KASBAH RESOURCES

09 February 2016

ASX CODE: KAS

OUR PRIME COMMODITY IS TIN

LME TIN PRICE (05/02/16)

USD 15,175/t

(CASH BUYER)

ABOUT KASBAH

KASBAH IS AN AUSTRALIAN LISTED MINERAL EXPLORATION AND DEVELOPMENT COMPANY.

KASBAH (75%) AND IT'S JOINT VENTURE PARTNERS TOYOTA TSUSHO CORP (20%) AND NITTETSU MINING CO. (5%) ARE ADVANCING THE ACHMMACH TIN PROJECT IN THE KINGDOM OF MOROCCO TOWARDS PRODUCTION.

PROJECTS

ACHMMACH TIN PROJECT
BOU EL JAJ TIN PROJECT

CAPITAL STRUCTURE

SHARES ON ISSUE:	556M
UNLISTED OPTIONS:	0.5M
CASH @ 31/12/15:	$2.6M

MAJOR SHAREHOLDERS

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

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ACHMMACH SMALL START OPTION

Successful Pre-Feasibility Study Confirms Low Capital Cost Development Opportunity

The Small Start Option (SSO) for the Achmmach Tin Project is a lower capital, higher grade, staged development opportunity more suited to the current commodity price and project funding environment.

The highlights from the successful pre-feasibility study on the SSO include:

- Pre-production capital reduced by 62% from the 2015 Enhanced Definitive Feasibility Study to **USD56M**
- Stage 1 run of mine ore grade increased to **1.05% Sn**
- All-in sustaining cost (AISC) of ≈**USD10,600 / t** of tin in concentrate
- C3 cost of tin production reduced by 4.9% to ≈**USD12,500 / t tin in concentrate**
- LOM free cash generation increases 8% to **USD92M**
- Payback reduced by ≈35% to **32 months**
- JV partners endorse commencement of definitive feasibility study

Kasbah Managing Director Wayne Bramwell said:

> **"With the SSO Kasbah has tailored a no-frills, fit for purpose design approach clearly focussed at addressing capital expenditure.**
>
> **Importantly, the SSO encapsulates a lower risk mining, construction and operating scenario that could see Achmmach established during a time of lower tin prices."**

OVERVIEW

In response to the combined impacts of a falling LME tin price and scarcity of development capital for larger scale resource projects, Kasbah Resources Limited **(Kasbah)** is pleased to announce the successful completion of a pre-feasibility study **(PFS)** on a Small Start Option for the Achmmach Tin Project.

The Small Start Option (SSO) for the Achmmach Tin Project (75% Kasbah, 20% Toyota Tsusho Corp., and 5% Nittetsu Mining Co.) is a lower capital, higher grade development opportunity more suited to a lower commodity price and more challenging funding environment.

The SSO builds upon the 2015 Enhanced Definitive Feasibility Study **(EDFS)** by using data and assumptions current at December 2015. The 2015 EDFS evaluated a 1.0 Mtpa underground operation and conventional processing facility treating Achmmach run of mine ore at an average grade of 0.77% Sn. This moderate grade but higher capital development model (approximately USD148M) for Achmmach is more appropriate for assumed forward tin prices above USD18, 000/t.

In contrast, the 2016 SSO PFS model revised the scale, engineering and capital requirements of the project down, initially mining and processing 0.5 Mtpa ore grades of greater than 1.0% Sn for the first 4.5 years. Post this period, the modular processing plant would be expanded from 0.5 Mtpa to 0.75 Mtpa capacity and process run of mine ore containing approximately 0.8% Sn for the additional 5-7 years of mine life.

Total project investment for this SSO development scenario is estimated at a PFS level assessment to be approximately USD56M, reducing some of the challenges around project financing. Importantly, this two stage, lower capital approach with a shift to contract mining, ore transport and crushing increases operational flexibility while maintaining the long term integrity of the mineable Achmmach resource.

The planned SSO incorporates:

- **A reduction in project scale -** with a corresponding significant reduction in capital requirements;
- **Adoption of a staged approach to mining** - increasing the stage 1 mine cut off-grade to raise run of mine ore grades to approximately 1.05% Sn for the first 5 years;
- **Simplified mine design** - with respect to ventilation, access to the lower Eastern Zone and mine fill;
- **Contract mining, ore transport and crushing** - engaging experienced third parties to provide these services removes the mine fleet and surface crushing capital requirements from pre-production capital costs;
- **Increased metallurgical recovery** - higher run of mine grades in the early years facilitates metallurgical recovery rising to 74.5% under this model;
- **Modular plant design** - reduces processing capital and power requirements, construction complexity and installation costs; and
- **Reduction in surface infrastructure** - due to project scale and fit for purpose design philosophy.

These changes in mine operation and construction methodology have the additional benefit of reducing construction, ramp up and operational risks to ensure stronger cash flow in the critical early years of the project.

Table 1 depicts the economic comparison of the SSO at an LME Sn price of USD15, 500 / t and the EDFS (rerun at USD15, 500 /t) so a direct comparison can be made.

Table 1: Achmmach SSO and EDFS Comparative Life of Mine Economic Summary

Parameter	Units	EDFS	SSO*
Ore mined	Mt	9.2	**6.45**
Sn grade (LOM)	%	0.77	**0.86**
Tin in concentrate	t	51,200	**40,623**
Concentrate grade	%	55	**55**
Tin concentrate shipped	t	93,100	**73,861**
Project life	months	128	**135**
Mine production period	months	116	**130**
Capex pre-production	USD M	131	**42**
Start-up & working capital	USD M	17	**14**
Total project investment	**USD M**	**148**	**56**
Operating costs			
C1[A]	USD/t tin	8,313	**8,625**
C3[B]	USD/t tin	13,126	**12,480**
All in sustaining cost (AISC)	**USD/t tin**	**9,857**	**10,597**
Project Financials			
Tin price	USD/t	15,500	**15,500**
Revenue	USD M	747	**592**
Free cash	USD M	85	**92**
Payback	months	49	**32**
Project NPV_8	USD	15	**43**
Project IRR	%	10.6%	**24.7%**

** Base case utilises no-fill, to be optimised.*

[A]- C1 cost is the sum of mining, processing, site administration and off-site refining.

[B] - C3 cost is the sum of C1 cost, depreciation & amortisation, royalties and project related corporate costs.

The staged mining approach discussed in the overview is depicted in **Table 2.** The increase in mine cut-off grade in Stage 1 (to 0.8% Sn) elevates run of mine grade to approximately 1.05 % Sn, with a return to a lower cut-off grade in Stage 2 (of 0.55% Sn) supporting an expansion to 0.75 Mtpa operation.

Table 2: SSO PFS* Staged Mining Metrics

PFS metrics	Stage 1	Stage 2
Cut-off grade	0.8% Sn	0.55% Sn
ROM tonnes and grade	**2.0 Mt at 1.05% Sn**	**4.4 Mt at 0.77% Sn**
Delivering	21,100 t contained tin to mill	34,000 t contained tin to mill
Processing	0.5 Mtpa over 52 months	0.75 Mtpa over 78 months

* Base case utilises no-fill, to be optimised.

The higher cut-off grade and run of mine ore grades in Stage 1 of the SSO have also resulted in an increase in Stage 1 metallurgical recovery. Achmmach metallurgical recovery increases as ROM grade increases and as such the Stage 1 recovery rises to 74.5%, to produce approximately 315 tonnes/month of tin in concentrate. In Stage 2, the cut-off grade returns to the EDFS level and run of mine ore grade returns to approximately 0.8% Sn (with Stage 2 metallurgical recovery dropping back to 71.8%) to produce approximately 345 tonnes/month of tin in concentrate.

The SSO PFS design and operating philosophy has reduced initial project start up capital costs to approximately **USD56M**. The major savings include:

- a shift to contract mining (removal of ≈ USD20M of underground mining fleet costs for the project owner);
- eliminating paste backfill and its associated capital (≈ USD7M);
- utilisation of contract crushing (removing ≈ USD7M of capital equipment from the project owner);
- simplifying the primary comminution and classification circuit to save ≈ USD11M;
- reducing flotation plant and associated reagent systems to save ≈ USD4M; and
- a significant reduction in indirect costs (≈ USD13.8M driven by the change in project scale and capital equipment).

Figure 1 compares the EDFS capital and illustrates the distribution of capital savings achieved in the SSO by project component.

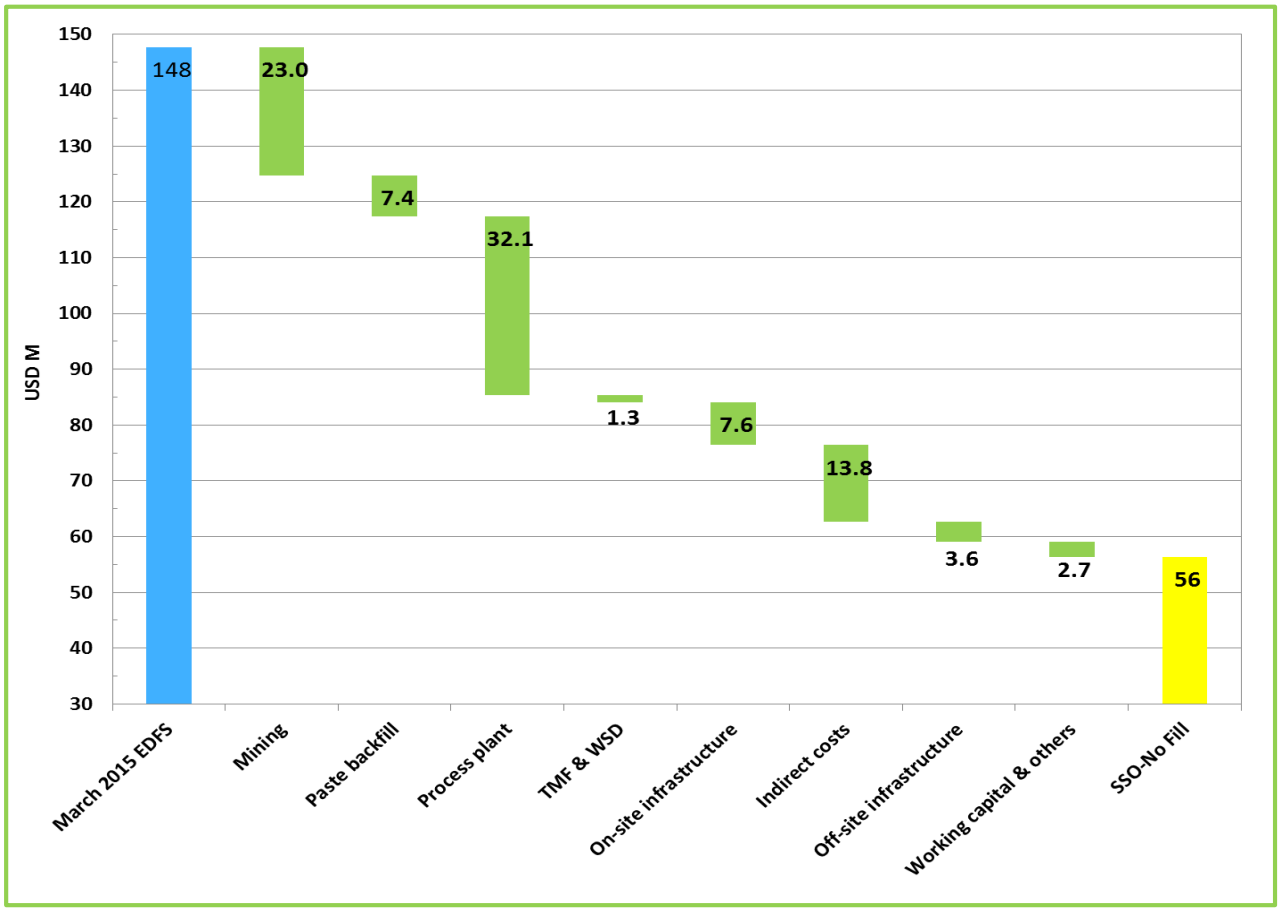

Figure 1: EDFS to SSO Capital Reduction (USD M by project area)

PFS CONCLUSIONS

The lower capital requirements of the SSO, higher early run of mine grades and the competitive operating cost profile for the Achmmach Tin Project makes the SSO a stronger, more robust development proposition than that of the higher capital 2015 EDFS.

The following aspects of the SSO model are key to its success:

- Reducing the scale of the project, its footprint and size of the ore processing hardware;
- 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; and
- Maximising the use of existing site infrastructure requirements.

The SSO PFS assessment takes all of these design aspects into account with the optimisation of the mine fill strategy at the DFS stage likely to extend the mining inventory above that of the base case depicted in the PFS.

Critically, the SSO model and its significantly reduced capital requirements also reduces the Achmmach sensitivity to tin price fluctuations with **Table 3** summarising PFS project returns across a wider range of LME tin prices.

Table 3: Achmmach SSO PFS Economic Sensitivity to LME Tin Price

Price, USD/t	SSO *	
	NPV, USD M	IRR, %
13,175	-5.0	5.6%
13,950	11.6	13.0%
14,725	27.9	19.3%
15,500	**43.3**	**24.7%**
16,275	58.6	29.7%
17,050	73.9	34.5%
17,825	89.2	39.0%

** Base case utilises no-fill, to be optimised.*

These combined factors indicate that the SSO concept provides a technically and economically viable option for the development of the Achmmach Tin Project and as such it will be advanced to a definitive feasibility study (DFS) level of assessment.

LOOKING FORWARD

On 20 January 2016 Bloomberg reported that tin smelters in China, the biggest supplier of refined tin to the world market, agreed to cut production this year by more than 10 percent to try to halt a decline in prices to the lowest since 2009. Nine companies representing more than 80% of the country's output, including the largest producer Yunnan Tin Co, plan to reduce refined tin supply by 17,000 metric tons.

This cut is equivalent to approximately 5% of global output last year. On announcement of these proposed supply cuts tin prices in Shanghai rose to as high as 95,550 Yuan (USD14,522) a tonne. On 5 February 2016 the LME tin closing price had risen to USD 15,175 / tonne.

With the changing tin market dynamics in view, all the Joint Venture partners have endorsed the SSO model as being worthy of advancement to a definitive feasibility study **(DFS)** level of accuracy during H1 2016. The additional technical work required will include:

- Optimisation of mine fill strategy;
- Finalising underground mining contractor input costs;
- Upgrading mine owner costs;
- Upgrading surface equipment supply and installation costs;
- Upgrading surface infrastructure and contract services costs;
- Finalising the project financial model; and
- Developing a new Ore Reserve.

Few new tin projects are positioned to meet medium term increases in tin demand and as such Achmmach remains an advanced development opportunity that is strategically positioned for the 2017 tin market's needs.

Appendix A provides a summary of the SSO scope, methodology and a discussion of PFS project economics.

On behalf of the Board

Wayne Bramwell - Managing Director

For further information please visit: www.kasbahresources.com
Or email: info@kasbahresources.com
Or follow us on Twitter: @kasbahresources

FORWARD LOOKING STATEMENTS

Some statements in this report regarding estimates or future events are forward-looking statements. They include indications of and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned', "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain mine licences, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel; incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rates; currency and interest rate fluctuations; various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions; the demand for and availability of transportation services; the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

Statements regarding plans with respect to the Company's mineral properties may contain forward-looking statements. Statements in relation to future matters can only be made where the Company has a reasonable basis for making those statements.

APPENDIX A: SSO SUMMARY

2 INTRODUCTION

The Achmmach Tin Project is a greenfields project located in El Hajeb province of Morocco. Atlas Tin SAS **(ATS)**, a joint venture company owned by Kasbah Resources Ltd (75%), Toyota Tsusho (20%) and Nittetsu Mining Corporation (5%) is the Project owner. The overall objective of ATS is to develop an underground mine for the extraction and processing of tin bearing ore to produce a saleable tin concentrate.

Kasbah Resources Limited **(KAS)** commenced resource development drilling activities at Achmmach in 2007, and released a DFS based on a 1Mtpa underground mining operation to the market in March 2014. The LME spot tin price at this time was USD23, 025/t.

After the release of the DFS, the definition of the small but high grade Western Zone **(WZ)** in the Achmmach Ore Reserve prompted KAS to review the DFS culminating in the release of its Enhanced DFS **(EDFS)** to the market in March 2015. The EDFS retained the terms of the DFS, but considered means to reduce project capital costs while applying an average tin price of USD21,511/t.

Since the release of the EDFS, the tin price has continued to soften as illustrated in **Figure 2 below**.

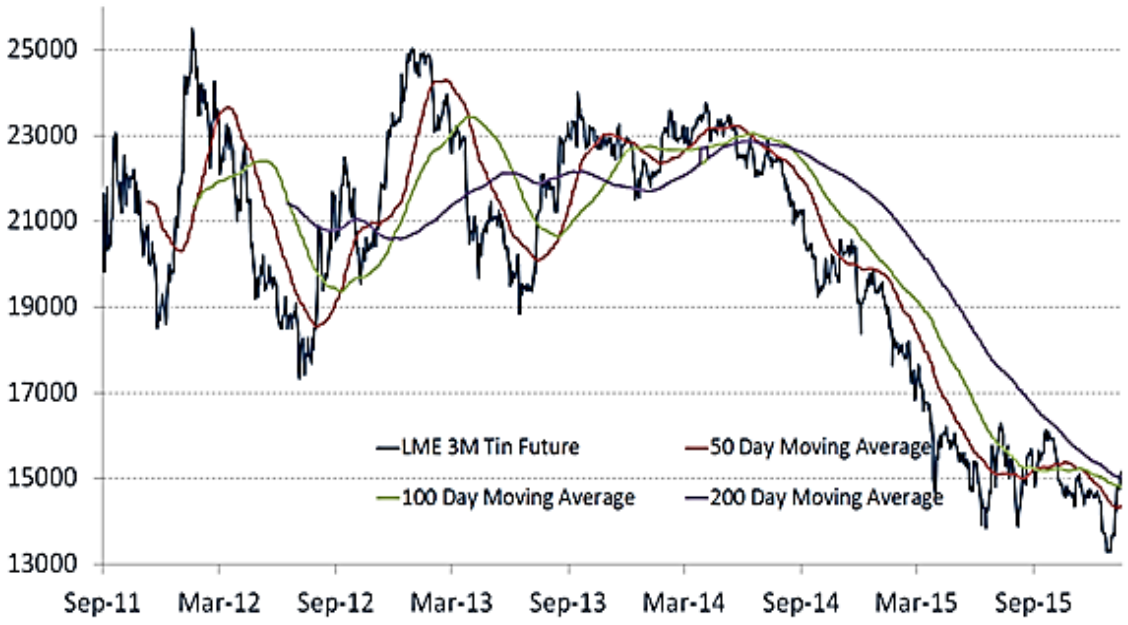

Figure 2: LME Tin Price (2011- February 2016)

(Ref: TMT Metals)

With respect to pre-production capital requirements, it will be difficult to finance the development of the 1 Mtpa Achmmach Project as envisioned in the EDFS with the tin price below USD18, 000/t. Consequently, ATS engaged Kasbah to evaluate a smaller scale, less capital intensive development and operational route to tin concentrate production (the SSO).

Initially Kasbah tested an ore mining rate of 300 ktpa but found the project cash flow could not support the development costs of the mine. Subsequently Kasbah established 500 ktpa to be potentially viable under a philosophy based on employing contract mining, ore transport and crushing services to minimise initial owner investment, reducing the process plant to parallel modular streams of 250 ktpa capacity each and reducing the scope and scale of buildings, roads and power supply construction.

Table 4 lists the key contributors engaged by Kasbah to develop the key inputs to the SSO evaluation.

Table 4: SSO Contributors

Section	Contributors	Area
Mining	▪ Entech Pty Ltd **(Entech)** ▪ Minero ▪ Red Rock Consulting	▪ SSO schedule development ▪ Mine contractor RfQ packages ▪ Technical and costing advice ▪ Mine design review
Processing	▪ ADP Modular & Marine **(ADP)** ▪ Maelgwyn Mineral Services	▪ Plant layout redrafting; Equipment requirements; capital cost review ▪ Flotation process review and equipment selection
Economic modelling	▪ Optimum Capital **(OC)**	▪ Financial modelling; project finance
General Information	▪ Kasbah & ATS staff	▪ Revised Moroccan goods & services pricing ▪ Operating costs review ▪ Preliminary project modelling

All contributors, with the exception of ADP and Maelgwyn Mineral Services, participated in the development of the EDFS.

3 MINING

3.1 Mine Design

Kasbah engaged Entech to take the original EDFS mine design and evaluate alternative options to reduce cost and complexity. The most significant measure was the elimination of paste backfill in favour of selective use of loose waste fill and cemented rock fill (CRF). Given the requirement to further develop geotechnical interpretation of mine design options at the PFS stage, Entech assessed two fill cases, them being of No Fill (which relies on the use of some loose waste fill in the CZ, and Fill, which employs extensive use of CRF in the mid- to lower levels along the Meknes Trend.

Entech was also able to review mine development strategy, which resulted in the elimination of costly development between the upper and lower areas of the EZ. Changes to mine access and ventilation were also incorporated in the SSO design.

Table 5 compares and contrasts the SSO PFS mine design with the results of the 2015 EDFS mine design.

Table 5: EDFS and SSO Mine Design Factors

Factor	EDFS	SSO
Mining method	▪ Top down longhole open stoping method using pastefill	▪ Bottom up longhole open stoping method **with and without CRF**
Mine access	▪ Mine access will be via twin portals ▪ Establishment of a cross drive linking the Meknès trend with the Western Zone	▪ **No change from EDFS** ▪ **No change from EDFS** ▪ Establishment of a cross drive linking the CZ with EZ Deeps – **Specific SSO strategy**
Operations	▪ The mine will operate using local personnel. Experienced expatriate mining personnel will be engaged by ATS to provide initial mine development management and ore delivery and mining method training	▪ The mine will operate using local personnel employed and trained by the selected mining contractor
Grade strategy	▪ A cut-off grade of 0.55% Sn was determined as part of the ore reserve determination	▪ Stage 1 **cut-off grade of 0.80% Sn** was selected for each case ▪ Stage 2 cut-off grade of **0.55% Sn** was selected for each case
Schedule strategy	▪ The mining schedule includes a proportion of low grade incremental ore, which where possible will be delayed in the mine schedule in favour of delivering higher grade ore to the ROM pad	▪ The mining schedule consists of two phases with higher grade ore delivered during first four years ▪ 1.6 Mt of material at 0.46% Sn will remain in the mine at the end of Stage 2 for the Fill case ▪ 2.8 Mt of material at 0.57% Sn will remain in the mine at the end of Stage 2 for the No Fill case

Mine backfill	▪ Mine backfill will use cemented mill tailings, batched from a surface plant and reticulated underground	▪ Mine backfill for the Fill case will use **CRF** employing cement slurry produced in a contract batch plant
Equipment supply	▪ Mobile equipment will be purchased new and replaced as required ▪ Permanently installed underground service equipment will be purchased and installed as required	▪ Mobile equipment will be supplied by the mining contractor ▪ ATS will purchase permanent underground service equipment and free issue to the mining contractor for installation

3.2 Mine Schedule

Table 6 compares the staged SSO schedule with the EDFS mine schedule.

Table 6: EDFS and SSO Mine Schedule Factors

Factor	EDFS	SSO
Mine output	▪ Ramp to 1.05 Mtpa at 0.77% Sn ▪ See **Figure 3**	▪ **Stage 1: 2.0 Mt of ROM ore at 1.05% Sn** over 52 months; followed by ▪ **Stage 2: Expansion to 4.5 Mt of ROM ore at 0.77% Sn** over 78 months (Fill case) ▪ See **Figure 4**
Mine Sequence	▪ 8 zones ▪ See **Figure 5**	▪ 6 zones ▪ See **Figure 6**
Impact on EDFS Ore Reserve	▪ EDFS Ore Reserve 9.2 Mt at 0.77% Sn for 71,300 t of contained tin ▪ See **Table 6**	▪ SSO Mining Inventory 7.5 Mt at 0.84% Sn for Fill case; **Table 8** ▪ SSO Mining Inventory 6.4 Mt at 0.86% Sn for No Fill case; **Table 9**

Figure 3 and **Figure 4** illustrate the differences between the EDFS and SSO ore delivery schedules, utilising the no fill case in this instance. Most notable is the ability of the SSO schedule to bring contained tin forward in the schedule, to the advantage of the Project revenue flow.

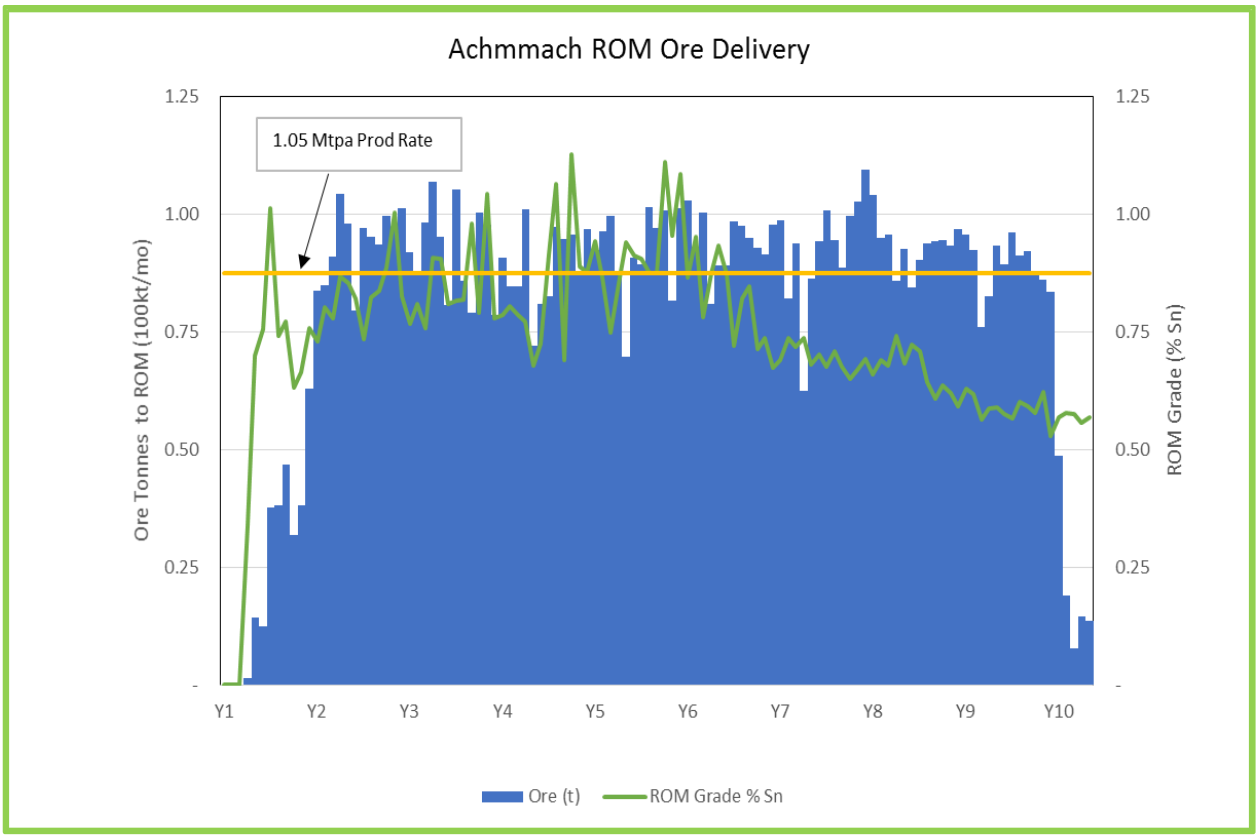

Figure 3: EDFS Ore Delivery Schedule

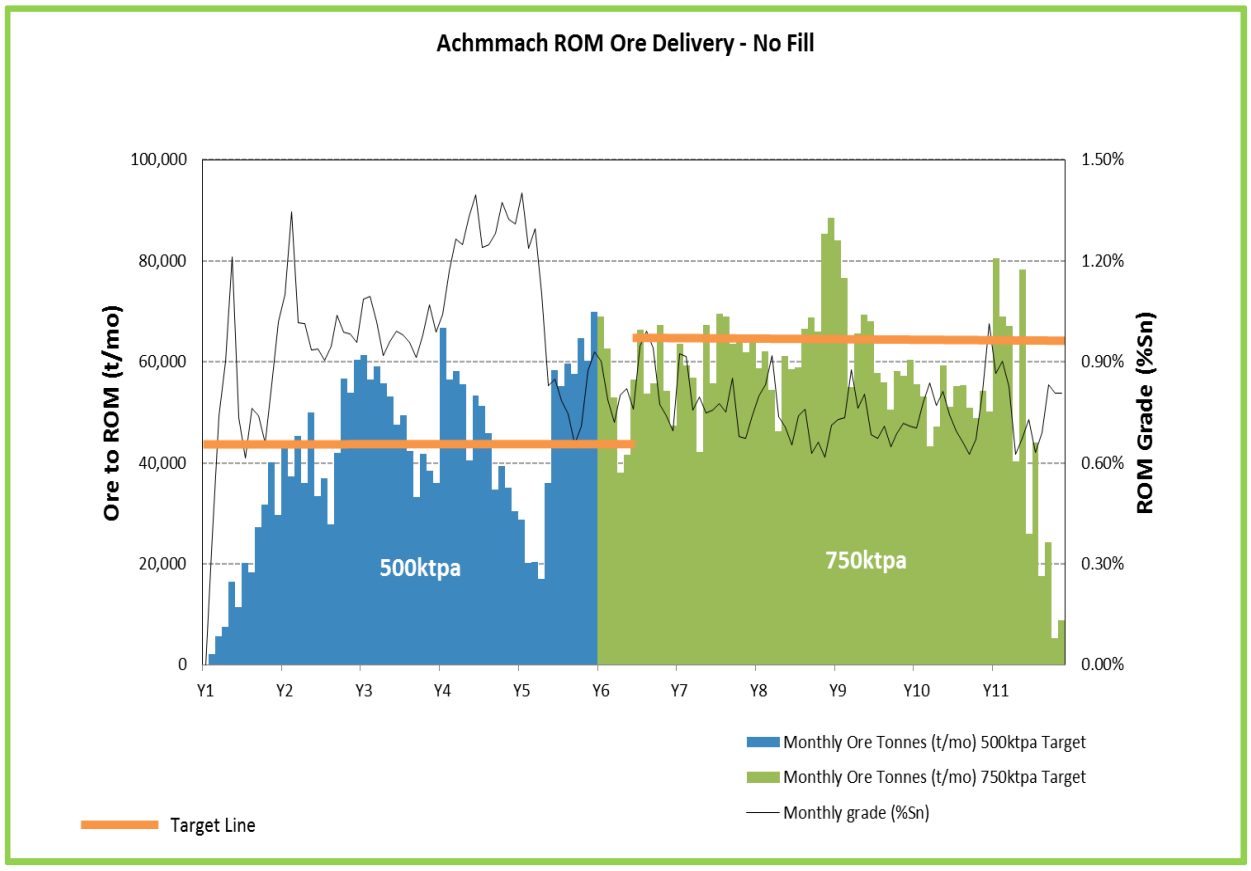

Figure 4: SSO No Fill Case Ore Delivery Schedule (showing average monthly ROM target)

3.2.1 Mining Sequence

In the EDFS access to the lower EZ was achieved by declining down from the upper EZ as illustrated in **Figure 5**. In the SSO, accessing the lower EZ from the CZ has simplified ore access in this area as shown in **Figure 6.**

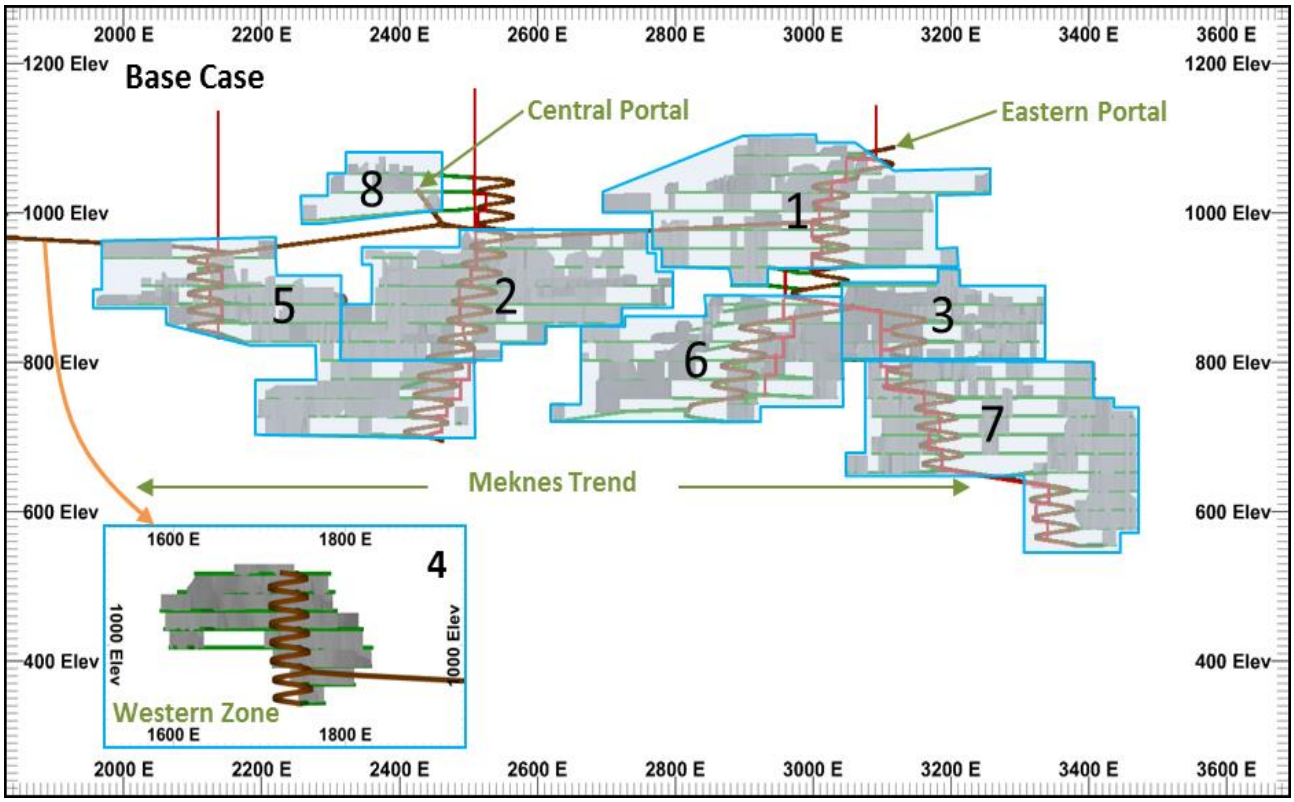

Figure 5: EDFS Mining Sequence (long section looking North)

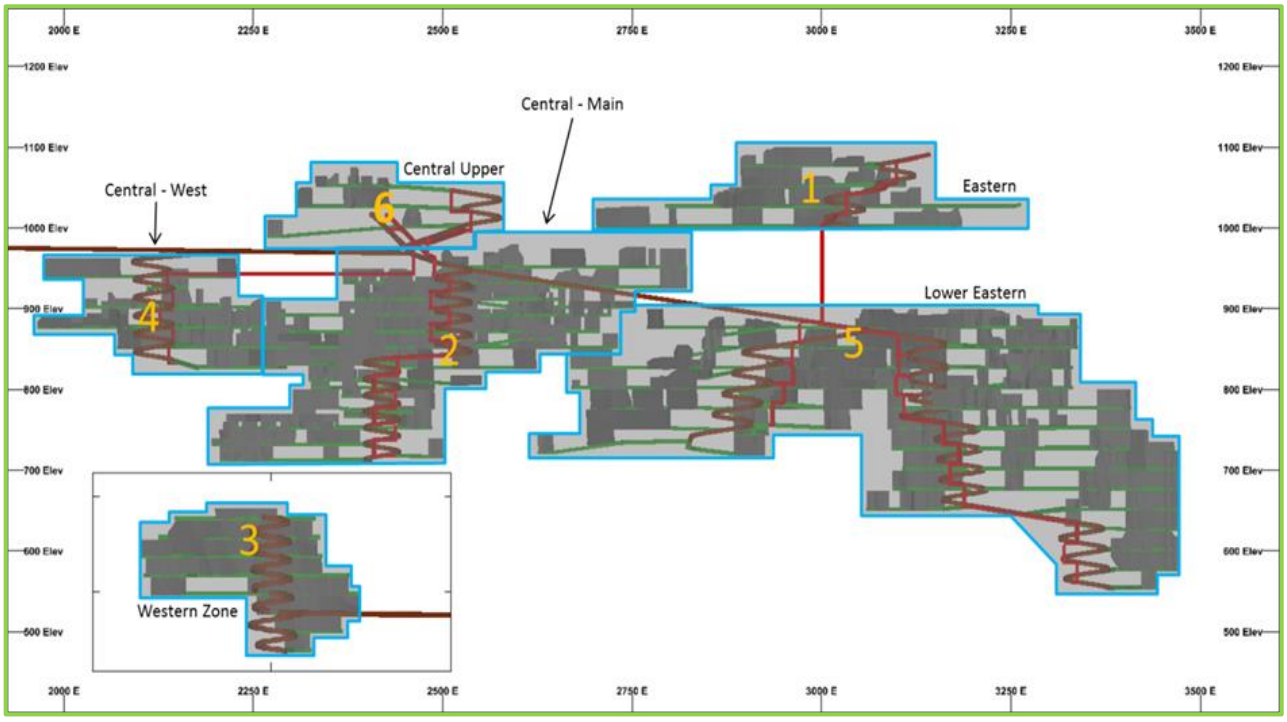

Figure 6: SSO Mining Sequence (long section looking North)

The following images from mine sequence animations compare the EDFS mine with the evolution of the SSO case through Stage 1 to completion of Stage 2. Refer **Figure 7**, **Figure 8** and **Figure 9**.

These stylised images depict the relative locations of mined ore blocks during the development of the SSO stages and at end of mine life for the EDFS and the SSO (block shading is an artefact of the animation design).

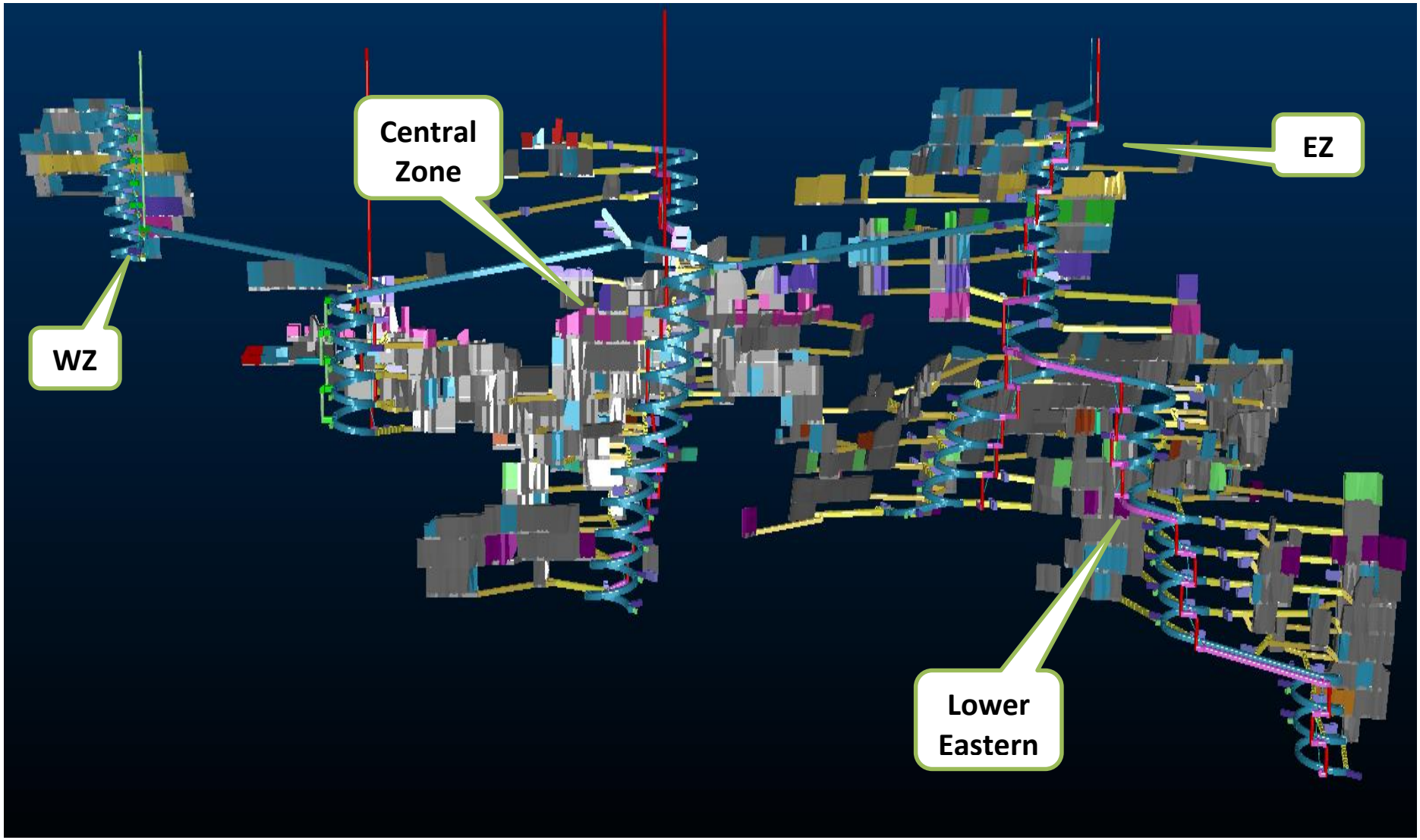

Figure 7 EDFS LOM Outcome (long section looking North)

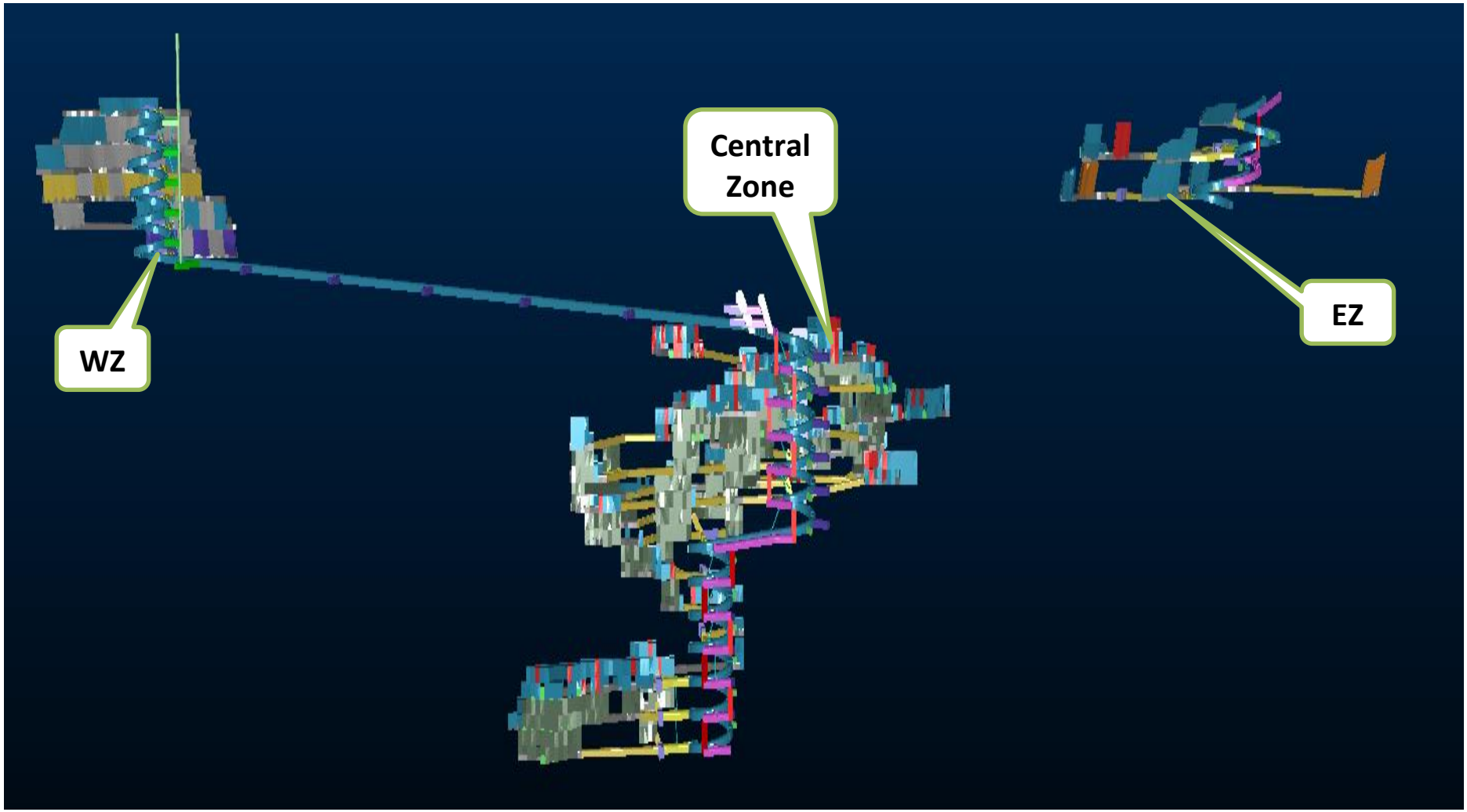

Figure 8: Stage 1 SSO Outcome (long section looking North)

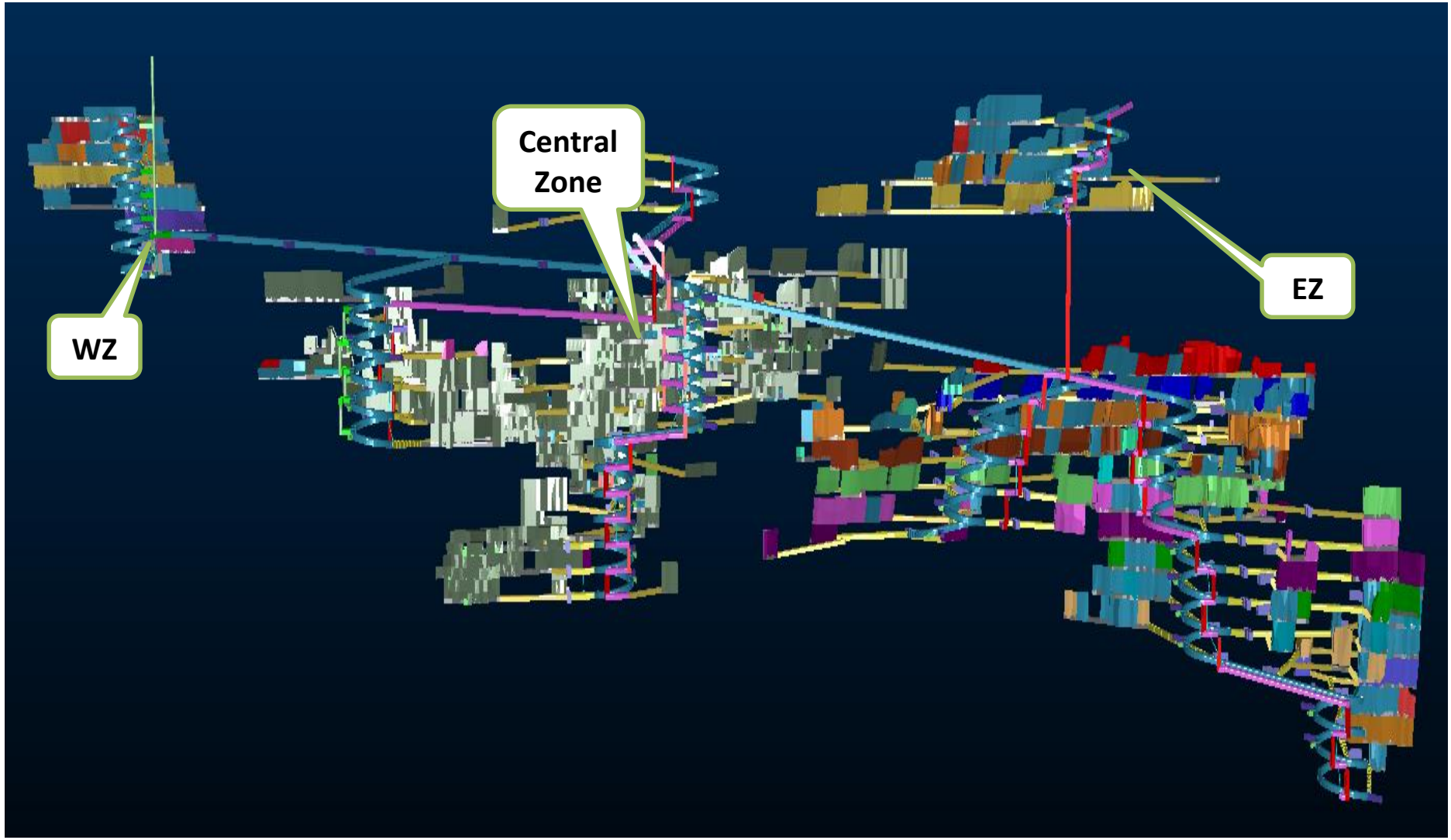

Figure 9: Stage 1+ Stage 2 LOM SSO Outcome (long section looking North)

3.2 Impact on Ore Reserve

Table 7 shows the JORC Ore Reserve determined from the 2015 EDFS.

Table 7: Achmmach March 2015 Ore Reserve
(@ 0.55% Sn Cut-off grade for High Grade Ore and 0.25% Sn for Low Grade Development Ore)

Achmmach	Proven tonnes	% Sn	Probable tonnes	% Sn	Total tonnes	% Sn	Contained tin, tonnes
Total High Grade Ore	1,258,000	0.98	7,463,000	0.77	**8,721,000**	**0.80**	**69,350**
Total Low Grade Development Ore	13,000	0.56	485,000	0.39	**498,000**	**0.39**	**1,950**
TOTAL	**1,271,000**	**0.97**	**7,948,000**	**0.74**	**9,219,000**	**0.77**	**71,300**

EDFS tin price USD21, 511/t. All reported numbers rounded to 1,000t ore, 0.01% Sn, 50t tin metal.

The Company confirms that it is not aware of any new information or data that materially affects the Ore Reserve Estimates included above and reported to the Market in ASX release of 12 March 2015, and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed**.**

Entech tested the effect of increasing the cut-off grade within the March 2015 Ore Reserve through incremental increases above the EDFS cut off of 0.55% Sn. This work demonstrated continuity of mineralisation within the EDFS ore zones up to 0.8% Sn, above which continuity began to deteriorate. For the purposes of this study, Entech selected 0.8% Sn as a cut off for design of Stage 1, reverting to 0.55% Sn cut off for Stage 2 design.

Entech then estimated the breakdown of SSO ore distribution within the EDFS March 2015 Ore Reserve, with "planned" ore representing ore that will be mined within the Stage 1 mine development plan. "Accessible" ore will require additional development to facilitate access and will contribute the bulk of Stage 2 ore supply, tested against a tin price of USD15,500/t. These categories together constitute the SSO 2016 Mining Inventory with **Tables 8 and 9** depicting approximations of this effect.

Table 8: Achmmach December 2015 SSO Mining Inventory – Fill Case

(@ 0.80% Sn Cut-off grade for Stage 1 Ore and 0.55% Sn for Stage 2 Ore)

Tonnage	Planned (P)	Accessible (A)	P+A	Sterilised	Totals
ORE, Mt					
0.8% COG	2.0	0	**2.0**	0	**2.0**
0.55% COG	0	5.5	**5.5**	1.7	**7.2**
Sub-totals	2.0	5.5	**7.5**	1.7	**9.2**
GRADE, Sn%					
0.8% COG	1.05%		**1.06**		**1.06**
0.55% COG		0.76%	**0.73**	0.46%	**0.68**
Sub-totals	1.05%	0.76%	**0.84**	0.46%	**0.77**
TIN, t					
0.8% COG	21,200	0	**21,200**	0	**21,200**
0.55% COG	0	42,300	**42,300**	7,800	**49,100**
Sub-totals	21,200	42,300	**63,500**	7,800	**71,300**

All reported numbers rounded to 1,000t ore, 0.01% Sn, 50t tin metal.

Table 9 Achmmach December 2015 SSO Mining Inventory – No Fill Case

(@ 0.80% Sn Cut-off grade for Stage 1 Ore and 0.55% Sn for Stage 2 Ore)

Tonnage	Planned (P)	Accessible (A)	P+A	Sterilised	Totals
ORE, Mt					
0.8% COG	2.0	0	**2.0**	0	**2.0**
0.55% COG	0	4.4	**4.4**	2.8	**7.2**
Sub-totals	2.0	4.4	**6.4**	2.8	**9.2**
GRADE, Sn%					
0.8% COG	1.05%		**1.05**		**1.05**
0.55% COG		0.77%	**0.77**	0.57%	**0.67**
Sub-totals	1.05%	0.77%	**0.86**	0.57%	**0.77**
TIN, t					
0.8% COG	21,100	0	**21,100**	0	**21,100**
0.55% COG	0	34,000	**34,000**	16,200	**50,200**
Sub-totals	21,100	34,000	**55,100**	16,200	**71,300**

All reported numbers rounded to 1,000t ore, 0.01% Sn, 50t tin metal.

Entech has consequently identified "Sterilised" ore that will become inaccessible as a consequence of adopting selective mining during Stage 2. **Figure 10** illustrates the general locations of sterilised ore blocks.

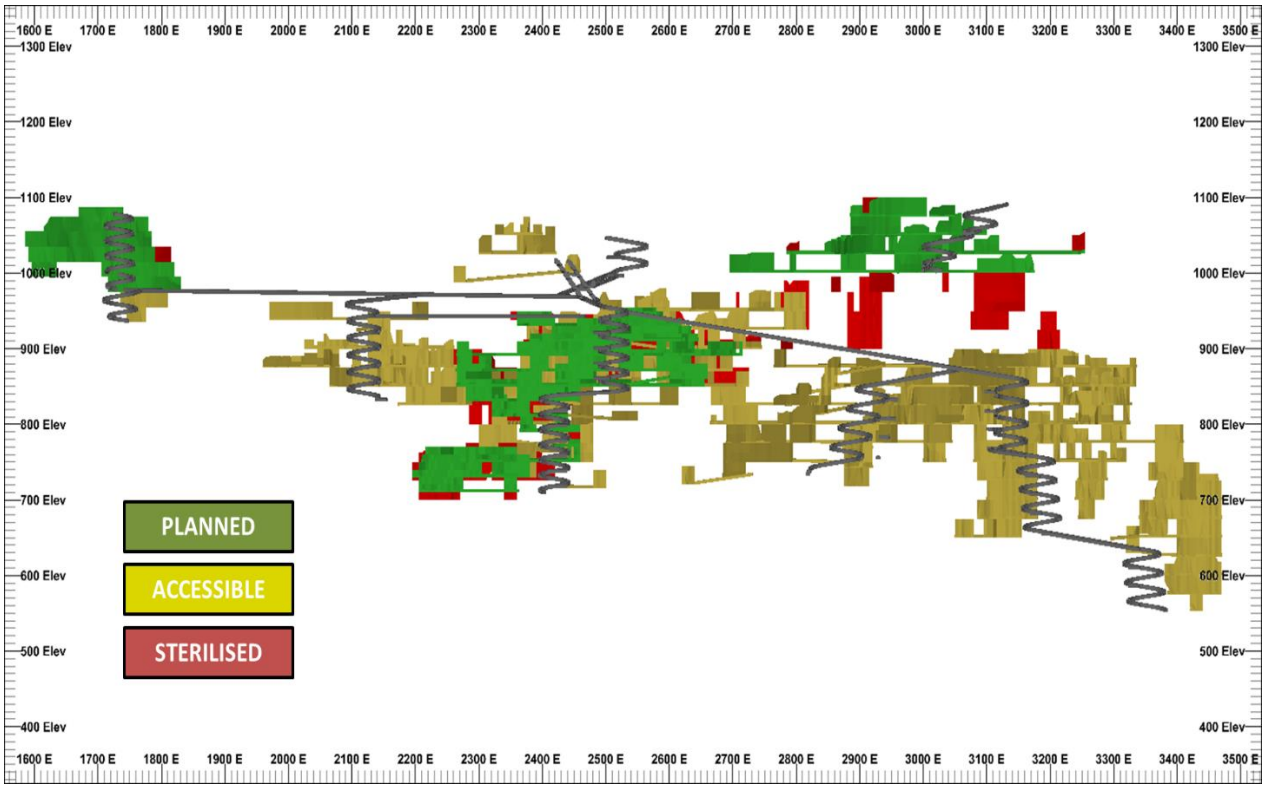

Figure 10: Achmmach SSO Block Model Showing Sterilised Ore Blocks

3.3 Mine Capital and Operating Costs

In a fundamental shift in operating philosophy from the EDFS, Kasbah invited selected underground mining contractors to provide estimates for the development and operation of the SSO at Achmmach. Indicative costs from these contractors have been utilised to determine PFS level operating cost estimates within the SSO.

4 ORE TREATMENT

4.1 SSO Process Plant Development

The SSO flow sheet design is based upon the EDFS process design criteria as there has been no change to the metallurgical properties of the ore that underpinned the EDFS flow sheet design. However, Kasbah expects the higher grade of Stage 1 ore in the SSO will lead to higher tin recovery during this stage of the Project.

However, the process engineering design philosophy differs from the EDFS in that the SSO will employ the installation of vendor supplied modular ore treatment units. This is in contrast to the heavily engineered 1 Mtpa facility envisaged in the EDFS.

Table 10 compares the ore treatment approach of the SSO to that of the EDFS.

Table 10: EDFS and SSO Process Design Comparison

Factor	EDFS	SSO
Recovery	▪ Estimated by algorithm ○ 71.8% for 51,200 t tin	▪ Estimated by algorithm; ▪ **Fill Case**: ○ Stage 1: 77.0% for 16,300 t tin ○ Stage 2: 72.3% for 30,600 t tin ▪ **No Fill Case** ○ Stage 1: 75.3% for 15,900 t tin ○ Stage 2: 72.2% for 24,600 t tin
Process	▪ Throughput 1.05 Mtpa ▪ Owner BOO ▪ Full scale treatment plant ○ 2-stage high energy rod/ball milling ○ Single stream process circuit	▪ Stage 1: 500 ktpa; Stage 2: 750 ktpa ▪ Contract crushing; ▪ Modular process facility: ○ Low power front end EDS milling ○ 250 ktpa milling & spiral circuits ○ Common regrind circuit ○ Common flotation circuit ○ Common concentrate dressing
Total Power Draw	▪ 6.4 MW	▪ Stage 1: 4.5 MW; Stage 2: 6.1 MW

Of note is a significant simplification to the proposed comminution circuit in the SSO. Kasbah has adopted the EDS mill as a cost effective option for primary milling of beneficiation plant feed. This technology developed by EDS of South Africa (www.eds.za.com) employs horizontal shaft hammer milling to replace rod and ball milling for the preparation of primary gravity concentration spiral feed. Kasbah proposes to carry out confirmatory testing of the EDS mill at the DFS stage of SSO evaluation.

ADP Modular & Marine **(ADP)** of Cape Town, South Africa prepared an equipment list, load list and pricing schedule for the SSO plant in consultation with the contributors shown in **Table 11** following.

Table 11: SSO Treatment Plant Estimate Basis

Section	Contributors	Area
Mass Balance	▪ Kasbah	▪ Based on EDFS mass balance
Flow Sheets	▪ Kasbah ▪ ADP ▪ Multotec ▪ Maelgwyn Mineral Services	▪ Block flow diagram ▪ Process flow diagrams ▪ Spiral plant flow sheet ▪ Flotation plant flow sheet
Equipment & Power	▪ ADP	▪ Consolidated vendor inputs
Plant layout	▪ ADP	▪ Consolidated vendor data
Cost Estimate	▪ ADP ▪ Kasbah	▪ Consolidated vendor equipment pricing ▪ Preliminary installation cost estimate ▪ Infrastructure cost reviews

Section 6 includes a comparison of SSO and EDFS ore treatment costs.

4.2 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 TMF unchanged at 0.5 Mtpa 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, approximately 0.42 Mt of water would be sequestered each year with tailings as paste back fill and impounded in the TMF. The reduction in overall ore processing to a maximum of 0.75 Mtpa would produce an equivalent quantity of 0.32 Mtpa sequestered in the TMF.

5. ENVIRONMENTAL

There will be a reduction in surface disturbance due to removal of the paste plant and consolidation of newly proposed buildings and workshops. There will be a higher utilisation of existing site infrastructure but land requirements associated with ore treatment and tailings management will not substantially change. 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 EDFS waste dump.

The remaining aspects of the ESIA are not expected to change.

6 SSO PROJECT ECONOMICS

This section consolidates the impacts of Project capital and operating costs associated with the SSO PFS. Kasbah and its contributors have employed foreign exchange rates current in December 2015.

6.1 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 within the SSO design philosophy has resulted in significant reduction of pre-production capital costs for the project, including working capital to approximately **USD56 M** as detailed in **Table 12**.

Table 12: Project Capital Cost Breakdown – Pre-production USD M

Cost Area	2015 EDFS	2016 SSO	Notes
Mine equipment	20.4	**5.2**	Owner component
Mine development	14.2	**6.6**	
Paste plant	7.4	**0**	
Process plant	43.6	**11.5**	Modular by ADP
Tailings and water management	4.0	**2.7**	Revised start-up schedule per Golder UK
Site infrastructure	16.3	**8.7**	Elimination of various buildings. Includes laboratory
Indirect Costs	17.5	**3.7**	Substantial reduction in EPCM charges
Off-site infrastructure	7.8	**4.2**	22 kV transmission line
Sub-total pre-production capital	**130.3**	**42.6**	
Working capital	3.3	**7.6**	
Contingency	11.0	**5.0**	
Capitalised VAT and other costs	2.3	**1.3**	
Total Project Investment	**147.8**	**56.4**	

Kasbah has reduced mining capital by approximately USD30M through the use of contract underground mining services and the elimination of the paste backfill plant. The introduction of contract crushing and simpler, lighter modular ore treatment plant components has also had a beneficial effect on treatment plant capital.

A reduction in indirect costs is a direct consequence of this philosophy.

Figure 11 illustrates the contributions of the components of the capital estimate to the reduction in capital from the EDFS case to the SSO base case.

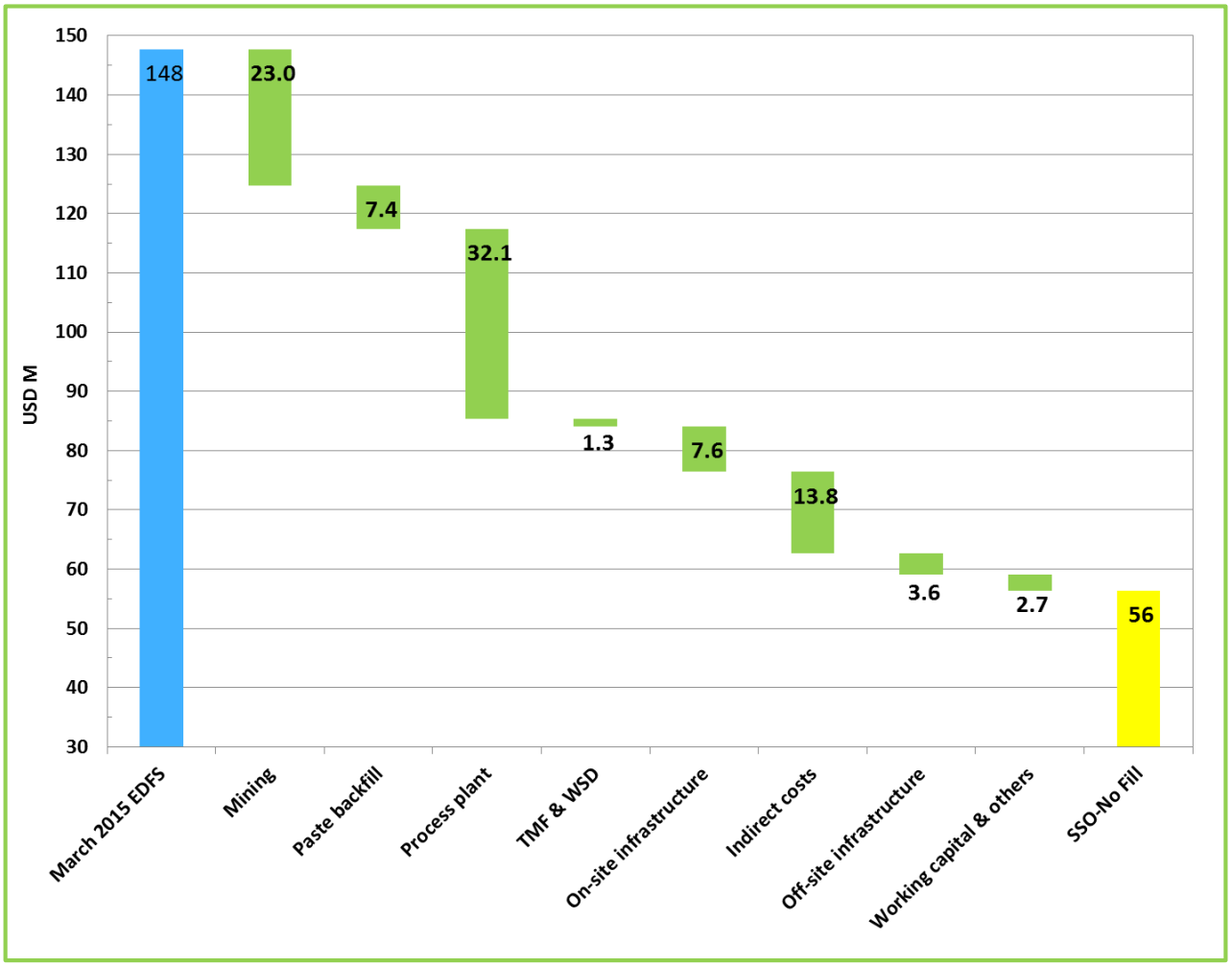

Figure 11: EDFS to SSO Capital Reduction by Area (USD M by Area)

6.2 OPERATING COSTS

Table 13 and **Table 14** summarise the SSO PFS life of mine operating costs in terms of recovered tin and ROM ore.

Table 13: SSO PFS Operating Cost Estimates - USD/t of Recovered Tin

Operating Costs – Life of Mine	EDFS	SSO Fill	SSO No Fill
Mining	3,935	4,117	**3,733**
Processing	2,379	2,961	**2,953**
Administration	895	767	**840**
Concentrate transport and processing	1,109	1,099	**1,099**
C1 Cash Costs	**8,318**	**8,944**	**8,625**
Depreciation & amortisation	4,243	2,872	**3,240**
C2 Cost	**12,561**	**11,816**	**11,865**
Royalties	574	404	**404**
Project related corporate costs	161	202	**211**
C3 Cost	**13,296**	**12,422**	**12,480**

Table 14: SSO PFS Operating Cost Estimates - USD/t of Ore

Operating Costs – Life of Mine	EDFS	SSO Fill	SSO No Fill
Mining	22.50	25.47	**23.52**
Processing	13.22	18.32	**18.61**
Administration	4.97	4.74	**5.29**
Concentrate transport and processing	6.16	6.80	**6.93**
C1 Cash Costs	**46.85**	**55.65**	**54.73**
Depreciation & amortisation	23.57	17.77	**20.42**
C2 Cost	**70.42**	**73.42**	**75.15**
Royalties	3.19	2.50	**2.55**
Project related corporate costs	0.89	1.25	**1.33**
C3 Cost	**74.50**	**77.17**	**79.02**

SSO costs per tonne of tin have declined slightly in comparison with EDFS costs as mine productivity and metallurgical recovery improvements take effect. 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.

Depreciation costs reflect the lower quantities of ore mined and tin recovered in the No Fill case.

6.3 Financial Modelling

Optimum Capital utilised the EDFS financial model as the basis for the SSO PFS assessment. An LME tin price of USD15, 500/t was utilised across the three cases. 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 15 compares the 2015 EDFS and 2016 SSO at the base case tin price of USD15, 500/t. For comparative purposes both the Fill and No-fill scenarios are depicted.

Table 15: Achmmach EDFS and SSO Technical and Economic Summary

Parameter	Units	EDFS	SSO Fill	SSO No Fill
Ore mined	Mt	9.2	7.56	**6.45**
Sn grade	%	0.77	0.84	**0.86**
Tin in concentrate	t	51,200	46,781	**40,623**
Concentrate grade	% Sn	55	55	**55**
Tin concentrate shipped	t	93,100	85,055	**73,861**
Project life	months	128	148	**135**
Mine production period	months	116	143	**130**
Capex pre-production	USD M	131	43	**42**
Start-up & working capital	USD M	17	14	**14**
Total project investment	USD M	148	57	**56**
Capex Sustaining	USD M	54	58	**55**
Operating costs:				
C1[A]	USD/t tin	8,318	8,944	**8,625**
C3[B]	USD/t tin	13,126	12,422	**12,480**
All In Sustaining Cost (AISC):				
C1 Cash Costs	USD/t tin	8,318	8,944	**8,625**
Royalties	USD/t tin	404	404	**404**
Sustaining Capex	USD/t tin	974	1,234	**1,357**
Corporate Costs	USD/t tin	161	202	**211**
AISC TOTAL:	**USD/t tin**	**9,857**	**10,784**	**10,597**
Project yield:				
Tin price	USD/t	15,500	15,500	**15,500**
Revenue	USD M	747	682	**592**
Free cash	USD M	85	106	**92**
Payback	**months**	**49**	**47**	**32**
Project NPV_8	**USD**	**15**	**44**	**43**
Project IRR	**%**	**10.63%**	**21.58%**	**24.69%**

[A] – C1 cost is the sum of mining, processing, site administration and off-site refining.

[B] – C3 cost is the sum of C1 cost, depreciation & amortisation, royalties and project related corporate costs.

Table 16 illustrates the comparative sensitivities of each SSO case to the tin price.

At lower tin prices the No Fill case appears to produce a superior NPV result as the Fill case bears the cost of fill preparation and placement. However, as tin price exceeds USD15, 500/t the Fill case becomes dominant owing to the greater quantity of tin produced over its longer Stage 2 mine life.

Table 16 PFS Sensitivity to Tin Price

Price, USD/t	SSO Fill		SSO No Fill	
	NPV_8, USD M	IRR, %	NPV_8, USD M	IRR, %
13,175	-8.5	5.0%	-5.0	5.6%
13,950	9.3	11.1%	11.6	13.0%
14,725	26.8	16.6%	27.9	19.3%
15,500	**43.9**	**21.6%**	**43.3**	**24.7%**
16,275	61.0	26.3%	58.6	29.7%
17,050	78.0	30.8%	73.9	34.5%
17,825	95.0	35.1%	89.2	39.0%

The additional operating efficiency provided by the SSO mine design provides the opportunity to adjust the fill strategy as geotechnical requirements or tin price allow.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 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.

The financial assessment of Fill and No Fill cases (as depicted in **Table 15**) suggests there is an optimal use of CRF, which will extend the mining inventory above that of the No Fill case, but at lesser up-front operating costs than that of the Fill case.

This fill optimisation is planned for the DFS.

8 PROJECT OPPORTUNITIES

The SSO refinement of the Achmmach Project parameters supports the potential to realise further improvements in the DFS as time and Project development activity permit. The opportunity now exists for the optimisation of the use of fill materials within the scope of the SSO mine design, and to revise the design in general terms. The present assessment of the SSO design is based on 20 m level intervals. Expanding this to 25 m offers the potential to reduce lateral development requirements, thus reducing mining costs.

The Achmmach drilling programme has also not yet fully defined the Meknes Trend mineral resource. This resource remains open at depth and along strike. Establishment of sufficient underground development will create the opportunity for additional resource drilling within the Meknes Trend.

Drilling to date has barely tested the extent of the SAT. A small reserve now exists in the Western Zone, but this represents 200 – 250 m of the 1.6 km of SAT strike distance. Again, the opportunity for additional drilling to test down dip extensions of the WZ from underground will arise in time.

Development from the Meknes Central Zone to the Western Zone will facilitate these programmes.