



**10 AUGUST 2016**

**ASX CODE: KAS**

**OUR PRIME COMMODITY IS  
TIN**

**LME TIN PRICE (08/08/16)**

**USD 18,150 / t  
(CASH BUYER)**

### **ABOUT KASBAH**

KASBAH IS AN AUSTRALIAN LISTED MINERAL EXPLORATION AND DEVELOPMENT COMPANY.

THE ATLAS TIN JOINT VENTURE (KASBAH 75%, TOYOTA TSUSHO CORP 20% AND NITTETSU MINING CO. LTD 5%) IS ADVANCING THE ACHMMACH TIN PROJECT IN THE KINGDOM OF MOROCCO TOWARDS PRODUCTION.

### **PROJECTS**

ACHMMACH TIN PROJECT (75% KAS)

BOU EL JAJ TIN PROJECT (100% KAS)

### **CAPITAL STRUCTURE**

SHARES ON ISSUE:	556 M
UNLISTED OPTIONS:	0.5 M
CASH @ 30/06/16	\$1.2 M

### **MAJOR SHAREHOLDERS**

WORLD BANK (IFC)	17.7%
AFRICAN LION GROUP	15.7%
THAISARCO	5.6%
TRAXYS	5.3%

### **CONTACTS**

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## **DFS CONFIRMS PROJECT ECONOMICS FOR ACHMMACH TIN PROJECT**

**Modest capital, low operating costs and rapid  
payback supports two stage development plan**



**The definitive feasibility study (DFS) for the Small Start Option at the Achmmach Tin Project (75% Kasbah, 20% Toyota Tsusho Corp, 5% Nittetsu Mining Co. Ltd) is now complete and has determined that an 0.5 Mtpa, high grade underground operation at Achmmach is technically and commercially feasible.**

### **Highlights include:**

- Ore reserve of 6.56 Mt @ 0.85% Sn for 55,500 tonnes contained tin
- Stage 1 Mine Production = 1.89 Mt @ ≈0.96 % Sn
- Stage 2 Mine Production = 4.67 Mt @ ≈0.80 % Sn
- Life of Mine (LOM) = 10.5 years
- Average annual production of ≈3,970 tonnes of tin in concentrate
- All in sustaining costs (AISC) of USD 11,507 / t Sn
- Project construction capital cost of USD 61.7 M
- On an after tax, ungeared basis (using the 21/7/16 LME spot Sn price of USD 17,830 per tonne and an 8% discount rate), the DFS generates:
  - NPV of 100% of the project = USD 51 M
  - Kasbah 75% of NPV = USD 38 M
  - an Internal rate of return of 20.6%
  - a payback period of 3.8 years
  - Life of Mine free cash flow of USD 120 M
- Negotiations regarding potential corporate transaction are ongoing.

## OVERVIEW

Kasbah Resources Limited (**Kasbah, ASX: KAS**) is pleased to announce the completion of the Definitive Feasibility Study (DFS) and new Ore Reserve for the Small Start Option (SSO) at the Achmmach Tin Project (75% Kasbah, 20% Toyota Tsusho Corp and 5% Nittetsu Mining Co. Ltd).

On 18 March 2015 Kasbah released an enhanced definitive feasibility study into a 1 Mtpa underground mine and processing facility for the Achmmach Tin Project to the market. This large scale, capital intensive project required construction capital of approximately USD 131 M to establish the 1 Mtpa project and in a weak financing, commodity and equity market, the capital requirement was a significant impost to project development. To address these issues and the continued fall in the LME tin price during 2015, Kasbah commenced investigation into a lower cost development model.

**The 2016 Achmmach SSO DFS has defined a lower capital, higher grade, staged development opportunity that is technically and economically feasible at current LME tin prices (Table 1). Importantly the Project Construction capital (on a 100% basis) is estimated to be USD 61.7 M with all in sustaining costs (AISC) of USD 11,507 / t of tin in concentrate.**

The Achmmach SSO DFS is premised upon a hard rock underground tin mine with a ten year life that is developed in two stages. Stage 1 production initially commences at 0.5 Mtpa for 42 months then is expanded in Stage 2 to 0.75 Mtpa for 80 months (the remainder of the mine life).

This staged approach utilises contract mining, contract crushing and modular plant design and unlike the 1 Mtpa scale where the full capacity was installed upfront, the SSO offers greater operational flexibility.

**Table 1: Achmmach SSO DFS Metrics**  
**@ LME Sn price @ 21/07/16 of USD 17,830 / t**

SSO	Ore Reserve	Life of Mine (LOM)	Project Construction Capital USD	All in sustaining costs (AISC) USD / t of tin in concentrate	NPV <sub>8</sub> after tax USDM (100% of Project)	IRR %
DFS	6.56 Mt @ 0.85 % Sn for 55,500 t of contained tin	10.5 Years	61.7 M	11,507	51	20.6

The SSO has maintained competitive all-in sustaining costs and at current LME tin prices generates positive substantial returns.

**Table 2** summarises DFS project returns across a wider range of LME tin prices.

Table 2: 2016 Achmmach SSO DFS - Sensitivity to LME Tin Price

LME Sn Price USD / t	NPV <sub>8</sub> after tax USD M (100% of Project)	IRR
16,000	14.6	11.8%
17,000	34.5	16.7%
<b>DFS @ 17,830</b>	<b>50.9</b>	<b>20.6%</b>
18,000	54.3	21.3%
19,000	74.1	25.7%
20,000	93.9	29.9%

#### Achmmach Small Start Option - 2016 DFS Overview

The Achmmach SSO DFS incorporates:

- **Mining an ore reserve of 6.56 Mt of ore** - grading 0.85% Sn for a total of 55,500 t of tin metal over a 10.5 year mine life (**table 5**);
- **Adopting a staged approach to mill production** – Stage 1 has an annual throughput of 0.5M tpa and treats ≈1.65 Mt tonnes of tin ore at ≈1.00 % Sn over 42 months. Stage 2 sees production expanded to 0.75 Mtpa and treating 4.9 Mt of ore at ≈ 0.79 % Sn for the remaining 80 months (**table 3**);
- **a simplified, modern mine design** – utilising an experienced underground mining contractor with long hole open stoping and crushed rock fill as the primary mining method;
- **Contract mining and crushing** – project construction capital is reduced and project ramp up is accelerated by utilising experienced third parties to provide these services;
- **Increased metallurgical recovery** - higher run of mine grades in Stage 1 facilitates metallurgical recoveries of 73.4% which enhances cash flow in the crucial first years of production;
- **Modular plant design** – this type of engineering design reduces processing capital, operating power requirements, construction complexity and field installation costs; and
- **Reduction in surface infrastructure** – the smaller project scale and a fit for purpose design philosophy has reduced costs in this area.

The staged mining approach (**Table 3**) is premised upon a 0.8% Sn mine cut-off grade in Stage 1 delivering run of mine grades of approximately 1.00 % Sn. The reduction to a 0.55% cut-off grade in Stage 2 sees production expand to 0.75 Mtpa and tin production maintained at a consistent level of **≈3,970 tonnes** of tin in concentrate per annum across the life of mine.

The higher run of mine ore grades in Stage 1 of 1.0% Sn result in an increase in metallurgical recovery to 73.4%, with production of approximately 292 tonnes/month of tin in concentrate. In Stage 2, as run of mine ore grade returns to approximately 0.80% Sn, metallurgical recovery reduces to 72.2% to produce approximately 351 tonnes/month of tin in concentrate. Tin concentrates will be a saleable industry standard of ~55% Sn.

**Table 3: 2016 DFS - Staged Mining Metrics**

DFS metrics	Stage 1	Stage 2
Cut-off grade	0.8% Sn	0.55% Sn
ROM tonnes and grade	<b>1.89 Mt @ 0.96 % Sn</b>	<b>4.67 Mt @ 0.80 % Sn</b>
Delivering	18,235 t contained tin to mill	37,310 t contained tin to mill
Processing	0.5 Mtpa over 42 months	0.75 tpa over 80 months
Total Tin in Concentrate produced	12,255 tonnes (292 tpm)	28,114 tonnes (351 tpm)

Tables 4 and 5 summarise the key technical and financial outputs from the August 2016 DFS.

**Table 4: Achmmach 2016 DFS Technical Summary**

Parameter	Units	DFS
Ore Reserve <sup>A</sup>	Mt	<b>6.56</b>
Stage 1 mined ore grade	%	<b>0.96</b>
Stage 2 mined ore grade	%	<b>0.80</b>
Average annual tin in concentrate produced	t	<b>3,970</b>
Total Tin concentrate shipped	t	<b>73,950</b>
Tin Concentrate grade	%	<b>55</b>
Total LOM Tin in concentrate shipped	t	<b>40,370</b>
Total Project life	months	<b>132</b>
Mine production period	months	<b>126</b>
Mill production period	months	<b>122</b>
<b>Project construction capital</b>	<b>USD M</b>	<b>61.7</b>
<b>Operating costs</b>		
C1 <sup>B</sup>	USD/t tin	<b>8,999</b>
C3 <sup>C</sup>	USD/t tin	<b>13,778</b>
<b>All in sustaining cost (AISC)</b>	<b>USD/t tin</b>	<b>11,507</b>

<sup>A</sup> Ore Reserve is derived from Measured and Indicated Mineral Resources that have had mining dilution and recovery factors applied to the mine design, and ore treatment and other surface operational cost factors applied to create an inventory of mineable stope and development tonnes, the extraction and treatment of which may be accomplished in an economic and environmentally acceptable manner.

<sup>B</sup> C1 cost is the sum of mining, processing, site administration and off-site refining.

<sup>C</sup> C3 cost is the sum of C1 cost, depreciation & amortisation, royalties and project related corporate costs.

Table 5: Achmmach 2016 DFS Financial Summary

Parameter		DFS
<b>Project construction capital</b>	<b>USD M</b>	<b>61.7</b>
+ First fill, spares and working capital	USD M	8.2
+ Contingency	USD M	5.4
+ VAT and other charges	USD M	3.2
<b>Total Project Investment to Peak Funding</b>	<b>USD M</b>	<b>78.5</b>
Revenue @ LME Sn price @ 21/7/16 of USD 17,830	USD M	678
Free cash	USD M	120
<b>Payback</b>	<b>months</b>	<b>46</b>
<b>NPV<sub>8</sub> after tax (100% of Project)</b>	<b>USD</b>	<b>51</b>
<b>NPV<sub>8</sub> after tax (Kasbah 75% share of Project)</b>	<b>USD</b>	<b>38</b>
<b>Project IRR</b>	<b>%</b>	<b>20.6</b>

Peak funding excludes financing costs for the project and covers the period from the first drawdown of Project funds to the date upon which the Project generates positive cash flow.

With respect to contingency, an amount has been applied to each component of the project construction capital (excluding mining development). This amount is based upon the respective level of engineering definition and knowledge around that area. The purpose of the contingency is to make specific provision for certain elements of potential cost growth within the project scope and by taking this approach, reduces the risk of capital cost over-run.

#### July 2016 Achmmach Ore Reserve

The new Ore Reserve has been estimated by Entech of Perth, Western Australia and uses Measured and Indicated Resources reported to the market on 10 September 2013 (for Meknes Trend) and 25 November 2014 (for the Western Zone).

The 2016 Ore Reserve (**Table 6**) is defined entirely within the main mining permit at Achmmach (PE2192), covers the Meknes Trend and the Sidi Addi Trend (the main tin mineralised structures defined within PE2912) and underpins the DFS mine life of **10.5 years** (126 months).

Table 6: Achmmach Ore Reserve July 2016

Achmmach	Proven			Probable			Total		
	Ore (t)	% Sn	Tin Metal (t)	Ore (t)	% Sn	Tin Metal (t)	Ore (t)	% Sn	Tin Metal (t)
Meknes Trend	877,000	1.10	9,700	5,359,000	0.80	43,100	6,236,000	0.85	52,800
Sidi Addi Trend	-	-	-	321,000	0.85	2,700	321,000	0.85	2,700
<b>TOTAL</b>	<b>877,000</b>	<b>1.10</b>	<b>9,700</b>	<b>5,680,000</b>	<b>0.80</b>	<b>45,900</b>	<b>6,557,000</b>	<b>0.85</b>	<b>55,500</b>

*Cut-off grade of 0.55% Sn. All calculations have been rounded to the nearest 1,000 t of ore, 0.01% Sn grade and 100 t tin metal.*



While the DFS is based solely upon the Achmmach Ore Reserve, exploration upside and mine life extension at Achmmach is probable from repetition of deeper targets within the main 1.6 km long Meknes Trend and the parallel, 1.6km long Sidi Addi Trend. The Meknes Trend has been extensively drilled from natural surface across its full 1.6 km of strike to a depth of approximately 550m. It has not been drilled below 600m and deeper extensions to the known tin structures may exist.

The Western Zone target is the first ore reserve to be defined on the Sidi Addi Trend at Achmmach. Limited shallow drilling across 200m of the full 1.6 km strike has defined the Western Zone reserve. Limited exploration has been undertaken across Sidi Addi and deeper and along strike targets may exist.



**Figure 1: Achmmach Tin Project - two parallel, 1.6km long tin mineralised trends**

## DFS CONCLUSIONS

The more modest capital requirements of the Small Start Option, higher early run of mine grades and the competitive operating cost profile for the Achmmach Tin Project confirm the staged development as a lower capital proposition than the 1 Mtpa model previously considered. The Small Start Option can provide an operating platform with attractive operating margins at an all in sustaining cost (AISC) of USD 11,507 / t. It can also be expanded to maximise returns to our shareholders as the LME tin price rises.

## FINANCING AND FRONT END ENGINEERING

The Board of Kasbah is currently in negotiation with a party with respect to a potential corporate transaction which, if completed, will provide greater flexibility in relation to project financing.

Once a project financing package is agreed, a Decision to Mine can be made by Atlas Tin SAS (the operating Joint Venture for the Achmmach Tin Project). If a positive Decision to Mine is made Kasbah's strategic project partners, Toyota Tsusho Corp and Nittetsu Mining Co. Ltd will be required to fund their combined 25% of the total project costs, with Kasbah required to fund the remaining 75%.

Over the next 6 months, the Atlas Tin Joint Venture will work towards finalising offtake and debt financing discussions with selected parties and in parallel, will also seek to commence front end engineering and design (FEED) for the Achmmach Tin Project.

FEED tasks include:

- Recruitment of the Atlas Tin construction and mine management team;
- Completion of detailed mine and process design;
- Finalising underground contract and surface crushing with selected parties;
- Finalisation of construction permitting; and
- Preparation of tender documents for supply of long lead items.

Early commencement of FEED activities would facilitate a rapid transition to construction at Achmmach.

All key project inputs to develop the Achmmach Tin Project (skilled mine management and technical staff, underground contractors, engineering support, equipment and constructors) are now readily available. As such, subject to an agreed financing package and a positive Decision to Mine in 2016, construction could commence with first tin concentrates potentially available to the market in early 2018.

**Appendix A** provides a summary of the key modifying factors, **Appendix B** covers DFS scope, methodology and a discussion of the DFS project economics and **Appendix C** the supporting JORC Code tables.

On behalf of the Board



**Wayne Bramwell**  
**Managing Director**

For further information please visit:

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#### COMPETENT PERSON STATEMENT

The information contained in the report that relates to Ore Reserves at the Achmmach Tin Project is based on information compiled or reviewed by Matthew Keenan. He is a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 JORC Edition), having five years' experience which is relevant to the style of mineralisation and type of deposit described in the report and to the activity for which he is accepting responsibility. He is a Member of The Australasian Institute of Mining and Metallurgy and has reviewed the report to which this consent statement applies and is an employee working for Entech Pty Ltd, having been engaged by Kasbah Resources Ltd on behalf of Atlas Tin SAS to prepare the documentation for the Achmmach Tin Project on which the report is based. Matthew Keenan consents to the inclusion in the report of the matters based upon his information in the form and context in which it appears.

The information in this report relating to the Exploration Results and Mineral Resources for the Achmmach Tin Project is based on information contained in the announcements entitled "220% Increase in Measured Category Tonnage at Achmmach" dated 10 September 2013 and "Western Zone Resource Upgrade" dated 25 November 2014. The Company confirms that it is not aware of any new information or data that materially affects the information contained in the previous announcements and in the case of the Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the previous market announcements' continue to apply and have not materially changed.

## FORWARD LOOKING AND CAUTIONARY STATEMENTS

This announcement includes certain statements that may be deemed ‘forward-looking statements’. All statements that refer to any future production, resources or reserves, exploration results and events or production that Kasbah Resources Ltd (‘Kasbah’ or ‘the Company’) expects to occur are forward-looking statements. Although the Company believes that the expectations in those forward-looking statements are based upon reasonable assumptions, such statements are not a guarantee of future performance and actual results or developments may differ materially from the outcomes. This may be due to several factors, including market prices, exploration and exploitation success, and the continued availability of capital and financing, plus general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance, and actual results or performance may differ materially from those projected in the forward-looking statements. The Company does not assume any obligation to update or revise its forward-looking statements, whether as a result of new information, future events or otherwise.

This announcement has been prepared in compliance with the current JORC Code 2012 Edition and the ASX Listing Rules. All material assumptions on which the forecast financial information is based have been included in this announcement, and are also outlined in Appendix 1. The Company believes it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any Production Targets and economic evaluation based upon the extensive knowledge and experience of the key individuals and companies that have assisted in developing the DFS.

The key contributors to the DFS are outlined in **table 7** below.

**Table 7: Achmmach DFS Contributors**

Section	Contributors	Substance
<b>Geology</b>	<ul style="list-style-type: none"> <li>Quantitative Group Pty Ltd (QG)</li> <li>Kasbah staff</li> </ul>	Resource estimation Resource drilling and geological review
<b>Mining</b>	<ul style="list-style-type: none"> <li>Entech Pty Ltd (Entech)</li> <li>Minero Consulting</li> <li>Mining One Pty Ltd</li> <li>C Bolger</li> </ul>	Mine schedule development Mine contractor Request for Quotation packages Technical and costing advice Mine geotechnical review Mine geology review
<b>Processing</b>	<ul style="list-style-type: none"> <li>ADP Modular &amp; Marine (ADP)</li> <li>Metallurgia (S Barry)</li> </ul>	Plant layout redrafting & equipment requirements Capital cost review
<b>Economic modelling</b>	<ul style="list-style-type: none"> <li>Minero Consulting</li> <li>Optimum Capital (OC)</li> </ul>	Financial modelling



## APPENDIX A: KEY MODIFYING FACTORS

### TABLE OF MATERIAL ASSUMPTIONS

Factor	Value / Comment
Maximum accuracy variation	+/- 15%
Mine life	10.5 years
Mining method	Underground open stoping with the use of loose waste fill, cemented rock fill or residual pillars
Mining cut-off grades	<b>Stage 1:</b> 0.8% Sn <b>Stage 2:</b> 0.55% Sn
Mine and ore haulage execution	Contractor
Processing methods	Contract crushing Primary & secondary milling Coarse gravity concentration Fine flotation concentration Bulk concentrate dispatch
Nameplate annual ore processing rate	<b>Stage 1:</b> 0.5 Mtpa <b>Stage 2:</b> 0.75 Mtpa
Annual tin in concentrate production	<b>Stage 1:</b> ≈3,500 t <b>Stage 2:</b> ≈4,210 t
Metallurgical recovery	<b>Stage 1:</b> 73.4% <b>Stage 2:</b> 72.2%
Average mining costs	USD 25.56/t ore
Average processing costs	USD 16.52/t ore
Average G&A costs	USD 5.86/t ore
Average concentrate transport & treatment cost	USD 1,211/t of tin in concentrate
Total Project Investment	USD 78.5M
Net smelter return (NSR)	88.8%
Tin price	USD 17,830/t
State royalty	NSR 3%
State corporate tax rate	17.5%

## APPENDIX B: DFS SCOPE AND METHODOLOGY

### 1. SCOPE

The 2016 Small Start Option DFS has been compiled by Atlas Tin (ATS) – the operating Joint Venture which owns the Achmmach Tin Project (Kasbah 75%, Toyota Tsusho Corporation 20% and Nittetsu Mining Co. Ltd 5%) with key inputs from the groups summarised in Table 1 below.

The DFS builds upon the 2016 SSO Pre-Feasibility Study (PFS) released to the market 9 February 2016 and defines a hard rock underground mine with a 10.5 year life that is developed in two stages. Production initially commences at 0.5 Mtpa, then expands to 0.75 Mtpa after approximately 4 years. Importantly, this two stage, lower capital approach, which adopts contract mining, contract crushing and modular plant design has significantly increased operational flexibility. **Table 1** shows the contributors to the DFS.

**Table 1: Achmmach DFS Contributors**

Section	Contributors	Substance
<b>Geology</b>	<ul style="list-style-type: none"> <li>Quantitative Group Pty Ltd (QG)</li> <li>Kasbah staff</li> </ul>	<ul style="list-style-type: none"> <li>Resource estimation</li> <li>Resource drilling and geological review</li> </ul>
<b>Mining</b>	<ul style="list-style-type: none"> <li>Entech Pty Ltd (Entech)</li> <li>Minero Consulting</li> <li>Mining One Pty Ltd</li> <li>C Bolger</li> </ul>	<ul style="list-style-type: none"> <li>Mine schedule development</li> <li>Mine contractor RfQ packages</li> <li>Technical and costing advice</li> <li>Mine geotechnical review</li> <li>Mine geology review</li> </ul>
<b>Processing</b>	<ul style="list-style-type: none"> <li>ADP Modular &amp; Marine (ADP)</li> <li>EDS, South Africa</li> <li>Metallurgia (S Barry)</li> <li>Multotec, South Africa</li> <li>Maelgwyn Mineral Services</li> </ul>	<ul style="list-style-type: none"> <li>Plant layout redrafting; Equipment requirements; capital cost review</li> <li>Ore milling development</li> <li>Process design review</li> <li>Gravity cassiterite recovery</li> <li>Flotation process review and equipment selection</li> </ul>
<b>Economic modelling</b>	<ul style="list-style-type: none"> <li>Minero Consulting</li> <li>Optimum Capital (OC)</li> <li>Kasbah and ATS staff</li> </ul>	<ul style="list-style-type: none"> <li>Financial modelling</li> </ul>
<b>General Information</b>	<ul style="list-style-type: none"> <li>Kasbah and ATS staff</li> </ul>	<ul style="list-style-type: none"> <li>Revised Moroccan goods &amp; services pricing</li> <li>Infrastructure costing</li> <li>Operating costs review</li> </ul>

## 2. ORE RESERVES AND MODIFYING FACTORS

ATS engaged Entech Pty Ltd (Entech) of Perth, Western Australia to advance the PFS mine design to DFS standard and define a new JORC (2012) compliant Ore Reserve by applying the following modifying factors:

- mining extraction recovery factor of 95%;
- based upon geotechnical recommendations a planned dilution skin of 1.0 m was added to all stope shapes. This planned stope skin contains material that is not part of the Mineral Resource.
- A further dilution of 0.5m has been applied in appropriate areas to take into account dilution from firing against fill surfaces.

The July 2016 Achmmach Ore Reserve is summarised in **Table 2** below:

**Table 2: Achmmach Ore Reserve July 2016**

Achmmach	Proven			Probable			Total		
	Ore (t)	% Sn	Tin Metal (t)	Ore (t)	% Sn	Tin Metal (t)	Ore (t)	% Sn	Tin Metal (t)
Meknes Trend	877,000	1.10	9,700	5,359,000	0.80	43,100	6,236,000	0.85	52,800
Sidi Addi Trend	-	-	-	321,000	0.85	2,700	321,000	0.85	2,700
<b>TOTAL</b>	<b>877,000</b>	<b>1.10</b>	<b>9,700</b>	<b>5,680,000</b>	<b>0.80</b>	<b>45,900</b>	<b>6,557,000</b>	<b>0.85</b>	<b>55,500</b>

***Cut-off grade of 0.55% Sn. All calculations have been rounded to the nearest 1,000 t of ore, 0.01% Sn grade and 100 t tin metal.***

## 3. MINING

Entech built on its earlier SSO PFS design by reviewing fill strategy in consultation with Mining One, who produced a DFS level geotechnical report for the mine. The final DFS mine design produced a 10 year mine schedule delivering 6.56 Mt at 0.85% Sn and is premised upon:

- Utilising an international underground mine contractor supported by a local personnel;
- mine access via two portals – one into the Central Zone (CZ) and one into the Eastern Zone (EZ); and
- mechanised mining methods appropriate to the deposit and planned production rate including:
  - Bottom up longhole open stoping method with selected use of loose rock fill, cemented rock fill (CRF) and residual pillars in the Central Zone;

- combination of bottom up sequence with CRF and top-down sequence using open stoping with in-situ pillars retained for stability in the Western Zone; and
- top down, no fill method but leaving in-situ pillars for stability in the Eastern Zone.

The staged mining approach is premised upon a 0.8% Sn mine cut-off grade in Stage 1 delivering run of mine grades of approximately 0.96% Sn. The return to a 0.55% cut-off grade in Stage 2, which sees production expand to 0.75 Mtpa, will see tin production maintained at a consistent level (~3,970 tonnes of tin in concentrate per annum) across the life of mine (10.5 years), as shown in **Table 3**.

**Table 3: 2016 DFS - Staged Mining Metrics**

DFS metrics	Stage 1	Stage 2
<b>Cut-off grade</b>	0.8% Sn	0.55% Sn
<b>ROM tonnes and grade</b>	<b>1.89 Mt @ 0.96% Sn</b>	<b>4.67 Mt @ 0.80% Sn</b>
<b>Delivering</b>	18,235 t contained tin to mill	37,310 t contained tin to mill
<b>Processing</b>	0.5 Mtpa over 42 months	0.75 tpa over 80 months
<b>Total Tin in Concentrate produced</b>	12,255 tonnes (292 tpm)	28,114 tonnes (351 tpm)

**Table 4** summarises the DFS mine design outcome.

**Table 4: DFS Mine Design Factors**

Factor	DFS
<b>Mining method</b>	Bottom up longhole open stoping method with selected use of loose rock fill, CRF and residual pillars.
<b>Mine access</b>	EZ: dedicated portal; CZ: dedicated portal.
<b>Mine ventilation</b>	Dual decline at each portal.
<b>Operations</b>	Maintain contract mining operation.
<b>Grade strategy</b>	Stage 1 cut-off grade of <b>0.80% Sn</b> Stage 2 cut-off grade of <b>0.55% Sn</b>
<b>Schedule strategy</b>	Two phased approach with higher grade ore delivered during first four years maintained per SSO-PFS ≈2.6 Mt of material at 0.6% Sn will remain in the mine at the end of Stage 2
<b>Mine backfill</b>	Mine backfill will comprise loose rock fill and CRF
<b>Equipment supply</b>	Mining contractor

## Mining Methods

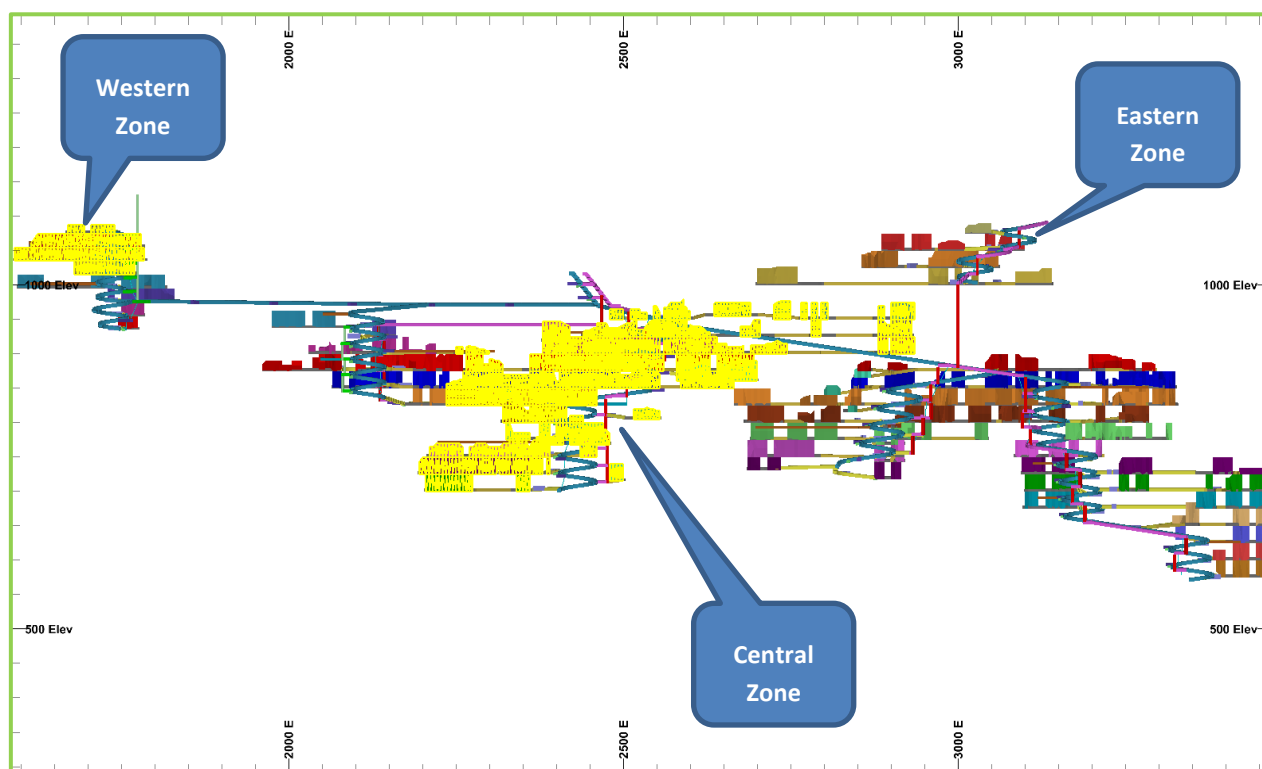
The final mining methods selected by Entech comprise a combination of bottom-up CRF and top-down open stoping methods. The proposed mine design employs CRF in areas of higher grade to minimise metal loss to pillars, with the cheaper open stoping method used in the areas developed later in the life of mine schedule. For scheduling purposes, the Western Zone had both methods applied, with bottom-up CRF above 1015 mRL and top-down open stoping below this point.

**Table 5** summarises the mining methods selected for each mining area in the SSO DFS mine plan.

**Table 5: DFS Mining Methods**

Mining Zone	Mining Method
Central Zone	Bottom-Up CRF
Central Western Zone	Top-Down Open Stoping with Pillars
Western Zone (above 1015mRL)	Bottom-Up CRF
Western Zone (below 1015mRL)	Top-Down Open Stoping with Pillars
Eastern Zone	Top-Down Open Stoping with Pillars

**Figure 1** illustrates the application of fill strategy throughout the mine.



**Figure 1: Mining Methods by Zone - CRF Highlighted in Yellow (Long-Section Looking North)**

#### 4. METALLURGY AND PROCESSING

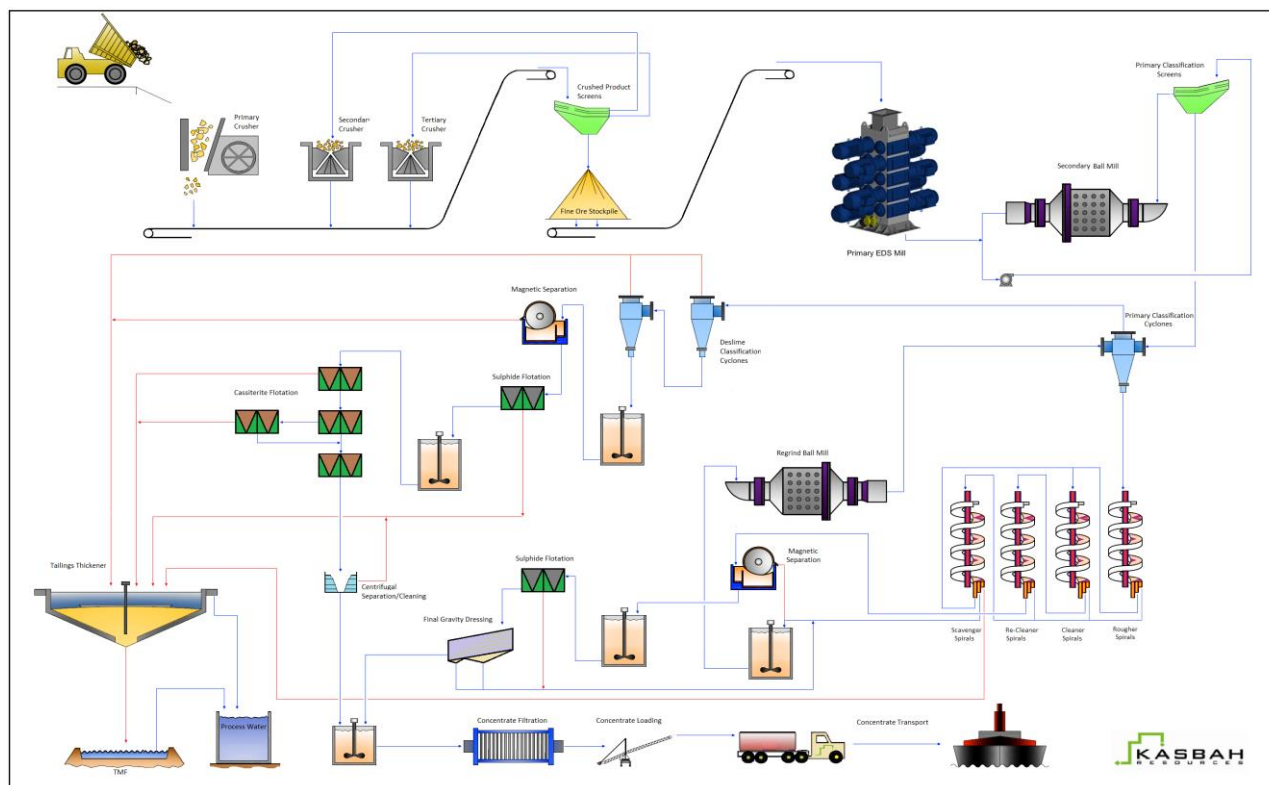
As in the case of the SSO-PFS, there has been no change to the metallurgical properties of the ore that underpins the SSO-DFS flow sheet design. Consequently, Kasbah expects the higher grade of Stage 1 ore will lead to higher tin recovery during this stage of the Project as illustrated in **Table 6**

**Table 6: SSO Process Attributes**

Factor	SSO
<ul style="list-style-type: none"> <li>Recovery</li> </ul>	<ul style="list-style-type: none"> <li>Estimated by algorithm;</li> <li><b>Stage Recoveries</b> <ul style="list-style-type: none"> <li>Stage 1: 73.4% for 12,255 t tin</li> <li>Stage 2: 72.2% for 28,114 t tin</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Process</li> </ul>	<ul style="list-style-type: none"> <li>Stage 1: 500 ktpa; Stage 2: 750 ktpa</li> <li>Contract crushing;</li> <li>Multiple 250 ktpa modular process streams comprising: <ul style="list-style-type: none"> <li>Low power primary EDS milling</li> <li>Reduced power secondary ball milling</li> <li>Spiral concentration</li> <li>Gravity middlings regrind ball milling</li> <li>Sulphide and cassiterite flotation</li> </ul> </li> <li>Common concentrate dressing and dispatch</li> <li>Common consumables supply and management systems</li> <li>Common tailings disposal</li> <li>Common water management system</li> </ul>
<ul style="list-style-type: none"> <li>Total Process Power Draw</li> </ul>	<ul style="list-style-type: none"> <li>Stage 1: 3 MW; Stage 2: 4.4 MW</li> </ul>

**Figure 2** shows the overall process flow diagram.





**Figure 2: Achmmach Process Flow Sheet Overview**

Kasbah retained ADP Modular & Marine (ADP) of Cape Town, RSA to advance the SSO-PFS plant design and cost estimation to DFS status. ADP activity centred on integrating the comminution, gravity concentration and flotation concentration modules into a compact plant layout that then formed the basis of the process plant capital cost estimate.

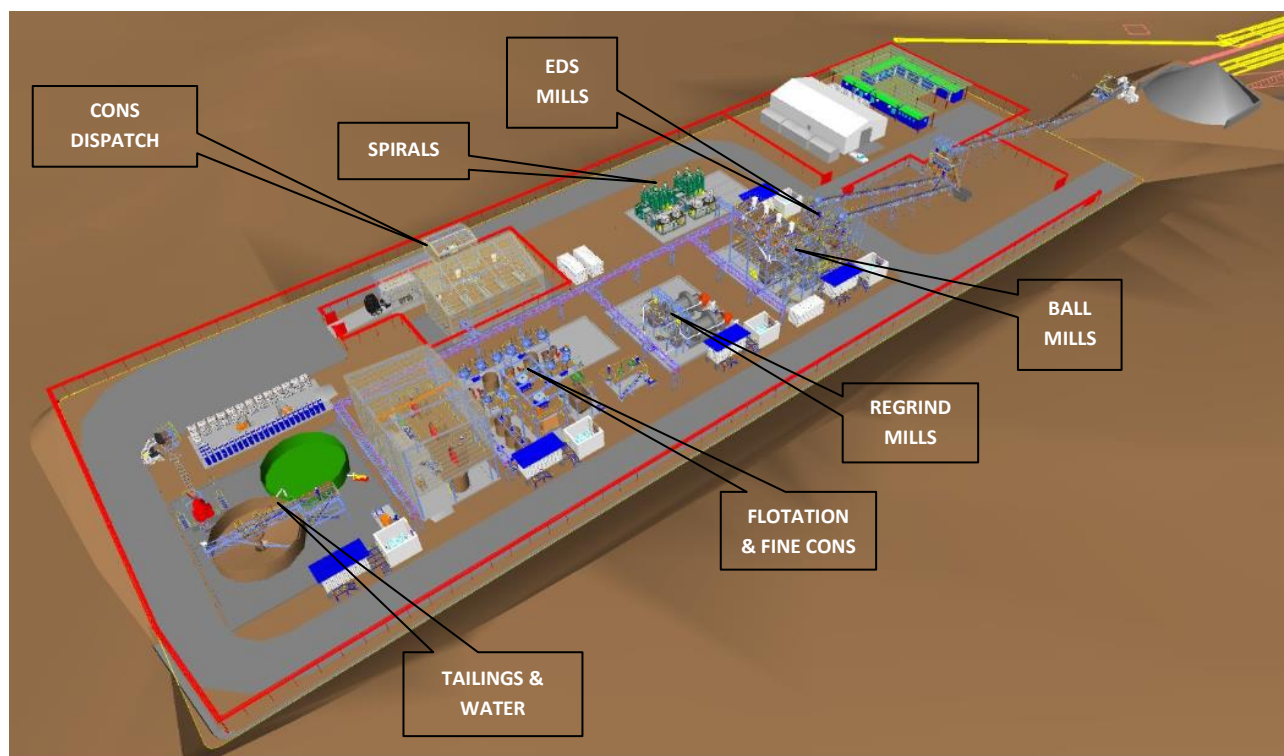
ADP upgraded the SSO-PFS equipment list, load list and pricing schedule for the DFS plant in consultation with the contributors shown in **Table 7** following.

**Table 7: SSO Treatment Plant Estimate Basis**

Section	Contributors	Substance
■ Mass Balance	■ ADP	■ Based on SSO-PFS mass balance
■ Flow Sheets	<ul style="list-style-type: none"> <li>■ ADP</li> <li>■ ADP</li> <li>■ EDS, JKMRC</li> <li>■ Multotec</li> <li>■ Maelgwyn Mineral Services</li> </ul>	<ul style="list-style-type: none"> <li>■ Block flow diagram</li> <li>■ Process flow diagrams</li> <li>■ Primary milling testing and interpretation</li> <li>■ Spiral plant flow sheet</li> <li>■ Flotation plant flow sheet</li> </ul>
■ Equipment & Power	■ ADP	■ Consolidated vendor inputs
■ Plant layout	■ ADP	<ul style="list-style-type: none"> <li>■ Consolidated vendor data</li> <li>■ Site topographic data</li> </ul>
■ Cost Estimate	<ul style="list-style-type: none"> <li>■ ADP</li> <li>■ Kasbah</li> </ul>	<ul style="list-style-type: none"> <li>■ Consolidated vendor equipment pricing</li> <li>■ Preliminary installation cost estimate</li> <li>■ Infrastructure cost reviews</li> </ul>

### Plant Layout

**Figure 3** prepared by ADP illustrates the layout of the process plant. ADP based the layout on the installation of 2 x 250 ktpa modular process streams while providing sufficient space for a third 250 ktpa treatment plant for the Stage 2 expansion.



**Figure 3: Achmmach Process Plant 3D Rendering**

The principal ore flow is from the mine to the plant via the ROM pad and crushing plant (not shown above) to the EDS mills. Then via secondary ball mills to the spiral plant and regrind mills, which together comprise the gravity circuit. The residual ore flows through the flotation and fine concentrate circuit and then on to the tailings system. Dressed concentrate exits site via the concentrate load out facility. The tailings and water circuit provides process water to the entire process.

### **Comminution**

During April 2016 Kasbah conducted full scale testing of the EDS milling plant at EDS in Johannesburg, RSA ([www.eds.co.za](http://www.eds.co.za)). Prior to this ATS collected 5 tonnes of mineralised tourmaline ore from the Achmmach BRPM ore stockpile and crushed this in the Achmmach core preparation facility to produce two 2.5 tonne sub-batches of ore passing 20 mm and 10 mm respectively. ATS personnel prepared the -20 mm batch by open circuit crushing in the Rhino jaw crusher. They then produced the -10 mm batch by screening +10 mm from 2.5 tonnes of -20 mm material and passing the oversize once through the Rhino crusher.

EDS performed test milling of the two parcels of ore through its full size, 10-shaft mill in consultation with Kasbah and Mr R Bracey of the Julius Kruttschnitt Mineral Research Centre (JKMRC) of the University of Queensland, Australia, who advised on test programme design and data interpretation. The JKMRC is a foremost authority on mineral ore comminution.

With the assistance of JKMRC, EDS structured the test programme to address the following aspects of the EDS-style of ore milling by determining:

- The limiting product particle size of the machine;
- The optimum throughput capacity of the machine;
- The specific power consumption of the machine;
- The robustness of the machine in the context of milling Achmmach ore;
- The effect of feed particle size on machine performance; and
- The likely consumption of wear components.

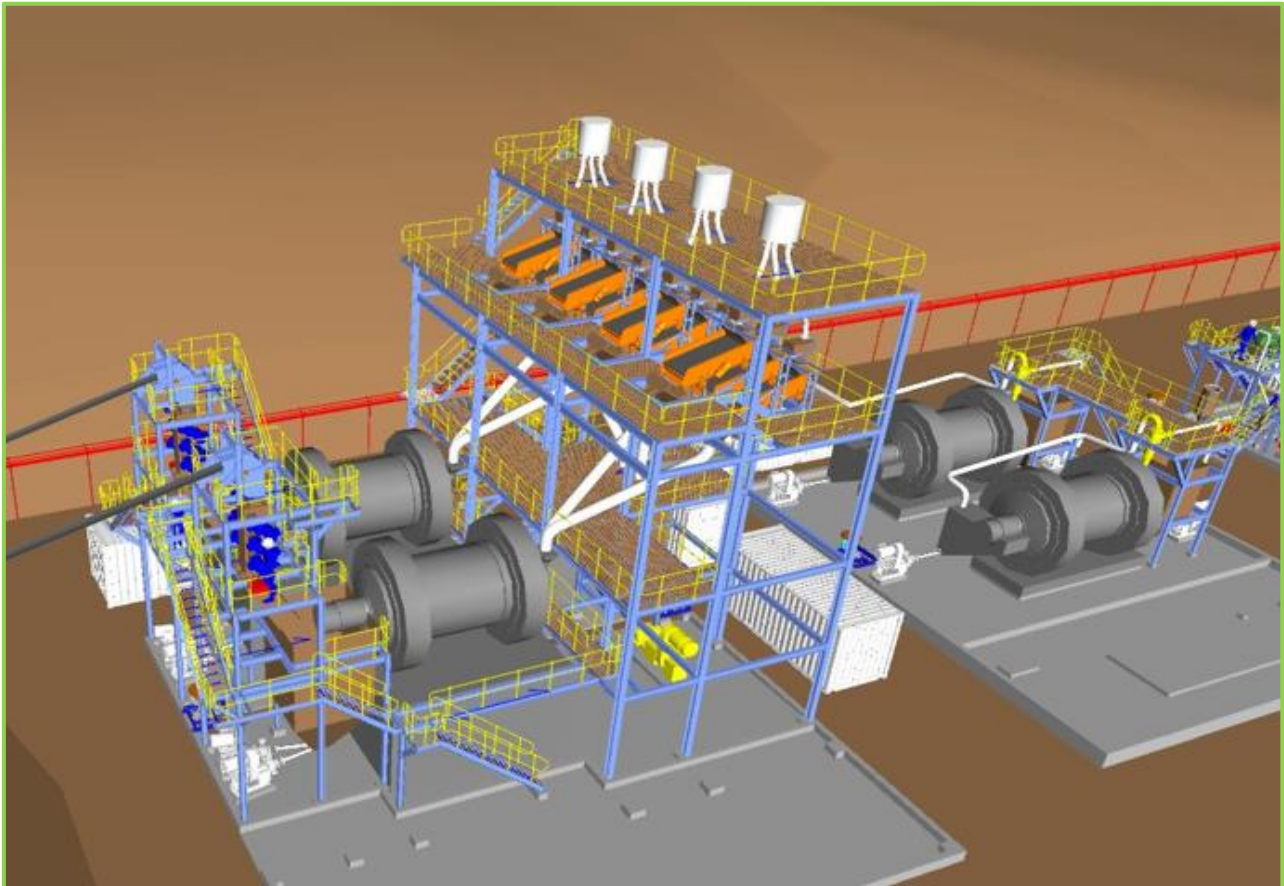
The outcome of this programme was that the EDS mill is suited to primary milling duty on Achmmach ore at a crush size of 100% passing 20 mm, and when employed in place of a rod mill would reduce the size of the secondary ball mill from that which would be required in the equivalent rod-ball circuit. Additional observations made during the test programme included:

- The EDS mill readily reduced Achmmach ore from -20 mm to an 80% passing (P80) size of 2.7 mm;
- The EDS mill reduced -10 mm ore to a P80 of 1.7 mm;
- The EDS mill is not able to achieve total ore reduction to -200 µm;
- EDS specific power consumption is of the order of 3 kWh/t ore; and
- The optimum throughput capacity for Achmmach ore is in the range 40 – 50 tph.

Subsequent to the test programme, ATS engaged JKMRC to interpret the test data obtained by EDS and prepare an independent report into the performance of the EDS mill on Achmmach ore.

As a result of its review JKMRC concluded the EDS mill is “an adequate mill for milling hard rock tin ore”, and the optimal comminution circuit would comprise secondary crushing, EDS milling and secondary ball milling. Given the variation in ore hardness from footwall to hanging wall ranging from 160 to 274 MPa (Achmmach PFS May 2012), ADP in consultation with Kasbah has provided for milling tertiary crushed ore combined with an adequately sized secondary ball mill to accommodate these variations in ore hardness.

**Figure 4** illustrates the resultant layout of the SSO comminution circuit.



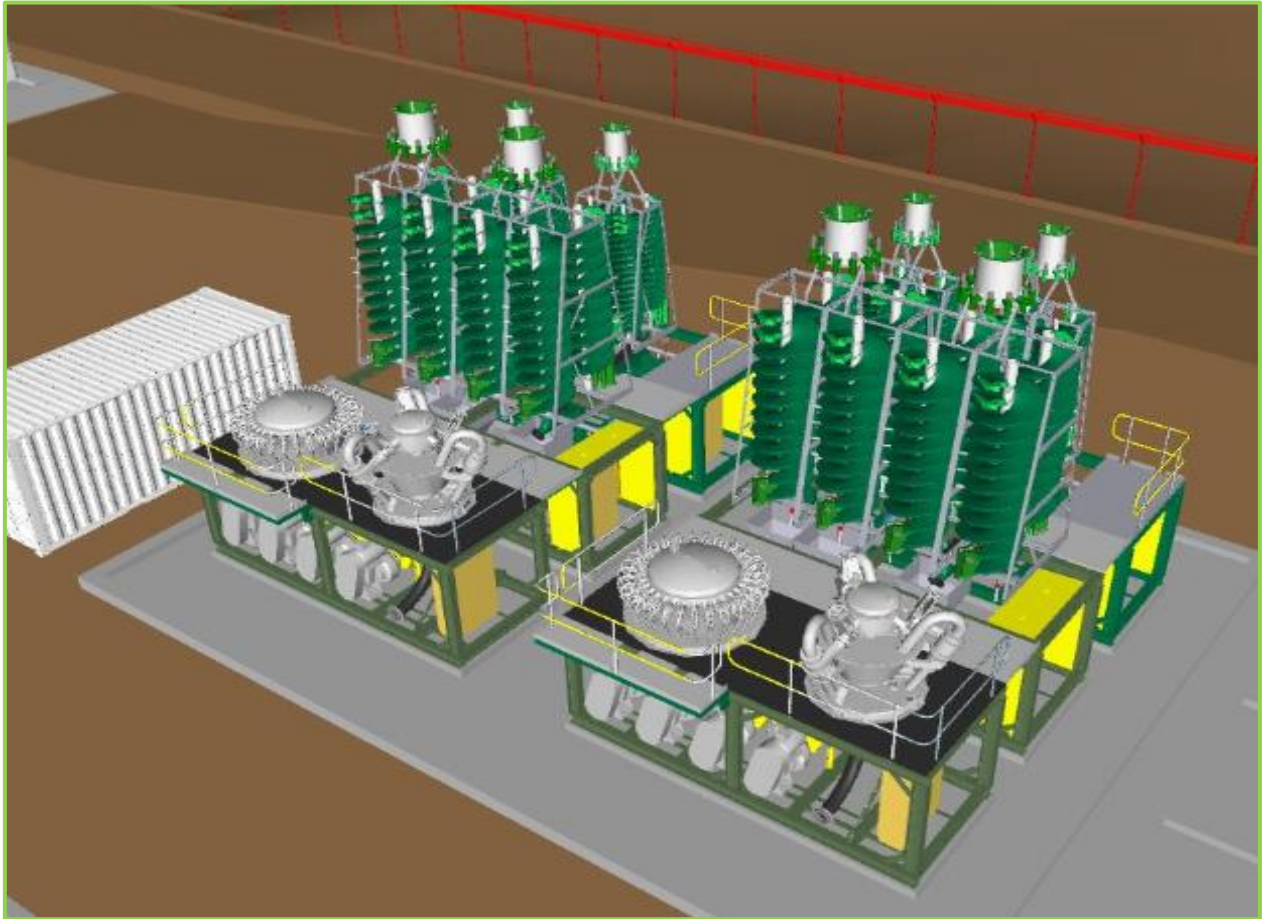
**Figure 4: Achmmach SSO Comminution Circuit (EDS mills, secondary ball mills and regrind ball mills)**

### **Gravity Circuit**

Two sets of cyclones located at the head of the gravity circuit will deslime milled ore at 10  $\mu\text{m}$ , with the overflow slimes reporting to the tailings thickener. The deslime product will be classified at 38  $\mu\text{m}$  with the overflow fines reporting to the flotation circuit. The +38  $\mu\text{m}$  -200  $\mu\text{m}$  fraction will report to the modular spiral plant for separation into tin concentrate, middlings material and coarse reject.

**Figure 5** illustrates the modular nature of the spiral circuit.





**Figure 5: SSO Classification and Spiral Plant (2 x 250 ktpa Modules)**

Sulphide flotation and magnetic separation will clean the gravity concentrate prior to final upgrade over shaking tables to a tin content of approximately 59% Sn. The final gravity concentrate will report to filtration and dispatch.

Middlings material and table rejects will report to the regrind circuit for progressive reduction to float feed size. The spiral feed cyclones will classify regrind mill product with the underflow reporting to the head of the spiral circuit.

### **Flotation**

Classified and deslimed fine ore will report to the Imhof flotation circuit, which will employ a conventional flow sheet of rougher / scavenger, clean and reclean. Conditioning tanks will provide sufficient residence time for the addition of silicate dispersant and depressant, followed by cassiterite collector.

**Figure 6** illustrates the flotation circuit.



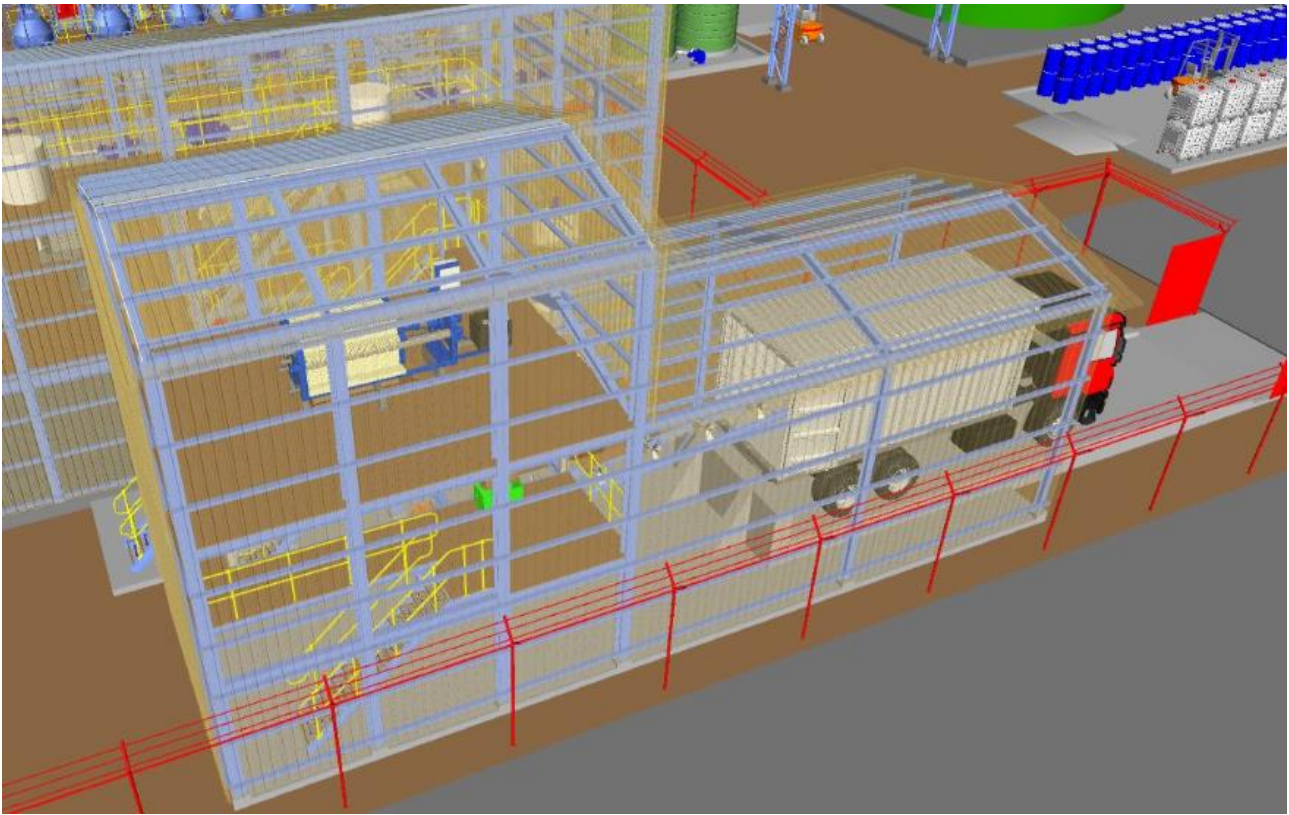
**Figure 6: Achmmach Flotation Circuit**

A series of Falcon centrifugal concentrators operating in cleaner / recleaner configuration will upgrade fine flotation concentrate to approximately 50% tin content. Falcon cleaner tails will report to the tailings thickener. The final fine concentrate will report to concentration filtration and dispatch, where it will be blended with the final gravity concentrate.



## Concentrate Dispatch

Figure 7 illustrates the concentrate filtration and dispatch facility.



**Figure 7: Concentrate Filtration & Dispatch (Conveyor omitted for clarity)**

An agitated surge tank will blend and store concentrate slurry ahead of a plate and frame filter, which will produce concentrate cake containing approximately 8% moisture. The filter product conveyor will deliver concentrate into a truck mounted sea container in lots of up to 20 tonnes moist weight.

The container truck will reverse up to the conveyor such that the conveyor will fill to the front of the container. The truck will slowly move forward, enabling the concentrate to be evenly distributed along the length of the container. Kasbah estimates Stage 1 container movements will approach 4 per day, increasing to 6 per day upon commissioning of Stage 2.

## TAILINGS AND WATER

No immediate changes to surface tailings and water management will be required within the SSO. The initial halving of the ore processing rate coupled with elimination of paste backfill leaves the load on the Tailings Management Facility (TMF) unchanged at 500 ktpa of tailings during Stage 1. The use of reclaimed dewatered tailings for use as future mine backfill will remain an option for the operation.

The reduction in annual water demand will heighten the security of water supply for the operation. Under the terms of the EDFs, the ore milling rate of 1 Mtpa resulted in the sequestration of approximately 420 kt of water each year with tailings as paste back fill and in the TMF. The reduction in overall ore processing to a maximum of 750 ktpa would reduce this figure 320 ktpa.

As part of the SO-DFS process, Golder UK revised the TMF construction strategy. The proposed change will further reduce pre-production capital requirements, and cope with the acceleration in TMF fill rate when the ore milling rate increases to 750 ktpa.

Three downstream raises will follow the smaller starter embankment owing to there being insufficient consolidated tailings to support an initial upstream raise. Thereafter, upstream raising will become possible.

**Table 8** illustrates the resultant SSO-DFS TMF design concept.

**Table 8: SSO TMF Construction Sequence**

Construction Phase	Elevation, metres above sea level	Embankment Volume, m <sup>3</sup>	Project Time, years
Starter Dam	932.5	128,500	-1.0
Downstream Raises	940	209,700	1.5
	946	167,700	3.0
	952	167,700	4.5
Upstream Raises	954.5	10,300	6.0
	957	12,000	7.5
	959.5	13,700	8.5
	962	15,400	9.5
<b>Total embankment volume</b>		<b>725,000</b>	

ATS will construct a seepage collection pond downstream of the embankment toe.

## **MARKETING AND SALES STRATEGY FOR CONCENTRATE**

In 2015 total global refined tin production was reported by the CRU in June 2016 as approximately 333,000 t. World consumption was approximately 344,000 t with a market deficit of approximately 11,000. World reported stocks at the end of 2015 equated to approximately 4.0 weeks of demand.

The CRU expects an annual market deficit of around 8,000 tonnes in 2016.

In the June 2016 the CRU Tin Monitor stated that ...” the CRU is still forecasting a marginal decline in global refined tin use this year, although trade sources mostly report improved or at least steady demand in the current quarter. If this continues, there may be a stronger under-pinning for higher prices by the year end. In the meantime, the recent range of \$15,500 - \$17,500 could be maintained.”

The Achmmach Tin Project will produce low impurity tin concentrates for the international tin market. The DFS is premised upon sale of tin concentrates to an Asian based tin smelter, with Atlas Tin SAS recovering 88.8% net smelter return (NSR).

## ENVIRONMENTAL, SOCIAL MANAGEMENT AND APPROVAL STATUS

### Environmental Social Impact Assessment

Kasbah's approach to minimising surface infrastructure development in the SSO offers the opportunity for a modest reduction in rental due to the Department of Forestry in that little, or no further removal of forest will be required. Land requirements for ore treatment and tailings management will not substantially change meaning no reduction in the land rental charges will be realised.

The retention of almost all mine waste underground as CRF or loose fill will virtually eliminate the perceived risk of acid rock drainage from the mine waste dump.

ATS does not expect the remaining aspects of the ESIA to change and all permits granted to date remain in good standing. **Table 9** provides the status of Project permits and approvals.

**Table 9: Project Permits and Approvals Status**

Approval	Date issued	Expiry	Authority
Titre Minier PE2912	12/03/2010	17/01/2022	ANCFCC (National Cadastral and Cartographic Agency)
Environmental & social (ESIA and ESMMP)	22/12/2014	22/12/2019	Ministry of Environment. Decision No. 36/2014
Collective land rental agreement	25/11/2014	25/11/2017	Ministry of Interior. File 10 776
Community development agreements	17/10/2014	By mutual consent	Presidents of Ait Ouikhalfen and Ras Jerri communes
Project water supply and management	19/12/2014	Open	Sebou Basin Agency, Fes. ABHS/DEPRE/SDE 2433/14
Development of support water bores	09/02/2016	09/02/2017	Sebou Basin Agency, Fes. Licence No. 243/2015
Permis d'Occuper PE2912	17/06/2015	17/06/2018	Decision No. 02/2015 WALI Meknes/Tafilalet
Mining Licence	Not yet applied for	10 years, renewable each 10 years	Law 33-13 relating to mines Approved 04/02/2015 – promulgated 23/05/2016
Decision to Construct	Not yet applied for	Life of mine	Local Commune and Provincial Governor
Explosive permit	Not yet applied for	Life of mine	Communes, Provincial Governor and MEM

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## ENVIRONMENTAL AND SOCIAL MONITORING AND MANAGEMENT PLAN

At the outset of Project development ATS will engage appropriately qualified personnel who will be charged with the preparation and implementation of project Environmental and Social Monitoring and Management Plan (ESMMP). This set of plans will initially cover the construction period, where they will focus on spillage control, waste management and construction labour management. Broader plans covering the environment, labour and community will be in place ahead of Project commissioning.

The key elements of the management organisation for the implementation of the ESMMP are as follows:

- The ATS Executive Management Team will have the oversight for the ESMMP and will provide leadership and the resources necessary for effective implementation.
- The Site Resident Manager will be responsible for the implementation of the ESMMP and will be assisted by the project environmental management team.
- Different contractors will be required to nominate an Environmental, Health and Safety (EHS) coordinator and staff who will be responsible for the effective implementation of the contractual EHS requirements. ATS will supervise and ensure that the actions are effectively carried out as per contract requirements.

The different environmental and social plans that will be prepared as the project moves forward will comprise the following key phases:

### Planning Phase

Prior to contracting the services of the construction contractors and contracting mining engineer, ATS will prepare environmental and social specifications for the contractors. The contractors will be required to prepare their own environmental and social management plans.

### Construction Phase

The plans and action for the construction phase are as follows:

- Construction contractors will implement the environmental and social management plans prepared in the planning phase; and
- ATS will monitor the construction contractors to ensure compliance with the environmental and social management plans.

### Operations Phase

The plans and action for the operations phase are as follows:

- ATS will implement its environmental and social management and monitoring plans; and
- In the years leading to the end of the mine life, ATS will further develop the outline mine reclamation and closure plan (MRCP) into a detailed MRCP.

## SSO ECONOMICS

This section consolidates the impacts of Project capital and operating costs determined by Kasbah and its contributors in SSO-DFS process. The DFS estimate process employed foreign exchange rates current in July 2016.

### Capital Costs

The simplified, fit for purpose design, removal of paste backfill, shift to greater use of contract services and higher utilisation of existing site infrastructure initiated in the SSO-PFS and refined in the within the SSO-DFS design philosophy has resulted in project construction capital costs for the project, including working capital to approximately **USD 78 M** as detailed in **Table 10**.

**Table 10: Project Construction Capital Cost Breakdown – USD M**

Cost Item	SSO DFS
Mining development	21.33
Mining capital items	3.22
TMF, Water Storage Dam (WSD), ROM pad	5.00
Process plant	13.11
Civil & earthworks	4.54
Infrastructure	10.90
Engineering, Procurement and Construction Management (EPCM)	2.26
Construction indirect costs	1.34
<b>Sub-total Project Construction capital</b>	<b>61.70</b>
First fill, spares & working capital	8.16
Contingency	5.40
VAT and other local charges	3.22
<b>Total Project Investment</b>	<b>78.48</b>

Kasbah consolidated its mining capital estimate by engaging Entech to issue a revised Request for Quotation (RfQ) based on the mine fill strategy and schedule described above, and then selecting an appropriate contractor response to this RfQ. Contract crushing and simpler, lighter modular ore treatment plant components introduced in the SSO-PFS were retained, with the capital estimate accuracy improving from 25% to within 15%.

## Operating Costs

**Table 11** and **Table 12** summarise life of mine operating costs in terms of recovered tin and ROM ore.

**Table 11: Project Operating Cost Estimates - USD/t of Recovered Tin**

Operating Costs – Life of Mine	SSO DFS
Mining	4,152
Processing	2,684
Administration	952
Concentrate transport and treatment	1,211
<b>C1 Cash Costs</b>	<b>8,999</b>
Depreciation & amortisation	4,114
<b>C2 Cost</b>	<b>13,113</b>
Royalties	467
Project related corporate costs	197
<b>C3 Cost</b>	<b>13,778</b>

**Table 12: Project Operating Cost Estimates - USD/t of Ore**

Operating Costs – Life of Mine	SSO Fill
Mining	25.56
Processing	16.52
Administration	5.86
Concentrate transport and treatment	7.46
<b>C1 Cash Costs</b>	<b>55.62</b>
Depreciation & amortisation	25.33
<b>C2 Cost</b>	<b>80.95</b>
Royalties	2.88
Project related corporate costs	1.21
<b>C3 Cost</b>	<b>85.04</b>

SSO costs per tonne of tin have increased slightly in comparison with EDFs costs as mine productivity and metallurgical recovery improvements offset the effects of the reduction in scale. Mining costs per tonne of ore have increased owing to expensing some lateral development associated with exploiting smaller stopes and the use of additional trucks and drill rigs.



**FINANCIAL MODELLING**

The Company and Optimum Capital utilised the SSO PFS financial model as the basis for the SSO DFS assessment. The LME tin price of USD17,830/t as at 21 July, 2016 was applied. The use of a fixed tin price provides a direct comparative assessment of Project economics for all scenarios and also provides a useful pivot point for preliminary testing of SSO Project sensitivity to a range of tin prices.

**Table 13** and **Table 14** depict key technical and financial outputs from the DFS.

**Table 13: Achmmach 2016 DFS Technical Summary**

Parameter	Units	DFS
Ore Reserve <sup>A</sup>	Mt	<b>6.56</b>
Stage 1 mined ore grade	%	<b>0.96</b>
Stage 2 mined ore grade	%	<b>0.80</b>
Average annual tin in concentrate produced	t	<b>3,970</b>
Total Tin concentrate shipped	t	<b>73,950</b>
Tin Concentrate grade	%	<b>55</b>
Total LOM Tin in concentrate shipped	t	<b>40,370</b>
Total Project life	months	<b>132</b>
Mine production period	months	<b>126</b>
Mill production period	months	<b>122</b>
<b>Project construction capital</b>	<b>USD M</b>	<b>61.7</b>
<b>Operating costs</b>		
C1 <sup>B</sup>	USD/t tin	<b>8,999</b>
C3 <sup>C</sup>	USD/t tin	<b>13,778</b>
<b>All in sustaining cost (AISC)</b>	<b>USD/t tin</b>	<b>11,507</b>

<sup>A</sup> Ore Reserve is derived from Measured and Indicated Mineral Resources that have had mining dilution and recovery factors applied to the mine design, and ore treatment and other surface operational cost factors applied to create an inventory of mineable stope and development tonnes, the extraction and treatment of which may be accomplished in an economic and environmentally acceptable manner.

<sup>B</sup> C1 cost is the sum of mining, processing, site administration and off-site refining.

<sup>C</sup> C3 cost is the sum of C1 cost, depreciation & amortisation, royalties and project related corporate costs.

**Table 14: Achmmach 2016 DFS Financial Summary**

Parameter		DFS
<b>Project construction capital</b>	<b>USD M</b>	<b>61.7</b>
+ First fill, spares and working capital	USD M	8.2
+ Contingency	USD M	5.4
+ VAT and other charges	USD M	3.2
<b>Total Project Investment to Peak Funding</b>	<b>USD M</b>	<b>78.5</b>
Revenue @ LME Sn price @ 21/7/16 of USD 17,830	USD M	<b>678</b>
Free cash	USD M	<b>120</b>
<b>Payback</b>	<b>months</b>	<b>46</b>
<b>Project NPV<sub>8</sub> after tax</b>	<b>USD</b>	<b>51</b>
<b>Project IRR</b>	<b>%</b>	<b>20.6</b>

Peak funding excludes financing costs for the project and covers the period from the first drawdown of Project funds to the date upon which the Project generates positive cash flow.

With respect to contingency, an amount has been applied to each component of the project construction capital (excluding mining development). This amount is based upon the respective level of engineering definition and knowledge around that area. The purpose of the contingency is to make specific provision for certain elements of potential cost growth within the project scope and by taking this approach, reduces the risk of capital cost over-run.

**Table 15** illustrates the comparative sensitivities of the SSO-DFS case to the tin price.

**Table 15: Project Sensitivity to Tin Price**

LME Sn Price USD / t	NPV <sub>8</sub> after tax USD M	IRR
16,000	14.6	11.8%
17,000	34.5	16.7%
<b>DFS @ 17,830</b>	<b>50.9</b>	<b>20.6%</b>
18,000	54.3	21.3%
19,000	74.1	25.7%
20,000	93.9	29.9%

File reference <20160805\_Achmmach Financial Model\_Rev M.1.xlsm>

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## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

The foregoing analysis indicates that the SSO concept provides a technically and economically viable option for the development of the Achmmach Tin Project with the following aspects key to its potential success:

- Adopting selective mining to maximise early delivery of tin to the treatment plant;
- Maximising the use of contractor services in mining, ore transport and ROM ore crushing;
- Reducing the scale of ore processing hardware; and
- Limiting site infrastructure requirements.

### **Recommendations**

Given the positive result of the foregoing SSO-DFS analyses, Kasbah recommends the Project be further advanced by:

- Securing financial resources for Project development; and
- Taking a Decision to Mine.

### **OPPORTUNITIES**

Kasbah recognises several opportunities to enhance the Project or develop a second standalone operation exist. These include:

- extending the existing underground resources within the Meknes Trend by ongoing mine exploration;
- increasing tin recovery by continuing to develop improved beneficiation techniques;
- the Sidi Addi trend has been lightly explored and retains the potential to greatly expand, and may potentially duplicate the current Meknes Trend resource; and
- the adjacent Bou-El-Jaj tenements are highly prospective for tin mineralisation and offer the possibility of a stand-alone satellite mining operation.

**APPENDIX C: JORC CODE TABLES**
**JORC CODE TABLE 1**
**Section 1: Sampling Techniques and Data**
*(Criteria in this section apply to all succeeding sections.)*

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>All sampling used in resource estimation was derived from diamond core drilling of PQ, HQ or NQ size, which is sampled at a nominal 1 m interval using industry standard protocols and QAQC procedures. These protocols and procedures are fully documented.</li> <li>Surface sampling data was not used in the Mineral Resource Estimate.</li> <li>Sample representivity was ensured by use of a high quality sample retrieval method (diamond core), and industry standard protocols for sample mass reduction to the final assayed aliquot.</li> <li>Samples were cut into half core with an automatic core saw, dried, and crushed to 80% passing 2 mm to produce a 250 g sample. After initial on-site sample preparation, each sample is analysed with a handheld Niton XRF analyser to identify intervals with anomalous mineralisation, and these samples are submitted to ALS laboratory for more precise analysis. Therefore, there are gaps in the sampling, but not in the mineralised zones. The handheld XRF results are not used for resource estimation.</li> <li>At ALS (previously in Spain or Norway, now Ireland), each sample is subsequently pulverised to 85% passing 75 microns to produce a 25 g charge. Tin was assayed using fused bead preparations with XRF determination.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>All drilling used in the resource estimate was diamond core, with PQ or HQ at the surface and reducing to NQ at depth when required. Orientation of all core has been performed using the ACT tool method.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Core recovery is routinely recorded for all drill holes during geological logging. The rock is very competent, with average recovery in the order of 99% - low recoveries are associated with faults or other structures that are not related to the mineralization, and recovery in the mineralised zones is almost always 100%.</li> <li>Where difficult ground conditions were encountered, drill runs were reduced to less than a metre.</li> <li>Logging depths were checked against core blocks and rod counts were routinely carried out by drillers and upon the geologist's request.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed geological logging is undertaken for lithology, alteration, weathering and structural logging from oriented core. Rock quality and other geotechnical information is also logged.</li> <li>Logging is to geological boundaries / contacts.</li> <li>All core is photographed dry and wet, and the photos are kept securely in electronic format.</li> <li>The entire length of all drill holes is logged.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Initial sample preparation is carried out at a custom built on-site sample preparation facility.</li> <li>Core is sawn longitudinally, using a manual core saw at project commencement and later an automatic core saw. Samples are collected from the same side of the core, with half-core submitted for assaying and the remaining half retained for future reference. Samples are then crushed to 80% passing 2 mm and rotary split to obtain a 250 g sample.</li> <li>At this point samples are dispatched to ALS laboratories in Ireland where they are further pulverized to 85% passing 75 microns prior to analysis.</li> <li>Duplicates of the crushed material are submitted for assaying at a rate of 1:25.</li> <li>The sample sizes are on average 1 m intervals and vary from PQ, HQ or NQ diameter. This size is considered appropriate to the grain size of the material being sampled to correctly represent the tin mineralization at Achmmach.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Kasbah tin assays were determined using fused bead X-Ray Fluorescence (XRF) which is the current industry standard for tin. This assay technique is considered "total" as it extracts and measures the entire element contained within the sample. No geophysical tools were used to determine any element concentrations used in the resource estimate.</li> <li>A Thermo Scientific Niton handheld XRF XL3t analyser was used to identify core intervals to be assayed.</li> <li>ALS conducts their own internal laboratory QAQC (including CRMs and pulp duplicates) to ensure the precision and accuracy of their analytical methods.</li> <li>For the entire drilling program, Kasbah independently inserted: <ul style="list-style-type: none"> <li>Certified Reference Material with a range of values from 0.2% to 1.05% Sn at a rate of 1:20.</li> <li>crushed duplicates at a rate of 1:25; and</li> <li>blanks at a rate of 1:50.</li> </ul> </li> </ul> <p>In addition, 3% of pulp duplicates have been analysed externally by an independent laboratory. Statistical analysis of duplicates and standards demonstrates the data to be</p>

Criteria	JORC Code explanation	Commentary
		reliable and unbiased.
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>▪ <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>▪ <i>The use of twinned holes.</i></li> <li>▪ <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>▪ <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ All significant intercepts are reviewed and confirmed by at least three senior personnel before public release and use in resource estimation.</li> <li>▪ No twinned holes have been drilled at Achmmach to date.</li> <li>▪ Data is collected by qualified geologists and entered into spread sheets with pre-determined lookup fields. The spread sheets are locked and have validation rules attached in order to limit potential data entry errors.</li> <li>▪ After entry and validation, data is imported via a GBIS front end onto a SQL server database. The import process includes further validation steps.</li> <li>▪ Data is stored on a server located in a locked room on site and replicated to the Perth Office. Backups are also regularly made.</li> <li>▪ Regular data validation reviews are conducted by Kasbah senior personnel prior to resource estimation.</li> <li>▪ No adjustments or calibrations are made to the raw assay data. Data is imported directly into the database in raw original format.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>▪ <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>▪ <i>Specification of the grid system used.</i></li> <li>▪ <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Drill hole collars were set out using hand-held GPS or by offset from nearby previously drilled holes. The final drill hole collar coordinates were established by a licensed contract surveyor, using a total station Top-Con. Sub-metre accuracy horizontally and vertically is expected from the surveying equipment used.</li> <li>▪ Quality Control collar location checks (repeats of previous pickups) were inserted at each survey campaign in order to monitor accuracy and consistency of the equipment at a rate of 1:10.</li> <li>▪ Down hole surveys were conducted using a multi-shot Reflex instrument at 25 m intervals.</li> <li>▪ The coordinate system is UTM 30N and datum is WGS84.</li> <li>▪ A local grid was introduced over the Achmmach Tin Project with the easting axis parallel to the overall tin mineralization-trend. The local grid is rotated 20° anticlockwise from the UTM system.</li> <li>▪ The Digital Elevation Model topographic surface was derived from a stereo image pair of a GeoEye-1 acquisition from December 2011, which has 1m vertical accuracy.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>▪ <i>Data spacing for reporting of Exploration Results.</i></li> <li>▪ <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>▪ <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Drill sections are at 20 m to 40 m spacing (Easting), with holes at varying intervals along the sections. Multiple holes are drilled from the same drill pad in a fan configuration leading to variable pierce point spacings, which is about 40 m x 40 m down to about 20 m x 10 m.</li> <li>▪ It is the opinion of the Competent Person that mineralised envelopes have sufficiently demonstrated geological and grade continuity to support the definition of Mineral Resource as defined in the 2012 JORC Code and the classifications applied to these.</li> <li>▪ For the mineral resource estimation, samples have been composited to 1 m, which is by far the most frequent raw sampling interval.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>▪ <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>▪ <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The majority of the holes have been drilled at -60° to grid south, which was designed to intersect tourmaline structures and mineralised zones perpendicularly or nearly perpendicularly. In the East Zone, some flatter holes have been drilled to intercept the near-surface mineralisation. A number of holes have been drilled at -50° to grid north to check cross-cutting structures</li> <li>▪ No orientation sampling bias has been identified in the data at this stage.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>▪ <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Sample security is managed by Kasbah from the site up to the city of Meknès. From there a local transport company, STDN, is responsible for the delivery of the samples to DSV in Casablanca. From Casablanca, DSV is responsible for clearance and air freight of samples to ALS in Ireland. Sample bags and drums are sealed with security tags for transportation.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>▪ <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ QG visited site in 2009 and 2010 to review all aspects of the operation. Recommendations such as submitting blank standards to the lab and checks on the adequacy of sample preparation have been implemented by Kasbah.</li> </ul>

## Section 2: Reporting of Exploration Results

(Criteria listed in section 1 and where relevant in sections 3 and 4, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Achmmach Tin Project lies within Mining permit – PE2912, located 40km south-west of the city of Meknès in Morocco is 100% owned by Atlas Tin SAS a Moroccan company. Atlas Tin SAS is 75% owned by Kasbah, 20% Toyota Tsusho and 5% Nittetsu Mining Corporation.</li> <li>The tenement is in good standing and no known impediments exist.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Relationship between mineralization widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>

Criteria	JORC Code Explanation	Commentary
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Other Substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1 and where relevant in sections 2 and 4, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>Competent Person's view of the deposit.</i>	
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>No new information to report. No new exploration has been carried out and the Mineral Resource remains the same.</li> </ul>

## Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1 and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<ul style="list-style-type: none"> <li>▪ Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>▪ Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Mineral Resource estimates used by Entech Pty Ltd to estimate an Ore Reserve were prepared by Quantitative Group and reported in the Achmmach Mineral Resource Estimate, Morocco, September 2013 Report and the Achmmach Western Zone Resource Estimate, Morocco November 2014. In these Resource estimates Ordinary Kriging (OK) was used to estimate 20 m (X) x 20 m (Y) x 5 m (Z) parent cells that had been sub-celled at the domain boundaries. The model estimates were assessed against the drill-hole sample data for Sn visually, and the global statistics of de-clustered input and output data were compared. The estimates were also validated by graphing summary statistics for the samples and estimates within 40 m spaced easting slices, 40 m spaced northing slices and 20 m spaced RL slices for each domain.</li> <li>▪ Based on data density, domain geometry and resource confidence, QG recommended that most of the mineralised zones at Achmmach be classified as an Indicated Resource under the guidelines of JORC (2012). The area in the Meknès Zone that had been drilled on 20 m centres, which is about 250 m of strike length, was classified as Measured, and the remaining mineralised zones in the deposit were classified as Indicated.</li> <li>▪ The Quantitative Group used a 0.5% Sn cut-off which was based on a tin price of US\$23 000/tonne, operating costs of US\$79/t (underground mining costs of US\$27/t, processing costs of US\$38/t, and smelting USD14/t) with processing recoveries of 70% at an average head grade of 0.8% Sn. QG assumed an annualised mining and processing rate of one million tonnes.</li> <li>▪ The Ore Reserves estimated and presented in this report are wholly included within the Mineral Resource reported by QG in the Achmmach Mineral Resource Estimate, Morocco, September 2013 Report and in the Achmmach Western Zone Resource Estimate, Morocco November 2014.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>▪ If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Competent Person has not visited the site.</li> <li>▪ The site is a greenfields site with no surface disturbance other than exploration activities and local access roads.</li> <li>▪ The Competent Person is comfortable relying on other independent consultants who have visited the site.</li> <li>▪ The Competent Person has reviewed detailed site topography data and site photographs.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Study status</b>	<ul style="list-style-type: none"> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul style="list-style-type: none"> <li>Entech has conducted a mining study of the Achmmach Tin Project in Morocco for Kasbah Resources Limited. This study was conducted to a Definitive Feasibility Study level of accuracy. DRA Pacific have conducted the mineral processing design to a similar level of accuracy. The Entech and DRA work is included in the Achmmach Tin Project Small Start Option Definitive Feasibility Study by Kasbah Resources, July 2016.</li> <li>Modifying factors accurate to the study level have been applied based on detailed selective mining unit (SMU) and stope design analysis. Modelling indicates that the resulting mine plan is technically achievable and economically viable.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>A stope cut-off grade of 0.8% Sn was used to identify mineable parts of the mineral resource and to design the stopes for the first four years of production. This was based on analysis of optimisation processes at a range of cut-off grades and provided the most attractive balance of higher grade feed with mine continuity.</li> <li>A stope cut-off grade of 0.55% Sn was used for material after 4 years of the mine plan. This was based on the detailed financial assumptions generated in 2015.</li> <li>An incremental cut-off grade of 0.25% Sn was applied to mine development. This cut-off grade includes material that is of sufficient value to cover the costs involved in transporting that material to the processing plant, processing and then selling the resultant product for a profit, if the material is required to be mined in order to access fully economic ore.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>The mining recovery factors used.</li> <li>Any minimum mining widths used.</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the selected mining methods.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed mine designs were carried out on all ore sources and used as the basis for the Ore Reserve estimate.</li> <li>In the Central Zone portion of the Meknes trend, stopes were assumed to be mined using a mechanised bottom up longhole stoping method with cemented rock fill (CRF). The other extracted portions of the Meknes trend are assumed to be mined using a top-down open stoping approach leaving in-situ pillars for stability.</li> <li>The Western Zone deposit on the Sidi Addi trend was assumed to be mined using a combination of a bottom-up sequence with cemented rockfill and top-down sequence using open stoping with in-situ pillars retained for stability.</li> <li>Diesel powered trucks and loaders will be used for materials handling. Diesel-electric jumbo drill rigs will be used for development and ground support installation. Diesel-electric longhole drill rigs will be used for production drilling and raise development.</li> <li>The selected mining methods are</li> </ul>

		<p>considered suitable for the deposit, the planned production rate and the geographical location. The mining method is well-known and accepted globally and provides selectivity, minimal technical complexity and flexibility.</p> <ul style="list-style-type: none"> <li>▪ Independent expert geotechnical analysis to a DFS level of detail has been carried out by Mining One Pty Ltd to determine boxcut design, stope spans, unplanned dilution assumptions, design characteristics and ground support regimes.</li> <li>▪ Based on detailed geotechnical analysis stope spans were limited to 50 m in height by 35 m in length at Meknes and 20 m in height by 20 m in length at Western Zone.</li> <li>▪ An automated stope optimisation process was undertaken using Datamine Minable Shape Optimiser (MSO) software. A minimum stope width of 3.0 m was selected based on the proposed size of mining equipment, with a maximum stope width of 20 m. Detailed stope design was then conducted on the optimisation results to ensure mineability. Only blocks in the model that were classified as Measured or Indicated were included in the optimization process.</li> <li>▪ Based on the geotechnical recommendations a planned dilution skin of 1.0 m was added to all stope shapes. This planned dilution skin contains material that has not been assigned a Resource classification in the Mineral Resource. A further dilution of 0.5 m has been applied in appropriate areas to take into account dilution from firing against fill surfaces. The total global dilution is 19%.</li> <li>▪ Based on the long hole open stoping mining method proposed and the mechanized remote loading equipment used, a mining recovery of 95% has been assumed. An extra 2.5% of ore was assumed to be lost in bottom-up areas where stopes were wider than 5 m to reflect the difficulty inherent in backfilling these stopes completely to floor level.</li> <li>▪ Only Measured and Indicated Resources were included in the mine design process. There was no Inferred material in either Resource. The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resource material.</li> <li>▪ Infrastructure required for this mine includes boxcuts, portals, declines and lateral capital development, ventilation shafts and fans, escapeways, services infrastructure for provision of power, service water, compressed air and dewatering lines to the underground workings, a batch plant, surface roads, and surface ROM pads and waste dumps. All capital infrastructure requirements for the mine have been included in the DFS and reviewed by Entech as part of this exercise.</li> </ul>
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Criteria	JORC Code explanation	Commentary
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul style="list-style-type: none"> <li>ADP Modular &amp; Marine (ADP) has designed a metallurgical process that includes: <ul style="list-style-type: none"> <li>Three stage crushing and screening</li> <li>Primary grinding using an open circuit EDS mill feeding a closed circuit ball mill;</li> <li>Coarse gravity separation using spirals and wet tables;</li> <li>Gravity middlings regrind and recycle;</li> <li>Flotation of deslimed fine cassiterite followed by concentrate upgrade using centrifugal concentration;</li> <li>Gravity concentrates upgrade by sulphide flotation and magnetic separation of susceptible gangue;</li> <li>Concentrate filtration;</li> <li>Concentrate packaging in sealed sea containers and despatch; and</li> <li>Tailings thickening and disposal to a valley-fill TMF.</li> </ul> </li> <li>The metallurgical process is based on substantial testwork during several testwork campaigns as follow-up to the initial DFS programme. Kasbah Resources Limited reported this work in detail in the Achmmach Tin Project Definitive Feasibility Study in March 2014, along with additional testwork presented in the Achmmach Tin Project Enhanced Definitive Feasibility Study by Kasbah Resources Limited, March 2015. Additional testwork on Western Zone ore has also been incorporated into the Enhanced DFS programme.</li> <li>Recovery through the gravity and tin dressing circuit is 58.8% at a concentrate grade of 55% Sn. Recovery through the ultrafine cassiterite flotation circuit is 12.6% at a concentrate grade of 50% Sn. Overall Sn recovery to final concentrate is 72.5% at a concentrate grade of 55% Sn.</li> <li>Based on treatment/refinery quotations received from two refineries, treatment and refining charges amount to USD541/tonne of concentrate.</li> <li>In the DFS a six tonne bulk sample was taken from crushed rejects from the Meknès zone, which is representative of the ore mined during the life of mine. This sample was split to three tonnes and was used by several internationally renowned metallurgical laboratories to confirm the process flowsheet. The results of this test work is presented in the Achmmach Tin Project Definitive Feasibility Study by Kasbah Resources Limited, March 2014.</li> <li>During the Enhanced DFS programme bulk samples of Western Zone ore and original Meknes Trend Ore were tested to provide additional process design data. The results of this work substantially confirmed and</li> </ul>

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		<p>improved upon the findings of the DFS.</p> <ul style="list-style-type: none"> <li>During the SSO programme a 5 tonne bulk sample of ore was delivered to South Africa for testing by equipment vendors to confirm selection of milling, gravity concentration and flotation equipment.</li> <li>Testing of the bulk ore sample at EDS in Johannesburg, South Africa confirmed the suitability of multi-stage hammer milling as a viable substitute for primary rod milling. This approach has the effect of reducing comminution power requirements and capital and operating costs.</li> <li>The Ore Reserve estimation is based on total tin grade. There is no distinction between cassiterite and stannite (trace amounts only).</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>An Environmental and Social Impact Assessment (ESIA) scoping report was prepared in 2011 and presented to the National Committee for Environmental Impact Assessments (CNEIE) on the 15 June 2011 and the committee accepted the report and issued Terms of Reference for the Environmental Impact Assessment.</li> <li>The ESIA which was carried out during the period May 2011 to June 2013 and included carrying out a two season environmental baseline survey, the first in May 2011 and the second in October 2011. A draft Final ESIA prepared as part of the Preliminary Feasibility Study (PFS) was submitted to the CNEIE in September 2012. A second version of the ESIA has been prepared as part of the Definitive Feasibility Study (DFS). This includes the findings of the social baseline survey that was carried out in April 2013. The present document integrates the answers to the CNEIE comments raised after its subsequent review in October 2013. The report was prepared by Artelia Eau &amp; Environnement, January 2014. The report was prepared in compliance with Morocco's environmental regulations.</li> <li>The ore contains traces of sulphides, which when discharged to the tailings management facility could be a source of acid seepage. To mitigate acid seepage, the tailings will be dosed with an excess of limestone neutralizing agent to ensure acid generation cannot occur. As a matter of standard practice the tailings management facility will be designed with a system to collect and recycle the small quantity of resultant lixiviate (seepage water) to the ore processing unit. Seepage from beneath the TMF is expected to follow natural bedrock downstream of the TMF where it will be captured in a seepage pond.</li> <li>Stockpiles of ore, mine waste dumps and the tailings management facility will be equipped with toe drains and sediment traps to prevent rainwater runoff from</li> </ul>

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		<p>transporting sediment and fine rock material into the watercourses situated near the facilities. As a rule drainage from stockpiles will be directed to the TMF or the water storage dam (WSD).</p> <ul style="list-style-type: none"> <li>The CNEIE reviewed the final version of the ESIA on 11 March 2014 and issued its approval of the report at that meeting, together with its requirements for the completion of a Project ESMMP. Final acceptance of the Project ESIA and ESMMP was granted in November 2014. This approval remains in force.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li><i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></li> </ul>	<ul style="list-style-type: none"> <li>Achmmach is covered by two exploitation permits (PE2912 and PE193172) held 100% by Kasbah covering a total area of 32 km<sup>2</sup></li> <li>Achmmach will be serviced by the cities of Khemisset, El Hajeb and Meknès, with significant freight services and operating supplies being drawn from within Morocco via Rabat.</li> <li>Key expatriate and some senior Moroccan staff will be accommodated at the project site. Other mining and operations personnel will be bussed on a daily basis from cities and towns including Khemisset, Meknès, El Hajeb, Agourai and Ras Jerri.</li> <li>Past and contemporary forestry activities in the Achmmach area have resulted in the establishment of reasonably good unsealed road access to Achmmach.</li> <li>The early exploration and sampling programmes carried out by the BRPM have established the presence of a ground water source at the depth of the existing mine workings.</li> <li>A Golder &amp; Associates water balance model in the DFS highlighted that the water from existing bores would only supply 8 L/s or 40% of the project water requirements. Kasbah will develop bore capacity to support start-up water requirements and to provide insurance against extraordinarily dry periods.</li> <li>The Water Storage Dam will provide sufficient water to satisfy project water requirements during statistically normal and occasional dry years. It will be located directly upstream of the proposed TMF where a cross-valley, earthen embankment will be constructed. The WSD will collect run-off during the winter. Golder has estimated water harvesting will normally be sufficient to support year round project operation.</li> <li>Morocco's electrical power supply is generated, distributed and transmitted by the state-owned company, Office National de Electricité et de Eau Potable (ONEE), which will provide power to the Achmmach Project. A 60 kV power line will be constructed, originating at Toulal (225/60 kV) near Meknès and traversing a distance of 44 km via Ras Jerry to</li> </ul>

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		Achmmach. This line will be used to provide up to 10 MVA to the mine.
<b>Costs</b>	<ul style="list-style-type: none"> <li>▪ <i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></li> <li>▪ <i>The methodology used to estimate operating costs.</i></li> <li>▪ <i>Allowances made for the content of deleterious elements.</i></li> <li>▪ <i>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</i></li> <li>▪ <i>The source of exchange rates used in the study.</i></li> <li>▪ <i>Derivation of transportation charges.</i></li> <li>▪ <i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></li> <li>▪ <i>The allowances made for royalties payable, both Government and private.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Capital infrastructure cost estimates for the mine have been made based on quotations and include estimations of the relevant establishment costs. These estimates have been based on quotes from suppliers.</li> <li>▪ The cost estimation for the excavation of box-cuts and establishment of portals are based on quotes provided by a specialist civil works contractor based in Morocco.</li> <li>▪ Cost estimations for underground development and production were provided by reputable underground contractors with relevant international experience as part of a detailed request for quotation process.</li> <li>▪ ADP employed vendor equipment quotes and Moroccan based civil and construction rates to prepare the processing plant capital estimate. ADP completed a visit to Morocco in February 2016 to establish contact with relevant contractors and service providers to the mining industry.</li> <li>▪ Where possible, 30 day quotes from Moroccan suppliers have been used as the basis of the mine operating cost estimate. Where pricing information from Moroccan suppliers has not been obtained, an alternative source (usually an Australian supplier) for the purpose of estimation.</li> <li>▪ ADP provided inputs to the costs of consumables and maintenance based on vendor quotes. Kasbah Resources Limited provided operating cost inputs for labour, power, concentrate shipping and smelting and in-country corporate costs.</li> <li>▪ An allowance for deleterious elements is based on treatment/refinery quotations received from two refineries. The treatment and refining charges amount to USD541/tonne of concentrate.</li> <li>▪ All costs have been given in US dollars (USD). Where quotes have been obtained in a different currency the relevant exchange rate was applied. Exchange rates for overall project cost reporting were set as at July 2016.</li> <li>▪ Shipping costs are based on the transport of 20 t containers to an Asian based smelter and a quote provided by Lasry of Agadir, Morocco. Shipping costs are estimated to be USD2,032/20 t container.</li> <li>▪ Treatment and refining charges are based on quotations from two refineries.</li> <li>▪ The Moroccan government royalty payment is 3% of net smelter return. There are no private royalties that need to be considered.</li> </ul>
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li>▪ <i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ Design and production schedules for revenue calculations were based on detailed mine plans and mining factors assumptions.</li> <li>▪ A tin price of USD17,830/t been used. This</li> </ul>

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		figure is based on the LME cash price prevailing 2 June 2016. Financial modelling indicates that the project has an appropriate margin against adverse commodity price movements to provide a suitable level of confidence in the economic viability of the Ore Reserve, based on the current market position and forecasts.
<b>Market assessment</b>	<ul style="list-style-type: none"> <li>▪ <i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></li> <li>▪ <i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></li> <li>▪ <i>Price and volume forecasts and the basis for these forecasts.</i></li> <li>▪ <i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The following comments are based on a market assessment by Kasbah Resources Limited and are drawn from market assessments published by ITRI, CRU and BNPP.</li> <li>▪ In 2015 total global refined tin production was reported by the CRU in June 2016 as approximately 333,000 t. World consumption was approximately 344,000 t with a market deficit of approximately 11,000. World reported stocks at the end of 2015 equated to approximately 4.0 weeks of demand.</li> <li>▪ The CRU expects an annual market deficit of around 8,000 tonnes in 2016. year..</li> <li>▪ In the June 2016 the CRU Tin Monitor stated that ..." the CRU is still forecasting a marginal decline in global refined tin use this year, although trade sources mostly report improved or at least steady demand in the current quarter. If this continues, there may be a stronger under-pinning for higher prices by the year end. In the meantime, the recent range of \$15,500 - \$17,500 could be maintained."</li> <li>▪ .</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>▪ <i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></li> <li>▪ <i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ The Ore Reserve estimate is based on a financial model that has been prepared at a Definitive Feasibility study level of accuracy. All inputs from mining operations, processing, transportation and sustaining capital as well as contingencies have been scheduled and evaluated to generate a full life of mine cost model.</li> <li>▪ The economic analysis is based on a life of mine production schedule compiled by Entech. This production schedule consists wholly of Proved and Probable Ore Reserves. No Inferred Resources are included in the schedule.</li> <li>▪ Capital costs are based on quotations provided by suppliers and mining contractors.</li> <li>▪ Operating costs are based on quotations from suppliers and mining contractors.</li> <li>▪ The cost estimates are to the accuracy of <math>\pm 15\%</math> in accordance with guidelines published in Cost Estimation Handbook, AusIMM 1993</li> <li>▪ A project discount rate of 8% annually has been used to estimate the NPV.</li> <li>▪ No inflation is included in the economic analysis.</li> </ul>



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<b>Social</b>	<ul style="list-style-type: none"> <li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>ESIA and ESMMP has been approved by the CNEIE</li> <li>Tenement licences are current</li> <li>Land rental agreement process is complete</li> <li>Forestry occupation permit is under application</li> <li>MOUs for the establishment of Community Development Programmes have been signed with the two local communes</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul style="list-style-type: none"> <li>No naturally occurring risks attributable to climatic or seismic conditions have been identified.</li> <li>Moroccan Project operating company Atlas Tin SAS has been formed in accordance with Moroccan procedures. A JV shareholder agreement is in place.</li> <li>Investment convention approval is in progress.</li> <li>Permission to establish Project water bores has been given by ABHS</li> <li>Government approvals are in progress as above. Kasbah expects all approvals to be received in a timely manner.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss. No Probable Ore Reserve has been generated based on Measured material.</li> <li>The Proved Ore Reserve is based on that portion of the Measured Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.</li> <li>None of the Probable Ore Reserves have been derived from Measured Mineral Resource.</li> <li>The result appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>The Ore Reserve estimate, along with the mine design and life of mine plan has been peer reviewed by Entech personnel.</li> </ul>

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<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The Ore Reserve is attributed a confidence classification of Proven (17%) and Probable (83%).</li> <li>The design, schedule and financial model on which the Ore Reserve is based has been completed to a Definitive Feasibility study standard, with a corresponding level of confidence.</li> <li>The Ore Reserve is based on a global estimate.</li> <li>There is a degree of uncertainty associated with geological estimates. The Reserve classifications reflect the levels of geological confidence in the estimates.</li> <li>There is a degree of uncertainty regarding estimates of impacts of natural phenomena including geotechnical assumptions, hydrological assumptions and the modifying mining factors, commensurate with the level of study. The Competent Person is satisfied that the analysis used to generate the modifying factors is appropriate, and that a suitable margin exists to allow for the Reserve estimate to remain economically viable despite reasonably foreseeable negative modifying factor results.</li> <li>There is a degree of uncertainty regarding estimates of commodity prices and exchange rates, however the Competent Person is satisfied that the assumptions used to determine the economic viability of the Ore Reserves are reasonable based on current and historical data.</li> <li>The Competent Person is satisfied that further, i.e. quantitative, analysis of risk to confirm the Ore Reserves to an appropriate level of confidence is not required.</li> <li>There is a degree of uncertainty associated with geological estimates. The Reserve classifications reflect the levels of geological confidence in the estimates.</li> </ul>