

# **QUARTERLY REPORT for the Quarter Ended 30 June 2010**

# HIGHLIGHTS

Magnetic Resources NL ABN 34 121 370 232

ASX Codes: MAU and MAUCA

Level 2, 16 Ord Street West Perth WA 6005

T +61 8 9226 1777 F +61 8 9485 2840 E <u>info@magres.com.au</u>

PO Box 1388 West Perth WA 6872

Issued Capital: Shares - Quoted: 64,717,636 fully paid shares 17,418,862 contributing shares Options - Unquoted: 2,295,000 options exercisable at \$0.2709 by 23.12.2014

Cash: \$4.6 million

Directors: Peter Thomas Non Executive Chairman George Sakalidis Managing Director Roger Thomson Executive Director

## **IRON ORE**

- Drilling at Jubuk identifies additional coarse grained magnetite in an interpreted second fold limb
- Jubuk drill core tests confirm potential for a premium grade magnetite product
- First pass sampling of regional iron ore targets completed with encouraging results. Numerous drilling targets identified and drilling planned

## BAUXITE

- High grade alumina identified in laterite near Dalwallinu, indicating potential for a northern extension of the Darling Range bauxite province
- Regional ground holding expanded to 6,300sq km

## GOLD

• Drilling of gold anomalies in progress at Tampia North and drilling planned at Lake Grace

## CORPORATE

• \$3.26M raised in share placements

## **IRON ORE**

#### **JUBUK** (Magnetic 100%)

Magnetic Resources has completed a two part reverse circulation (RC) drilling programme infilling and extending the Jubuk Target 1 magnetite prospect near Corrigin in WA and testing one of the parallel major magnetic anomalies in the area. The 2,415m programme consisted of 20 RC drill holes. The drill hole locations are shown in Figure 1. Farming activities have delayed further infill drilling around the outcrop zone.

The drilling at Jubuk Target 1 has shown the continuity of significant widths of near surface coarse grained magnetite in metamorphosed and re-crystallized banded iron formation (BIF). Significantly, the drilling identified a parallel zone of magnetite BIF, interpreted to be the western limb of a tight anticlinal fold structure. The previous drilling in the outcrop area at Jubuk Target 1 did not test for a western limb and a re-assessment of the geophysical data in this area is being carried out. A review of the geological and analytical data suggests the presence of two major BIF units ranging in width from 20-30m together with three or four thinner (less than 10m) less continuous BIF units. The presence of a second limb has positive implications for the tonnage potential at Jubuk.

Significant intersections received to date from Jubuk Target 1 include:

JRC019:	8m @ 24.2%Fe from 52m
	8m @ 26.7%Fe from 80m
JRC022:	8m @ 27.7%Fe from 60m
JRC023:	28m @ 23.7%Fe from 64m
	4m @ 22.5%Fe from 116m to end of hole
JRC024:	12m @ 28.3%Fe from 84m

The intersection in JRC022 is significant as it is located about 200m to the east of the main trend of the magnetite BIF on an interpreted parasitic fold structure which may increase the tonnage potential in this area.

Six drill holes were completed on nearby sub parallel Target 2 where geophysical modelling suggested multiple bodies of high magnetic susceptibility. The drilling intersected broad zones with lower magnetic susceptibilities. The data derived from the drilling will be integrated with the ground magnetic data and the area re-assessed prior to further drilling. The best result was 16m @ 10.8%Fe from 8m in JRC013.

Magnetic continued metallurgical testwork to define parameters for a scoping study by utilising a composite sample from diamond drill core from Jubuk Target 1. An abrasive index test returned a value of 0.44 compared to an industry norm of 0.3 and a high abrasive index of 0.7. A Bond Ball Mill Work Index (BWI) test gave a result of 17KWh/t indicating that the BIF is hard. BWI values for magnetite ores commonly range from 6 to 29kWh/t with an average of 13kWh/t. While the Jubuk magnetite BIF may be harder than average it should not be an issue considering modern process equipment design. The BWI was performed at a closing screen size of 106 microns, to target a P80 of 75 microns, and the actual P80 of the material as tested was 88 microns.

Davis Tube Recovery (DTR) test results from the diamond core composite confirm the impressive results previously obtained from Jubuk. The concentrate grade indicates total iron over 70%, LOI over -3% and FeO over 30%, confirming potential to produce a very high quality concentrate. Iron recovery is very good (over 90%), and expulsion of silica is excellent (over 99%) as shown in Table 1.

Table 1 Summary of Jubuk Drill Core DTR results

DTR Product	Wt (%)	Fe (%)	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub> (%)	P (%)	S (%)	LOI 1000 (%)	Fe0 (%)		
Mags	26.2	70.50	1.31	0.67	0.003	0.002	-3.24	30.68		
Non-Mags	73.8	2.66	74.35	9.52	0.042	0.059				
Assay Head	100.0	20.41	55.25	7.21	0.032	0.049	-0.45			
Mag Recovery	26.2	90.4	0.6	2.4	2.5	11.7				
Non-Mags are calculated assays										



Figure 1 Jubuk Target 1 Cross-Section 6434200mN showing holes JRC023, 24, 25, 26.

#### **REGIONAL ACTIVITY**

First pass sampling of identified outcrop areas on Magnetic's extensive iron ore tenements in the Mid West and South West regions of Western Australia has been completed with geological mapping in progress. The tenements, which now total some 6,300sq km in area, cover numerous iron ore targets identified from interpretation of regional aeromagnetic data followed by detailed aeromagnetic surveys to refine and prioritise targets. Magnetic is targeting both magnetite and direct shipping ore (DSO) hematite in areas of good infrastructure close to railway lines and ports. The location of Magnetic's iron tenements is shown in Figure 8.

In the Wubin area sampling has identified numerous outcrops with in excess of 40%Fe, correlating with significant magnetic anomalies. A scout drilling programme is being planned in several target areas, as shown in Figure 3. Farming activities will delay drilling in some areas until after cropping is completed.

An initial drilling programme of 4,000m of reverse circulation drilling to 120m depth to test six of the targets within the project area is planned and permitting for this drilling is in progress. A second programme of approximately 2,000m of aircore drilling to 30m depth is being planned, this programme will test for DSO type detrital iron ore similar to that being mined at Koolanooka.



Figure 2 Jubuk Target Areas 1 and 2 Drill Hole Locations (faults in blue) on Greyscale Aeromagnetic Image



Figure 3 Wubin Project, Proposed Scout Drilling Targets

# BAUXITE

#### Dalwallinu (Magnetic 100%)

Following a regional assessment for iron ore in the Dalwallinu area north of Perth, Magnetic Resources has identified strongly elevated alumina  $(Al_2O_3)$  contents in samples of lateritic duricrust collected throughout the Dalwallinu iron ore project area, with some samples containing up to 39.65%  $Al_2O_3$  (range 0.68% to 39.65%  $Al_2O_3$ ). A review of the iron and alumina results from Magnetic's sampling indicates only minor overlap between the iron and alumina results, as the elevated iron values are developed over areas of high magnetic response and the elevated alumina responses occur over granitic areas of low magnetic response.

Based on a subsequent review of regional open file data, Magnetic has acquired four exploration licences with a primary focus on the bauxite potential. The exploration licences total 889sq km situated in the Dalwallinu-Latham area as shown in Figure 4, in an area north of what is generally recognised as the Darling Range bauxite province.

Significantly, wide-spaced historical sampling on 3km centres by a venture involving the CSIRO shows high alumina values in laterite up to 32.4% Al<sub>2</sub>O<sub>3</sub> (range 12.9% to 32.4% Al<sub>2</sub>O<sub>3</sub>) within the new bauxite tenement areas. The elevated alumina values in the CSIRO samples and Magnetic's recent iron sampling are shown in Figure 5. Magnetic has completed reconnaissance validation sampling of this historical regional data, the results of which are pending. Also of significance, the historical data shows a clear correlation between elevated Al<sub>2</sub>O<sub>3</sub> responses and the elevated lateritic plateau of the Darling Range. Preliminary investigations indicate that the region has not been subject to systematic exploration for bauxite.

Important chemical factors in assessing potential for bauxite include determining available (i.e. caustic soda-soluble)  $Al_2O_3$ , soluble or reactive silica, and iron content. The reconnaissance samples currently being analysed will provide indicators for some of these factors. Other factors such as  $Al_2O_3$  distribution, thickness and tonnage potential have strong influences on bauxite project economics. Magnetic will evaluate these factors and others such as the mineralogy of the laterite and underlying saprolite, as part of the exploration process on the tenements. Magnetic Resources is most encouraged by the bauxite potential of its new tenements, which are well located near existing rail infrastructure and which abut those of Bauxite Resources (ASX:BAU) to the south. Magnetic believes the new tenements could cover a significant northern extension to the Darling Range bauxite province.

## URANIUM

#### SEABROOK (Magnetic 80%, earning up to 100%)

Sampling of radiometric anomalies has defined extensive areas of anomalous uranium in soils and lake sediments up to 50ppm uranium from soil sampling and up to 249ppm uranium in hand auger samples from this lake and the associated palaeochannel system.

A 155-hole, 3,177m aircore drilling programme has been completed, testing the extent and tenor of uranium mineralisation and particularly its distribution at depth in the lake sediment in the areas of defined uranium anomalism. The drilling also tested the geometry and nature of the basement to the lake and palaeodrainage channels in order to verify the mineralisation model being applied to this area. A maximum U response of 45ppm over a 2m was obtained. The lack of anomalous uranium at depth indicates there is a complex evaporative concentration process occurring in the near surface environment of the lakes with subsequent remobilisation of any uranium at depth in the lake system. The Seabrook project and the similar Lake Harvey project are being reviewed in the light of these results.



Figure 4 Bauxite Tenement Locations



Figure 5 Digital Elevation Map Showing Association of Elevated Al<sub>2</sub>O<sub>3</sub> with Elevated Topography

# GOLD

#### TAMPIA NORTH (Magnetic 80%, diluting)

The Tampia North tenements, where Magnetic holds an 80% interest with rights to earn a 100% interest, cover a 30km strike on an interpreted shear zone where gold anomalies and indications of gold mineralisation have been outlined by geochemical sampling and shallow drilling. The tenements are subject to a farmin agreement with Pacific Ore Ltd.

A soil sampling program has defined several target areas for RAB drilling to determine the source of the surface gold anomalies. A 49-hole, 890m drilling programme has been completed to cover both the gold anomalism and peripheral zones where pathfinder elements As and Mo show anomalism. Drilling commenced at the end of the June quarter and analytical results are pending.

#### LAKE GRACE and HOLLAND ROCKS (Magnetic 100%, diluting)

The Lake Grace and Holland Rocks tenements cover a cumulative 60km strike length of an interpreted shear zone where geochemical sampling has identified several goldanomalous areas and where limited historical drilling reported a best intersection of 1m @ 34g/t Au from 94m at Lake Grace. The tenements are subject to a farm-in agreement with Pacific Ore Ltd.

#### Lake Grace

A soil sampling programme has been completed over those target areas where land access agreements are in place. The sampling has defined coherent gold responses up to 15ppb Au which appear to be associated with a discrete magnetic unit evident on regional aeromagnetic data, see Figure 6. Subject to permitting and land access agreements, a drilling programme is being planned when harvesting in the area is complete.

#### Holland Rocks

A soil sampling programme (482 samples) was completed over the Holland Rocks project area. The maximum gold value is 12.7ppb Au. When considered in conjunction with the multi-element index the gold appears to define two potentially mineralised trends, as shown in Figure 7, within the structural zone apparent in the regional magnetic data. A drilling programme is being planned when harvesting is complete.

## CORPORATE

Magnetic has placed 7,244,443 fully paid shares to a combination of sophisticated and professional investors at an issue price of 45cents per fully paid share to raise \$3.26million before costs. The funds raised will mostly be used to advance exploration on Magnetic's iron ore and other prospects in the southern Yilgarn region of WA.



Figure 6 Lake Grace Gold Signatures Related to Regional Magnetic Data.



Figure 7 Gold and Multi-element Signatures from Holland Rocks



Figure 8 Location Map, Iron Ore Tenements

Magnetic Resources is targeting iron ore deposits ranging in size from 220Mt to 1000Mt within its various project areas (see inset in Figure 8) based on interpretation of geophysical data using an assumed specific gravity of 3.5 and projecting the targets to an average depth of 100m below surface. The potential quantity and grade is conceptual in nature as there has not yet been sufficient exploration to define a mineral resource and it is uncertain if further exploration will result in the determination of a mineral resource.

For more information on the company visit www.magres.com.au

George Sakalidis Managing Director Phone (08) 9226 1777 Mobile 0411 640 337 Email george@magres.com.au Roger Thomson Technical Director Phone (08) 9226 1777 Mobile 0419 969 183 Email roger@magres.com.au

The information in this report is based on information compiled or reviewed by Allan Younger (Dip Applied Geol), who is a member of the Australasian Institute of Mining and Metallurgy. Allan Younger is a consultant to Magnetic Resources NL. Allan Younger 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'. Allan Younger consents to the inclusion of this information in the form and context in which it appears in this report.