

# Dolphin and Bold Head Project Development Update



## ASX: KIS

Market Capitalisation \$14.9 million  
Shares on Issue 135.1 million  
52 Week High 12.5 cents  
52 Week Low 4.6 cents  
Share Price 11.0 cents

## Board of Directors

Johann Jacobs Chairman  
Allan Davies Director  
Chris Ellis Director

## King Island Scheelite Limited (KIS)

through its 100% Dolphin Project on King Island, Tasmania is one of the world's richest tungsten deposits and could meet a significant proportion of the world's tungsten requirements over a minimum 13 years.

## Tungsten price

Metal Pages APT USD36,750 / tonne  
(08/04/2014)

## Contact

Johann Jacobs  
Chairman

9 April 2014

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## PROJECT DEVELOPMENT HIGHLIGHTS

- A New Development Plan, as an enhancement to the Low Cost Option development plan, has largely been completed
- The basis of this plan involves:
  - Opencut mining for 4 years
  - Subsequent underground mining for 9 years
  - Selective mining of tailings from previous operations
  - Processing plant to include both gravity and flotation circuits
  - Dewatering of opencut void to commence in current quarter

## Key outcomes of this plan are:

- Potential increase in life of mine  $WO_3$  production by 15 to 20%
- Significant reduction in mining costs – especially during the opencut years
- Development capital reduced from \$141 M to less than \$50 M

## **Project Status**

The Project is focused on developing the high-grade tungsten resource at Dolphin, and later at Bold Head, both situated at Grassy on King Island, Tasmania. The main resource is located within the historic Dolphin Mine which previously operated from 1917 and closed in 1990, due to extremely low tungsten prices.

The Project, which is 100% Company owned has:

- JORC compliant high grade tungsten resources and reserves
- Freehold land covering planned mining operations
- Current leases and tenements
- Development and environmental approvals

A Value Engineering Study (“VES”) undertaken during the first half of 2013, and announced to the market on 16<sup>th</sup> May 2013, confirmed the potential to significantly optimize the 2012 Definitive Feasibility Study (“DFS”).

Since then, work has been completed on further optimisations of the VES and following that, the Low Cost Option. The Company is now nearing completion of a New Development Plan which will have a similar production profile to the DFS but with significantly enhanced project metrics.

The operating parameters around which this plan has been developed are summarised in the various sections below:

## **Resources and Reserves**

An important aspect of the VES, and ultimately the New Development Plan, was to maximise open cut mining, not considered in the DFS. As a result, the Company undertook a shallow resource definition drilling program at Dolphin West and Bold Head, with 9 of the 13 holes intersecting significant tungsten mineralisation. An ASX Announcement, released on 8th January 2014, provides full details of the results of the drilling program.

Whilst work is continuing to convert the results of these boreholes into resources, work is also being done on amending the opencut resources from a 0.25% cut-off to a 0.2% cut-off. Both these factors are anticipated to increase the minable resources.

Comprehensive details of the resources are provided in the Appendix hereto.

## Mining

An opencut plan has been completed by independent mining consultancy, Xenith Consulting. The plan incorporates a comprehensive pit design, monthly volumes to be mined and the anticipated associated costs.

Average annual waste to be moved per year, during opencut operations will be approximately 990,000 tonnes, whilst average annual ore production will be 400,000 tonnes.

The underground mining plan has, at this stage, been left as it was proposed in the DFS, with average annual production of ore being 400,000 tonnes.

The New Development Plan also incorporates selectively mining and re-processing approximately 380,000 tonnes of relatively high grade (0.35%) tailings from previous processing operations.

## Processing

Important developments during this quarter were the results of the metallurgical test work completed on the drill cores from the latest drilling. These tests concluded that by introducing a gravity circuit ahead of the flotation circuit both capex and operating costs could be significantly reduced.

The Processing plant will now comprise the following circuitry: coarse and fine crushing, grinding, gravity separation to reject barren gangue and upgrade the feed to flotation, rougher and cleaner flotation to produce a saleable concentrate. There is still some ongoing testing being conducted in the concentrate dressing area of the flow sheet.

Test work outcomes also suggested lower reagent consumptions, power usage and no requirement for process heating when compared to the DFS.

Crushing will be performed on a single shift basis at approximately 150tph. The processing plant feed rate will be approximately 60tph (400,000 tpa) to the gravity circuit, with approximately 40tph continuing to flotation.

Process recovery of  $WO_3$  is expected to be around 85% producing an average of 220,000 mtu of  $WO_3$  in an approximately 55% flotation concentrate over the first 4 years of production, while treating the lower grade open cut ore.

Average cost of processing the open-cut ore during the first 4 years of production is anticipated to be around A\$33 per tonne of feed to the plant. The average figure for the 9 years covered in the primarily underground mining based DFS was around \$54 per tonne.

## Off Take

The Company continues discussions with off-take arrangements of a lower grade ore. These are expected to be concluded in the next two quarters.

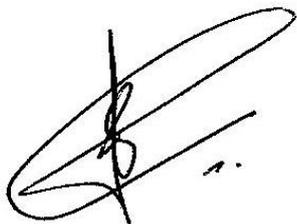
Current Ammonium Paratungstate (APT) prices are trading at US\$36,750 per tonne. As a result of the decision to produce a much lower grade concentrate – pricing indications are that the product would have to be discounted by approximately 25% to 30% of the above price.

## Future Activities

In order to further de-risk project development, it has been decided to commence dewatering of the opencut void during the current quarter. A detailed dewatering Management Plan has been agreed with authorities. This process is anticipated to take between 3 and 4 months.

Following dewatering a drilling programme will be undertaken with the objective of confirming the resources as well as to undertake further metallurgical testwork to confirm the redesigned processing circuit. This work is anticipated to be completed during the last quarter, after which a decision will be taken with the redevelopment of the mine.

During this time the Company will also compile a comprehensive Revised Definitive Feasibility Study which will incorporate the increase in resources expected from the recent drilling and the reduction in the open-cut grade, previously referred to.



**Johann Jacobs**  
Chairman

9<sup>th</sup> April 2014

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## APPENDIX

The revised ore reserve estimate announced on 1<sup>st</sup> March 2012 contains a total of 5,196,000 tonnes at 0.70% WO<sub>3</sub> resulting in 36,310 WO<sub>3</sub> tonnes:

	Tonnes (000)	WO <sub>3</sub> %	WO <sub>3</sub> Tonnes
<b>Dolphin Probable</b>	2,687	1.04	28,060
<b>Bold Head Probable</b>	609	0.76	4,640
<b>Tailings Proven</b>	1,900	0.19	3,610
<b>TOTAL</b>	5,196	0.70	36,310

*The Information in this announcement relating to Mineral Reserves for Dolphin, Bold Head, and Tailings is extracted from the report entitled 'Dolphin Project – Definitive Feasibility Study' created on 1<sup>st</sup> March 2012 and is available to view on the Company's website [www.kingislandscheelite.com.au](http://www.kingislandscheelite.com.au).*

The VES announced on 16<sup>th</sup> May 2013 identified an indicated and inferred resource of 1.25Mt of ore at 0.67% WO<sub>3</sub> in the existing pit floor and walls which can be mined during the first 3 years. Indicated is 0.90Mt of ore at 0.74% WO<sub>3</sub>. Inferred is 0.35Mt of ore at 0.49% WO<sub>3</sub>. These resources were based on a cut-off grade of ~~2.5%~~0.25%.

*The Information in this announcement relating to Mineral Resource for Dolphin is extracted from the reports entitled 'Dolphin Project Value Engineering of Definitive Feasibility Study completed' created on 16<sup>th</sup> May 2013 and entitled 'Report for the Quarter Ended 30<sup>th</sup> June 2013' created on 22<sup>nd</sup> July 2013. The reports are available to view on the Company's website [www.kingislandscheelite.com.au](http://www.kingislandscheelite.com.au).*

The Company confirms that it is not aware of any new information that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

### Competent Persons' Statements

The information in this Report that relates to JORC Mineral Resources and Minerals Reserve estimate for Tailings is based on information compiled from reports prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Consultant Geologist Mr Tim Callaghan of Resource and Exploration Geology, who is a Member of The Australasian Institute of Mining and Metallurgy ("AusIMM"); has a minimum of twenty years of experience as a geologist, five of which are in the estimation, assessment and evaluation of Mineral Resources of this style and is the Competent Person as defined in the JORC Code. This Report accurately summarises and fairly reports his estimations and he has consented in writing to the form and context in which it appears.

The information in this Report that relates to the June 2011 JORC Mineral Reserves estimate for Dolphin Mine and the May 2010 Mineral Reserve estimate for Bold Head is based on information compiled from reports prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Consultant Mining Engineer Mr Alan Fudge of Polberro Consulting, who is a Member of The Australasian Institute of Mining and Metallurgy ("AusIMM") and has a minimum of five years experience in the estimation, assessment and evaluation of Mineral Reserves of this style and is a Competent Person as defined in the JORC Code (2004). This Report accurately summarises and fairly reports his estimations and he has consented in writing to this review in the form and context in which it appears.

