

25 October 2012

# SEPTEMBER 2012 QUARTERLY REPORT

Emerging fertiliser development company Aguia Resources Limited (ASX: **AGR**) ("Aguia" or "Company") is pleased to present its September 2012 quarterly activities report.

### Milestones

During the September 2012 quarter, Aguia achieved a number of significant milestones including:

- Ongoing 2<sup>nd</sup> phase diamond drilling on its flagship Três Estradas phosphate project
- Completion of a reverse circulation drilling programme testing the oxide potential at Três Estradas
- Second stage beneficiation testwork returning excellent results, with concentrate grades of up to 36.0% P<sub>2</sub>O<sub>5</sub>

### Summary

## Phosphate

At the Três Estradas ("TE") phosphate project, programmes of diamond drilling and reverse circulation drilling commenced and were completed in October. The aims of these programmes are to:

- Expand the initial JORC compliant inferred resource (21Mt @ 4.6% P<sub>2</sub>O<sub>5</sub>) as reported in the Company's announcement to the ASX dated 15 June 2012, through a 21 hole diamond drilling programme targeting mineralisation below 100 metres depth
- Test, define and upgrade the JORC compliant resource category of the higher grade oxide zone that extends from surface to up to 20m depth with a 50 x 50 metre drill pattern

The Company has also completed a 2<sup>nd</sup> stage beneficiation testwork programme at the University of Sao Paulo. Further optimisation of the flotation process was aimed at increasing concentrate grades from samples of oxide, primary and a test blending the near surface higher grade oxidised carbonate and amphibolite host material - as this would be mined first providing an early cash flow.

- This work returned very encouraging results, and indicates the potential to produce a commercial concentrate using industry standard methods and reagents.
- Results have increased concentrate grades in all sample types with grades of up to:
  - 36.0% P<sub>2</sub>O<sub>5</sub> from carbonatite oxide material
  - 35.9% P<sub>2</sub>O<sub>5</sub> from oxide blend (carbonatite and amphibolite)
  - 31.4% P<sub>2</sub>O<sub>5</sub> from fresh primary material

## Potash

At the Atlantic potash project, adjacent to Brazil's only operating potash mine (within the Sergipe Basin), the Company is continuing a review of the project for planning purposes.

## Near Term Focus

The Company will continue its efforts to commercialise its flagship TE phosphate project through resource expansion, upgrade drilling and further phosphate beneficiation optimisation test work.



Figure 1: Location of Aguia Projects, Brazil

– ENDS –

### For further information, please contact:

#### Simon Taylor

Managing Director **T** +61 2 9247 3203 **E** staylor@aguiaresources.com.au

### David Loch

Unicus Investor & Media Relations T +61 3 9654 8300 / +61 411 144 787 E david@unicusgroup.com.au

#### About Aguia

Aguia is an emerging fertiliser development company focusing on phosphate and potash projects in Brazil. Brazil is Latin America's biggest economy and is heavily reliant on imports of up to 50 per cent of its phosphate and 90 per cent of its potash needs. Aguia is well positioned to capitalise on the growing demand for phosphorus and potash based fertilisers in the expanding agriculture sector in Brazil and controls four large projects, located close to existing infrastructure. The Company is committed to its existing projects whilst continuing to pursue other opportunities within the fertiliser sector.

## Phosphate Projects

## **Rio Grande Projects**

Aguia has an exclusive option to acquire 100% of the Três Estradas ("TE") and Joca Tavares ("JT") carbonatite style phosphate projects from Companhia Brasileira do Cobre ("CBC").

The projects are located in the state of Rio Grande do Sul, the southernmost Brazilian state adjacent to the border with Uruguay. The region has well developed infrastructure with excellent roads, rail, power, port and services.

The three southern states of Rio Grande do Sul, Santa Catarina and Paraná currently consume around 1.1 million tonnes  $P_2O_5^1$  or around 28.5% of Brazilian consumption, however there are currently no active phosphate mines in the region.

The TE, JT and other Aguia projects will be logistically advantaged to supply into this region, compared with phosphate mined in Minas Gerais, Goias and imports.



## Figure 2: Location of Rio Grande Phosphate Projects, SE Brazil

The TE project represents a significant new phosphate discovery with characteristics similar to existing producers in Brazil. Importantly, first stage drilling has shown that the grade and mineralogy is similar to that of other open-cut operating mines globally including Yara's Siilinjärvi mine in Finland and Vale's Cajati mine in Brazil, both of which produce a high quality phosphate concentrate within carbonatite host rocks.

# Ongoing Drilling Programmes

As part of its commercialisation plan, the Company is currently undertaking diamond and reverse circulation drilling at the TE project. This follows on from the maiden JORC-compliant resource and initial beneficiation studies as announced last quarter.

The initial inferred resource estimate, prepared by SRK Consulting was 21Mt @  $4.6\% P_2O_5^2$  as reported in the Company's announcement to the ASX dated 15 June 2012. This was reported in a

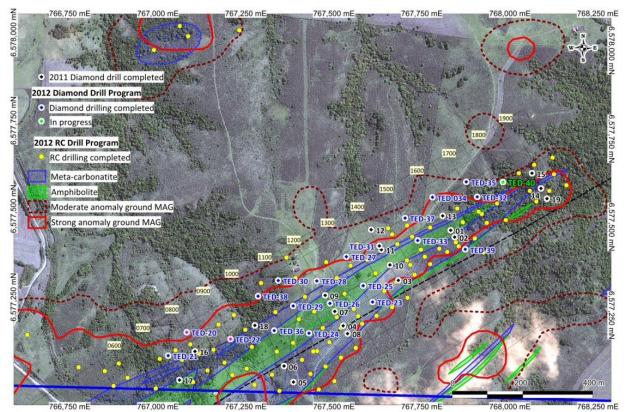
<sup>&</sup>lt;sup>1</sup> Data source: ANDA 2011 statistical summary

<sup>&</sup>lt;sup>2</sup> Inferred resource calculated from 40% of potential target length and to 100 metres depth

conceptual pit shell with a 3%  $P_2O_5$  cut-off grade, and based on limited drilling to a vertical depth of 100m.

The current diamond drilling is planned to test the potential to a depth of 200m, with a 21 hole, 3,870m programme.

The second part of the programme includes reverse circulation ("RC") drilling. This drilling is now completed, although assay results are still pending. This drilling tested the higher grade oxide zone from the surface on a 50m by 50m grid. The objective of the shallow drilling is to better constrain the high grade oxide zone and improve the category of the resource (Figure 3).



### Figure 3: Tres Estradas Stage 2 Drilling Location Plan

### **Metallurgical Testwork**

The Company is continuing its programme of metallurgical testwork, with encouraging results from the  $2^{nd}$  phase which was completed at the University of Sao Paulo. This programme, which has largely focussed on the optimisation of the flotation process, has returned concentrate grades of up to 36% P<sub>2</sub>O<sub>5</sub> from oxidised carbonatite, using industry standard methods and reagents<sup>3</sup>.

The highlights of the test work are the results of the blend of oxide carbonatite and amphibolite material that returned four samples with concentrate grades above 32% P<sub>2</sub>O<sub>5</sub> and with metallurgical recoveries above 78%. It is noted that there remains scope for improvement in these results as the oxide samples were not subjected to any magnetic separation in the processing. The oxide material extends from surface. These results are highly significant as this part of the TE resource would provide early cash flow in the start-up of the project. Results of this blend of oxide material are shown in Table 1.

<sup>&</sup>lt;sup>3</sup> Based on preliminary beneficiation test work, optimisation test work underway

Flotation Tests	Content % (*)			Recovery % (*)			
	$P_2O_5$	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mass	$P_2O_5$	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
EB-01-29 (**)	34.0	5.6	3.0	22.5	78.3	4.0	3.7
EB-01-30 (**)	32.3	7.6	4.2	22.5	78.2	5.2	5.0
EB-01-31 (***)	35.8	4.4	3.8	32.2	82.8	5.4	5.9
EB-01-32 (***)	35.9	4.7	4.1	31.2	79.9	5.6	6.0

Table 1: Flotation Performance of a Mixture of EB-01 plus EB-03 (rougher + cleaner stage 1)

(\*) – Product floated at cleaner stage1

(\*\*) Mixture – 1: Mass composed of EB-01 (carbonatite) (50%) plus EB-03 (amphibolite) (50%)

(\*\*\*) Mixture – 2: Mass composed of EB-01 (84%) with EB-03 (16%)

By achieving higher grades the overall recoveries have been affected, this is mainly due to an over grinding of the samples and a loss of material to fines and slimes within the fresh rock source.

Minimising the fines and slimes to increase recoveries will be one of the focal points of the next stage of test work. This will involve commissioning a world class grinding and crushing expert to optimise the grinding process prior to flotation of the product. An optimal balance between grade and recoveries will be determined in stage 3 testing using a specialist processing facility with industrial scale equipment and technology (pilot scale).

Overall metallurgical balances for sample EB-01 (oxide carbonatite) and EB-02 (fresh carbonatite) are shown in tables 2 and 3 below.

Optimisation work on sample EB-01 (oxide carbonatite) returned a higher concentrate grade from Stage 1 ( $36.0\% P_2O_5 vs 32.6\% P_2O_5$ ), and it should be noted that the sample was not subjected to any magnetic separation.

Products	Content %			Recovery %			
	$P_2O_5$	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mass	$P_2O_5$	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
Flotation Concentrate	36.0	3.6	6.1	23.9	69.6	3.3	6.2
Flotation Tailings	3.3	35.7	33.0	37.2	9.9	50.6	51.7
Slimes	6.5	31.1	25.7	38.9	20.5	46.1	42.1
Feed (calculated)	12.4	26.2	23.7	100.0	100.0	100.0	100.0

Table 2: Overall Metallurgical Balance of Processing Ore EB-01

Likewise, optimisation of EB-02A (fresh carbonatite) increased the concentrate grade from the Stage 1 result of  $28.1\% P_2O_5$  to  $31.4\% P_2O_5$ .

Products	Content % (*)			Recovery % (*)			
	P <sub>2</sub> O <sub>5</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mass	P <sub>2</sub> O <sub>5</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>
Flotation Concentrate	31.4	5.17	1.62	5.3	39.0	3.6	1.2
Flotation Tailings	1.99	8.57	5.03	50.7	23.7	58.5	34.0
Slimes	3.93	6.69	4.09	39.6	36.6	35.7	21.6
Magnetic tailings	0.68	3.64	73.4	4.4	0.7	2.2	43.2
Feed (calculated)	4.26	7.42	7.49	100.0	100.0	100.0	100.0

Table 3: Overall Metallurgical Balance for Processing Ore EB-02-A

# Joca Tavares ("JT")

The JT project is located 41 kilometres east-south-east from the TE project. No systematic exploration has been conducted since its discovery by the Companhia de Pesquisa de Recursos Minerais ("CPRM").

Encouraging results from surface rock grab samples collected by Aguia have returned assays up to  $11.4\% P_2O_5$ . The dimensions of the target zone will be investigated by Aguia, including mapping, rock chip sampling and programmes of drilling.

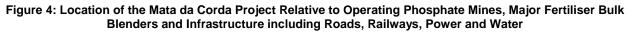
Some of the projects are located within the Brazilian border control zone (150 kilometres from the international border) restricting foreign ownership of the tenements to 49%. Should the option be exercised to acquire the tenements at the conclusion of the exploration program, the Company will be required to enter into a joint venture with a Brazilian owned company to develop the tenements. Accordingly Aguia has set up a corporation, in which Aguia Resources owns 49%, and Brazilian interests 51%, and which incorporates shareholder agreements channelling all economic benefits back to Aguia Resources. This arrangement is not expected to materially alter the Company's potential economic return on the funds invested as part of the exploration program.

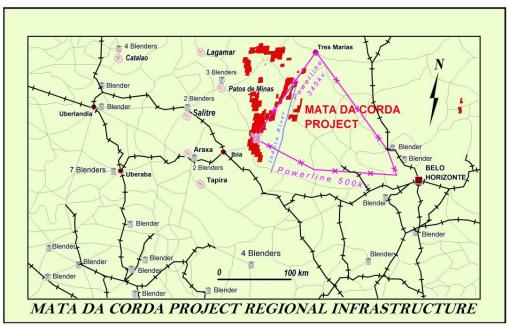
# Mata da Corda Phosphate Project ("MCPP")

The MCPP is located within 150 kilometres of the three largest phosphate mines in Brazil; Araxá – Vale (290Mt @ 14.9%  $P_2O_5$ ), Tapira – Vale (744Mt @ 8.4%  $P_2O_5$ ) and Catalão – Anglo/Vale (203Mt @ 8.8%  $P_2O_5$ ). These three mines account for 95% of the phosphate rock production in Brazil. Within this existing transportation corridor there are 32 major bulk fertiliser blenders (Figure 4).

The MCPP is well located with excellent logistics. It is close to infrastructure (roads, water, railway and energy), potential primary (agriculture) customers, and fertiliser blenders and is on the main transportation route for the expanding agricultural districts of Mato Grasso.

MCPP is held in a joint venture with Vicenza Mineracao e Participacoes S.A. ("Vicenza") who is the operator and has an option to acquire 70% of the project.



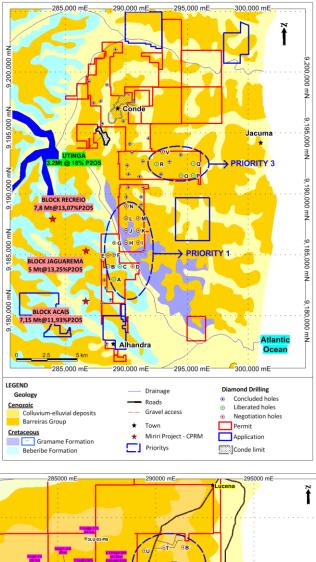


## Lucena Phosphate Project ("LPP")

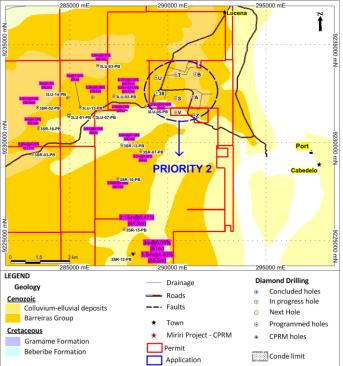
The Company has previously reported assays from a 28 hole drilling program spaced over a 20 kilometre zone (Figure 5). Twenty two holes returned phosphate mineralisation over thicknesses ranging from 1.0 to 13.7 metres. Numerous high grade intersections were received including assays up to  $23.3\% P_2O_5$ .

The main mineralised interval is located at the bottom of the Gramame Formation (limestone) near the top of the Itamaraca Formation (sandstone). The depth of the mineralisation varies from 15 to 94 metres depth with thickness in the range of 0.5 to 7.0 metres. The grades found vary from 3.1% to 21.9%  $P_2O_5$ .

The Company is currently undertaking a 27 hole, 1,810m diamond drilling programme to delineate shallow mineralisation in three priority target areas. This work is expected to be completed in November, with first assay results expected in early December.



#### Figure 5: Lucena South and Lucena North Showing Known Deposits and Previous Drill Hole Locations



## **Potash Projects**

## **Atlantic Potash Project**

During the quarter the Company has continued to review data from historic work. No field activities were conducted.

### About the Atlantic Potash Project

The Atlantic Potash Project is located in the northeastern portion of Brazil in the State of Sergipe. The Project sits to the west and northeast of the city of Aracaju, the capital of Sergipe State with a population of 570,000 inhabitants and a large scale harbour.

Aguia, through its wholly owned subsidiary Potássio do Atlantico Ltda ("Paltda"), has acquired 106 exploration claims totaling approximately 178,000 hectares (1,780 km<sup>2</sup>) consisting of five property areas in the Sergipe-Alagoas basin.

In addition the Company signed a Letter of Intent ("LOI") with Lara Exploration Ltd ("Lara") to acquire 100% of Lara's potash projects, located adjacent to Aguia's projects.

Potash mineralisation was discovered in the Sergipe-Alagoas Basin by Petrobras during oil and gas exploration in the 1950's and 1960's. In Sergipe, sylvinite dominant potash deposits occur in the regions of Taquari-Vassouras and Santa Rosa de Lima. The discovery of sylvinite mineralisation resulted in the commencement of mining at the Taquari-Vassouras underground mine in 1985, first by Petromisa and later transferred to Vale in 1991.

The Sergipe Basin also hosts significant potash deposits comprised of carnallite. In anticipation of the sylvinite deposit becoming exhausted, Vale is developing a carnallite solution mining project within the basin, and has built a functioning pilot plant (2008) which has proved solution mining of carnallite in the Sergipe basin is commercially feasible with the aim of establishing capacity for 1.2 Mtpa KCI by 2015.

The Project is well located with excellent infrastructure (roads, water, and energy). Fertiliser blenders are located in the project area providing a ready local market for the product. The area has considerable oil exploration infrastructure, with several companies having offices and warehouses in Aracaju including Halliburton and Schlumberger. The harbour is located 15 kilometres North of Aracaju and it is used for the transport of oil, potash and heavy equipment.

#### JORC Code Competent Person Statements

The Três Estradas Phosphate Project has a current JORC compliant inferred mineral resource of 21.33Mt @ 4.63%  $P_2O_5$  (total initial contained phosphate of 0.99Mt  $P_2O_5$ ).

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Fernando Tallarico, who is a member of the Association of Professional Geoscientists of Ontario. Dr Tallarico is a full-time employee of Aguia Resources Limited. Dr Tallarico 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 ("JORC Code"). Dr Tallarico consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.