

An update on the Severn tin deposit

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Heemskirk Tin Project



Stellar 100% Owned Tin Projects:

Heemskirk Tin Project (Severn, Queen Hill, Montana and Oonah deposits)

Mount Razorback and St Dizier Satellite tin deposits

Large Exploration Licence package

- Five major underground metal mines, four currently operating, within 30km – a highly mineralised province with significant infrastructure and mining services
- Port of Burnie: 150km to the north, services all west coast mines providing access to world markets
- Renewable power and water nearby
- Secure Tenure: ML's over Heemskirk deposits, tailings pipeline and tailings storage and St Dizier satellite deposit
- Large EL Package: With a number of significant historic silver-lead mines providing further upside



History of exploration

- The immediate area surrounding the deposits was subject to intensive mining activity for silver-lead mineralisation between 1883 and 1963. The majority of the mining activity occurred between 1887 and 1919 with recorded production of 263,000t of silver-lead ore from numerous mines, adits, pits and costeans in the locality.
- Sporadic tribute mining from existing mines continued until the early 1960's, with the only significant production being from the New Montana, Zeehan Western (2,100t) and Oceana Mines (13,500t) (King, 1961).
- Minor tin production was recorded from the Oonah Mine between 1897 and 1910 with an estimated 15-20,000t of stannite mined and a tin-copper matt produced at the Zeehan Smelter.
- Modern exploration commenced in the mid 1960's initially by Placer Prospecting around the Oonah and Queen Hill deposits followed by Gippsland Pty Ltd who first intersected the Queen Hill cassiterite lodes in 1971.
- Gippsland later entered into a JV with Aberfoyle Resources, completing extensive exploration drilling up to 1992.
- The collapse of the tin price in the early 1990's saw activity decline and the deposits were retained by the JV as an RL granted in 1997.
- Stellar acquired the RL and recommenced exploration drilling in 2010, drilling a further 74 diamond drill holes into the deposits to 2022.



Regional Geology

- The Zeehan district has seen complex deformation, igneous activity and sedimentation from the Late Proterozoic to the present.
 - Basement rocks in Tasmania are dominated by the Late Precambrian Tyennan Element in the east and the Rocky Cape Association of similar age in the northwest.
 - The Zeehan Basin on the eastern margin of the Dundas Trough was a major control on the pre-Carboniferous geology of the Zeehan District.
- Around 700Ma a shallow rift basin developed between the northwest and eastern basement blocks.
 - Siliciclastic sediments of the Forest Conglomerate, Donaldson Formation, Timbs Group and Oonah Formation were deposited in the deepening basin.
 - Sag phase siliciclastic sedimentation and carbonate deposition followed and are represented by the Black River Dolomite, Savage Dolomite, Success Creek Group and upper Timbs Group.
 - The Success Creek Group unconformably onlaps the Oonah Formation in the Zeehan district and is marked by a structural and low grade metamorphic contrast between the two groups (Corbett, 1989).
 - The hiatus in deposition and increased complexity of the Oonah Formation is a result of the late Precambrian Penguin Orogeny.
- Continued rifting in the Late Proterozoic (580-550Ma) resulted in the deposition of a thick pile (>5km) of tholeiitic volcanics and associated sediments, carbonate and chert of the Crimson Creek Formation.
 - The Crimson Creek tholeiites have a within plate geochemical signature (Brown and Jenner, 1989). Correlates of the Crimson Creek Formation occur elsewhere in NW Tasmania outside of the Dundas Trough (Brown, 1986, Brown and Jenner, 1989).
- During the Middle Cambrian (515-510Ma) a sequence of mafic-ultramafic complexes were emplaced on the western margin of the Dundas Trough.
 - Ultramafic detritus in clastic rocks suggests they were emplaced high into or above the Crimson Creek Formation and were subject to Middle Cambrian Erosion (Corbett, 1989).
 - Berry and Crawford, (1988) proposed an obduction model for the emplacement of the mafic-ultramafic complexes and associated sedimentary sequences where a forearc terrain was thrust over a passive continental margin.
- Basaltic suites of genetically related island arc-ocean island affinities have been distinguished within the western margin of the Dundas Trough (Brown and Jenner, 1989).
 - These have been demonstrated to be genetically related to the spatially associated ultramafic complexes and include a high magnesium boninite and low titanium tholeiites (Brown and Jenner, 1989).

Regional Geology

- Post collision extensional tectonics produced troughs into which the Cambrian Dundas Group and Mt Read Volcanics were deposited.
 - The Dundas Group forms a complex sequence of locally derived sediments and volcanics along the western margin of the Dundas Trough.
 - The Mt Read Volcanics occupy the eastern margin of the trough with proximal volcanics juxtaposed along the boundary with the Tyennan Block grading into extensive volcanosedimentary sequences to the west.
- The Late Cambrian Delamarian Orogeny resulted in localised uplift and erosion of the Tyennan Block and subsidence of the Dundas Trough.
 - The Ordovician to Devonian Wurawina Supergroup unconformably fills structural and erosional basins.
 - The succession is divided into the Late Cambrian to Middle Ordovician coarse siliciclastic Denison Group, the Ordovician carbonates of the Gordon Group, and fine siliciclastics of the Silurian to Devonian Eldon Group (Banks and Baillie, 1989).
- The Middle Devonian Tabberabberan Orogeny has resulted in polyphasal deformation with intersecting fold trends forming dome and basin structures and overprinting relationships (Williams, 1978).
 - Folds are generally upright to steeply inclined with plunging hinge lines.
 - Many faults are steep thrusts and reactivation of Cambrian structures is common.
 - Folding within the Zeehan Basin produced dominantly NNW trending fold hinges.
 - Localised WNW trending folding is located in the Zeehan-Linda zone, possibly associated with the large Firewood Siding and Tenth Legion thrust faults (Williams, 1978).
- Several small to medium sized post tectonic I and S type granitoids intrude the early lithologies.
 - Granitoids were emplaced at shallow levels and are dominantly granite or biotite adamellite.
 - Geophysical modeling has indicated the presence of a large ENE trending ridge of granite linking the Heemskirk and Granite Tor plutons (Leaman and Richardson, 2003).
 - A number of styles of mineralization are associated with the Devonian granitoids including tin-tungsten, lead-zinc-silver (Collins et al, 1989) and the Avebury Nickel Skarn (Callaghan and Green, 2014).



Regional Geology

- Cassiterite mineralization is associated with stratabound massive sulphide bodies replacing carbonates of the Oonah Formation (Mt Bischoff, Queen Hill), Success Creek and Crimson Creek Groups (Renison, Montana).
 - Stockwork and fault related cassiterite-sulphide mineralisation is associated with the Renison, Severn, Queen Hill and Montana deposits.
 - Disseminated cassiterite is associated with greisenised granite on the southern margin of the Heemskirk Granite.
- Skarn tin-tungsten and tungsten-magnetite deposits occur adjacent to granite bodies in direct contact with calcareous sediments (Tenth Legion, St Dizier, Kara, Dolphin).
- Lead-zinc-silver fissure vein mineralization occurs in haloes around granite bodies.
 - Lead -zinc-silver lodes are typically small such as the numerous deposits of the Zeehan/Dundas field.
 - The Magnet Mine was the largest known of this style at 630,000t @ 7.3%Pb, 7.3% Zn and 427g/t Ag.
- Post deformation sedimentation resumed in the Permian with thick, essentially flat lying sequences of mudstone, sandstone and minor carbonates of the Parmeener Supergroup.
 - Minor Jurassic Dolerite sills are present in the Dundas Trough.
- Tertiary faulting, basin formation and alkali-olivine basalt extrusion formed the large Macquarie Harbour Graben west of Strahan and basalt flows north of Mt Heemskirk.
 - Surficial Quaternary deposits are widespread and erosion and deposition continues to modify the landscape



- The oldest rocks in the Zeehan locality are the Proterozoic siliciclastic sediments of the Oonah Formation comprising quartzite, black shales and siltstones.
 - The Oonah Formation within the Heemskirk Tin project area is characterized by two distinct lithologies,
 - a thinly bedded interlayered sequence of black shales and boudinaged quartzite locally termed by Aberfoyle geologists as the QS sequence
 - and a prominent grey quartzite termed the QST sequence that forms the Queen Hill ridgeline.
- Coeval with the Upper Oonah Formation is a localised basaltic sequence of tholeiitic lavas and proximal volcaniclastic breccias locally termed the Montana Basalt.
 - The Montana Basalt is located on the western side of Queen Hill and essentially bound the western margin of the mineralisation.
 - They consist of massive and fragmental vesicular basalt with associated lenses of volcaniclastic sandstone, siltstone and limestone/dolomite.
 - The QS and QST sequence is in faulted or disconformable contact with the underlying Montana Basalt.



- A localised sequence of grey siltstone and dolomite termed the Montana Beds separates the Oonah Formation from the Crimson Creek Formation on the eastern side of Queen Hill.
 - The Montana beds are discontinuous, varying in thickness and composition, and are interpreted as disconformable to the Oonah Formation and the overlying Crimson Creek Formation.
- The Crimson Creek Formation comprises a thick sequence of graded basaltic volcaniclastic turbidites with interbedded black shales.
 - The prevalence of black shale increases towards the base of the Crimson Creek Formation and the boundary between the Crimson Creek and Oonah Formations can be difficult to identify.
 - Rare vesicular basaltic lavas and proximal volcaniclastic breccias are present in some drill holes, particularly towards the north of the project area.
 - Localised dolomitic lenses are more common towards the base of the formation.
- The deposits are located in a broad scale northeast-southwest trending flexure in the dominantly east-west trending geology.
 - Within the mineralised zone the foliation and bedding dip steeply east at about 70-800.
 - Numerous bedding parallel and northwest trending faults disrupt the stratigraphic sequence.
 - Lithologies are generally considered to be east facing.



- The Heemskirk Tin Deposits are derived from Devonian Granite related hydrothermal activity similar to other deposits located on the west coast of Tasmania.
 - Such as the Renison, Cleveland, Mt Bischoff, Mount Lindsay, Razorback and St Dizier deposits.
 - The Heemskirk granite batholith outcrops 8-10km to the west of Zeehan.
 - Gravity modeling (Leaman and Richardson, 1989) and the metal zonation of the Zeehan-Dundas field strongly suggest the presence of a granite ridge extending east from Mt Heemskirk below Zeehan and Dundas at a depth of over 1km.
- The principal tin bearing minerals of the Heemskirk Deposits are cassiterite (SnO2) and subordinate stannite (Cu2S.FeS.SnS2).
 - Petrological studies (Teale, 2015) indicate mineralisation consists of generally coarse (0.1 0.6mm) cassiterite hosted in pyrite-pyrrhotite veins and disseminations in association with pervasive siderite-sericitechlorite-tourmaline±fluorite±topaz alteration.
 - Mineralisation is strongly zoned with late stage galena-sphalerite-silver fissure veining located towards the periphery of the tin mineralisation and elevated levels of Pb and Zn associated with upper levels of the mineralisation.
 - The tin–basemetal zoning of the deposits is well documented (e.g. Kitto, 1992) and is a valuable relationship for exploration.
 - Elevated levels of stannite are associated with the Upper Queen Hill deposit and from two holes near the bottom of the Montana deposit. High levels of stannite are present in the Oonah deposit.







Severn Geology

- The Severn deposit is essentially:
 - A stratabound stockwork and replacement style, located on and above the Oonah Formation QS sequence and Crimson Creek Formation boundary.
 - Mineralisation appears to be controlled by a broad northeast plunging fold/fault associated with Astley's Fault.
 - Sulphide-cassiterite mineralisation occurs in both sequences but is principally hosted within the Crimson Creek Formation.
 - Mineralisation strikes generally north-south, dips steeply east at 50-700 and plunges north, remaining open down dip and down plunge.
 - Mineralisation occurs principally as pyrite pyrrhotite-siderite stockwork veining with accessory cassiterite, stannite, chalcopyrite and rare arsenopyrite, galena and sphalerite.
 - Vein widths vary between a few millimeters to 0.5m. Vein orientations are variable.
 - The mineralised zone is broad, extending over 400m in strike length, over 50m in width and extending from 120m below surface to a depth of over 700m.





Queen Hill Geology

- The Queen Hill deposit is essentially:
 - A stratabound on the Montana Volcanics-Oonah QS sequence boundary with mineralisation occurring in both sequences.
 - Mineralisation strikes generally north-south, dips steeply east and plunges north, remaining open down plunge.
 - The deposit has a strike length of over 200m which extends from surface to 250m, varying in thickness from 2-25m.
 - The deposit comprises two main lenses with several small associated lodes.
 - Some of the dolomite beds associated with the volcanics have been replaced forming semi-massive sulphide bodies.
 - Mineralisation occurs as pyrite-siderite veining and replacements with accessory cassiterite, stannite, galena and sphalerite.
 - The deposit is strongly zoned with galena-sphalerite disseminations and veining more common towards the top and periphery of the tinsulphide mineralisation.
 - Base metal silver veins form lode style deposits on the periphery of the deposit.





Montana Geology

- The Montana deposit is essentially:
 - A vertical body striking generally east-north-east.
 - The deposit extends over 100m in strike length and extends from 50m below surface to nearly 400m depth.
 - The deposit is relatively thin, between 2-8m in width.
 - Mineralisation, occurring as massive pyrite-siderite with accessory cassiterite, galena, sphalerite and lesser stannite, is mostly hosted within stratabound siltstones and carbonates of the Montana Beds.
 - However, the western end of the deposit is interpreted to be controlled by a fissure vein hosted in the QS sequence.
 - Tin mineralisation is located below and adjacent to peripheral galena-silver-sphalerite lodes that were historically mined to a depth of 70m from surface.
 - Two galena silver lodes were exploited, one trending northwest, the other east-northeast.





Oonah Geology

- The Oonah deposit is essentially:
 - A structurally controlled fissure vein pyrite-chalcopyrite stannite-cassiterite-siderite-galena-sphalerite mineralisation hosted on a basalt shale contact.
 - The deposit strikes north-northwest for 3-400m and dips steeply north at 70o for over 200m.
 - Fissure veins are generally thin, between 1 and 5m width and are offset by the steeply northwest dipping Oonah Fault.
 - A basemetal lode and a stannite lode from two parallel structures where dilatant zones have opened up along lithological contacts during sinistral movement on the Oonah Fault.
 - Basemetal mineralisation and stannite is concentrated towards the top of the deposit. Geological control on the top of the deposit is well defined by historic mine workings.









Heemskirk Tin Project

2019 Mineral Resource Estimate

Classification	Deposit	Tonnes (mt)	Sn (%)	Contained Sn (t)	Cassiterite % of Total Sn (%)	Cu (%)	Pb (%)	Zn (%)
Indicated	Upper Queen Hill	0.32	1.0	3,230	87	0.2	2.1	1.0
	Lower Queen Hill	0.65	1.4	9,230	97	0.0	0.1	0.1
	Severn	1.15	1.0	11,500	99	0.1	0.0	0.1
Total Indicated		2.12	1.1	23,960	97	0.1	0.4	0.2
Inferred	Upper Queen Hill	0.11	1.6	1,760	94	0.2	1.9	0.7
	Lower Queen Hill	0.36	1.4	5,040	97	0.0	0.2	0.0
	Severn	2.74	0.9	24,660	99	0.0	0.0	0.0
	Montana	0.68	1.5	10,200	96	0.1	0.7	1.4
	Oonah	0.59	0.9	5,310	36	0.8	0.1	0.1
Total Inferred		4.48	1.0	46,970	90	0.1	0.2	0.3
Total Indicated	6.60	1.1	70,930	92	0.1	0.3	0.3	

Heemskirk Tin Project - Resource Update

Variance (%)

Rescat	Deposit	Tonnes	Sn Pct DA	Sn Ppm	Cu Ppm	Pb Ppm	Zn Ppm	Sn Tonnes
Inferred	Severn	21%	3%		32%	-24%	18%	24%
Indicated	Severn	38%	5%		1%	6%	-31%	45%
Grand Total		26%	4%		20%	-14%	0%	31%

- Significant upgrade to Severn Resource for overall tonnes and Sn metal tonnes. Small upside for grade. Geological domains were remodelled to provide a more coherent model of the mineralisation at Severn, with a review also undertaken of the block modelling parameters to better understand the grade distribution of the deposit.
- Additional drill holes included:
 - ZS140
 - ZS143
 - ZS143W
 - ZS148
 - ZS149
 - ZS150
 - ZS151

Classification	Deposit	Resource	Tonnes	Sn (%)	Contained	Cassiterite % of	Cu	Pb	Zn
		Date	(IVIT)	(%)	Sn (t)	rotal Sn (%)	(%)	(%)	(%)
Indicated	Upper Queen Hill	2019	0.3	1.0	3,254	87	0.2	2.1	1.0
	Lower Queen Hill	2019	0.7	1.4	9,299	97	0.0	0.1	0.1
	Severn	2022	1.7	1.0	17,235	98	0.1	0.0	0.0
Sub Total	Indicated		2.6	1.1	29,788	97	0.1	0.3	0.2
Inferred	Upper Queen Hill	2019	0.1	1.6	1,728	94	0.2	1.9	0.7
	Lower Queen Hill	2019	0.4	1.4	5,106	97	0.0	0.2	0.0
	Severn	2022	3.2	0.9	29,528	98	0.1	0.0	0.1
	Montana	2019	0.7	1.5	10,443	96	0.1	0.7	1.4
	Oonah	2019	0.6	0.9	5,382	36	0.8	0.1	0.1
Sub Total	Inferred		5.0	1.0	52,188	91	0.1	0.2	0.3
Sub Total	Queen Hill		1.4	1.3	19,387	95	0.1	0.7	0.3
Sub Total	Severn		4.9	1.0	46,764	98	0.1	0.0	0.0
Total	Heemskirk Tin Pro	ject	7.6	1.1	81,976	93	0.1	0.2	0.2

Table 1: Heemskirk Tin Project Mineral Resource Statement 2022





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Challenges at Heemskirk

- I would also like to discuss a couple of issues that whilst are not unique to the deposits, certainly add some challenges to it. These include:
 - The historic perception of stannite content and its associated mineralogical processing challenges.
 - Drilling difficulties due to very poor ground conditions encountered in the upper zone of Severn.
 - The proximity to residential homes in Zeehan.
 - Other interactions

Challenge - Perception of stannite content

- Drilling and resources historically were focused on Queen Hill, specifically the upper portions of the deposit.
- Resource estimates and metallurgical studies in the early 1980's identified that upper Queen Hill carried the tin mineralisation as fine grained cassiterite, and approximately 10-15% stannite. Fuming was proposed and tested as a possible processing method but was deemed uneconomic at the time.
- Stannite is a tin/copper sulphide mineral, which can be very difficult/impossible to recover using traditional processing methods.
- Stannite content can be quantified through multiple assay techniques, mostly through a multi process approach, with the process being an assay by XRF for total Sn concentrations, then an acid digest ICP assay. The stannite will dissolve in the acid digest (cassiterite will largely not dissolve), and then the ICP Sn assay is compared to the XRF total tin assay and expressed as a percentage.
- Further drilling at depth, particularly at Queen Hill, showed a significant drop off in stannite content, with lower Queen Hill assaying approximately 3-5% stannite (as a percentage of overall Sn).
- Continued drilling at Severn indicates that the mineralisation has a very low stannite content, somewhere around 1-2% stannite (as a percentage of overall Sn).
- The perception that the orebodies that make up the majority of the Heemskirk Tin Project are full of stannite is not reflective of reality. Met studies done recently have highlighted a traditional tin processing stream can deliver good recoveries and concentrate grades for the project.



Challenge – Poor ground conditions

- Cover material for Severn deposit consists of Crimson Creek Formation volcaniclastics and shales, and appears to be highly weathered, particularly to the north of the deposit. This of course, is where the higher grade zones of Severn have been identified.
- Previous drilling has attempted RC and PCD drilling, with limited success for both. Coreless PCD drilling was deemed the best approach, with
 previous drilling campaigns drilling to ~100m with PCD.
- Stellar in this current round of drilling have also encountered poor ground conditions whilst drilling, even utilising the drill to ~100m with PCD method.
- During recent drilling, three holes were abandoned, ZS147, ZS153, ZS154, resulting in a combined loss of approximately 18 weeks of drilling for a single rig. This has significant flow on effects.
- Due to the restrictions around drilling within the township, namely 10 hours days for five days a week, we found that in the upper parts of the holes they would close up over night locking up the rods, preventing downhole advance.
- A trial of continuous 24 hr drilling of PCD roller pre-collar's to 300m+ depth was undertaken. Other changes made in the trial included:
 - New collar locations further South East of the likely poor ground, which results in a more NW hole azimuth, possibly avoiding worst of northern Severn bad ground.
 - Larger PCD drill bit providing more clearance around drill rods for cuttings.
 - Larger onsite sump capacity to remove recirculated drill cuttings to improve water quality downhole.
 - Use of larger truck mounted drill rig, with high quality and experience drillers.
- So far, the 24 hr drilling trial has been very successful in pre-collaring through top 300m+ of bad ground in Northern Severn. We have completed the first two Phase 2B Holes (ZS155 4 nightshifts and ZS156 3 nightshifts).
- Sonic drilling for pre collars has been investigated, with issues with overall depth (230m max depth in Australia so far, up to 270m in the USA) posing some technical issues with this method. Processes would need to be developed to make this work, but we have looked into it.

Challenge – Poor ground conditions





Challenge - Drilling locations





Challenge - Drilling locations





Challenge - Drilling locations

- Stellar have received good community support for the drilling. But this takes time and effort, with at focus on both engaging individual members of the community, and the general community at large.
- A few complaints were received from residents living further from the drilling operations, mainly as they were not aware / surprised by the night shift drilling.
- This highlighted that extensive liaison with nearby residents is critical, and maintaining ongoing communication.
- Being genuine and listening to people is important, understanding how you would respond if there was a drill rig down the street from you, next to your house, etc.
- Broader community liaison is ongoing, including an article on the 24-hour drilling trial in the local newspaper the *Western Echo*. People may not read company announcements, but they will definitely read the local paper!
- Community engagement with a stall at the recent Zeehan Gem and Mineral Fair. Feedback from the community was generally
 positive, with the minority of unhappy people getting the forum to vent any frustrations they may have, be they real or
 perceived. This is important in a small town like Zeehan! Some people want to be heard, and you need to give them an
 opportunity to do that in constructive way.
- A lot of people don't understand the process of drilling and mining studies, and they are genuinely interested in the process.
- Likely that the remaining 4 northern Severn Phase 2B holes can be drilled with 24 hr drilling of pre-collars with continued effective community liaison, and 3 to 4 (at most) nightshifts of drilling per hole.
- We also endeavour to reduce the noise generated by the rig by utilising soundproof curtains.



Challenge - Infrastructure





Phase 2B Severn Infill Drilling



- Phase 2B Severn drilling program of 8 diamond holes for 3,860m, commenced 29 September
- Infill drilling program aimed to further increase the Severn Indicated Mineral Resource Estimate targeting:
 - > Northern Severn High Grade-Thickness Zone (6 holes)
 - Southern Severn Potential High Grade-Thickness Zone (2 holes)
- First hole ZS155 completed to 595m in late-Oct. Results pending.
- Second hole ZS156 completed to 556m in late-Nov. Results pending.
- Severn Mineral Resource update released on 24th of Nov 2022 based on Phase 2A Drilling.
- Further Severn Mineral Resource update planned in mid-2023 based on Phase 2B Drilling.
- PFS planned in the second half of 2023.



• Any Questions?



Additional data

- ZS152 drilled to 1195m
- Data to be released from that hole shortly
- The only thing that I can say about the hole at the moment is that it didn't tag the granite. This was not the intent of the hole, but it would have been interesting to see.



St Dizier Mineral Resource Statement (JORC 2012), March 2014

Classification	Tonnes	Sn	Contained	Cassiterite %	WO₃	Fe	S
(mt)		(%)	Sn (t)	(%)	(%)	(%)	(%)
Indicated	1.20	0.69	8,280	87	0.04	23.70	2.64
Inferred	1.06	0.52	5,512	58	0.05	22.22	1.81
Total Mineral Resource	2.26	0.61	13,786	75	0.04	23.00	2.25



Company	Country	Products	Project Stage Completed	Total Resource Tonnes (Mt)	Total Resource Grade (%)	Total Resource Contained Tin (kt)	Measured Resource in Total (%)	Indicated Resource in Total (%)	Inferred Resource in Total (%)	Source / Company Announcen
Cornish Metals	UK	Sn	PFS	4.0	1.6	65		51%	49%	7 June 2021 Resource Update
Minsur	Peru	Sn	Exploration	7.6	1.2	88	1%	92%	7%	Minsur 2020 Annual Report, deep depos
Stellar	Australia	Sn, minor Cu	Scoping	7.6	1.1	82	125	36%	64%	24 November 2022 Resource update a (excludes Cu credits)
First Tin	Germany	Sn	PFS	5.3	1.0	53		38%	62%	First Tin website / Resources and Resen Sep 2021 resource @ 0.50% Sn COG
Elementos	Australia	Sn-Cu	Scoping	7.5	0.8	56		83%	17%	ELT website. September 2018 resource @ 0.35% Sn COG (excludes Cu credits)
Kasbah	Morocco	Sn	FS	22.4	0.7	156	11%	89%	×	31 October 2022 - Annaul Report Pg 4 https://www.kasbahresources.com/site/p 5858-4042-9e91-582d039f5bcb/Annual-I Shareholders.pdf
First Tin	Germany	Sn	Exploration	6.8	0.5	33	-	29%	71%	First Tin website / Resources and Reser Dec 2021 resource @ 0.35% Sn COG
BMT JV	Australia	Sn, minor Cu	FS	23.9	0.4	105	100%	-	-	Metals X Website / Mineral Resources an 18/05/2018 resource estimate (excludes
Elementos	Spain	Sn	(Optimised) Scoping	18.9	0.4	76	23%	62%	15%	ELT website. 8 Nov 2021 resource@ 0.1
JSC Tin One	Kazakhstan	Sn	FS	123.3	0.4	489	-	48%	52%	JSC Tin One & ITA websites. 2014 CSA Global Resource Estimate
Consolidated Tin Mines	Australia	Sn-Fe-F	PFS	13.1	0.4	52	16%	58%	27%	CSD 30/09/2013 announcement PFS res deposits. Now delisted.(Excludes Fe and
Venture	Australia	Sn-W, minor Cu	FS	4.7	0.4	17	38%	44%	17%	VMS website Resource Statement @ 0.7 (underground mine FS) (excludes W and
Kanbauk	Myanmar	Sn-W-CaF2	Exploration	30.0	0.3	79	-	-	100%	Knabauk website. 2017 resource @ 0.19 (Excludes W, CaF credits)
TinOne Resources	Australia	Sn	Exploration	5.2	0.2	10	-	-	100%	TinOne Resources / Great Pyramid Proje
First Tin	Australia	Sn	PFS	36.4	0.2	58	-	79%	21%	First Tin website / Resources and Reserves resource @ 0.10% Sn COG
Avalon	Canada	Sn-In	PFS	37.2	0.1	55	2%	62%	36%	AVL website. May 2018 resource @ 0.19 (excludes Indium credits)

