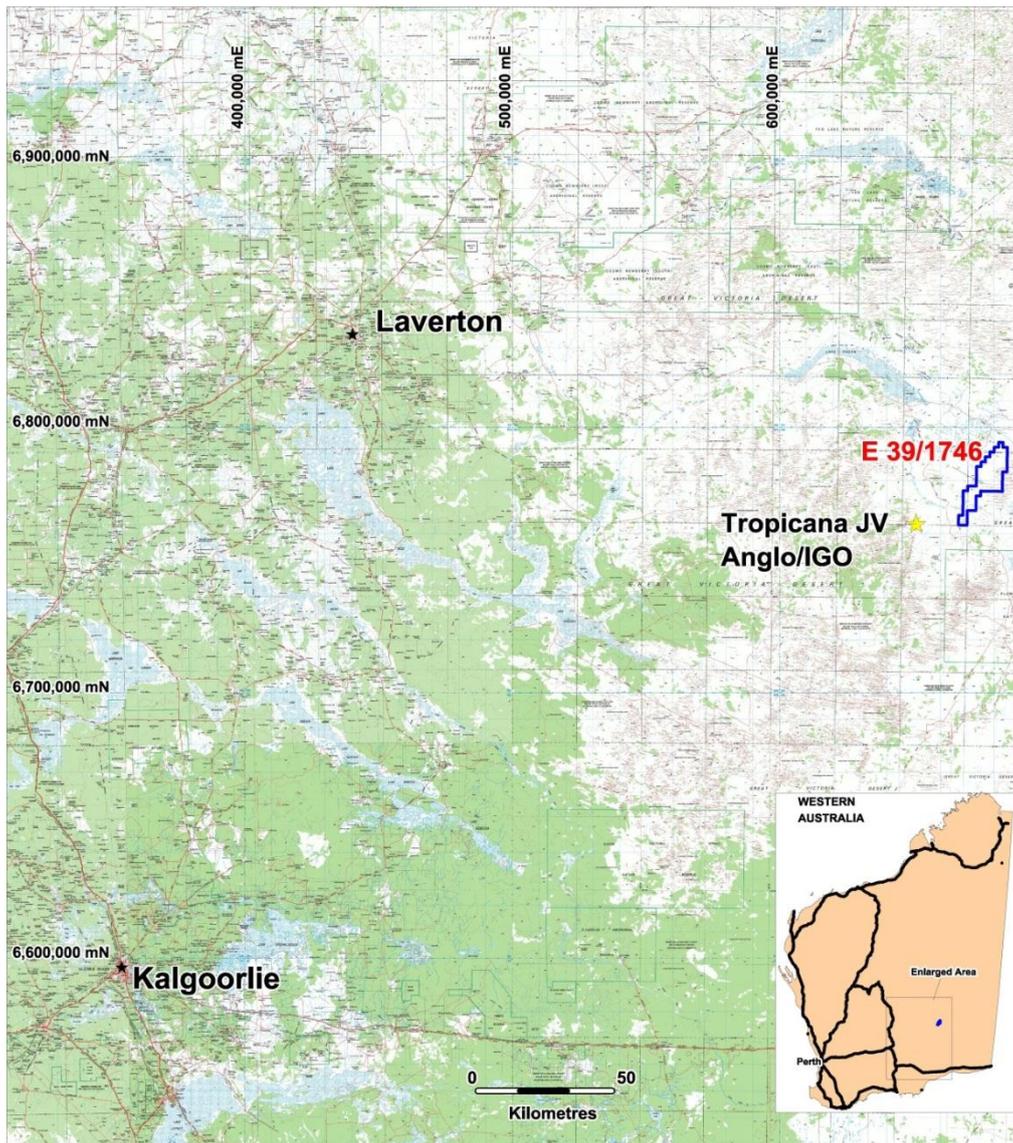


Figure 4. Montezuma’s Tropicana Project Location Plan.

The Green Dam Project (E28/2302 and 2313) is situated just northeast of Kalgoorlie. Previous operators have delineated both significant nickel and gold mineralisation. Anomalism to date indicates potential for intrusive-related, large-tonnage Ni-Cu and high-grade Archean, orogenic gold mineralisation.

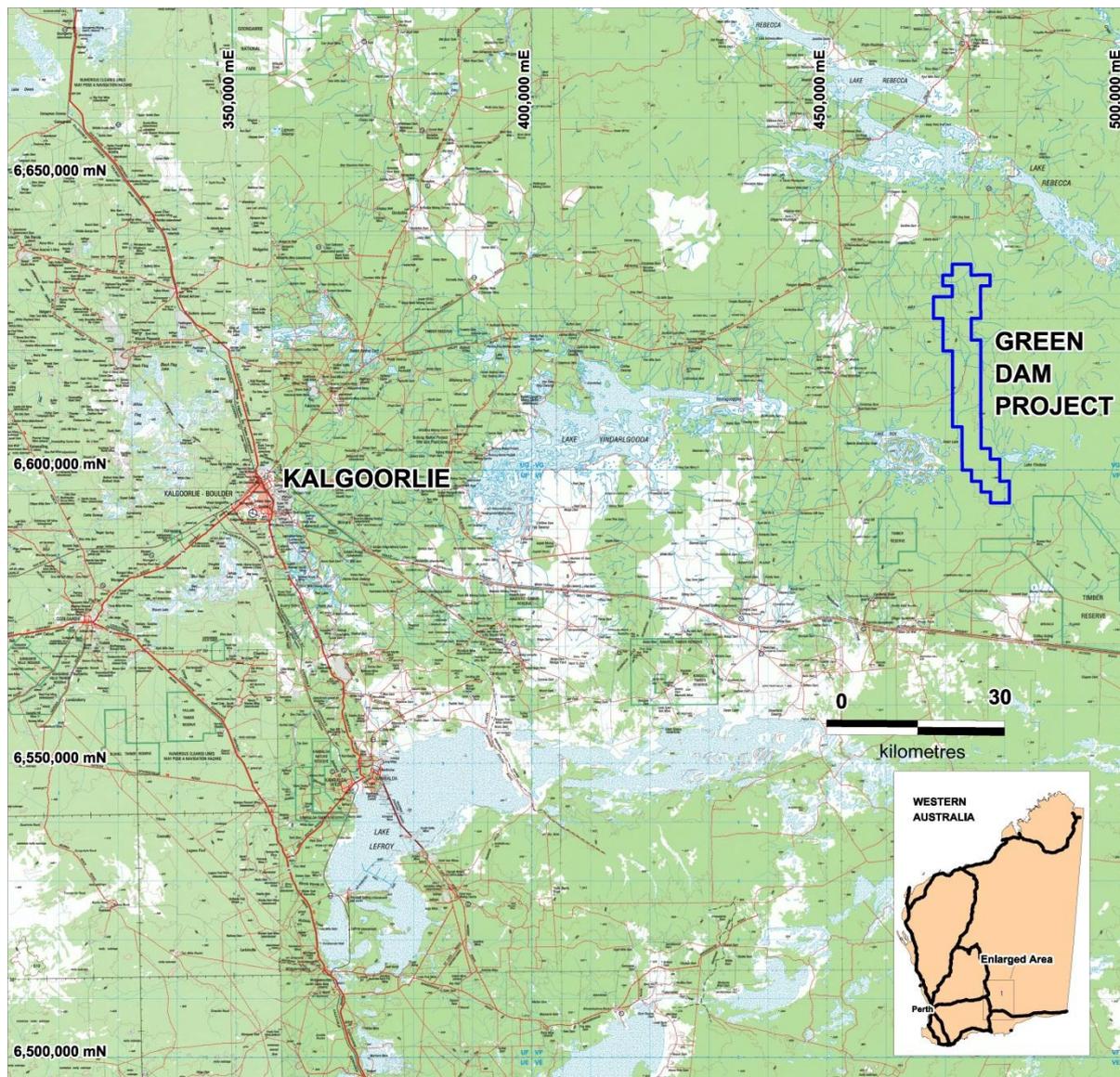


Figure 5. Green Dam Project Location Plan.

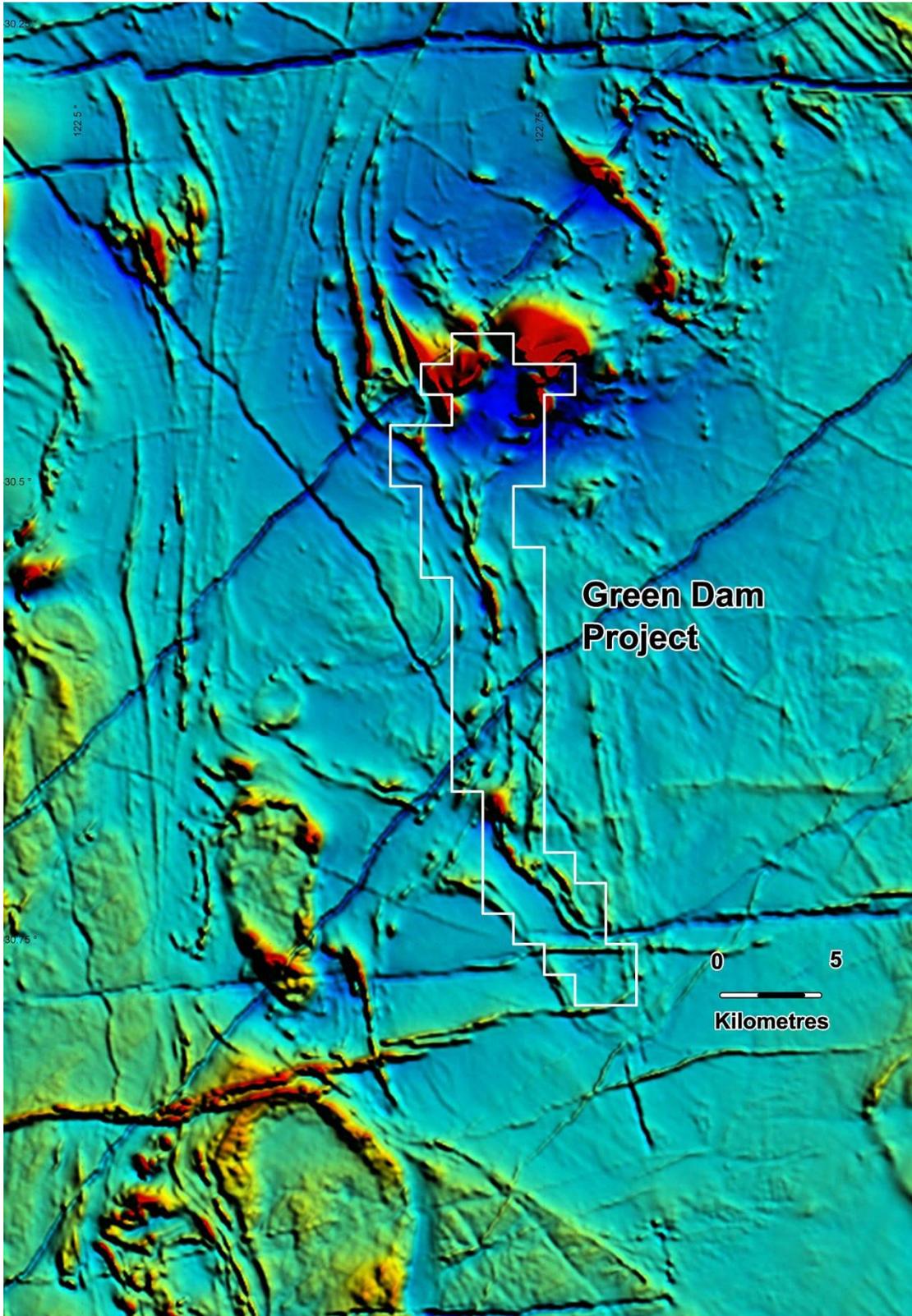


Figure 6. Regional Aeromagnetic Image Green Dam Project.

Peak Hill/Durack (85-100%)

Montezuma has an option agreement with Grosvenor Gold Pty Ltd (Grosvenor), a wholly owned subsidiary of Resource and Investment NL (ASX: RNI) whereby Grosvenor may acquire 100% of Montezuma's interest in the Peak Hill Project by the acquisition of Peak Hill Metals Pty Ltd (a wholly owned subsidiary of Montezuma). The key terms of the agreement include:

- Grosvenor paying an initial option fee of \$100,000 for an exclusive option until 29 March 2013, that has been subsequently extended to 29 November 2013 by paying Montezuma an additional \$50,000.
- Grosvenor may exercise the option at any time prior to expiry by paying Montezuma a consideration comprising \$2.8 million in cash, the issue of 8,400,000 fully paid ordinary shares in RNI, and 2.1 million 35 cent options in RNI.
- If it exercises the option, Grosvenor must also grant Montezuma a 1% Gross Royalty, capped at \$1 million, on all revenue it receives from production from the Peak Hill Project.
- Grosvenor must meet minimum expenditure commitments on the project during the option period.

HEAP LEACHING STUDIES¹

Heap leach metallurgical test work on oxide and transitional mineralisation from Peak Hill and Harmony have commenced with the selected samples considered representative of all potential deposits suitable for heap leach within the Montezuma tenements over which RNI has an option to acquire later in the 2013.

Metallurgical studies are currently focused on leach kinetics and potential for dump and heap leach operations.

Size optimisation bottle roll results from Fortnum were utilised to undertake variability bottle rolls on Peak Hill and Harmony ore. Other test work indicates -25mm material selected for the Peak Hill and Harmony bottle roll variability tests is the representative sample fraction.

Bottle roll tests indicate sufficiently high enough recoveries to commence column tests with 85% recovery indicated.

	Composite	Source Hole	Composite Head Assay (Au) g/t	-25mm		
				Recalculated Head grade (g/t)	Tails Grade (g/t)	Recovery (%)
Montezuma	1	Peak Hill Dump Trans	2.42	2.12	0.32	85.2%
	2	Harmony Dump Oxide/Trans	1.59	Completed- Re-assaying Tails		

Table 1. Bottle roll test results.

Samples have been agglomerated using 10kg/t cement and 6% moisture and have been found to have adequate percolation at this blend. Columns tests will be undertaken with these conditions.

¹ The Information compiled in respect to the Peak Hill/Durack project has been provided by Mr Albert Thamm, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Thamm is Technical Director of Resource and Investment NL.

Additional short term test work planned includes:

- Conducting 0kg/t percolation tests on the two Montezuma dump samples to ascertain the potential for dump leach.
- Montezuma column tests assuming on both oxide and transitional ore.

Additional longer term test work planned includes:

- Percolation tests on a “hybrid” screened and agglomerated sample from Peak Hill/Harmony. This will determine the size fraction to be screened and agglomerated to give good recovery in a heap leach while minimising operating costs (cement consumption).
- Large scale column leach tests (6 tonne capacity). Utilising the results from the small scale column tests, representative large scale tests replicating the likely operating conditions will be conducted. Separate column tests on 100% agglomerated, fines only agglomeration. These will be further refined after the results of tests mentioned above are known.

ENVIRONMENTAL REPORTING

In addition to heap leach studies, RNI made further progress with statutory obligations on Montezuma tenements and environmental investigations.

Progress during the Quarter included:

- Annual Environmental Report completed;
- Closure plan for Peak Hill completed;
- Level 1 flora and fauna survey complete; and
- Pit lake samples collected for water limnology studies. Currently awaiting test results.

FOR MORE INFORMATION...

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Company information, ASX announcements, investor presentations, corporate videos and other investor material on the Company’s projects can be viewed at <http://www.montezumamining.com.au>.

ABOUT MONTEZUMA MINING

Listed in 2006, Montezuma Mining Company Ltd (ASX: MZM) is a diversified explorer primarily focused on manganese, copper and gold. Montezuma Mining has a 100% interest in the Butcherbird Manganese/Copper Project and an 85-100% interest in the Peak Hill and Durack Gold Projects in the Murchison region of Western Australia.

The Information in this report that relates to Exploration Results in respect to the Butcherbird, Barite Range, Tropicana and Green Dam Projects is based on information compiled by Mr Mark Gunther, who is a member of the Australian Institute of Geoscientists. Mr Gunther is a geologist who is a part-time employee of Montezuma Mining Company Ltd and 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 a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Gunther consents to the inclusion in the release dated 31 July 2013 on the matters based on information in the form and context in which it appears.

The information in this ASX release that relates to Exploration Results and Mineral Resources and Geometallurgy in respect to the Peak Hill/Durack project is based on information compiled by Mr Albert Thamm, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr Thamm is Technical Director of Resource and Investment NL and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting of Mineral Resources and Ore Reserves. Mr Thamm consents to the inclusion in the release dated 31 July 2013 on the matters based on information in the form and context in which it appears.