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Elementos Limited (ELT:AU) Rating Update

This review of Elementos Limited has been prepared in accordance with the **PortfolioDirect** stock rating framework described on pages 2-4.

PortfolioDirect/_{resources} offers strategy and portfolio recommendations for independent investors. The rating framework has been developed to assist investors and their advisers to grade individual stock risk so as to better match stocks in their own portfolios with their personal risk profiles and to take account of the differing risk characteristics of potential investments when structuring their portfolios.

A **PortfolioDirect** stock rating is not intended as a forecast of future share price movements. Share prices will be influenced by a range of factors including, significantly, macroeconomic conditions and the current cyclical positioning of the sector which are not taken into account in determining a stock rating. The **PortfolioDirect** analytical framework separates the view about market direction from the stock risk analysis contained in this review.

The most important driver of a stock rating for a company being reviewed is an assessment whether the company is likely to meet its exploration and development targets within the timeframes sought by investment markets and, when development has occurred, its ability to maintain positive value momentum over future years.

The Investment Snapshot

Commodity Exposure	<i>What is the mineral to which the company is principally exposed?</i>	Tin
Location	<i>Is the development or exploration site in or near an established mineral province?</i>	Tasmania - in an area of historical mining activity
Focus	<i>Is the company involved in single or multiple commodities or projects requiring capital rationing?</i>	Strong - single commodity/single project
Time horizon	<i>Do investment returns depend on (i) a reduction in risk over the medium term, (ii) specific near term events or (iii) a future change in cyclical conditions?</i>	Returns will be tied to ongoing reductions in the risk profile as approvals are obtained late in 2015 and funds are sourced subsequently
Investment proposition	<i>Can potential investment returns compensate for the amount of capital and time required?</i>	The currently anticipated staged development profile would justify the capital and potential opportunity costs
Portfolio positioning	<i>What roles could the company play in a portfolio? Are other companies able to fulfill these roles more effectively?</i>	The company would fit a medium term value oriented portfolio, one seeking diversification across commodity categories or where there is a specific view about the direction of the tin market. There are few alternatives.
Liquidity	<i>How easily can buyers or sellers of the stock be accommodated?</i>	Low liquidity will limit market access for most classes of investor

Important Information Regarding the Preparation of this Report

This report is not intended as an offer or solicitation with respect to the purchase or sale of a security. Nothing in this report should be taken as a recommendation. Elementos has been rated without taking into account the particular objectives, financial circumstances or needs of any particular investor. Before taking any decision based on this communication, an investor should assess his or her own circumstances and seek professional advice.

This report is based on information disclosed publicly by Elementos at the date of the report, information otherwise available in the public domain at that time and analysis and technical inferences drawn by the staff of E.I.M. Capital Managers Pty Ltd, the publisher of **PortfolioDirect**.

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Elementos has not had an opportunity to comment on the report or request any amendments prior to its publication.

Trading in PortfolioDirect Rated Stocks by E.I.M. Capital Managers

Stocks rated in accordance with the criteria outlined in this communication may be bought or sold by E.I.M. Capital Managers on behalf of clients or funds whose investments are managed by the firm. Specific investment objectives and individual portfolio considerations may result in transactions by E.I.M. Capital Managers that are not consistent with **PortfolioDirect** ratings for individual stocks.

Stock Rating Criteria

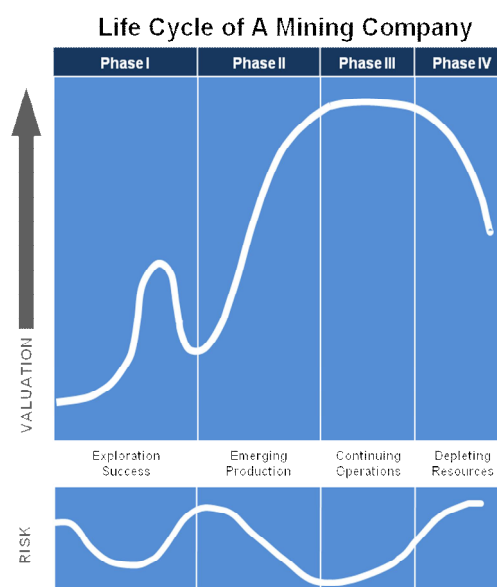
E.I.M. Capital Managers categorises sector investments based on the four phases in the life cycle of mining and oil and gas companies.

Phase I: the exploration phase during which relatively small amounts of capital may be deployed with the prospect of a high return but when investors also risk losing all the funds subscribed prior to the company having an agreed development plan.

Phase II: the emerging production phase in which companies are able to demonstrate access to a commercial resource and add value by meeting key development milestones along an agreed development path.

Phase III: the phase of continuing operations in which organic volume growth is limited and commodity price movements become the dominant driver of earnings and value.

Phase IV: a period typically characterised by falling ore grades and rising costs requiring additional capital to prevent output contracting.



Phase I companies will be scored (on a five point scale) on their potential to confirm a commercially viable development within an acceptable investment market timeframe. The duration of the investment horizon might vary from time to time depending on market conditions but will usually extend to a period of up to 24 months. Judgements will be based on publicly available information, including clarifying conversations with company management, and the resulting geological inferences drawn by E.I.M. Capital Managers analysts.

Phase II companies will be scored on a five point scale on their capacity to deliver positive value momentum (i.e. the ability to generate increasing fundamental value over future years without any reliance on higher commodity prices).

Since Phase III companies, by definition, no longer have any material organic growth prospects, they will generally fail the 'positive value momentum' test. A Phase III company may still play an important portfolio role depending on its relative financial strength, its capacity to withstand periods of cyclical weakness due to the competitiveness of its cost structure and its potential, arising from a large resource base, to operate through multiple economic cycles. Phase III companies will be scored on a five point scale on their absolute value proposition and how they meet these additional criteria.

No inferences about share price performance should be drawn from the rating of an individual stock. Investment returns will be influenced by a range of factors, some of which are included among the **PortfolioDirect** rating criteria, as well as investment market expectations about a range of macroeconomic variables. The **PortfolioDirect** rating does not take account of macroeconomic or investment market conditions that play a role in setting the price levels of securities.

There may be points in the cycle when stocks assessed by **PortfolioDirect** as being relatively risky and given a relatively low score on the **PortfolioDirect** rating scale are capable of producing relatively strong investment returns. This may arise, for example, because of strong leverage to changes or expected changes in market conditions among stocks with unusually depressed share prices or very small current market values.

Significant Investment Risks

In addition to general equity market risks reflecting unexpected changes in global economic or political conditions, investors in the resources sector may incur further risks specific to investments in the sector.

Commodity market risk: Resources sector investment returns are generally more volatile than returns from other equity market sectors due to the earnings of resources companies being exposed to commodity price and foreign exchange movements. Commodity prices can be influenced by a range of factors including economic events, which might affect the volume of commodities used, monetary policies which might affect levels of speculation and changes in output reflecting levels of industry exploration, investment and production disruptions.

Operational risk: Companies may fail to meet their development goals as a result of unexpected external influences, including political conditions and natural phenomena, as well as the skill base and operational capabilities of company management. Companies engaged in exploration activities may fail to locate or define mineral deposits of a sufficient size to be commercially viable.

Funding risk: Since companies in the resources sector require ongoing funding for development, expansion and maintenance of output, changes in financial market conditions can affect the value of investments adversely through the cost or availability of capital.

Regulatory risk: The value of investments in the sector may be affected adversely by changes in government policies relating to the conditions under which mine developments are permitted, including the need for more stringent environmental controls, higher taxation or royalty rates or requirements for local equity participation.

Small companies risk: Small or early stage companies generally have less diversified income streams, less stable funding sources and weaker bargaining positions with their counterparties than larger companies. The securities of small companies may also be less liquid than those of larger companies making the purchase or sale of securities more difficult or costly to complete, possibly with an adverse impact on portfolio performance.

How does PortfolioDirect rate a Phase I company?

Phase I companies have yet to confirm a commercially viable development. The **PortfolioDirect** rating system scores Phase I companies on the potential to confirm a commercially viable development within two to three years. A company still seeking to define a resource will be assessed on how its exploration or development properties, as well as the company as a whole, measure up against 10 individual criteria.

1. Consistency with recognised deposit types.
2. Proximity to other discoveries.
3. Adequacy of funding to complete a critical program of drilling or analysis.
4. The track records of key executives driving exploration programs on behalf of the company.
5. The company's possession of unique or innovative insights leading to reinterpretation of previous geological assessments.
6. A strong focus on a specific geographic region.
7. The likelihood of a market surprise arising from a change in view about the quality of a potential mineral resource.
8. The likelihood of a market surprise arising from a change in view about the size of a potential mineral deposit.
9. The potential to resolve outstanding technical parameters within a reasonable investment horizon.
10. Whether the company's share price has already been re-rated by the share market.

A Guide to the PortfolioDirect Rating Report

Each **PortfolioDirect** company rating report addresses questions affecting business outcomes and potential investment standing under five separate headings.

Primary Development Assets

- What are the most important geological or operational attributes of the company?
- Where are the assets located and what is the availability of local infrastructure?
- What potential impact does location have on business outcomes?
- How was ownership achieved - corporate exploration, acquisition or farm-in - and what obligations remain to the vendors or partners?
- Do historical outcomes on or near these exploration properties say anything about likely mineral characteristics on the company's own assets?
- Are there identifiable technical issues that need addressing before further work can be completed?

Regulatory Standing

- What approvals have been received?
- What additional approvals will be necessary to meet business goals?
- Has the company been in breach of any regulatory requirements at this site or elsewhere on any previous occasion?
- Can the company show a commitment to environmental and social needs?

Project Potential

- What scale of development is anticipated or, if judgements about this cannot be made presently, what must happen before such a judgement can be made?
- What operational or market constraints might affect the project potential?
- What is the likely range of project capital needs in the event of development?

Capacity to Meet Targets

- What skills does the company currently have available?
- What additional or alternative skills will be needed for the next stage of activities?
- How does the track record of the existing management impact current judgements about the capacity of the company to meet its targets?
- What financial resources are currently available? Are they adequate for the targets being set?
- Are there unresolved technical, financial or regulatory matters that could impact the achievement of business targets?

Rating Discussion

- Into which development phase has the company been classified?
- What are the key criteria against which the company is being benchmarked?
- How does the company stand against the rating criteria for a company at this stage of development?
- Are there criteria which have been more or less important in coming to a rating decision?
- Are there matters which might affect the rating in the future?
- Are there any special attributes displayed by the company that might impact on its role in a portfolio?
- How have historic investment returns affected judgements about current and future market risk?

Company Rating Update Elementos Ltd (ELT:AU)

NR 1 1+ 2 2+ 3 3+ **4** 4+ 5

Recent Events

What has happened to cause a review of the company's PortfolioDirect rating?

The company has submitted a Development Proposal and Environmental Management Plan (DPEMP) relating to the proposed first stage of a redevelopment of the historic Cleveland tin mine in northern Tasmania (ASX 12 March 2015) and made a Mining Lease Application (ASX 31 March 2015).

What's Different?

How do recent events differ from prior expectations about what will drive company investment returns?

Since the earlier **PortfolioDirect** review, there is a clearer sense of development timing and reduced uncertainty about the value proposition.

The proposed development plan covers the reprocessing of mine tailings and the dewatering of the underground workings. Construction of relevant facilities and commissioning is planned for 2016 with an initial seven year operation. Recovered of both tin and copper is expected and a current program of metallurgical test work (as part of a pre-feasibility study) is underway to define expected recoveries and production levels.

There is no reason to expect significant variations in development capital or operating costs from those outlined by the company in the past. Completion of a pre-feasibility study on the tailings retreatment plan should support future financing initiatives by the company.

An updated resource estimate has been prepared in accordance with the 2012 JORC reporting standard to confirm the longer term potential of the Cleveland development and meet current regulatory requirements. The resource statement covering residual hard rock resources available at the Cleveland mine shows 7.44Mt of material grading 0.65% Sn and 0.25% Cu at a grade cut-off of 0.35% Sn with 67% of the tonnes at a slightly higher grade of 0.69% Sn and within the higher indicated confidence category. Some 0.842Mt of the resource has been classified as open pit material. Underground development would come after the tailings and potential open pit operations and would use available underground access points.

Recent mapping and sampling has highlighted exploration opportunities in the immediate vicinity of the former workings which had been overlooked owing to the weathered nature of the sulphide lodes and the rugged terrain.

Rating Impact

What have been the key influences on a rating change?

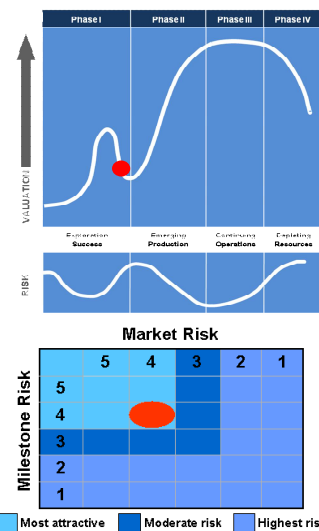
There has not been any change to the rating. The previous **PortfolioDirect** rating had highlighted the relatively short timeframe to production and potentially low cost development of the initial tailings retreatment operation located on a former mining site with established utilities and available workforce. These remain the key attributes affecting the rating. Progress along the development path validates a continuation of the existing rating.

Investment Consequences

What is the impact of recent events on the investment prospects of the company and how investors should react?

PortfolioDirect continues to classify the company as being in the latter stages of Phase I and, consequently, retaining a relatively high risk profile. However, with permitting progress and further metallurgical test work, the risk profile of the Cleveland development has been reduced and the project stands a higher chance of making the transition along the development path. With a market value of less than \$7M, the company offers above average leverage to approvals and development confirmation as they are forthcoming.

The company is one of only a few offering tin exposure for investors seeking to structure a portfolio with a diversified commodity base or with a specific view about the tin market. ■



Company Rating Review Elementos Limited (ELT)

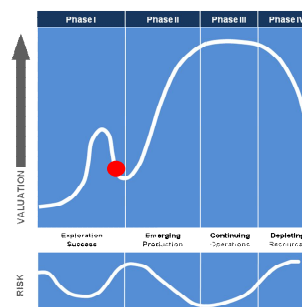
Development Stage: Phase I

Selection Criteria: Corporate subscriber initiated

Rating: 

Recent Company Events

- The company recently completed the acquisition of the remaining 50% of the Cleveland project through the purchase of Exploration Licence 7/2005 in exchange for cash of \$150,000 and Elementos shares to the value of \$350,000.
- Historic estimates for tin and copper tailings materials at the mine have been re-estimated as a higher confidence indicated resource as the basis of an initial development plan.
- The company has completed a \$0.58M share placement and is completing a partly underwritten rights issue for a further \$1.57M.
- The company has identified promising silver rich, lead-zinc exploration targets close to the Cleveland mine area. Sampling of very old workings revealed very high grades and a recent soil sampling program has identified broad anomalies beyond historic workings.

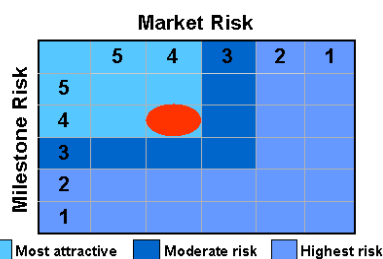


Statistical Risk Measures

Deviation from	
• 15 week moving average	-11%
• 25 week moving average	-10%
• 50 week moving average	-17%
Historical return ranking (1-100)	
• 2011-2014	86
• 12 months	51
Return volatility¹	1.1X
Liquidity²	8%
1. Relative to sector median 2. Turnover for 12 months as % of current shares	

Primary Development Assets

Cleveland Tin project 50% Elementos with option to 100%
 The Cleveland project is located immediately south of the small village of Luina in the northwest of Tasmania. Luina is 80km by an all weather sealed road from the container port of Burnie and within an active mining area. The Savage River iron ore mine is accessed by the same road. High tension power lines run through the project site which had been an operating mine until 1986. Water is available. The project is located in a known tin mineralised province with the historic Mount Bischoff mine located 15km to the east and the Renison tin mine located 35km to the south.



The Cleveland tin deposit is within a historic mine dating from the discovery of mineralisation in 1900 and subsequent mining of oxidised and weathered ores from 1908 to 1917. Systematic exploration of the field and its depth potential was undertaken by Aberfoyle Limited during 1961-1965 leading to the definition of extensive mineralisation of depth and the subsequent operation of a large scale modern underground mine from 1968 to 1986.

This history, evolving from the discovery and treatment of oxidised tin-bearing gossans to more extensive operations treating sulphide-bearing fresh ores, is mirrored elsewhere on the west coast of Tasmania (principally the Renison Mine) and is a reflection of metallurgical understanding of the time. As the metallurgical processes to treat sulphide ores evolved (principally crushing and floatation), so did the ability to treat the more extensive sulphide mineralisation.

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The Cleveland deposit has been described as a hydrothermal iron sulphide-tin replacement deposit related to the replacement of reactive carbonate-rich sediments with metals derived from Devonian age granite (the Meredith granite) which outcrops approximately 5km from the mine but has been interpreted from gravity surveys to lie 4km beneath the surface of the mine. The mineralisation at Cleveland consists of pyrrhotite-cassiterite-stannite-chalcopyrite in steeply dipping stratabound lenses with tourmaline-chlorite-fluorite-quartz-siderite gangue. The lenses are displaced by moderately dipping reverse faults which appear to have acted as fluid conduits. The replaced carbonate beds (the Halls Formation) sit between a sequence of basaltic volcanics (Deep Creek Volcanics) and a sequence of micaceous deep water sediments and turbidities (Crescent Spur Sandstone). A Porphyry stock has been identified at the bottom of the mine (below 350m) which has alteration envelopes of veinlets of quartz-fluorite-wolframite-molybdenum and quartz-fluorite-wolframite. The tin mineralisation remains open at depth and in the case of some lodes, open along strike. A number of near surface extensions also occur.

The historic production of the Aberfoyle Cleveland operation (1968-1986) has been reported as follows:

Historic mine production 5.645 Mt at 0.74% Sn 0.28% Cu
Mining recovery and dilution 90%, 10% dilution

Resource inventory

The project has an extensive diamond drill hole database reflecting the long operating history and the focus on incremental depth extensions of known mineralised lenses. The latest resource estimation employed 2020 core holes with 1725 lens intersections plus available information from underground mapping of known lenses by Aberfoyle. The lenses have typical strike lengths ranging between 100m and 600m, true thicknesses of up to 20m and down dip lengths to approximately 300m (with termination by the shallow dipping reverse faults) (ASX 5 March 2014).

These underground holes were augmented by 30 air core holes drilled by the project vendor in 2007 primarily on the tailings resource. The tailings grade was assessed from mill reconciliation data. Tailings dam 1 is 300m long and 100m wide with a maximum depth of 20m. Tailings dam 2 is 400m long and 200m wide with a maximum depth of 35m. The company has drawn on past studies of the tailings to assess the likely recovery of the residual tin noting a range of 33%-45% using a conventional gravity and flotation circuit (ASX 5 March 2014). Much higher recovery of metal could be obtained from a pyrometallurgical process.

The company also shows details of a tungsten resource at Cleveland noting work by Aberfoyle when what is known as the Foley mineralisation was exposed from underground development work in 1978 and in regular declining on the 20 and 22 level in 1983. The tungsten zone occurs as wolframite and minor scheelite in a quartz stock work around and within a greisenised quartz porphyry dyke. The combined dyke and stock work zone is large having a measured strike of approximately 300 metres (dyke is 660m wide), a width of similar dimensions and depth continuity of over 800metres. Owing to the limited exposure and drilling into this zone, some 37 drill intersections have been reported and employed in resource estimation work.

The following resource estimate was prepared in March 2014 by recognised external consultants MiningOne (ASX 5 March 2014). An estimate for the tailings resource was prepared in June employing the results of mill data from 1968-1986, air core sampling of the dams in 2007 and the completion of 21 wacker holes in 2013 collecting unconsolidated sediments from mine dams 1 and 2 (ASX 17 June 2014).

Cleveland Resource – underground tin, March 2014

Cut off 0.35% Sn

Measured Resource

Indicated Resource 5.002 Mt at 0.69 % Sn 0.28 %Cu for 34,500 t contained tin

Inferred Resource 2.442 Mt at 0.56 % Sn 0.19 %Cu for 13,900 t contained tin

Total 7.444 Mt at 0.65 % Sn 0.25 %Cu for 48,400 t contained tin

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Cleveland Resource – tailings resource June 2014

No cut off grade applied

Measured Resource	-		
Indicated Resource	3.85 Mt	at 0.3 % Sn 0.13 %Cu	for 5,000 t contained tin
Inferred Resource	-		
Total	3.85 Mt	at 0.3 % Sn 0.13 %Cu	for 5,000 t contained tin

Cleveland Resource - underground tungsten (Foley zone), March 2014

Cutoff 0.2% WO₃

Measured Resource	-		
Indicated Resource	-		
Inferred Resource	3.97 Mt	at 0.3 % WO ₃	for 12,000 t contained WO ₃
Total	3.97 Mt	at 0.3 % WO ₃	for 12,000 t contained WO ₃

In April 2014, the company outlined a range of exploration targets for the underground resources at Cleveland reviewing the lateral and down dip potential of seven individual and known lenses within the mine (ASX 2 April 2014). Low and high end estimates were prepared giving a combined tonnage range of 3Mt (low end) to 16Mt (high end).

These quantities of mineralisation are significant exploration targets given the historical mine produced 5.645 Mt with the low-end estimate equivalent to 53% of this amount and 40% of the remaining defined underground resource. The target used a tin grade in the range of 0.6-0.7% consistent with the recent resource estimation. The four most significant underground targets are summarised below.

Cleveland underground exploration target	Low end	High end
	3Mt	16Mt
Key known lenses with extension potential		
Khaki	0.53 Mt	2.64 Mt
B South Halls B1	0.58 Mt	2.92 Mt
Halls B3	0.45 Mt	2.26 Mt
Halls C3	1.08 Mt	5.41 Mt
Others	0.37 Mt	2.77 Mt

Exploration prospects immediately south of project, Godkin, Cleveland South

In March 2014, the company released details of promising sample results from historic workings south of the former Cleveland Mine (ASX 7 March 2014). These results were from a simple dump sampling exercise but the assay grades and geological potential of these areas warrant further consideration.

Cleveland South

At Cleveland South, which is located only 200m to the south of the Cleveland mine site, spoil piles of two historic workings (Washington Hay and Confidence) from the late 1800s early 1900s have been sampled (six samples) reporting silver-bearing lead and zinc sulphides. At Washington Hay, two samples (6.51% and 10.72% combined lead and zinc) were reported within brecciated siltstone. At Confidence, four samples were collected, two from a base metal-depleted gossan and two from brecciated sulphides on the spoil pile. As with Washington Hay, for the fresh rock the base metal tenure was high (9.98% to 17.8% combined lead and zinc) with very high silver levels.

The geological map accompanying the release shows both Cleveland South workings located on distinct geological boundaries. In the case of one, a faulted contact with sandstones and carbonate rich sediments (that have been correlated with the Cambrian age Crimson Creek sediments, which occur at Renison Mine) and the turbiditic sediments that occur on the northern margin of the Cleveland tin mine. For the other, the same faulted contact is evident but oriented at right angle to the other working (which is less than 500m away).

The location of these workings appears to be based on some past judgements regarding the likely setting of the base metals (framed in the context of possible base metal veining related to the

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larger Cleveland system) rather than observed geology which is limited in this area due to vegetation and steep terrain. There appears to be no geological purpose for the interpreted cross-fault here (even with localised brecciation of sulphides) which, if removed, immediately recasts the setting of the Cleveland South sulphides to one of a likely sedimentary host.

This style of deposit offers considerably greater upside as an exploration target than a narrow vein system, particularly in western Tasmania. There has been very limited exploration of these historic workings since the development of the Cleveland mine over 40 years ago and probably little evaluation before then.

Godkin

The Godkin area is located 2km southwest of the Cleveland mine site along a northwest trending zone of historic workings on the flanks of Mount Bell. The workings appear to be hosted within a sequence of limestone and sandstones with some areas of local intrusive granitic stocks which may point to a skarn association. Sampling of mine dumps on the northern end of the trend identified some anomalous silver in gossanous material but much higher grades were reported in dump samples to the south of the trend at the Godkin South prospect. Here, the company sampled base metal rich carbonate breccia with two samples showing extremely high zinc and lead levels (one at 26.5% zinc and 7.4% lead, the other at 22.5% zinc and 5.6% lead) with elevated silver (518 and 553 g/t Ag).

The trend, as defined by the mapped limestone outcrop, appears to extend for over 2km. The company has highlighted a zone of interest at the southern end of the limestone (where the highest grades were reported) which may intersect with a northeast trending boundary which appears to host the historic mines of Cleveland South (putting aside the historical geological interpretation with multiple cross faults which appears flawed). Earlier maps of the Cleveland mine area do not show the limestone and place the Godkin occurrence within a different, more mafic, host rock (Collins 1981; The geology and genesis of the Cleveland tin deposit, western Tasmania: fluid inclusion and stable isotope studies; *Econ. Geol.* v76 pp 365-392).

A subsequent small scale soil sampling program has been reported by the company (ASX 14 July 2014). Some 16 close spaced samples were collected at the historic Godkin South prospect with some samples returning very high silver and zinc levels (87.9 g/t Ag, 1.43% Zn). At the Godkin Extended workings, similar anomalous results were reported in the soil although fewer samples were taken. The area is quite steep and it is unclear if the samples are reflecting the displacement of material surrounding the workings located further up the hill or fresh buried targets. The company is embarking on a program of detailed mapping and surface geophysical programs leading to the definition of drilling targets.

Regulatory Standing

The Cleveland project is centred on a historic mining site in northwestern Tasmania. The former Cleveland Mine and defined resources occur on Exploration Licence EL7/2005. The proposed project area lies in Forestry Tasmania Managed Land.

The licence had been held by a private company, Lynch Mining. Elementos Limited, through its wholly owned subsidiary Rockwell Minerals (Tasmania), had held 50% of EL7/2005 with an option to acquire 100%. It recently exercised an option to acquire the remaining 50% of EL7/2005 which it did not own (ASX 6 June 2014).

To advance the Cleveland project to production, the company must receive environmental approval for the tailings retreatment plan from the Tasmanian Environmental Processing Authority and receive a Mining Lease from Mineral Resources Tasmania. The company is targeting environmental approval in the March quarter of 2015 having previously lodged a draft Development Proposal and Environmental Management Plan.

The exploration prospects at Godkin are located on Exploration Licence EL9/2006 which covers an area of 42 square kilometres and sits immediately west of the original mining tenement. The licence was granted to the company in early 2013 and is 100% held.

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The company also holds EL 15/2011 which sits directly south of both EL7/2005 and EL9/2006 extending the company tenements to extensive granite outcrops to the south. A fourth tenement, EL 9/2006 occurs west of EL 9/2006.

Project Potential

The company has recently completed various studies relating to the re-establishment of tin production at the Cleveland site initially from retreating existing tin bearing tailings at the site. A phased redevelopment of residual underground resources would then be contemplated employing funds derived from the tailings retreatment operation. The tailings resource was recently re-estimated in support of this plan.

The tailings retreatment plan outlined the full retreatment of the existing tailings resource over six years including the removal and reestablishment of dam walls (ASX 17 June 2014). The simple operation would employ an excavator that loads material into a mobile pump box from where it would be pumped to the processing plant. Processing involves light milling, desliming, classification, two stage flotation (to produce a copper concentrate then a tin concentrate) and fine particle scavenging with spirals. Previous company studies show that a 50% cassiterite recovery for a 40% tin concentrate is under consideration. A 40% recovery is assumed for the copper but more test work is required to confirm this.

Previous studies commissioned by the company pointed to a potential pre-production cost of \$23.9M (around half for a mill) but the study did not consider second hand equipment, a more appropriate alternative for a project of this type with a limited range of financing options. The same evaluation work estimates unit operating costs would be \$18.28/t mill feed delivering a 61% pre tax margin from an expected value of recovered metals of \$46.4/t (based on a US\$25,500t tin price). The analysis suggested a pre tax internal rate of return of 56% for the project.

Redevelopment of underground operations at Cleveland has also been contemplated by the company mining residual lodes using up-hole retreat benching (without fill) to produce potentially 1,900tpa tin in concentrate and 700kt copper in concentrate. Past studies have drawn on 39% of the defined hard rock resource of which 67% is in the indicated confidence level. Metallurgical performance was related to historical outcomes with 71% tin recovery and 75% copper recovery. Some 52% of the cassiterite is expected to be recovered from gravity.

The company has outlined the following available mining inventory.

Available underground resource:	7.444 Mt at 0.65% Sn 0.25% Cu
Mining inventory for study:	2.9 Mt at 0.73% Sn 0.27% Cu

Past scoping studies have estimated a pre production development cost of \$43.8M for the underground development with \$11.4M related to the processing plant and \$15M to a mining fleet. The underground mine was estimated to have a sustaining capital cost of \$1.7M per annum mostly related to ongoing ore access. A gross operating margin of 40% was projected from the underground operation from a unit operating cost of \$97.6/t ore (excluding freight charges on concentrate) and an expected in-ground value of recovered metal in ore of \$161.9/t ore. The company has shown a pre-tax internal rate of return on the project of 30%.

The completion of an analysis of a potential development at Cleveland earlier this year gave confidence to undertake further work initially on the tailings opportunity. The timing of any development is dependent on permitting, access to funding and the completion of further metallurgical testing particularly for the copper held in the tailings material.

A number of project enhancements were outlined in a recent presentation by the company (ASX 8 May 2014). These enhancements relate to both the tailings retreatment and hard rock operation.

Higher throughput

The tailings resource is of sufficient size to permit a much higher throughput (potentially increasing from 650ktpa to 1 Mtpa) which would

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provide a larger production base to support a fixed cost operation. The incremental capital cost from such an expansion would reflect additional specific plant components and would not be expected to substantially alter the proposed development cost.

Local capital cost tailing development

Burnie has an established metal fabrication and mining services industry offering the potential for lower cost mill refit work. The use of local contractors for engineering and construction work may also lead to better cost outcomes. These industries can also deal with the refurbishment of any second hand equipment.

Mineral recovery

Company materials show 50% tin recovery (20% gravity and 30% from floatation) based on the historic Aberfoyle Mount Cleveland Mine. There have been considerable improvements in gravity and fine particle recovery since the closure of the mine. A range of different tin reagents are also available to enhance floatation performance.

A staged redevelopment plan for Cleveland requires an relatively low initial capital commitment. The tailings operation could generate sufficient free cash flow to fund a significant part of any re-entry to the underground mine. The outcome of a higher throughput of tailings and potentially improved recoveries would lift this contribution.

Near mine opportunities

The geological potential of what are historic but largely neglected prospects and evident geological inconsistencies in the mapping of the area, in part due to vegetation and steep terrain, raise the possibility of greater resource potential than considered by previous owners of the mine offering opportunities from near mine surface exploration at Cleveland.

The work by Elementos so far has been limited to sampling of historic mine dumps but detailed mapping and the use of available geophysics has the potential to generate additional exploration targets.

Capacity to Meet Targets

The company has demonstrated capacity in the management of the regulatory and permitting process in Tasmania. The company is fortunate in that the planned operation is located on a historic mine site although the company has to undertake environmental permitting to return the Cleveland exploration licence to a Mining Lease. Permitting for mining activity in the northwest of Tasmania has been problematic for some companies even when dealing with historic exploration areas.

The company has a demonstrated exploration capacity which has led to the quantification of resources within the tailings as well as material from the vicinity of the underground workings to a sufficient degree of confidence to allow development planning. Mining inventories (from dam and underground sources) can be drawn from the available indicated resources. The company has assessed the project in a capable manner. An exploration target has been defined for underground lode extensions. Surface exploration has started, targeting near-mine overlooked opportunities.

The company has conducted studies in the past aimed at assessing the technical merits of treating tailings and underground material. The company has demonstrated a capacity to undertake work directed at de-risking the financial and technical parameters of a proposed development.

The company is pursuing a strategy that focuses on the Cleveland development while seeking to monetise other holdings. On 10 April, the company announced that it had signed an earn-in agreement with a private company under which the latter party will spend \$0.6M on three Cloncurry region permits to earn a 51% interest.

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At the end of March, Elementos held cash of \$0.48M (ASX 30 April 2014) and was in need of additional funding to maintain exploration development and permitting activities. The company recently announced the completion of a placement to investors raising \$0.58M at 1.2c. A renounceable rights issue is underway aimed at raising a further \$1.52M of which \$0.5M has been underwritten with firm commitments for a further \$0.26M (ASX 14 July 2014). Funds are to be used to finalise the environmental permitting at Cleveland, design the tailings development, exploration and general corporate costs.

Rating Discussion

PortfolioDirect has classified Elementos Limited as a Phase I company. The **PortfolioDirect** rating system scores Phase I companies on their potential to confirm a commercially viable development within a reasonable timeframe acceptable to investment markets. A company still seeking to define a resource and whose investment potential relies primarily on exploration success will be assessed on how its exploration or development properties as well as the company measure up against the stated individual criteria.

Elementos is in the latter stages of Phase I. A resource base has been defined at the historic Cleveland mine in Tasmania and work is progressing to permit, fund and optimise the development of a tin mining operation. The investment potential of Elementos relies primarily on a market re-rating resulting from successfully negotiating a transition from Phase I to Phase II.

The transition from Phase I to Phase II can often represent a value trap for investors as companies have typically passed the point at which they can generate sufficient positive surprise from exploration or resource sourcing to force a reassessment of market value. At the same time, they may not yet have made a commitment to development (or may display insufficiently convincing project economics for investors to assume future development within a reasonable time frame). There is a risk of this positioning being prolonged and well beyond a reasonable investment time horizon. In some cases, it may never be completed.

For investors, the risk faced by companies at this point in the corporate life cycle must be compensated for by a depressed market value (and a correspondingly high prospective return) if an investment is to occur. Against this background, investors need to make three judgements:

- whether the company faces a near term outcome which is critical to the development of the project and which offers an opportunity for the market to reassess the capacity of the company to move forward;
- the likelihood that this outcome will prove value accretive; and,
- the extent to which investors have previously lost faith in company progress as exemplified by its share price performance relative to other companies in the sector.

Elementos has most of the key ingredients for a successful transition from Phase I to Phase II. The tailings retreatment operation and the historical prospectivity of the area in which the company is working offer the potential for a low capital cost transition into long life underground mining within a relatively short timeframe averting the often lengthy gestation periods that come with major underground mine developments. Permitting and, later, development funding are the key missing ingredients that would confirm progress.

Working in areas of historical mining operations and with a government disposed to encouraging employment in the industry, the company is well positioned to handle the necessary permitting although mining impact remains a politically and socially sensitive issue in Tasmania and permitting cannot be taken for granted.

The funding constraint would be a challenge in any event. While existing and prospective tin miners are able to point to emerging sources of demand and logical buyers of concentrates, finance remains expensive and deals are typically taking longer than anticipated to complete.

The investment return from Elementos over the course of the current cycle puts it in the bottom 15% of outcomes suggesting expectations are low and that the share price will be correspondingly highly leveraged to a government approval and other signs of progress that would place the

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company on a sound footing to move to the next stage of development. The **PortfolioDirect** rating assigns a high likelihood that the project attributes will be sufficient for this to happen within a reasonable timeframe.

While Elementos is well advanced on the path to a development commitment, it also retains the potential for exploration surprise in the immediate Cleveland area. At Cleveland, the rugged nature of the landscape and thick vegetation of the region coupled with what appears to be a long period of limited exploration interest in the fields have worked to preserve the possibility of some exploration surprise. The rich base metal endowment of the northern west coast of Tasmania, apparent inconsistencies in the historical mapping of the area and multiple available styles of mineralisation in this setting add to this possibility. At this stage, however, any exploration opportunities are peripheral to permitting and funding for its core development as sources of any significant re-pricing of the company.

From a portfolio construction viewpoint, Elementos offers a relatively low risk Phase I investment opportunity. The potential market leverage should more than compensate for the risk that is being incurred. Exposure to tin is relatively hard to obtain. Many market observers expect a supply shortage in coming years which will lead to higher prices. While this is possible based on existing investment intentions, the expectation of more attractive prices is likely to offer incentives for new investment capacity. Industry reactions to price forecasts can sometimes be enough to eliminate anticipated shortage. Tin is also at risk of technological changes and innovation in materials usage in electronic componentry. Nonetheless, the tin market appears one of the better positioned among the main metal commodity markets and warrants a position in a diversified resource portfolio. ■

Abbreviations and Symbols

lb	pound	cif	cost, insurance and freight
oz	troy ounce	fob	free on board
Koz	1,000 troy ounces	fot	free on truck
Mlbs	million pounds	g/t	grams per tonne
kg	kilogram	ppm	parts per million
t	tonne	RC	reverse circulation
kt	1,000 tonnes	RAB	rotary air blast
Mt	1,000,000 tonnes	U ₃ O ₈	yellowcake (uranium)
Mtpa	million tonnes per annum	Fe/FeO	iron/iron ore
kL	kilolitre (1,000 litres)	SiO ₂	silica
ML	megalitre (one million litres)	Al ₂ O ₃	alumina
GL	gigalitre (one billion litres)	P	phosphorus
ha	hectare	TiO ₂	titanium dioxide
m	metre	ZrO ₂	zirconium dioxide
m ³	cubic metre	LOI	loss on ignition
km	kilometre	mg/l	milligrams per litre
A\$	Australian dollar	Mj/kg	mega joules per kilogram
\$M	million dollars	EBITDA	earnings before interest, tax, depreciation & amortisation
US\$	United States dollar	EBIT	earnings before interest & tax
MG/GW	megawatt/gigawatt	ROM	run of mine
ct	carat	LOM	life of mine
bbl	barrel	MOU	memorandum of understanding
mbd	million barrels a day	VTEM	Versatile Time Domain Electromagnetic
MBOE	million barrels of oil equivalent		

