Celamin Holdings NL (CNL)

Delivering on phosphate development opportunities

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Recommendation: Speculative BUY

Key Points

- ***Chaketma scoping study indicates robust economics***
- ***Maiden Chaketma JORC resource estimate released***
- ***DFS underway – first phosphate production targeted Q1 2015***
- ***Potential resources suggest >50 year project life***
- ***Board composition strengthened for development phase***
- ***Global phosphate demand forecast to continue increased growth***

Celamin Holdings NL is focused on the exploration and development of resource projects in North Africa, initially in Tunisia and Algeria. The Company's immediate focus is the advanced Chaketma phosphate project held in partnership with local company, Tunisian Mining Services SA (TMS). Celamin is advancing the Chaketma project with a Definitive Feasibility Study and has production targeted for early 2015. Celamin has also acquired rights to several base metal tailings projects in Tunisia with TMS and is farming in to an Exploration Permit with base metal (Pb/Zn) targets in Algeria.

Company Information

ASX Code	CNL
Share Price	A$0.17
Ord Shares	152.3m
Partly Paid Shares	14.9m
Options	101.3m
Market Cap	**A$25.9m**
Diluted MCAP	A$12.5m
Cash (Sep 12)	A$2.6m
Total Debt	A$0.0m
Enterprise Value	**A$9.9m**

Directors

Chairman	Hon Andrew Thomson
Managing Director	David Regan
Executive Director	Russell Luxford
Non-Executive Director	Martin Broome
Non-Executive Director	Gary Scanlan

Substantial Share Holders

D&M Regan (Super Fund)	27.4%
RNAJ Stagg (Super Fund)	14.0%
African Lion 3 Limited	12.2%

Company Details

Address	Level 4, 100 Albert Rd South Melbourne, Vic 3205
Phone	+613 9692 7222
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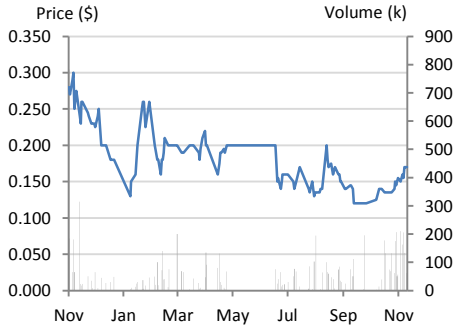
1 Year Price Chart



Source: Bloomberg

Company Overview

Celamin Holdings (ASX: CNL) has a portfolio of phosphate and base metal projects located in North Africa – specifically Tunisia and Algeria. The principal focus for the company is the development of the Chaketma phosphate project (CNL 80%, reducing to 50% at development stage) in Tunisia.

The Chaketma phosphate project has quickly advanced to become a potential "company maker" for Celamin and was recently the subject of a positive scoping study completed by experts Direct Mining Services Pty Ltd. The success of this study led Celamin to proceed immediately to a Definitive Feasibility Study (DFS). The maiden JORC compliant Inferred resource containing 37Mt at 21.0% P_2O_5 covers just one of seven prospects at Chaketma. Earlier investigations estimated the potential for a substantial "Pre-Resource Mineralisation" of approximately 229Mt at 20% P_2O_5.

The Chaketma scoping study indicated an economically robust and viable project with a (pre-tax) US$605m NPV, IRR of 28%, capex of US$364m, a payback of 3.5 years and a potential mine life of over 50 years on maximum output of 1.5Mtpa phosphate concentrate. The project is located in a mature phosphate mining province and is close to existing infrastructure and Euro markets.

Strong demand for fertiliser commodities, such as phosphate, is expected to continue as a result of global population growth and the shortage of arable land for increased food needs.

Investment Review

Celamin has a strong portfolio of North African projects, the major focus being the advanced Chaketma phosphate project (CNL 80%, reducing to 50%), located in Tunisia.

Chaketma – Scoping study highlights economic potential of project

Chaketma first production forecast for Q1 2015

A scoping study was recently completed by Direct Mining Services Pty Ltd (DMS) of Perth, assessing the economic potential of developing six deposits within the Chaketma project to production, namely; Kef El Louz North, Kef El Louz South, Sidi Ali Ben Oum Ezzine, Douar Ouled Hamouda, Gassa El Kebira and Gassat Ezerbat. Based on estimated Pre-Resource Mineralisation in the 6 deposits – where current exploration continues to expand expectations - provisional mineable material is estimated at 176Mt @ 19.2% P_2O_5. This would generate approximately 79Mt of phosphate rock concentrate at an average grade of 30% P_2O_5 over a 53 year mine life.

Scoping study indicates robust economics

Results from the scoping study indicate that the Chaketma project is viable and has the potential for solid returns over the life of the project. DMS also completed a sensitivity analysis to assess the impact of varying parameters on the NPV. The project is robust with respect to mining and processing costs, as well as the capital spend and strip ratio. Key drivers of the project's value are concentrate sale price and ore feed grade. A base case sell price of US$165/t has been used for the study, whereas DMS estimates that a 5% increase in the phosphate price would result in a **13.7% increase in NPV to US$684m**. Phosphate rock prices traded between US$175-$202.50/t over the past 12 months.

Definitive feasibility study underway

Following the successful scoping study, Celamin is now advancing the Chaketma phosphate project through a Definitive Feasibility Study (DFS) with first phosphate production slated as early as the first quarter of 2015. This would be a significant achievement for Celamin, marking a rapid transformation from explorer to producer.

Maiden JORC resource delivers on grade and tonnage

On 9 November 2012, Celamin released a solid maiden JORC compliant resource for the Chaketma project, as the first step in its DFS. Mining consultants, GEOS Mining, has reported an Inferred resource of 37Mt at a grade of 21.0% P_2O_5 for the Kef El Louz North deposit, just the first of seven prospects to be evaluated at Chaketma.

Exploration indicates further upside for Chaketma likely

Significantly, recent drilling at Chaketma has revealed important extensions to known mineralisation on a number of prospects, providing opportunities to further improve the project economics.

Board of Directors reinforced in the pursuit of development success

Board positioned for transition to become a North African producer

Celamin has advanced rapidly from explorer to a company with two advanced phosphate projects in Tunisia. Importantly, during 2012, in addition to MD David Regan, Celamin actively sought to broaden the technical skills on its Board through the selection of four new directors, each with value adding experience.

- Mr A Thomson (Chairman) – a consultant with extensive experience in high level investment and government relations in the Middle Eastern region.
- Mr R Luxford (Exec Director) – engineer specialising in mineral project development including two large scale phosphate projects.
- Mr M Broome (Non-exec Director) – a geologist with more than 37 years of experience working in the minerals industry in Africa.
- Mr G Scanlan (Non-exec Director) – extensive experience in the management, development, financing and administration of mining projects.

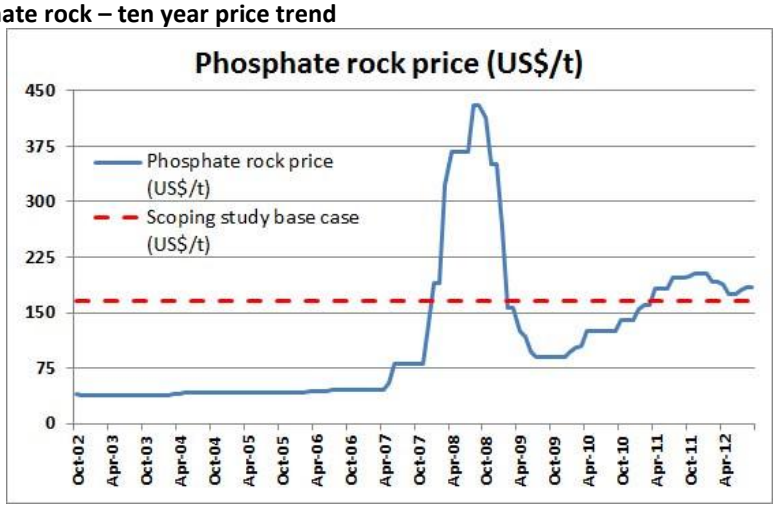
Phosphate prices have rebounded >100% since GFC weakness

The outlook for fertiliser products remains robust with long term demand continuing to be underpinned by global population growth, as well as urbanisation and GDP expansion in major emerging economies, leading to tighter food supply metrics.

While phosphate prices were below US$50/t in the period to 2007, a significant, yet unsustainable, spike to US$430/t was observed in August-September 2008. During the Global Financial Crisis (GFC), like other commodities, phosphate prices fell heavily, back to $90/t. While this was a dramatic retracing, importantly, the floor price reached was still around 100% higher than prices prior to mid 2007. Post GFC, global phosphate rock prices rebounded steadily, rising another 100% to around US$185/t.

While a cyclical softening in prices in the short term is anticipated, the base case for Celamin's Chaketma scoping study utilised a reasonable US$165/t product sales price.

Phosphate rock – ten year price trend



*Source: IndexMundi, Breakaway *Scoping study base case from Celamin announcement 14/8/12*

Additional Projects

Nearby Bir El Afou phosphate resource in the wings

While all efforts over the past year have been directed towards advancement of the Chaketma project, Celamin is also involved in the neighbouring **Bir El Afou phosphate resource**. The 2011 Prefeasibility Study (PFS) results were less compelling than Chaketma, however successful development of the latter may ultimately enhance the economics of Bir El Afou, located just 55km to the west-northwest.

Celamin also holds interests in base metal (Pb-Zn) exploration projects and a base metal tailings project in North Tunisia, as well as a base metal (Pb-Zn-Cu-Ag) resource in Algeria. However, the Company is focused on the Chaketma project.

Breakaway's View

Celamin Holdings' Chaketma phosphate project has quickly become the Company's leading asset, after a recent scoping study indicated positive economics, and possible production as early as Q1 2015. Conservative scoping study parameters, a maiden JORC compliant resource that exceeded expectations and demonstrated additional exploration success suggest that there is clearly further value upside to the Celamin investment case. Strategically, the Company has strengthened the technical breadth on its Board to be able to deliver proposed phosphate development opportunities in the North African region.

These factors, combined with a scoping study NPV of US$605m (pre-tax), suggest that Celamin is currently undervalued, with an Enterprise Value of just A$9.9m. We expect a re-rating as the Company continues to achieve its milestones over the coming year.

What is Phosphate?

Phosphorus, an element with chemical symbol 'P', forms a salt called phosphate (PO_4). It is characterised as one of the fertiliser commodities along with nitrogen (N) and potassium (K), and is typically found in commercial quantities in nature in two forms:

i. as phosphate rock (sedimentary > igneous), or to a lesser extent,
ii. as guano deposits.

In phosphate rock, the common phosphorus bearing mineral is apatite. Geochemical rock analyses generally report phosphate as P_2O_5 – phosphoric acid – which typically requires beneficiation to a >30% P_2O_5 commercial concentrate in most phosphate operations. The major phosphate fertiliser products produced from phosphoric acid are DAP and MAP, with lesser SSP and TSP.

Each of the micro-nutrients – P, N and K – drives growth in plants. Almost all modern farming, and hence the world's food reserves, depend heavily on phosphate based fertilisers. Over 90% of phosphate consumption is used for agriculture and industry, through fertilisers, pesticides and animal feed. According to the US Geological Survey (USGS), there are no substitutes for phosphorus in agriculture.

DAP and MAP are principal phosphate fertiliser products

Diammonium Phosphate (DAP)

DAP is the most commonly produced and traded phosphate fertiliser and is manufactured by reacting ammonia with phosphoric acid. Because it has a high nitrogen and phosphorus content, DAP allows savings to be made in storage, freight and application. It is a very economical nitrogen and phosphorus fertiliser and is widely used throughout the world. In Australia, DAP is used in cropping and on grass pastures, both on its own and in blends, e.g. for sugarcane and horticulture. Over 20Mt of DAP are produced annually from over 20 countries including USA, Morocco, Tunisia (5th largest exporter), Russia, China and Australia.

Monoammonium Phosphate (MAP)

MAP is also manufactured by reacting ammonia with phosphoric acid. It is popular as a planting fertiliser in grain and cotton crops on neutral to alkaline soil types, to supply all the phosphorus the crop requires plus starter nitrogen. It is usually preferred to DAP in such situations as it is less likely to harm germinating seeds and emerging seedlings, due to its lower nitrogen content. Brazil is the main destination for exports.

Single Superphosphate (SSP)

SSP is manufactured by treating phosphate rock with sulphuric acid. A fully granulated and dried product can be produced. Molybdenum and sulphur-fortified grades are available. SSP is particularly popular on perennial pastures, where both phosphorus and sulphur are normally required. It is also used in legume grain crops.

Triple Superphosphate (TSP)

TSP is manufactured by treating phosphate rock with phosphoric acid. It has higher phosphorus content than SSP, but contains very little sulphur. It is used in cropping, in blended NPK fertilisers, and in legume-based pastures if sulphur is not required. Tunisia is the 2nd largest exporter of TSP.

Phosphate Content of Phosphate Fertiliser Products

Phosphate fertilisers	% P	% N	%S	%Ca
DAP	20.0%	18.0%	1.6%	-
MAP	21.9%	10.0%	1.5%	-
SSP	8.8%	-	11.0%	19.0%
TSP	20.7%	-	1.0%	15.0%

Source: Incitec Pivot

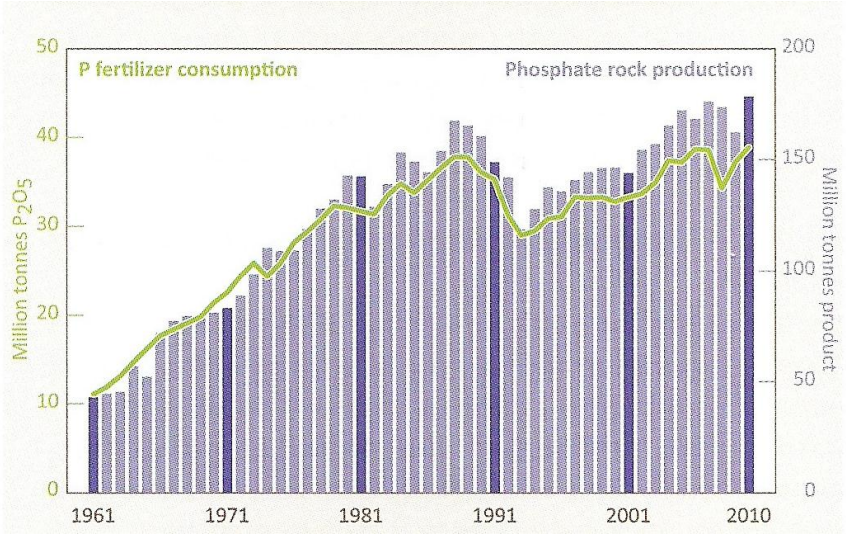
The Outlook for Phosphate

Prior to the GFC, phosphate rock pricing experienced a steep increase to record levels (see page 3) due to a surge in demand for food crops and increases in prices of freight and energy. However along with most commodities, record phosphate prices were unsustainable and fell sharply in the GFC. A price bounce has since been observed with a doubling of the phosphate rock price from US$90/t to US$185/t in the past 3 years.

Phosphate demand growth underpinned by population growth

While some seasonal weakness is expected in the short term, longer term demand for phosphate will be underpinned by global population growth, as well as urbanisation and GDP expansion in major emerging economies - such as China, Brazil and India - and the subsequent increase in demand to grow crops for food and biofuels.

World Phosphate Rock Production and P Fertiliser Consumption



Source: International Fertiliser Association 2011

The chart above highlights the long term growth trend in both phosphate rock production (supply) and also P fertiliser consumption (demand). The weakness around the early 1990s reflects a period of dramatic political and economic change in the old USSR and the Eastern European Block countries that saw the collapse of Russian domestic fertiliser consumption.

USGS forecast demand for P_2O_5 to grow by 2.5%pa

The USGS forecast a 20% rise in world phosphate rock production capacity between 2011 and 2015, with much of the additional capacity being installed in Africa. The USGS also forecast that global consumption of P_2O_5 contained in fertilisers would grow concurrently at 2.5% per annum over the five years from 2011, with largest demand increases coming from Asia and South America.

2010/11 Global Fertiliser Demand

Source: Celamin

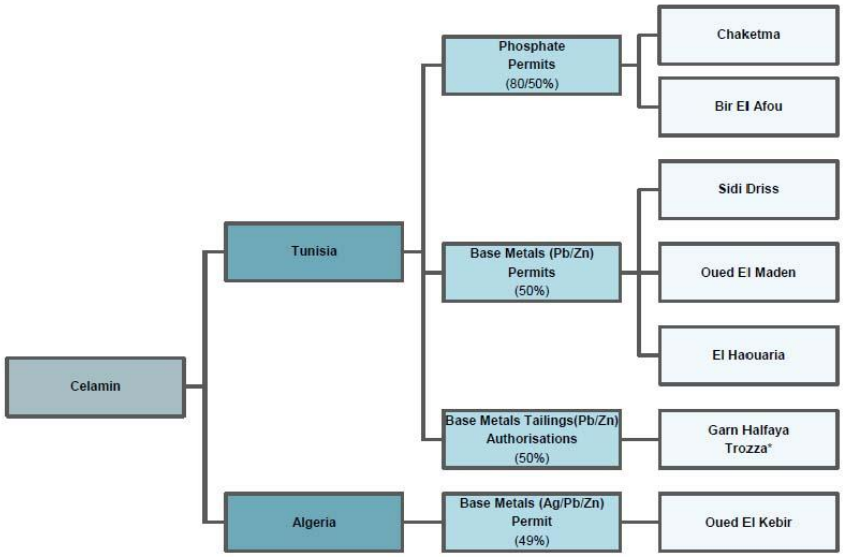
Project Review

Celamin has formed a strong allegiance with local North African based company Tunisian Mining Services SA (TMS). Each of its projects in Tunisia and Algeria is held through a partnership with TMS. Major projects, Chaketma and Bir El Afou, are held 80% by CNL, but will reduce to 50:50 with its partner at the development phase.

North African focus with phosphate and base metal assets

Celamin's Asset Portfolio (CNL % share)

Source: Celamin



Celamin's Project Locations

Celamin Holdings NL emerged as an ASX listed vehicle in late 2010 (after the transformation of the previously listed Victorian Gold Mines NL, ASX code: VGM) to acquire (through stages) the North African portfolio of assets of Celamin Ltd. The portfolio was being held in partnership with TMS. At that time, the Bir El Afou phosphate project was most advanced and was rapidly progressed to achieve a positive Prefeasibility Study.

The focus then turned to the nearby Chaketma phosphate project, which had demonstrated an even larger target potential than Bir El Afou. Less than 18 months after approval was given for the first work program at Chaketma, the project delivered a positive Scoping Study and is due for its maiden JORC compliant resource.

With successful drill results at Bir El Afou and the potential of Chaketma it was decided early on that Celamin Holdings would accelerate the terms of the portfolio acquisition, with final shareholder approval for the transaction received on 27 April 2012.

The Celamin portfolio consists of:

- Advanced **phosphate rock** projects in northwestern Tunisia
- **Base metals resource** in Algeria and other base metal projects in Tunisia
- **Base metal tailings** assets in Tunisia

The Company's almost single minded focus on the rapidly emerging phosphate assets, requiring the bulk of the funds on hand, and subsequently raised, has meant that the base metal projects in Tunisia and Algeria have received lesser attention.

Phosphate

2 stage phosphate development in Tunisia envisaged

Celamin's major focus is the development of phosphate projects right on Europe's doorstep in Tunisia, North Africa. The Company has two phosphate projects within relatively close proximity (~55km) with the potential to advance to production.

- **Chaketma Project** – Possible production Q1 2015, DFS underway
- **Bir El Afou Project** –PFS completed, possible 2nd stage production

Celamin's Phosphate Project Locations – on Europe's doorstep

Source: Google Earth

Whilst the initial focus was on the Bir El Afou project, the Chaketma project's rapid progress and successful exploration has seen it takeover as the Company's flagship asset. Given the proximity of the two projects, successful development of the Chaketma project is likely to benefit the potential development of the Bir El Afou project at a later date.

Chaketma Project

Current exploration and development priority – DFS underway

Substantial land package of phosphate prospectivity

The Chaketma Exploration Permit is located 170km to the southwest of the capital Tunis and is a substantial land holding extending for approximately 10km (N-S) x 6km (E-W).

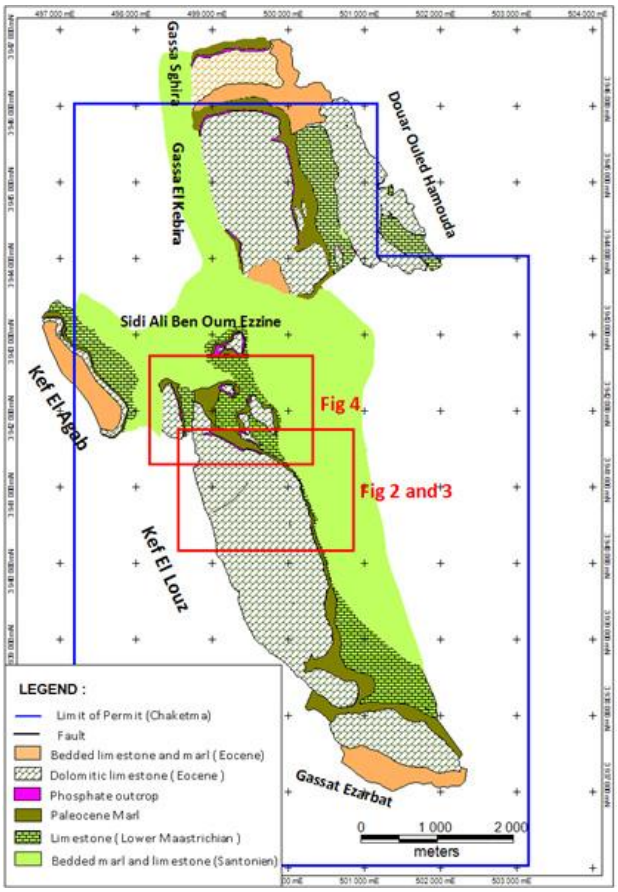
The permit was secured in 2010, has been granted for a three year period and is renewable twice. Celamin holds an 80% interest in the partnership with TMS, but will reduce to 50% at the production stage.

Only one of six prospects evaluated in detail to date

The area contains at least six individual phosphate prospects identified to date: Kef El Louz (North and South), Sidi Ali Ben Oum Ezzine, Douar Ouled Hamouda, Gassa El Kebira and Gassat Ezerbat, while initial reconnaissance indicates that the Kef El Agab prospect shows additional potential to host phosphate.

Recent exploration efforts have focused on the Kef El Louz and Sidi Ali Ben Oum Ezzine areas, such that the level of exploration completed on other areas remains deficient, highlighting the significant upside potential still to be fully evaluated on this project.

Chaketma Project – Location of phosphate prospects



Source: Celamin Holdings (ignore reference to Figure numbers)

The phosphate deposits at Chaketma are derived from flat lying to shallow dipping **marine sedimentary phosphorite horizons**, interbedded with limestone and marl type sediments. Variable erosion has exposed the phosphate rich layers typically lying beneath a layer of dolomitic limestone. Initial exploration included trenching and channel sampling across the exposed phosphate rich layers. But where these layers then dip gently below the overlying dolomitic limestones it has been necessary to use drilling to determine the 3-dimensional geometry of the phosphate bodies as well as determine the variability of thickness and distribution of grade within the unit.

Focus on Kef El Louz - high grade phosphate over good widths

Kef El Louz - Trench and channel sampling at the Kef El Louz prospect demonstrates significant intersection widths combined with high grade phosphate. For example, CHT033 returned 18m at 24.43% P_2O_5, while CHT034 returned 18m at 24.11% P_2O_5.

Diamond drilling completed by Celamin during 2012 has indicated that the thickness of the phosphate rich layer actually increases down the shallow dip from the trench exposures on the east to the covered areas to the west and southwest. For example, drillhole CHDD-2012-033 returned an intercept of 39.65m at 21.38% P2O5, commencing from a shallow 26.05m. Drilling on this western flank is continuing and has exceeded the expectations and assumptions used in the Scoping Study and "Pre-Resource Mineralisation" target estimates.

Latest drilling demonstrates improving phosphate thickness at depth

Kef El Louz Best Drill Results

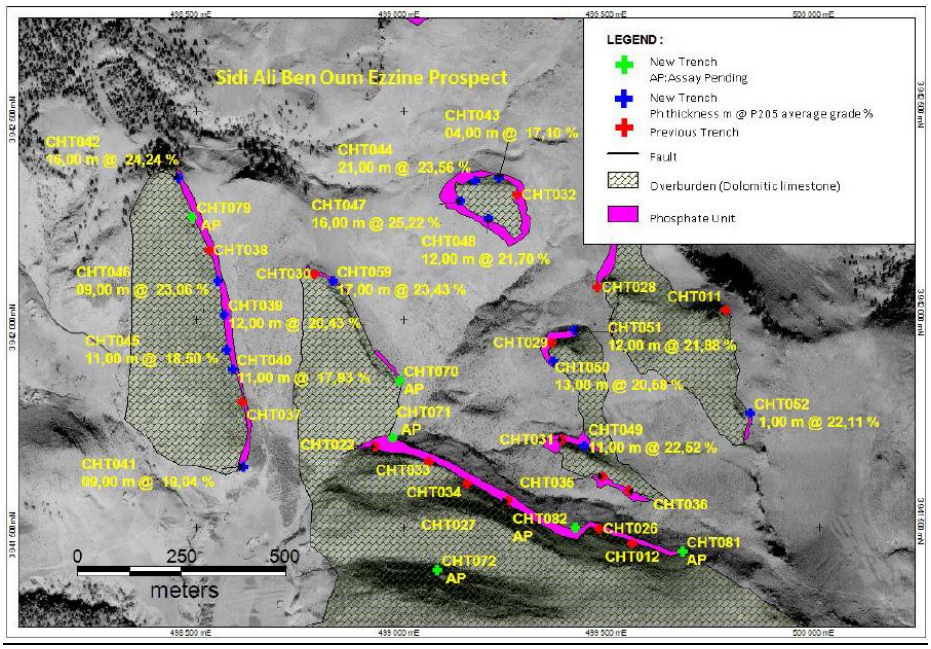
Drill Hole	From (m)	To (m)	Intercept (m)	P_2O_5%	CaO%
CHDD-2012-033	26.05	65.70	39.65	21.38	40.59
CHDD-2012-027	32.00	68.00	36.00	20.87	40.07
CHDD-2012-025	43.30	77.00	34.40	21.16	40.67
CHDD-2012-040	21.70	51.50	29.80	20.94	41.10
CHDD-2012-037	22.90	49.10	26.20	22.27	42.04
CHDD-2012-029	86.30	112.40	26.10	20.80	40.46
CHDD-2012-038	12.95	33.15	20.20	21.06	42.19

Source: Celamin Holdings

Sidi Ali Ben Oum Ezzine returns encouraging trench sample results

Sidi Ali Ben Oum Ezzine - The other prospect at Chaketma that has received attention from Celamin is the Sidi Ali Ben Oum Ezzine prospect, located a short distance to the north of Kef El Louz. This prospect is situated on a prominent pinnacle. Impressive trench and channel results have been received from sampling of exposed phosphate rich layers at this locality. For example, CHT030 returned 30.0m at 22.85% P_2O_5, while CHT044 returned 21.0m at 23.56% P_2O_5.

Sidi Ali Ben Oum Ezzine Trench Locations



Source: Celamin Holdings

Sidi Ali Ben Oum Ezzine and Kef El Louz Channel Sampling Results

Trench ID	Prospect	Length (m)	P_2O_5%	CaO%
CHT030	Sidi Ali Ben Oum Ezzine	30.00	22.85	43.89
CHT044	Sidi Ali Ben Oum Ezzine	21.00	23.56	43.87
CHT038	Sidi Ali Ben Oum Ezzine	20.00	20.07	42.46
CHT029	Sidi Ali Ben Oum Ezzine	19.00	22.87	44.33
CHT033	Kef El Louz	18.00	24.43	44.11
CHT034	Kef El Louz	18.00	24.11	43.72
CHT059	Kef El Louz	17.00	23.43	44.58
CHT042	Sidi Ali Ben Oum Ezzine	16.00	24.24	43.26
CHT047	Sidi Ali Ben Oum Ezzine	16.00	25.22	45.82
CHT028	Sidi Ali Ben Oum Ezzine	15.00	24.29	44.90

Source: Celamin Holdings

Chaketma Scoping Study

Positive scoping study for Chaketma development

In August 2012, following a year of highly encouraging drilling and trenching results, Celamin and its partner TMS completed a positive scoping study to evaluate the possibility of developing a phosphate mining operation based on the Chaketma Project. Due to the early stage nature of investigations at Chaketma, the study utilised information and assumptions used for the nearby Bir El Afou Prefeasibility Study completed in November 2011.

The scoping study was managed by Direct Mining Services (DMS) based in Perth, whilst a Tunisian engineer with many years of project management experience, co-ordinated the studies.

Substantial estimate of "Pre-Resource Mineralisation" target

The scoping study commenced with results of Celamin's Chaketma drilling and trenching campaign completed during the 2011-12 financial year. This enabled provisional phosphate rock resource potential to be estimated over the six deposits discovered at Chaketma to date for use in the study. This so-called **"Pre-Resource Mineralisation*"** estimate reached approximately 229Mt at 20.2% P_2O_5 (see Table). Assumptions – such as continuity of thickness and grade from early trench, channel and drill sampling - were made to estimate this figure given the preliminary stage nature of exploration activities on these deposits pre June 2012. Celamin included 2,200m of diamond drilling and 34 trenches/pits completed up to 30 June 2012 in the estimates. However, these figures had reached 3,918m of drilling and 82 trenches completed by October 2012.

Range of Possible "Pre-Resource Mineralisation*" at Chaketma *Source: Celamin Holdings*

Conservative assumptions for potential resource used in study

Chaketma – Estimated Exploration Targets* by Prospect (July 2012)								
		Thickness (m)			Tonnages (Mt)			Assumed
	Area	Min	Max	Ave	Min	Max	Ave	Grade (%)
Kef El Louz - North	1,600,000			11.7	30.0	30.0	30.0	19.7%
Kef El Louz - South	2,000,000			7.05	38.1	38.1	38.1	19.0%
Sidi Ali Ben Oum Ezzine	460,000			7.9	12.1	12.1	12.1	21.0%
Douar Ouled Hamouda	1,400,000	8	12	10	30.2	45.4	37.8	22.0%
Gassaa El Kebira	2,400,000	9	21	15	58.3	136.1	97.2	20.0%
Gassat Ezerbat	800,000	3	10	6.5	6.5	21.6	14.0	20.0%
Total	**8,660,000**				**175.2**	**283.3**	**229**	**20.2%**

*(*Note: Insufficient work to define resource as at July 2012. Uncertain if further work will define resources*

Subsequent drilling has revealed substantially greater thicknesses of the phosphate rich target horizon. One example is at Kef El Louz where thicknesses up to almost 40m have been drilled (at better than assumed grade), compared to the assumed average thickness of just 11.7m used in the scoping study.

In conducting the study, DMS makes the following **assumptions** about the proposed open cut mine plan and operational parameters:

- Nominal 10% cutoff grade
- Ore loss (1.1m) to minimise ore contamination
- 15% reduction of ore recovery through loss
- 0.8m dilution at a grade of 5% P_2O_5

First production expected from Kef El Louz North

- Mining to commence at Kef El Louz North with additional ore sourced from Sidi Ali Ben Oum Ezzine
- Drill and blast, load and haul, truck and excavator operations
- Waste to be re-stacked in mined out areas
- Average head grade of 18.7% P_2O_5
- Simple processing via crushing, grinding, de-sliming, reverse flotation, filtration and drying
- Stage One: ore mining rate of 1.72Mtpa producing 0.75Mtpa concentrate
- Stage Two: ore mining rate of 3.44Mtpa producing 1.5Mtpa concentrate

SCOPING STUDY OUTCOMES*

Processing – phosphate rock concentrate product suitable for export at 30% P_2O_5**.** Metallurgical testwork reported by Celamin in June 2012 found that concentrates grading 32% P_2O_5 (equivalent to Moroccan premium) can be produced from Chaketma, using existing flotation technology.

Infrastructure – The project will be well serviced by existing infrastructure.

Chaketma close to existing infrastructure

- **Water** available via pipeline from aquifers 25km west of the project.
- **Power** available through local provider (STEG) via existing network
- **Gas** needs of up to 140GJ/hour will also be supplied by STEG.
- Sealed **roads** close to the project linking to the coast and the capital Tunis.
- Nearby towns to be used for **accommodation** of the workforce.
- Connection options to existing **rail grid** are as close as 35km away.
- Port of Rades, near Tunis, has available capacity for Chaketma's concentrate.

Social and environmental –initial studies suggest that no significant environmental or social issues exist that could be potential barriers to the project. Some areas of archaeological interest may require further impact assessment.

Project Economics

Capex of $364m likely to be reduced in DFS stage

Total capital expenditure - estimated to be **US$364m** using the base case of 1.5Mtpa phosphate concentrate production. An additional US$13.1m will be required for the current Definitive Feasibility Study and associated resource definition activities.

Project life:	**53 years**
Ore mined:	**176Mt**
Waste mined:	**1,610Mt**
Strip ratio:	**9.1:1**
Concentrate produced:	**79Mt**
Average concentrate grade:	**30% P_2O_5**
Assumed product sale price:	**US$165/t**
NPV* (discount rate 10%):	**US$605m**
IRR:	**28%**
Project capital payback:	**3.5 years**

Source: Celamin

Operating costs for the 0.75Mtpa scenario are estimated at US$62/tonne of concentrate, reducing to US$55/t of concentrate for the Stage Two 1.5Mtpa case.

The study suggests completion of the DFS by the end of 2013, an expected **project commencement** (construction phase) in Q1 2014, with initial production in Q1 2015.

Sensitivity analysis indicates project is robust with respect to cost variability

Project Sensitivity – By varying key parameters by ±5%, the following sensitivity impacts were estimated on the NPV, IRR and Cash Flow of the project. While the project is robust with respect to mining and processing costs, the capital expenditure and the strip ratio, the major impacts, and thus the key drivers, of the project's value are concentrate sale price and ore grade.

*Scoping study results are pre-tax and based on 100% of the project

Chaketma Scoping Study Sensitivity Table

Change ±5%	% change in		
	NPV	IRR	Cash flow
Concentrate sale price	13.7	8.1	9.8
Ore grade	12.2	7.5	9.0
Mining costs	3.2	2.1	2.2
Process & Energy costs	2.3	1.5	1.6
Capital expenditure	2.4	4.2	0.3
Strip ratio	2.1	1.4	1.4

Maiden JORC Compliant Resource

JORC compliant resource delineated

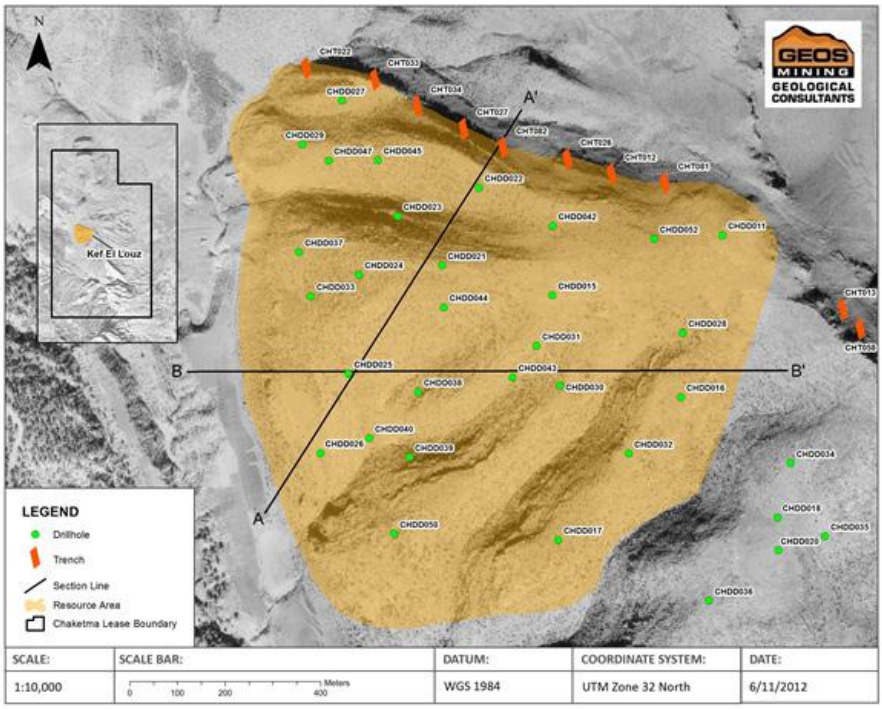
On 9 November 2012, Celamin announced a strong maiden JORC compliant resource, as the first step of the Chaketma DFS. Importantly, this **Inferred resource of 37Mt at 21.0% P_2O_5** only relates to the Kef El Louz North deposit, just one of seven prospects on the Chaketma property.

Parameters for the resource estimate were as follows:

- 37 drillholes and 31 trenches used in estimate
- HQ sized diamond drilling
- Drillholes vertical or 70-75^{o} dip
- Assay results for 28 holes used (9 holes pending results)
- Cutoff grade 10% P_2O_5
- 3 vertical mineralisation domains delineated

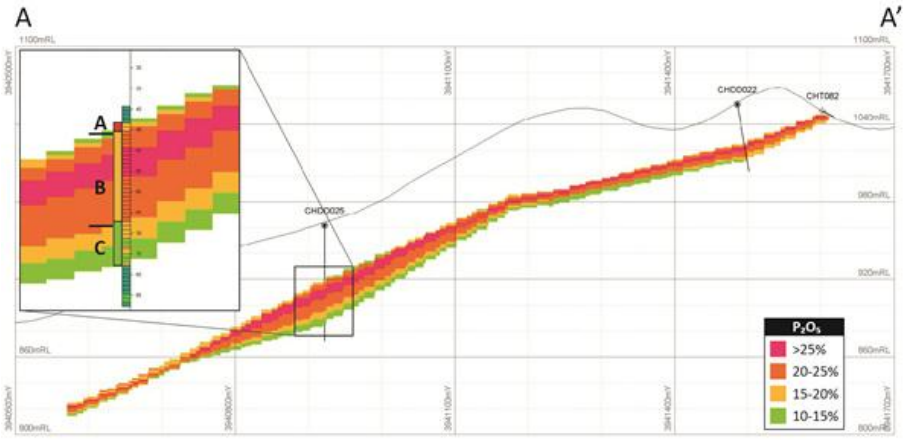
Statistically, the three mineralisation domains have been defined on the basis of MgO content, with the upper and lower domains having MgO content higher than a nominal 4% MgO. These layers are thought to represent marly gradational units with lower P_2O_5 content, whereas the central domain has low MgO and higher P_2O_5.

Kef El Louz North – Resource outline, drillhole and channel locations



Source: Celamin

Kef El Louz North cross section - Mineralised Domains and Resource P_2O_5 distribution

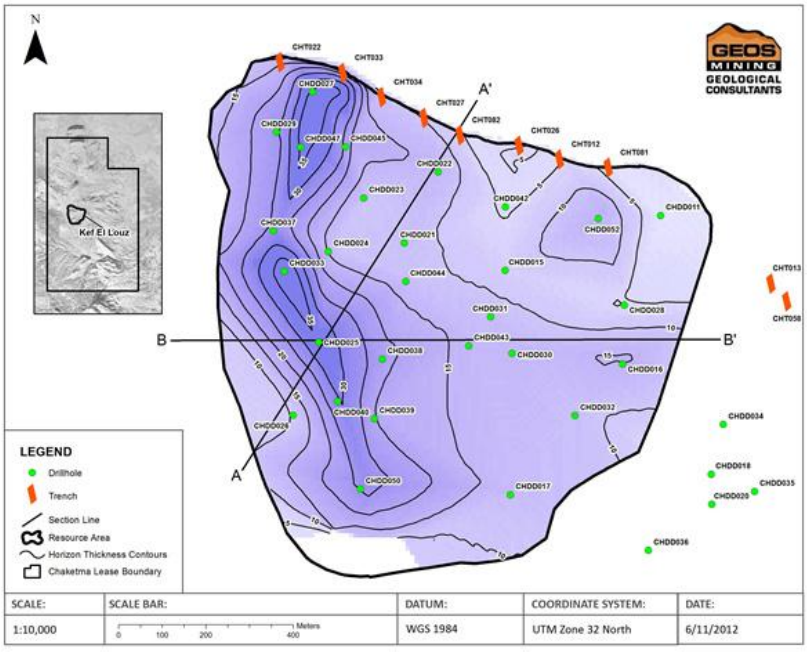


Source: Celamin

Grade and tonnage exceed expectations

Encouragingly, the grade and tonnage in this maiden resource estimate is higher than that previously assumed in the Pre-Resource Mineralisation for Kef El Louz North (30Mt at 19.7% P_2O_5), reflecting the conservative assumptions used in the earlier calculations. For example, an average thickness of 11.7m was assumed for this deposit, but the cross section above and the plan below, both display a thickening of the phosphate rich layer at depth, to the west.

Kef El Louz North – Contoured thickness of phosphate horizons



Source: Celamin

Economic potential enhanced by the JORC resource estimate

The maximum depth of the resource is less than 120m below surface, thus supporting the plan for a conventional open cut operation. And improved ore thickness suggests potential for lower initial strip ratios than first envisaged. This initial JORC compliant resource provides a base for the first ten years of the mining plan outlined in the scoping study.

Celamin can now proceed to the Engineering stage of the DFS, expected to commence in Q1 2013. Additional metallurgical testing will be undertaken, and further drilling will be required to not only increase the phosphate inventory but also the quality of the resource to Indicated and Measured status.

Breakaway's view

The results of the initial Chaketma scoping study provided a robust case to proceed with a DFS and possible first production as early as Q1 2015. Celamin has taken a conservative approach to some aspects of the scoping study (eg. strip ratio, ore thickness) which could see the DFS results provide an even more compelling case for development of the project.

The major risk to development of the project is likely to be commodity price weakness. In the near term, funding will be required to progress the resource delineation and DFS. The pre-tax NPV (based on 100% of the project) of US$605m is significantly higher than Celamin's current Enterprise Value of $9.9m.

The maiden Chaketma JORC compliant resource has validated and enhanced expectations from the scoping study. We expect that the market will now begin to appreciate the value of this project, which should see the company re-rated as each de-risking milestone is achieved by the DFS over the coming 12 months.

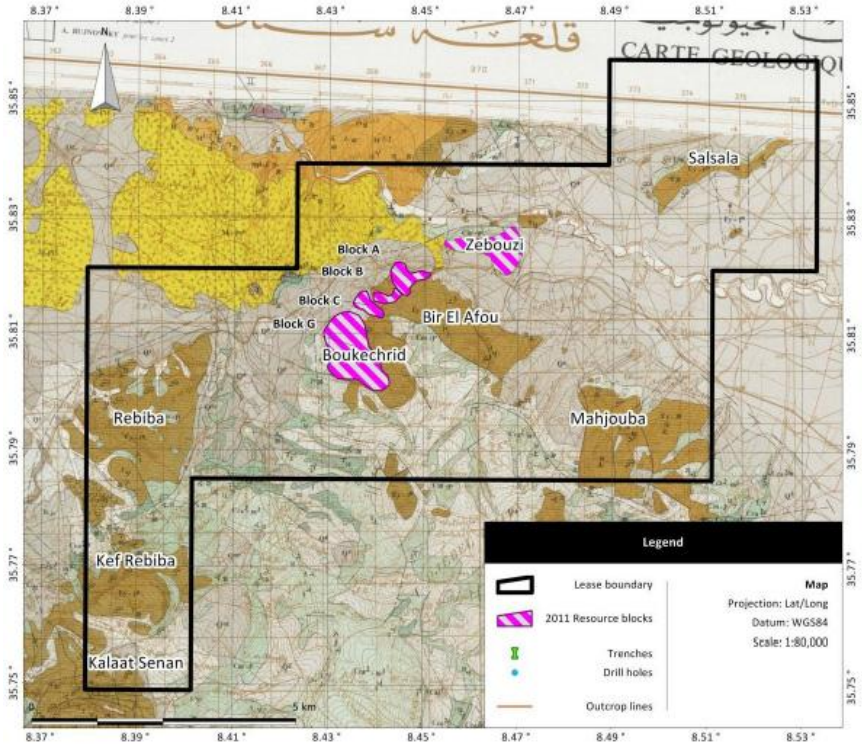
Bir El Afou Project

Positive Prefeasibility Study – close proximity to Chaketma

Additional phosphate resources at Bir El Afou

Celamin's initial flagship project was the Bir El Afou phosphate project, located just 55km to the northwest of Chaketma. The Exploration Permit covers a northeast trending belt of some 15kms length containing a number of phosphate bearing exposures.

Bir El Afou – Exploration Permit and Phosphate Zones



Source: Celamin

Celamin and its partner TMS focused their activities from late 2010 until August 2011 to drilling targets on this project towards a maiden resource estimate. Drilling problems and delays led to only a small area being included in the late 2011 resource estimate that revealed an **Inferred resource of 29Mt at 11.1% P_2O_5,** using a 7.5% P_2O_5 cutoff grade. This resource included zones known as Blocks A, B, C and G (Boukechrid), as well as the Zebouzi area.

Bir El Afou – 2011 Inferred Resource Breakdown by Zones

Inferred Resource	Bir El Afou Block A		Bir El Afou Block B		Bir El Afou Block C		Bir El Afou Blocks A, B & C	
Cut-off Grade P_2O_5%	Resource Tonnes	Grade P_2O_5 %	Resource Tonnes	Grade P_2O_5 %	Resource Tonnes	Grade P_2O_5 %	Resource Tonnes	Grade P_2O_5 %
0.0	7,300,000	6.5	2,800,000	9.5	700,000	8.7	10,800,000	7.4
5.0	3,900,000	10.7	2,600,000	10.0	500,000	9.8	7,000,000	10.4
7.5	**2,900,000**	**12.1**	**1,900,000**	**11.4**	**300,000**	**13.5**	**5,100,000**	**12.0**
10.0	1,800,000	14.6	1,300,000	13.0	200,000	14.6	3,300,000	14.6
12.5	1,300,000	16.3	500,000	16.1	200,000	14.6	2,000,000	16.1

Inferred Resource	Boukechrid Block G		Zebouzi		All Blocks	
Cut-off Grade P_2O_5%	Resource Tonnes	Grade P_2O_5 %	Resource Tonnes	Grade P_2O_5 %	Resource Tonnes	Grade P_2O_5 %
0.0	27,000,000	7.1	43,100,000	4.3	80,800,000	5.7
5.0	18,300,000	9.5	16,800,000	9.1	42,000,000	9.6
7.5	**13,900,000**	**10.6**	**9,900,000**	**11.0**	**29,000,000**	**11.1**
10.0	9,400,000	11.4	5,000,000	13.4	17,700,000	12.6
12.5	1,200,000	13.2	2,800,000	15.1	6,000,000	15.5

Source: Celamin

PFS finds no 'Fatal Flaws' at Bir El Afou

A **Prefeasibility Study** was conducted on the Bir El Afou project in 2011 and concluded that there were "no fatal flaws" to potential development of the Bir El Afou project, targeting 1.5Mtpa phosphate rock production. The study highlighted:

- A high grade phosphate rock concentrate of 30% P_2O_5 is achievable
- Inferred resource of 29Mt at 11.1% P2O5, using a 7.5% P_2O_5 cutoff grade
- Resource based on 66 drillholes and 17 pits/trenches
- Less than 5% of the permit areas had been explored
- Good potential to increase grade, tonnage and improve mining factors
- Excellent existing infrastructure would be available (rail, port, electricity and gas supply)
- Water would also be available about 25km away from the proposed plant site

Despite the positive aspects of the study, unacceptably high proposed open pit strip ratios, resultant high mining and operating costs and a low resource grade led the base case NPV to return a negative result. Sensitivity analysis determined that a positive NPV could be achieved at Bir El Afou by further exploration drilling to increase both the size and particularly the grade of the resource. An improvement in strip ratio would also significantly improve the financial aspects of the project.

Celamin has since announced that additional exploration targets exist with potential for 115-175Mt of phosphate at the Kef Rebiba, Bir El Afou Blocks D, E and F, and Majuoba prospects. At Kef Rebiba, for example, encouraging initial results from trenching of exposed phosphate rich rocks returned 9.35m at 16.8% P_2O_5 from KRT1, and 8.5m at 13.1% P_2O_5 from KRT2.

While the result of the initial PFS at Bir El Afou was disappointing, the progress and likely development of the nearby Chaketma project is likely to enhance the economic viability of Bir El Afou as a source of additional satellite feed.

Oued El Kebir Base Metals (Algeria)

Earning a 49% interest in a base metal resource

The Oued El Kebir project is located near Jijel on the Mediterranean coast of Algeria, east of the capital Algiers. An earn-in agreement was signed in April 2011 in which Celamin has the right to earn a 49% interest (the maximum foreign ownership in Algeria) from current holders, Faienceries Algeriennes, by completing a Feasibility Study.

The volcanic hosted complex was explored by Russian entities in the 1970s and 80s, drilling over 300 holes, to conclude the existence of a "reserve" totalling **11.5Mt containing 2.6% lead, 2.1% zinc, 0.7% copper and 95g/t silver**. Gold has also been identified associated with the base metal mineralisation but has been insufficiently quantified to provide accurate average grades. (Note: the "reserve" is an old Russian classification and is not reported according to JORC guidelines, however Celamin estimates that it is equivalent to an Inferred resource).

Initial programs involved the planning of 3 due diligence drillholes by Celamin to validate previous drilling results at Oued El Kebir and to obtain material for further technical studies. The company has been compiling historic exploration data in preparation for the drilling, however the focus for Celamin has turned to advancing the Chaketma phosphate project as a priority.

North Tunisian Base Metals and Tailings Projects

Base metal exploration and tailings retreatment opportunities

In September 2011, Celamin and partner TMS (50:50), were granted **3 Exploration Permits** in northern Tunisia that are prospective for base metals (primarily lead-zinc). These projects are:

- El Haouria
- Oued Maden, and
- Sidi Driss

Apart from data reviews and compilations, little work has been carried out on these projects to date as Celamin prioritises its efforts towards the Chaketma phosphate project.

The Company also has access to old **base metal tailings dumps** in the north of Tunisia in another 50:50 joint venture with TMS. These dumps are prospective for base metal extraction through retreatment using proven process technology. Celamin estimates that four of the dumps have target potential of 2.5-3.0Mt at 2.4-2.8% lead and 2.6-3.0% zinc.

Celamin has plans to undertake demonstration flotation testwork on tailings samples from Trozza and Garn Halfaya.

Directors

Non-Executive Chairman

The Hon. Andrew Thomson is a consultant to Minter Ellison Lawyers working in the Middle East and Asia on investment and government relations matters. Until 2005 he served at the World Bank as an Assistant and Acting Executive Secretary of the Inspection Panel. In this role Mr Thomson conducted investigations of developing world projects. Mr Thomson spent the early years of his career in Tokyo working as a fund manager and investment banker at Credit Suisse-First Boston (Japan). Before serving the World Bank he was a Member of Parliament in Australia in the House of Representatives, and during the 1990s was Parliamentary Secretary for Foreign Affairs, Minister for Sport, Tourism, and Minister Assisting the Prime Minister for the Sydney 2000 Games, Chairman of the Australia-Japan Parliamentary Friendship League, and Chairman of the Joint Standing Committee on Treaties (JSCOT). Mr Thomson is a graduate of the Law Faculty of the University of Melbourne, the International Center of Keio University in Tokyo, and Georgetown University Law Center. His other languages are Japanese, Mandarin Chinese, and Arabic. He is also chairman of Athena Resources Limited (ASX: AHN) and Gulf & Asian Mining Pty Ltd. Mr Thomson had been a member of the Board of Citadel Resource Group and its Chairman until its takeover by Equinox Minerals in 2011.

Managing Director

David Regan is a Lawyer but has been working in the resources industry in Papua New Guinea, Australia, North America and the North Africa/Middle East region for over thirty years in various senior corporate roles. During this period he worked for Rio Tinto, BHP Billiton, Atlantic Richfield (Anaconda Minerals, Arco Coal and Arco International) in a variety of roles including legal, corporate planning, economic evaluation, marketing, joint venture management and business development. Mr Regan has worked in the North Africa/Middle East region for over ten years where he led teams that put together over $3 billion of resource investments. Mr Regan was an Independent Director of ASX listed Citadel Resource Group, until its takeover by Equinox Minerals in 2011, and a Founding Director of Celamin Limited.

Executive Director

Russell Luxford is an engineer specialising in large scale mineral project development and operations. He spent over 20 years with Rio Tinto, Adelaide Chemical Company and Renison Goldfields working in gold, copper, silver/lead/zinc, aluminium, and nickel operations and project management. In 1996 he was appointed Engineering Manager for the WMC Phosphate Hill phosphate project, and subsequently as its start-up Operations Manager. Using this experience as a basis, Mr Luxford launched a mining project development and operations company which quickly grew and successfully executed projects worldwide for a range of high profile companies. He was subsequently appointed in 2004 as the Project Director of the US$5 billion Ma'aden Al Jalamid phosphate project and successfully led this complex, large scale phosphate project through option evaluation, studies, technology selection, off-take negotiations, joint venture arrangements, financing, engineering and construction. Mr Luxford later worked as a mineral project development consultant, including for potential emerging phosphate companies.

Non-Executive Director

Martin Broome

Martin Broome is a geologist with more than 37 years of experience working in the minerals industry in Africa. Until 2010, Mr Broome was Managing Director of African Mining Consultants ("AMC") having founded the company in 1994. This followed 20 years with Zambian Consolidated Copper Mines Limited ("ZCCM") in the Zambian copper belt. Mr Broome progressed to being the Group Rock Mechanic Engineer for ZCCM until 1989. Following this, he was involved in project management for the Baluba and Chambishi mining projects before initiating AMC where he oversaw open pit and underground rock mechanics design projects, feasibility studies for large and small scale open pit and underground mining projects, mine audits, due diligence and competent person's reports, mining methods, backfill and rock mechanics studies, government and parastatal mining, company privatisations, environmental auditing and project management. Mr Broome has been Non-Exec Director of Barclays Bank of Zambia plc, since 2003 and has been Chairman of the Bank's Subsidiary Audit Committee since 2009.

Non-Executive Director

Gary Scanlan

Gary Scanlan is an Associate Chartered Accountant and a Fellow of the AusIMM. He was appointed Non-Executive Director of LionGold Corp Ltd in October 2012. LionGold is a Singapore Exchange listed company focused on growing a global gold mining group. He is also a Non-Executive Director, since November 2006, of Red 5 Limited (ASX: RED) with gold mining interests in the Philippines. Mr Scanlan was a Non-Executive Director of Citadel Resources Limited from December 2009 until the takeover of that company in March 2011. For five years to September 2010, he was the Managing Director and Chief Executive Officer of Castlemaine Goldfields Limited. He was appointed Chairman of Castlemaine Goldfields December 2010 and retains this position following the takeover by LionGold Corp Ltd. Mr Scanlan started his career with Price Waterhouse where he first gained exposure to the mining industry. He then worked for 28 years in the mining industry, 18 years of which were with Newmont Mining Corporation/Newcrest Mining Limited. He has extensive experience in the management, evaluation, development, financing and administration of mining projects and companies.

Analyst Verification

We, Grant Craighead and Trevor Woolfe, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of Celamin Holdings and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

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