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EUROPEAN METALS HOLDINGS

COMPETENT PERSON'S REPORT ON THE CINOVEC LITHIUM-TIN PROJECT, CZECH REPUBLIC

November 2015

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November 2015

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Mark Mounde Technical Director

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and

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2 November 2015

Competent Persons Report on European Metals Holdings Limited's assets

Scope and purpose of the CPR

Wardell Armstrong International ("**WAI**") of Baldhu House, Wheal Jane Earth Science Park, Baldhu, Truro, Cornwall, TR3 6EH, has been commissioned by European Metals Holdings Limited (the "**Company**", and together with its subsidiaries, the "**Group**"), to complete a Competent Person's Report (the "**CPR**") on the Group's lithium, tin and tungsten assets in the Czech Republic. WAI understands that the Company is seeking admission to trading on AIM ("**Admission**"), a market operated by London Stock Exchange plc, and that the CPR and the results therein will be summarised and either included in full and / or incorporated by reference in the appendix to the 20 day announcement form to be prepared in connection with the Admission (the "**Appendix**").

The CPR has been prepared by WAI as of [date] 2015 based on information and data supplied by the Company.

The CPR has been prepared under the requirements of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, as published by the Joint Ore Reserves Committee of the Australian Institute of Mining & Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.

Consultants and interests

WAI is an internationally recognised, independent minerals industry consultancy. All consultants used in the preparation of this report are employed directly by WAI and have relevant professional experience.

Details of the principal consultants involved in the preparation of this CPR are as follows:

Dr Newall is Managing Director at WAI.

Dr Phil Newall, BSc (ARSM), PhD (ACSM), CEng, FIMMM,

Phil is a mining geologist with over 30 years' experience of providing consultancy services to minerals companies throughout the world, with particular specialisation in CIS, Europe, and Africa. He has a Mining Geology degree from Royal School of Mines in London, and a PhD in Exploration Geochemistry from Camborne School of Mines in Cornwall, UK. During his long career as a consulting geologist, Phil has undertaken a large variety of exploration and mining-related contracts, from project management through to technical audits of both metalliferous (specifically gold and base metals) and industrial mineral deposits. He has also acted as an Expert Witness in a number of high profile mining related legal cases. From a corporate standpoint, Phil is a Partner in the Wardell Armstrong Group as well Managing Director of WAI where he has responsibility for the Company's Mining Division and international offices in Moscow and Almaty.

Independence

WAI is independent of the Company, its directors, senior management and its advisers.

Neither WAI, its directors, employees or company associates (the "**WAI Parties**") have any commercial interest, either direct, indirect or contingent in the Group nor in any of the assets reviewed in this report nor hold any securities in the Company, its subsidiaries or affiliates nor have the WAI Parties:

(i) received, directly or indirectly, any securities from the Company within the twelve months preceding the application for admission to AIM;
(ii) entered into contractual arrangements (not otherwise disclosed in the Appendix) to receive, directly or indirectly, from it on or after admission and of the following:
   - fees totalling £10,000 or more;
   - securities in the Company where these have a value of £10,000 or more calculated by reference to the issue price or, in the case of an introduction, the expected opening price; or
   - any other benefit with a value of £10,000 or more at the date of admission.

WAI Remuneration

The only commercial interest WAI has in relation to the Group is the right to charge professional fees to the Company at normal commercial rates, plus normal overhead costs, for work carried out in connection with the preparation of the CPR. The payment of fees to WAI is in no way contingent upon conclusions contained in the CPR, or the value of the Company at Admission or on the success or otherwise of the Group's own business dealings.

Disclaimer/Reliance on Experts

WAI has critically examined the information provided by the Company and made its own enquiries and applied its general geological competence. WAI has not independently checked title interests with Government or licence authorities.

The evaluation presented in the CPR reflects our informed judgement based on accepted standards of professional investigation, but is subject to generally recognised uncertainties associated with the interpretation of geological, geophysical and subsurface data. It should be understood that any evaluation, particularly one involving exploration and future minerals developments, may be subject to significant variations over short periods of time as new information becomes available.

Consent and Confirmations

The CPR has been prepared in accordance with, and satisfied the content requirements of, the AIM Rules for Companies and the Note for Mining and Oil & Gas Companies dated June 2009, as issued by London Stock Exchange plc.

WAI accepts responsibility for the CPR and has taken all reasonable care to ensure that the information contained in this letter and the CPR is in accordance with the facts and there is no omission likely to affect its import.

Based on the information provided to WAI and to the best of its knowledge, WAI has not become aware of any material change or matter affecting the validity of the CPR.

Yours faithfully,

Dr Phil Newall
Managing Director
WAI

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EXECUTIVE SUMMARY

Background

The Cinovec tin, lithium and tungsten deposit is located in the Krusne Hory, a mountain range that straddles the border between Germany and the Czech Republic. The district has an extensive mining history, with various metals having been extracted since the 14th Century.

The main Cinovec deposit has been mined for in excess of 600 years with an estimated total of 40,000t of tin recovered. Early activity in the region focussed on the high grade tin veins related to the granite intrusions in the region, whilst in 1879, tungsten ores were also exploited. However, the most active period of mining was during World War I and II, although after World War II, mining was active on the Czech side only until 1990 when the mine was abandoned.

As the main deposit neared exhaustion in the 1970s, exploration by the government focused on the southern part of the system, the Cinovec South (or CJ) deposit.

During the 1970s and 1980s, an extensive exploration program was conducted at Cinovec South, including core drilling from surface and underground and excavation of adits and cross-cuts on two levels.

Historical data for the deposit were compiled by private company European Metals Limited (EML). Using these data, JORC Code Compliant Inferred Resources were compiled for both tin and lithium in late 2012.

EMH acquired EML (and hence the Cinovec deposit) in late 2013 and completed a three-hole confirmatory drill program in 2014 to test the tenor of the mineralisation and metallurgy. This was followed in 2015 by an update to the 2012 JORC compliant mineral resource estimate and the completion of a Scoping Study which looked at the overall project viability.

Geology & Mineralisation

The Cinovec tin-tungsten-lithium deposit is intimately associated with the cupola of the Cinovec-Zinnwald granite and comprises:

- irregular metasomatic greisen and greisenised granite zones from several tens to hundreds of metres thick that follow, and are located near or at, the upper contact of the cupola. Greisen comprises quartz and zinnwaldite with or without topaz, with irregular admixtures of sericite, fluorite and adularia-K feldspar;
- thin, flat greisen zones enclosing quartz veins up to 2m thick. Both the greisen and veins parallel the intrusive contact of the cupola, dipping shallowly to the north, south and east. Ore minerals are cassiterite (tin oxide), wolframite (tungsten oxide), scheelite (calcium tungstates) and zinnwaldite. In the greisen, disseminated

cassiterite predominates over wolframite, while in veins wolframite is roughly equal to, or more abundant than, cassiterite; and
- steep quartz veins with wolframite.

In reality, Cinovec is a large lithium deposit with associated tin and tungsten mineralisation. There does appear to be a spatial distribution of the metals with the highest lithium grades to the north, close to the German border, and nearer the surface. Moreover from an historic mining standpoint, it is likely that much of the production from Cinovec came from the high-grade vein material and not from the low-grade greisen mineralisation which forms the focus of this study.

WAI was able to inspect the core from the three holes drilled in 2014. The three sections of core examined showed broadly similar geology in that all are capped by the rhyolites below which lies the greisen altered granites and derivatives therefrom.

As a general characteristic, the highest lithium grades tend to be associated with the main greisen zones (typically darker and more silicified) which in turn are often broadly coincident with the highest tin values (and usually tungsten). However, these trends are not always seen, so assay grades are important in defining the higher grade zones.

One important feature which has a direct bearing on the resource base is that the highest lithium grades are always located in the upper parts of the intrusion in line with classic greisen formation.

Mineral Resources

A Mineral Resource model and Estimate was produced for the Cinovec deposit by Widenbar and Associates Pty Ltd in February 2012. This was audited by WAI in January 2013. Widenbar subsequently updated the Mineral Resource estimate in April 2015 to include a revised interpretation of the lithium mineralisation and include new drillhole data. This was audited by WAI as part of this CPR exercise.

The current Mineral Resources as of April 2015 estimated by Widenbar are quoted separately for Sn and Li, as the resources show an overlap of mineralisation and are modelled separately. The resources are reported at a number of cut-off grades. The estimates are given in the tables below:

Cinovec Tin Mineral Resource

Category		Gross								Net Attributable							Operator
	Cut-off Sn %	Tonnes (Mt)	Sn %	Sn t	W %	W t	Li %	Li t	Tonnes (Mt)	Sn %	Sn t	W %	W t	Li %	Li t	Geomet s.r.o.
Indicated	0.4	0.6	0.69	4,140	0.06	360	0.26	1,560	0.6	0.69	4,140	0.06	360	0.26	1,560	
	0.3	1.2	0.52	6,240	0.06	720	0.25	3,000	1.2	0.52	6,240	0.06	720	0.25	3,000	
	0.2	2.8	0.36	10,080	0.05	1,400	0.24	6,720	2.8	0.36	10,080	0.05	1,400	0.24	6,720	
	0.1	7.0	0.23	16,100	0.05	3,500	0.23	16,100	7.0	0.23	16,100	0.05	3,500	0.23	16,100	
Inferred	0.4	7.0	0.66	46,200	0.06	4,200	0.22	15,400	7.0	0.66	46,200	0.06	4,200	0.22	15,400	
	0.3	12.8	0.52	66,560	0.05	6,400	0.22	28,160	12.8	0.52	66,560	0.05	6,400	0.22	28,160	
	0.2	27.3	0.37	101,010	0.04	10,920	0.22	60,060	27.3	0.37	101,010	0.04	10,920	0.22	60,060	
	0.1	72.7	0.23	167,210	0.03	21,810	0.21	152,670	72.7	0.23	167,210	0.03	21,810	0.21	152,670	

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves and are prepared by Widenbar in accordance with the guidelines of the JORC Code (2012)..
3. The effective date of the Mineral Resource is April 2015.
4. All figures are rounded to reflect the relative accuracy of the estimate

Cinovec Lithium Mineral Resource

Category		Gross								Net Attributable							Operator
	Cut-off Li %	Tonnes (Mt)	Li %	Li t	W %	W t	Sn %	Sn t	Tonnes (Mt)	Li %	Li t	W %	W t	Sn %	Sn t	Geomet s.r.o.
Inferred	0.4	9.4	0.46	43,240	0.02	1,880	0.08	7,520	9.4	0.46	43,240	0.02	1,880	0.08	7,520	
	0.3	44.8	0.36	161,280	0.02	8,960	0.07	31,360	44.8	0.36	161,280	0.02	8,960	0.07	31,360	
	0.2	219.4	0.26	570,440	0.02	43,880	0.05	109,700	219.4	0.26	570,440	0.02	43,880	0.05	109,700	
	0.1	514.8	0.20	1,029,600	0.02	102,960	0.04	205,920	514.8	0.20	1,029,600	0.02	102,960	0.04	205,920	

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves and are prepared by Widenbar in accordance with the guidelines of the JORC Code (2012)..
3. The effective date of the Mineral Resource is April 2015.
4. All figures are rounded to reflect the relative accuracy of the estimate

Addition unclassified mineralisation, defined as Exploration results, are reported within the model using a 0.1% Li cut-off. This is quoted as some 350-450Mt at 018%-022% Li representing a large, low grade potential lithium resource.

The Widenbar model appears to have been prepared in a diligent manner and, given the data available, provides a reasonable estimate of the drillhole assay data at the Cinovec deposit.

However, WAI believes the classification of a small amount of the tin resource as Indicated is inappropriate, given that the update is based on only three new drillholes, which although broadly coincident with known mineralisation, only provide a small increase of data density. Notwithstanding this, WAI believes that the inclusion of Indicated or otherwise is not an issue with regard to the global resource estimate.

Processing

A limited programme of testwork undertaken at ALS Laboratories on the Cinovec CJ ore type indicates that the cassiterite and tungsten minerals can be recovered by conventional gravity processing to produce a gravity concentrate grading 13.8% Sn and 2.64% WO_3 which represents tin and tungsten recoveries of 68.8% and 50.6% respectively.

This concentrate was not processed further, so final recoveries cannot be determined from this work. However, historic metallurgical information suggested that the gravity pre-concentrate can be upgraded with cleaning stage recoveries of 96% and 84% to give separate concentrates grading 74% tin and 46% tungsten. This is achieved using a combination of magnetic, electrostatic and flotation processes.

GR Engineering has undertaken a scoping study for the design of a processing facility based on the treatment of 2.0Mtpa of ore and predicted an 80% tin recovery to a concentrate grading of 50% tin. The WO_3 recovery used in the scoping study was 53% with a tungsten concentrate grade of 60% WO_3.

The ALS testwork indicated an overall tin recovery in the region of 66% (68.8% x 96%), assuming the upgrade efficiency from historic metallurgical data. GR also allowed for a further 10% tin recovery using flotation to recover values from the fine tailings stream although no testwork has been undertaken and reported to date. The overall tin recovery figure of 80% does therefore appear to be reached by taking a generally optimistic view. WAI considers this achievable, but this has still to be demonstrated.

Similarly, the ALS work gave a tungsten gravity recovery of 50.6% to a low grade concentrate of 2.64%. The historic upgrade efficiency of 84% would only give an overall recovery of 42%, compared with the GR study figure of 53%.

Further metallurgical development work may result in improvements in recoveries to those used in the GR study, but at this stage of the project's development, final recovery figures can only be broadly estimated.

GR Engineering estimated the capital cost of a 2Mtpa plant to recover the tin and tungsten to be $72.4 million at Scoping Level (+/- 30%) and the process operating cost to be $11.24/tonne which WAI considers reasonable.

EMH has entered into a Memorandum of Understanding with Cobre Montana NL Limited (now called Lithium Australia) to investigate the potential for recovering lithium from the Cinovec ore. Lithium Australia has a license to apply a unique process, developed by Strategic Metallurgy, to extract lithium from micas to produce lithium carbonate.

Testwork has demonstrated that 70% of the lithium can be recovered into a lithium carbonate product. It is thought that the main inputs into the process are sulphuric acid and potassium carbonate with potassium sulphate being produced as a by-product.

Strategic Metallurgy predicted a Capital cost of $163.3 million for a 2Mtpa plant, excluding an acid plant. The operating cost was predicted to be $1,593 per tonne of Li_2CO_3 produced, net of potassium sulphate credits.

Therefore, total plant capital costs for the recovery of tin, tungsten and lithium are of the order of $236M.

WAI cannot comment on the accuracy of the cost estimates due to the confidential nature of the Strategic Metallurgy technology.

Conclusions & Recommendations

The Cinovec project represents a significant opportunity for the development of a large lithium-tin underground operation with the potential for open pit extraction should surface rights be acquired.

The results of the 2015 Scoping Study clearly showed that given current and forecast metal prices, Cinovec is likely to be a lithium play with by product tin. However, future price fluctuations may change this dynamic.

Given the favourable location of the deposit with respect to local infrastructure, markets and manpower, the extensive knowledge already gleaned on the geology and mineralisation, coupled with the positive results from the limited process testwork done to date, the Cinovec project has the potential to be a significant producer of both lithium and tin (with lesser amounts of tungsten).

Notwithstanding this, significant further work is required to develop the project. This work will be initially focused on defining the metallurgical process for the recovery of a marketable lithium carbonate (or other lithium compound). This will involve further extensive testing at both lab and or pilot plant scale.

In order to improve confidence in the mineral resource model and to convert the appropriate amount of Inferred resources to Indicated, WAI would recommend that a programme of confirmatory drilling of infill and twinned holes be carried out in order to validate the historical drilling. WAI understands that this drill programme has commenced.

The results from these works will form the basis of a Pre-feasibility Study that will define the project parameters and economics in more detail.

A preliminary budget of up to approximately AUD$220,000 has been allocated for the initial work programme over the next 12 months. There are no minimum work commitments under the terms of the Cinovec Project exploration licences. The overall objective is to proceed as quickly as possible to development and production of the Project based on of the existing defined resource envelope. The initial work programme will therefore focus on additional in-fill drilling. The total amount of drilling will be dependent on the results achieved and the initial programme will be between 500 to 1000 metres of diamond drilling (at a total cost of up to approximately AUD$ 150,000) to provide further cores for the metallurgical assessment of the potential lithium recovery process, metallurgical testwork and early pilot plant work.

Preliminary work on acid leaching of the Cinovec gravity tailings demonstrated that 70% of the lithium may be recovered into a lithium carbonate product. The process involved atmospheric leaching using sulphuric acid. The initial objective of the additional metallurgical study (which is budgeted to cost up to approximately AUD$ 70,000) will therefore be to assess this lithium recovery process further.

WAI supports this approach and the proposed initial budget seems reasonable. Any further in-fill exploration drilling to establish a lithium inferred resource and commence a Pre-feasibility Study to define the project parameters and economics in more detail, would be subject to an additional budget at that time.

1 TERMS OF REFERENCE

1.1 Introduction

Wardell Armstrong International ("WAI") was commissioned by European Metals Holdings ("EMH" or "Client") and Beaumont Cornish to undertake an update to the 2013 Competent Person's Report ("CPR"), previously prepared by WAI, for the Cinovec Lithium-Tin Project ("Project"), Czech Republic.

Since the 2013 CPR, the Client has undertaken a Scoping Study which has amongst other things defined a new resource estimate for the Project (prepared by Widenbar & Associates), undertaken additional metallurgical testwork and process design (GR Engineering and Cobre Montana), and provided preliminary mine design (Bara Consulting) with related financial analysis.

In terms of physical works at the Project site, three new core holes have been drilled to test the mineralisation as well as to provide samples for metallurgical testwork.

Thus, this CPR provides an update to the Project and considers the geology, mineralisation, mineral resources, mining, processing and environmental and social issues.

1.2 Background

The Cinovec tin, lithium and tungsten deposit is located in the Krusne Hory (Ore Mountains in English, Erzgebirge in German), a mountain range that straddles the border between Germany and the Czech Republic. The Krusne Hory district has an extensive mining history, with various metals having been extracted from the area since the 14th Century.

The main Cinovec deposit has been mined for in excess of 600 years with an estimated total of 40,000t of tin recovered. Early activity in the region focussed on the high grade tin veins related to the granite intrusions in the region, whilst in 1879, tungsten ores were also exploited. However, the most active period of mining was during World War I and II, although after World War II, mining was active on the Czech side only until 1990 when the mine was abandoned.

As the main deposit neared exhaustion in the 1970s, exploration by the government focused on the southern part of the system, the Cinovec Jih (Jih means south in Czech), CJ or Cinovec South Deposit.

During the 1970s and 1980s, an extensive exploration program was conducted at CJ, including core drilling from surface and underground and excavation of adits and cross-cuts on two levels. A total of 846 diamond holes was drilled for 83,466m and underground drives totalling 21,500m were excavated.

Historical data for the deposit were compiled by private company European Metals Limited (EML). Using these data, JORC Code Compliant Inferred Resources were compiled for both tin and lithium in late 2012.

EMH acquired EML (and hence the Cinovec deposit) in late 2013 and completed a three-hole confirmatory drill program in 2014 to test the tenor of the mineralisation and metallurgy.

1.3 Independent Consultants

WAI has provided the mineral industry with specialised geological, mining, and processing expertise since 1987, initially as an independent company, but from 1999 as part of the Wardell Armstrong Group. WAI’s experience is worldwide and has been developed in the coal and metalliferous mining sector.

Our parent company is a mining engineering/environmental consultancy that services the industrial minerals sector from ten regional offices in the UK and international offices in Almaty, Kazakhstan, and Moscow, Russia. Total worldwide staff complement is now close to 500.

WAI, its directors, employees and associates neither has nor holds:

- Any rights to subscribe for shares in European Metals Holding either now or in the future;
- Any vested interests in any concessions held by European Metals Holding;
- Any rights to subscribe to any interests in any of the concessions held by European Metals Holding, either now or in the future;
- Any vested interests in either any concessions held by European Metals Holding or any adjacent concessions; or
- Any right to subscribe to any interests or concessions adjacent to those held by European Metals Holding, either now or in the future.

WAI’s only financial interest is the right to charge professional fees at normal commercial rates, plus normal overhead costs, for work carried out in connection with the investigations reported here. Payment of professional fees is not dependent either on project success or project financing.

1.4 Data Reviewed

This current CPR follows on from a CPR produced by WAI in early 2013 which utilised predominantly historic data, but with the benefit of a Mineral Resource prepared in accordance with JORC (2012).

For the current CPR, WAI has had access to the 2015 Scoping Study managed and co-ordinated by European Metals Holding Limited (EMH), which includes sections compiled by various independent consultancy firms:

- Geology and Mineral Resources - Widenbar and Associates;
- Mining - Bara Consulting;
- Metallurgical testing - tin GR Engineering Services Ltd;
- Metallurgical testing - lithium Cobre Montana NL;
- Process design and costing - tin GR Engineering Services Ltd, and

- Process design and costing - lithium Cobre Montana NL.

WAI was able to access all the information detailed above which have been used to prepare this report along with observations made during the site visit.

Notwithstanding the above, the author has relied upon this information covering the areas of previous exploration, geology, resources (including scrutiny of the Widenbar block model), mining, infrastructure, processing, financial and environmental and social matters, all in good faith.

It should be noted that WAI has not taken any independent samples, nor verified the legal status of the operations.

1.5 Personal Inspections

Phil Newall, BSc (ARSM), PhD (ACSM), CEng, FIMMM, Managing Director of WAI, conducted a personal inspection of the Cinovec Project between 10 to 11 August 2015, primarily covering the geology, exploration and QA/QC related to the three hole recent drilling programme. Dr Newall previously visited the Project site in late 2012.

Other WAI consultants were also used in the compilation of this report.

1.6 Units and Currency

All units of measurement used in this report are metric unless otherwise stated. Tonnages are reported as metric tonnes ("t") and metal values are reported in weight percentage ("%").

Unless otherwise stated, all references to currency or "US$" are to United States Dollars (US$).

2 RELIANCE ON OTHER EXPERTS

This technical report has been prepared by WAI on behalf of European Metals Holdings and WAI has wholly relied upon the data presented in formulating its opinion. The information, conclusions, opinions, and estimates contained herein are based on:

- Information made available to WAI by European Metals Holdings at the time of preparing this CPR, and
- Assumptions, conditions, and qualifications as set forth in this CPR.

The qualified person has not carried out any independent exploration work, drilled any holes or carried out any sampling and assaying at the project area.

For the purposes of this report, WAI has relied on ownership information provided by European Metals Holdings. WAI has not researched property title or mineral rights for the licence area and expresses no opinion as to the ownership status of the property. The descriptions of the property, and ownership thereof, as set out in this CPR, are provided for general information purposes only.

The majority of technical data, figures and tables used in this report are taken from reports prepared by others and provided to WAI by European Metals Holdings.

Whilst WAI has endeavoured to validate as much of the information as possible, WAI cannot be held responsible for any omissions, errors or inadequacies of the data received. WAI has not conducted any independent verification or quality control sampling, or drilling.

WAI has not undertaken any accounting, financial or legal due diligence of the asset or the associated company structures and the comments and opinions contained in this report are restricted to technical and economic aspects associated with principally the proposed project.

WAI has not undertaken any independent testing, analyses or calculations beyond limited high level checks intended to give WAI comfort in the material accuracy of the data provided. WAI cannot accept any liability, either direct or consequential for the validity of information that has been accepted in good faith.

3 PROJECT BACKGROUND

3.1 Location and Access

The Cinovec deposit lies on the Czech-German border, some one and a half hours drive from Prague, the capital of the Czech Republic (Figure 3.1). Sealed roads pass within one kilometre of the site and the former important border crossing between the two countries lies adjacent to the deposit.

Figure 3.1: Regional Location of Cinovec

The deposit lies approximately 4km south of the German town of Altenberg which is a small resort offering skiing, hiking and other recreational sports, and some 8km north of Dubi which lies on the outskirts of Teplice, the main town in the region (Photo 3.1). Road access from all these towns is excellent.

The important German industrial city of Dresden is 35km from the deposit, with several of Europe's largest car manufacturing plants in the vicinity. This concentrated mass of industry should provide a ready market for the tin and lithium that the deposits are capable of producing.

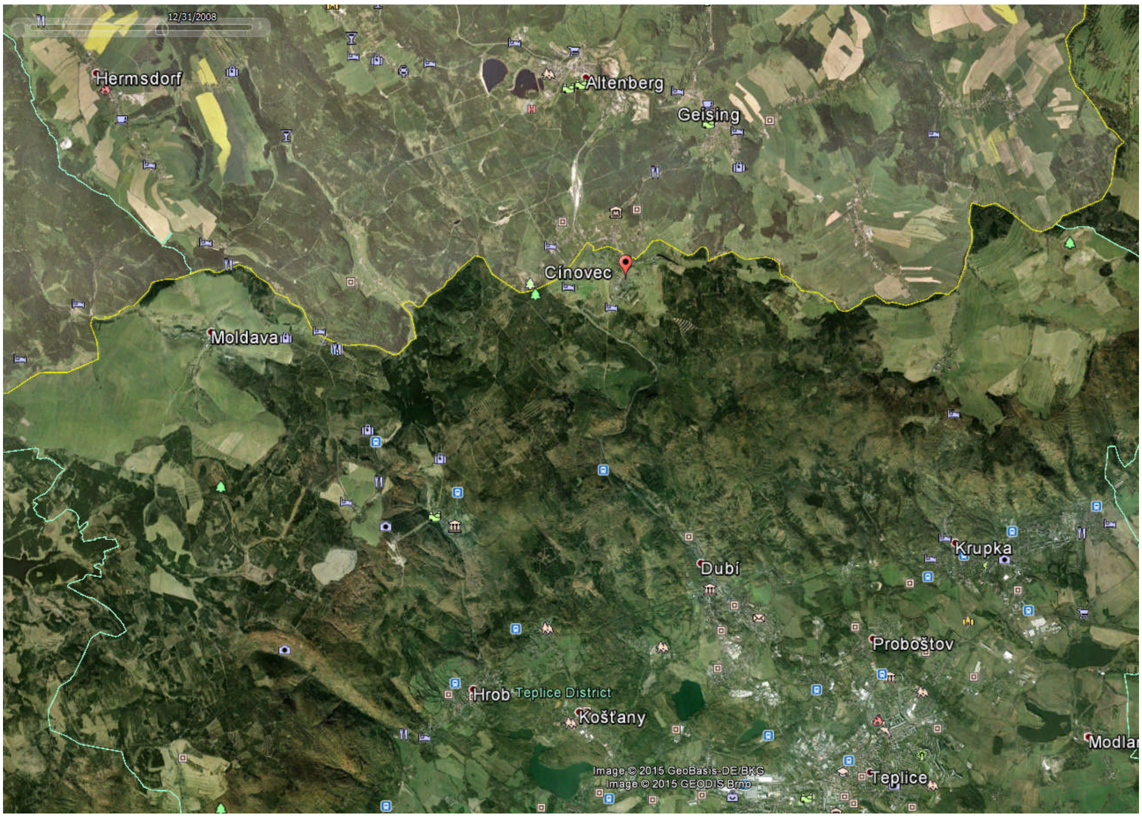

Photo 3.1: Location of Cinovec, Northwest Czech Republic (ref: Google Earth)

3.2 Topography & Climate

The village of Cinovec is located on a ridge under and adjacent to the old mine workings. The immediate area is characterised by a plateau at about 800m altitude which dips gently to the north and steeply to the south. The area is typically farmland and coniferous timber plantations (Photo 3.2).

Little remains of the previous mine workings as the mine buildings have been dismantled (head frame was removed in 2011), the shafts capped and site re-vegetated.

The climate of the area is semi-alpine and is characterised by high precipitation and low temperatures, although this presents no impediments to operating a year-round mine project. Statistics from the German town of Zinnwald-Georgenfeld that lies immediately north of Cinovec show a July average temperature of 13.2°C and winter minimum of -4.6°C. Maximum rainfall is in August at 103mm (Figure 3.2).

Photo 3.2: General View of the Surrounding Topography and Vegetation

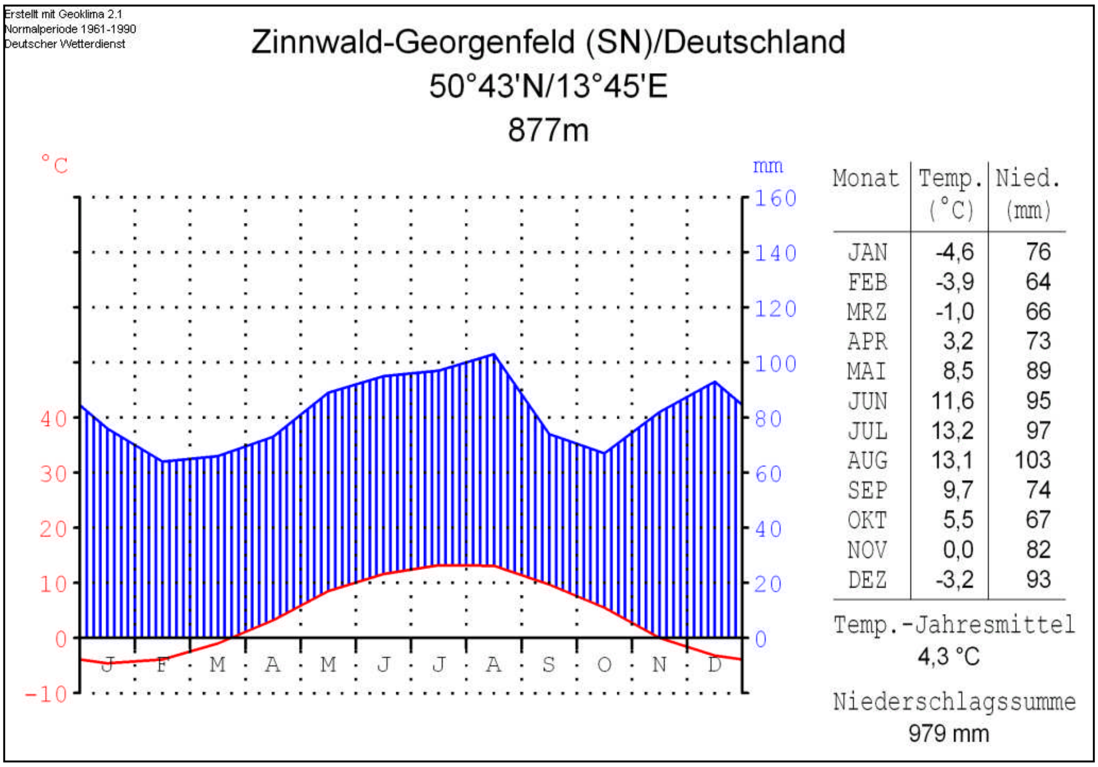

Figure 3.2: Temperature and Rainfall Data, Cinovec District

3.3 Local Infrastructure

The Cinovec Project benefits from being in an historic mining district with a long tradition of underground tin mining, as well as the existing coal mining operations nearby. Thus, a skilled local workforce is likely to be available nearby.

In addition, power (a 22kV transmission line runs to the site), water and communications are all well established in the immediate Project area, supported by the main coal mining and power producing area in the Czech Republic which lies immediately to the south of the deposit.

The local road network is excellent and a rail spur exists approximately 2km to the south of the deposit (Photo 3.3), down the steep slope towards Dubi. This may be of importance for concentrate transport and other bulk transport, but no formal study has as yet been undertaken.

Photo 3.3: Rail Siding Below the Deposit

Similarly, a rail head is also present at Altenberg in Germany (5km from the site) which represents the last station on a branch line that links into the main European rail system via Dresden. Altenberg is an old tin mining town and has a siding that was used previously to load tin concentrate.

Figure 3.3 shows the road and rail network local to Cinovec, as well as the position of power lines.

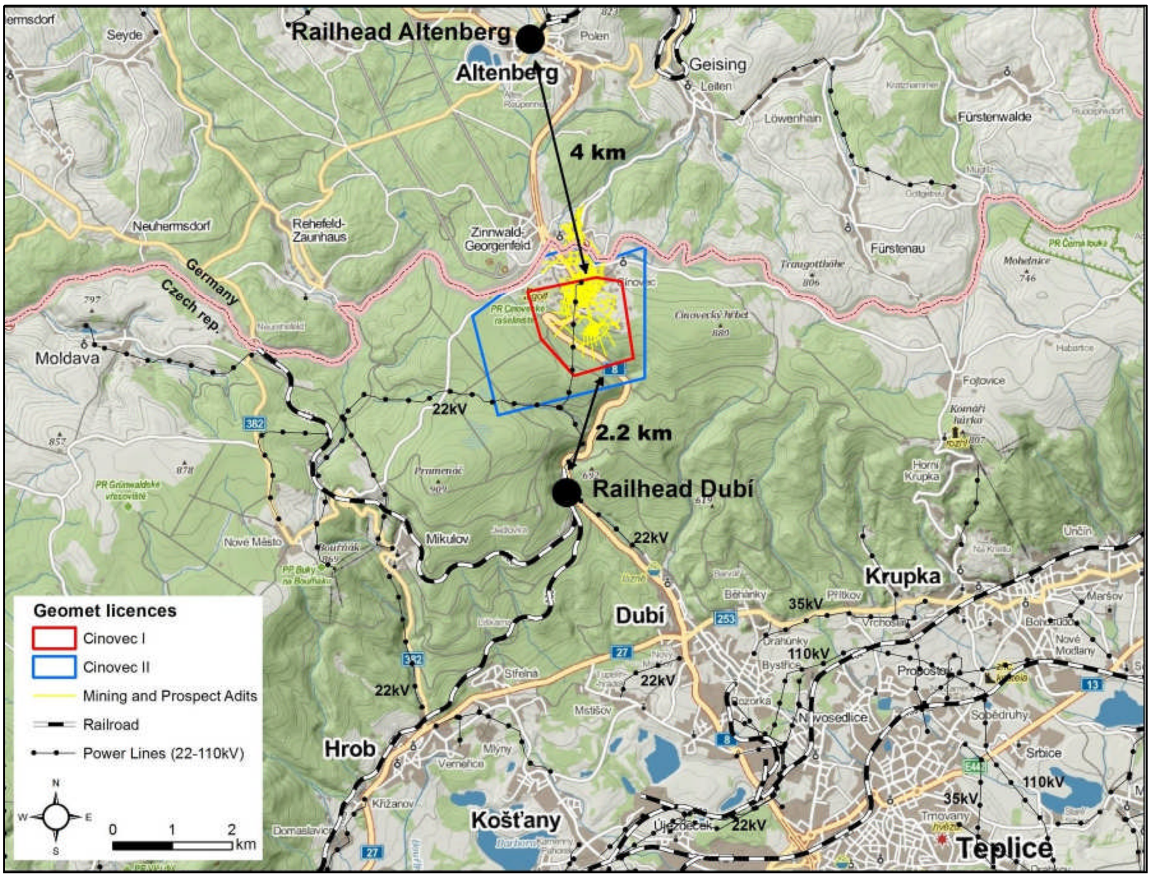

Figure 3.3: Local Infrastructure to Cinovec

However, both rail access points would require road transport to them unless another form of transport was considered such as an aerial ropeway or conveyer.

3.4 Czech Republic

The Czech Republic is a landlocked country in Central Europe. The country is bordered by Poland to the northeast, Slovakia to the east, Austria to the south, and Germany to the west and northwest. It is a pluralist multi-party parliamentary representative democracy, a member of the European Union, NATO, the OECD, the OSCE, the Council of Europe and the Visegrád Group.

The Czech state, formerly known as Bohemia, has had an interesting past. In recent times, the former Communist Czechoslovakia persisted until the 1989 Velvet Revolution, when the communist regime collapsed. On 1 January 1993, Czechoslovakia peacefully dissolved into its constituent states, the Czech Republic and the Slovak Republic.

Post-communism, the Czech Republic made rapid economic reforms such as privatisation, which have been a growth driver. Annual gross domestic product (GDP) growth stood at around 6% until the outbreak of the recent global economic crisis.

Elections in 2013 brought a new government for the Czech Republic, and although the economy started off 2013 rather weakly, it rebounded strongly in the coming quarters and most recently

(Q1,2015) the economy has enjoyed the fastest GDP increase in the entire EU, clocking at 2.8% compared with Q4, 2014, or 3.9% year-on-year.

The country is the first former member of the Comecon to achieve the status of a developed country according to the World Bank. In addition, the Czech Republic has the highest human development level in Central and Eastern Europe ranking as a "Very High Human Development" nation. It is also ranked as the most democratic and healthy (by infant mortality) country in the region and as the third most peaceful country in Europe.

The corporate tax rate in the Czech Republic is 19% and there is a 15% tax on dividends. The Czech currency is the Koruna, and as of July 2015, 1 US$ ≅ 25 Czech Koruna.

3.5 Mineral Rights & Permitting

3.5.1 Mining Legislation

Under the Mining Act, minerals are divided into Reserved minerals and Unreserved minerals

Reserved minerals, directly listed in the Act, include crude oil, gas, coal, ores and others. Generally, it can be said that the State is the owner of reserved minerals, whereas unreserved minerals belong to the owner of the land. If it is found (e.g. as a result of geological surveying) that reserved minerals occur at a site in a concentrated quantity, the Ministry of the Environment issues a Reserved Deposit Certificate.

Reserves in a reserved deposit are classified as follows:

- by the degree of exploration: reserves prospected and investigated;
- by the conditions of use: workable reserves – usable at present, unworkable reserves – not usable at present, and
- by the admissibility of extraction: free reserves, fixed reserves (e.g. in protective pillars).

In addition, parts of a reserved mineral deposit can be written off by exclusion from the records of reserves, and/or transfer from workable to unworkable reserves.

Unworkable reserves in a reserved mineral deposit can be written off if such reserves are not expected to be exploited.

A protected mineral estate (PME) is declared to protect a reserved mineral deposit against rendering its extraction difficult or impossible. A PME is declared in the prospecting or investigation period after the Reserved Deposit Certificate is issued and is declared by the Ministry of the Environment together with the Ministry of Industry and Trade and the District Mining Office, upon agreement with the planning body and the Building Authority.

A company's right to mine a reserved deposit originates in the mining claim allocation. An application for the determination of a claim has to be agreed in advance by the Ministry of Environment of the Czech Republic. The Ministry could limit a precedent approval for the determination of a mining claim by fulfilling qualifications taking into consideration state mineral policy interests. The company that applied for the PME has first right to apply for a mining claim.

The mining claim is allocated to the company only when they are in possession of a "Certificate on Mining Operations" issued by the authorised Regional Mining Office. The local authorised Regional Mining Office determines the mining claim in cooperation with other state administration bodies, mainly in agreement with environmental and territorial planning authorities and with the Building Office.

When a company has obtained a determined mining claim they can start mining operations after the issue of a mining activities licence which is awarded by the authorised Regional Mining Office. Before this can occur, an administrative procedure takes place where the plans of opening, preparation and mining of the deposit are discussed together with payment of an upfront rehabilitation bond.

A company is obliged to pay taxes from the claims and extracted reserved minerals. Yearly tax from a claim is up to CZK 10,000 per square kilometre demarcated on the surface. Every Regional Mining Office fully transfers this tax to the municipalities in which the claim is located.

According to the Czech Mining Code, Par.32a, the State may collect a fee on the value of the produced minerals of 0% to 10%, subject to negotiations on mining method, technical risk and commodity type. Typically the fee is lowest for underground metal mines and highest for quarries.

3.5.2 Project Status

The Cinovec deposit is covered by two granted exploration permits for Sn, W, Li and all other reserved minerals with the potential to be recovered. The permits are held 100% by Geomet s.r.o., a Czech registered company owned 100% by EMH.

The Cinovec permit covers the CJ deposit and the Cinovec II permit covers the Cinovec mine workings (the central and northern parts of the orebody). Ore in parts of the central and northern deposits was sterilised underneath an active public road; this road is now out of commission and hence the remnant ore is accessible.

There are two types of permits: exploration (four years, plus option to renew for such further period as is necessary to complete exploration on the exploration area to be agreed with the Ministry), and a mining permit. The mining permit is two stage – preliminary and final.

The holder of the exploration permit may apply for the preliminary mining permit (PMP) at any time during the duration of the exploration permit. The PMP is awarded by the Ministry of Environment. The final Mining Permit is issued by the regional Mining Bureau.

The Cinovec property consists of two granted exploration permits on which WAI has been informed there are no minimum expenditures. The details of the permits are provided in Table 3.1 below and shown graphically on Figure 3.4.

Table 3.1: Cinovec Permit Details

Permit	Holder	Interest %	Status	Expiry Date	Area (Ha)	Comments
Cinovec I Czech Republic	Geomet s.r.o.	100%	Exploration	30/7/19	210.48	The Cinovec I permit was renewed in July 2014 for a further five year period
Cinovec II Czech Republic	Geomet s.r.o.	100%	Exploration	31/12/15	393.02	Permit renewal on-going

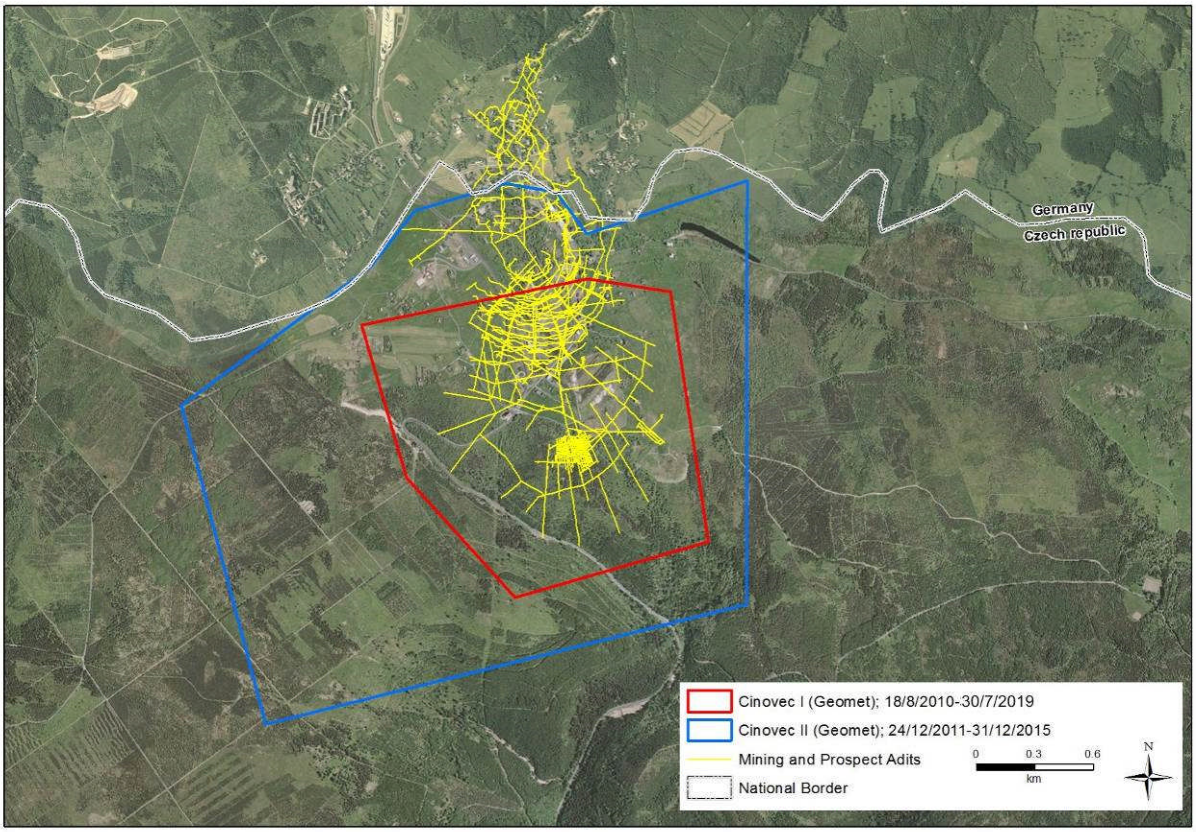

Figure 3.4: Satellite Image Showing Position of Permits

From the inspection of maps and documents, the permit area is considered to cover most of the known extent of the principal zones of mineralisation, together with their known down-dip and strike extensions.

> ***WAI Comment:*** *WAI has seen the renewed permit for Cinovec I and is satisfied that the present permit arrangements are sufficient both in terms of license tenure and area, although it should be noted that WAI has not undertaken a legal due diligence on the permits. In addition, State law appears to offer the holder of an Exploration Permit a clear mandate to proceed to a Mining Permit should the project warrant such action. Thus, the on-going renewal of the Cinovec II permit, in WAI's opinion, does not present an ownership threat to the property.*

3.5.3 Project History

The first records of tin mining in the region come from the 14th Century and activity has continued in the region up to the present day. *De Re Metallica*, first published in 1556, which claims to be the first book to describe early mineral processing techniques, was written based on observations on the silver mines close to Cinovec.

As described above, the main Cinovec deposit has been mined for in excess of 600 years with an estimated total of 40,000t of tin recovered with the most active period of mining during World War I and II, although after World War II, mining was active on the Czech side only until 1990 when the mine was abandoned.

The Czech and German sides of the deposit were explored by drilling for vein and greisen ores in recent times and also for the lithium ores.

As the main deposit neared exhaustion, extensive exploration of the Cinovec South area was conducted by the State in the 1970s and 1980s. Work completed included some 846 diamond drill holes, totalling 83,466m of drilling, and 21,500m of development tunnels. The surface and underground diamond drill holes were on 25m or 50m centres and excavation of adits and crosscuts on two levels. In excess of 65,000 samples were collected and analysed for Sn and W, with roughly a third of the samples also assayed for Li.

A manual resource estimate (not compliant with the JORC Code or NI43-101) was compiled and registered on the State Balance in 1990 of 53.4Mt @ 0.189% Sn, 0.039% W, 0.38% Li_2O.

On the Czech side, large resources of some 550Mt containing 0.18% Rb, 0.26% Li and 0.01% Cs in zinnwaldite were calculated within the greisen mineralisation. Within this tonnage, about 55Mt of higher grade tin-tungsten mineralisation was identified with grades of 0.2% Sn and 0.045% W within cassiterite, wolframite and scheelite.

In addition to this, Sn and W concentrates from Cinovec did contain important contents of Nb, Ta and especially Sc, by which they differ distinctly from greisen ores in the western part of the Krusne Hory area.

> ***WAI Comments:*** *the excellent location of Cinovec in Czech Republic apropos its position in Europe and its easy access to the vast German markets is a significant positive factor for future project development. In addition, the fact that the deposit is located in an area of historic and current mining activity is also seen as highly beneficial given the probable availability of workforce and likely Governmental support to develop the project.*

4 GEOLOGY & MINERALISATION

4.1 Regional Geology

The Erzgebirge is situated at the northern border of the Bohemian Massif in the Saxo-Thuringian Zone, and forms one of the major metamorphic crystalline complexes of the European Variscan Belt (Figure 4.1).

This large NE–SW trending anticline extends over 120km in length and 45km in width, and plunges slightly to the southwest. The Erzgebirge crystalline complex exposes a seemingly coherent sequence of high- to medium-grade para- and orthogneisses, mica schists containing intercalations of metabasalts, metarhyolites and marbles, and is covered by phyllites (Figure 4.2).

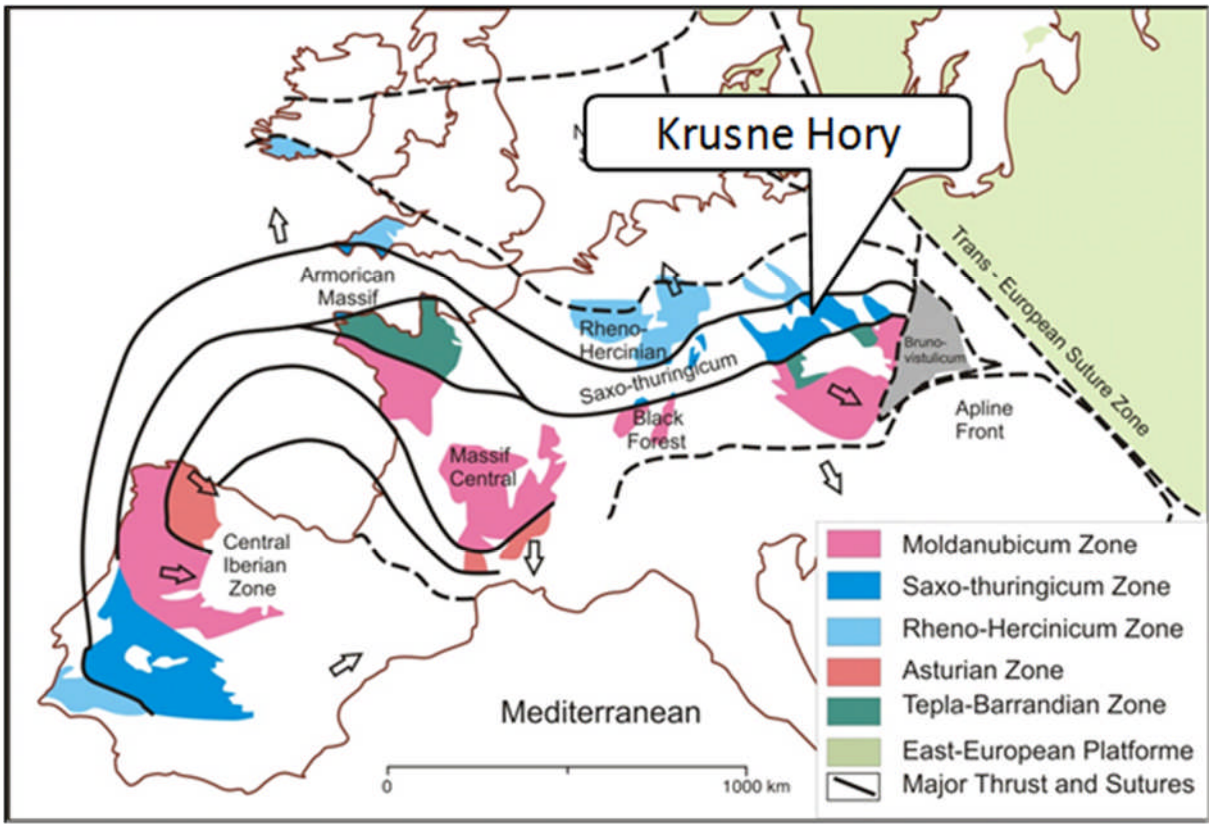

Figure 4.1: Regional Geology of the European Variscan Belt

The Krusne Hory metallogenic province is located on the northwestern margin of the Bohemian Massif in the Saxothuringcum of the European Variscides.

Geologically, the area encompasses a WNW-ESE striking fault block of Proterozoic to Lower Paleozoic metamorphic rocks intruded by a partially concealed Late Paleozoic multiphase granitic batholiths (Figure 4.2).

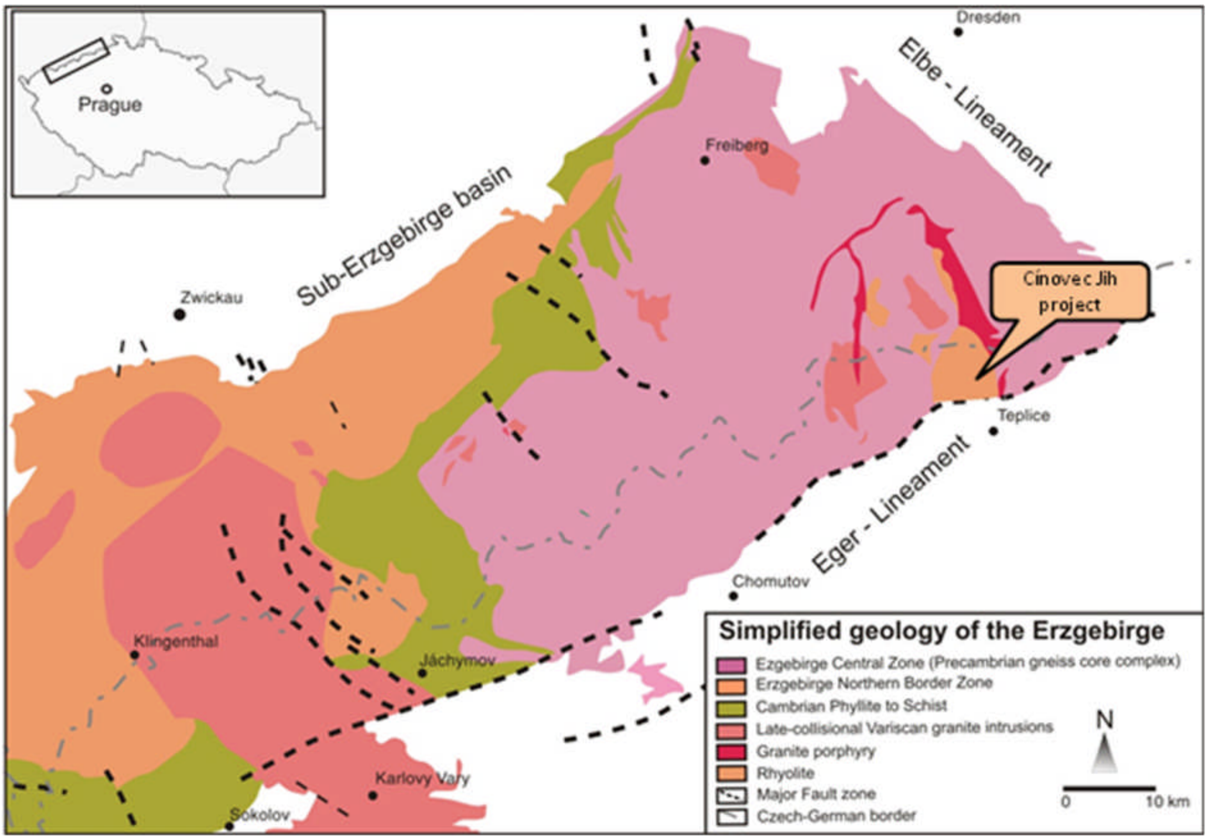

Figure 4.2: Simplified Geology of the Krusne Hory

Neoproterozoic basement rocks are composed of migmatitic gneiss and mica schist with abundant intercalated metamorphosed marl, dolomite, calc-silicate rock, quartzite, ultramafic and granulitic rocks which were migmatised and granitised during the Variscan orogeny. The overlying Lower Paleozoic sequence comprises marine clastic (mainly pelitic) and granitic rocks, which are transgressively overlain by Lower Devonian clastic rocks. Middle Devonian clastic rocks and carbonate with interbedded submarine spilite-keratophyre volcanics are followed by the Carboniferous Culm facies.

Magmatic rocks within the massif are related to events that occurred in several time periods; the Archean to Paleoproterozoic, the Late Neoproterozoic to Lower Paleozoic Cadomian/Baikalian Orogenies (700 to 500 Ma), the Lower Paleozoic Caledonian Orogeny (500 to 390Ma) and the Late Paleozoic Variscan Orogeny (350 to 300Ma). Variscan magmatism is divided into an early cycle (orthogneiss) and a quantitatively dominant late or post-kinematic cycle (unfoliated granites). There are two suites of post-kinematic granites – Older Granites (OG) and Younger Granites (YG); tin deposits are spatially associated only with the YG suite.

4.1.1 Local Geology and Mineralisation

Country rocks in the Cinovec area comprise Proterozoic metamorphic complex muscovite-biotite orthogneiss and paragneiss, Lower Palaeozoic phyllite and epiamphibolite and partly migmatised muscovite-biotite paragneiss. These sequences are overlain and cut by the Teplice Rhyolite, composed of extrusive and partially intrusive rhyolite, dacite and ignimbrite and associated tuff with arkosic and

Mid-Carboniferous coal interbeds. A thick north-south trending dyke of syenogranite porphyry up to 2km wide intrudes along or near the contact between the eastern gneisses and the Teplice Rhyolite; smaller dykes and masses are found elsewhere within the Teplice Rhyolite and basement rocks.

Tin deposits in the Krusne Hory province are either greisen type (with associated stockwork, sheeted vein and breccia pipe mineralisation) or skarn type. Cinovec is a greisen deposit.

The generic description of such deposits indicates that they consist of simple to complex fissure filling or replacement quartz veins, including discrete single veins, swarms or systems of veins, or vein stockworks, that contain mainly wolframite series minerals (huebnerite-ferberite) and (or) cassiterite as ore minerals (as is the case with Cinovec).

Other common minerals are scheelite, molybdenite, bismuthinite, base metal sulphide minerals, tetrahedrite, pyrite, arsenopyrite, stannite, native bismuth, bismuthinite, fluorite, muscovite, biotite, feldspar, beryl, tourmaline, topaz, and chlorite. Complex uranium, thorium, rare earth element oxide minerals and phosphate minerals may be present in minor amounts.

Greisen deposits consist of disseminated cassiterite and cassiterite-bearing veinlets, stockworks, lenses, pipes, and breccia in gangue composed of quartz, mica, fluorite, and topaz.

Veins and greisen deposits are found within or near highly evolved, rare-metal enriched plutonic rocks, especially near contacts with surrounding country rock; settings in or adjacent to cupolas of granitic batholiths are particularly favourable.

Tin and tungsten deposits exhibit a close spatial association with granitic plutonic rocks, especially late-stage, highly evolved, specialised biotite and (or) muscovite (S-type or A-type) granites and leucogranites. Small to moderate sized cupolas of larger subsurface plutons are especially favourable hosts; deposits may be endo- or exocontact.

Exocontact deposits usually are in pelitic and arenaceous sedimentary or metamorphic rocks and within the contact metamorphic aureole of a pluton. Most endocontact deposits, including tin greisens, and many tin and tungsten veins, are in or near cupolas and ridges developed on the roof or along margins of granitoids.

The Cinovec tin-tungsten-lithium deposit is intimately associated with the cupola of the Cinovec-Zinnwald granite (Figure 4.3 and Figure 4.4), and comprises:

- irregular metasomatic greisen and greisenised granite zones from several tens to hundreds of metres thick that follow, and are located near or at, the upper contact of the cupola. Greisen comprises quartz and zinnwaldite with or without topaz, with irregular admixtures of sericite, fluorite and adularia-K feldspar;
- thin, flat greisen zones enclosing quartz veins up to 2m thick. Both the greisen and veins parallel the intrusive contact of the cupola, dipping shallowly to the north, south and east. Ore minerals are cassiterite (tin oxide), wolframite (tungsten oxide),

scheelite (calcium tungstates) and zinnwaldite (lithium mica - Photo 4.1). In the greisen, disseminated cassiterite predominates over wolframite, while in veins wolframite is roughly equal to, or more abundant than, cassiterite; and

- steep quartz veins with wolframite.

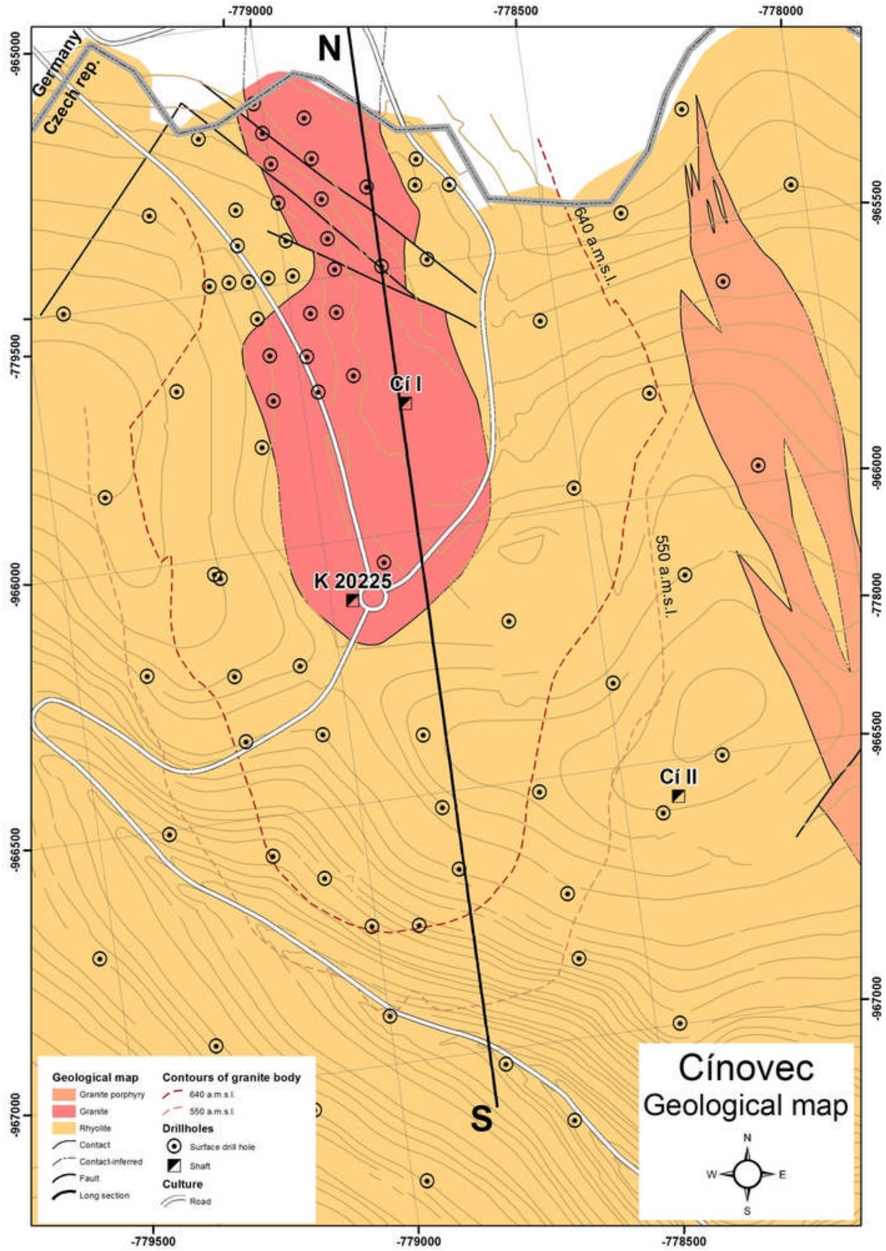

Figure 4.3: Surface Geology of the Cinovec Deposit

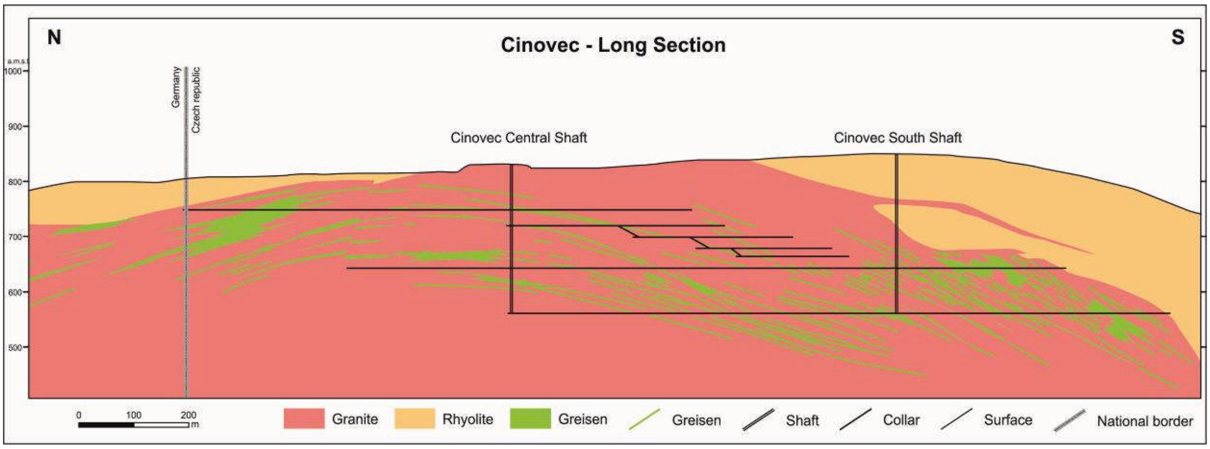

Figure 4.4: Cinovec Long Section

Photo 4.1: Typical Greisen Mineralisation

There does appear to be a spatial distribution of the metals with the highest lithium grades to the north, close to the German border, and nearer the surface. Moreover from an historic mining standpoint, it is likely that much of the production from Cinovec came from the high-grade vein material and not from the low-grade greisen mineralisation which forms the focus of this study.

4.1.2 Exploration Potential

The Cinovec mineralised system represents a world-class example of a Sn/W/Li + rare earth metal district which spans the Czech-German border and is part of the larger Erzgebirge metallogenic region.

Previous mining at Cinovec, although extensive, concentrated on the high-grade vein mineralisation which in the Main part of the deposit has been predominantly exhausted. However, the mineralisation identified at Cinovec South remains relatively untouched and comprises veins as well as the more ubiquitous greisen mineralisation.

As the greisen mineralisation was never the principal target of exploration, it is probable that significant tonnages over and above those stated in this report may exist across the site, although considerable exploration will be required to properly delineate these potential additional resources.

Over and above the Sn-W-Li mineralisation, samples collected from waste dumps and the tailings at Cinovec indicate promising levels of rare earth elements (Table 4.1) which may provide additional revenue for the project should commercial extraction be possible.

Table 4.1: REE Analyses

All in ppm	Be	Ce	Cs	Ga	Hf	La	
Greisen alteration of granite	9.13	36.3	58.1	26.6	9.2	14.8	
Granite with abundant lepidolite	17.7	31.7	141.5	52.8	5.4	11.8	
Fine grained white/light yeallow mica rich tailings (sand)	24.6	30.6	66.2	37.9	5.4	12	
Fine grained white/light yeallow mica rich tailings (sand)	25.1	33	69	38.9	4.7	12.8	
	Li	Nb	Rb	Sc	Ta	Tl	Y
Greisen alteration of granite	2890	106.5	2180	15.9	37.9	7.98	12.1
Granite with abundant lepidolite	5250	37.2	3750	17.5	15.25	17	9
Fine grained white/light yeallow mica rich tailings (sand)	2500	56.2	2410	11	18.55	11.6	10.2
Fine grained white/light yeallow mica rich tailings (sand)	2600	60	2480	11	19.1	12.05	9.9

WAI Comment: *the geology and mineralisation at Cinovec are reasonably well known through historic mining activity and a thorough records search undertaken by the Group. As such, there is considerable comfort that a sizeable deposit exists. The greisen mineralisation is clearly a target for low grade-large tonnage Sn, W and Li mineralisation which together form an exciting target.*

5 RECENT DRILLING PROGRAMME

5.1 Introduction

In an effort to acquire samples for metallurgical testwork and mineralogy, as well as to confirm both the style of mineralisation and structure, EMH undertook a small core drilling programme in 2014 comprising three NQ holes totalling some 975.6m. Holes CIS-1 and 3 were angled at 70° to the north, whilst CIS-2 was vertical. CIS-2 & 3 were collared from the same location.

The location of the holes (marked in red) is shown in Figure 5.1 below.

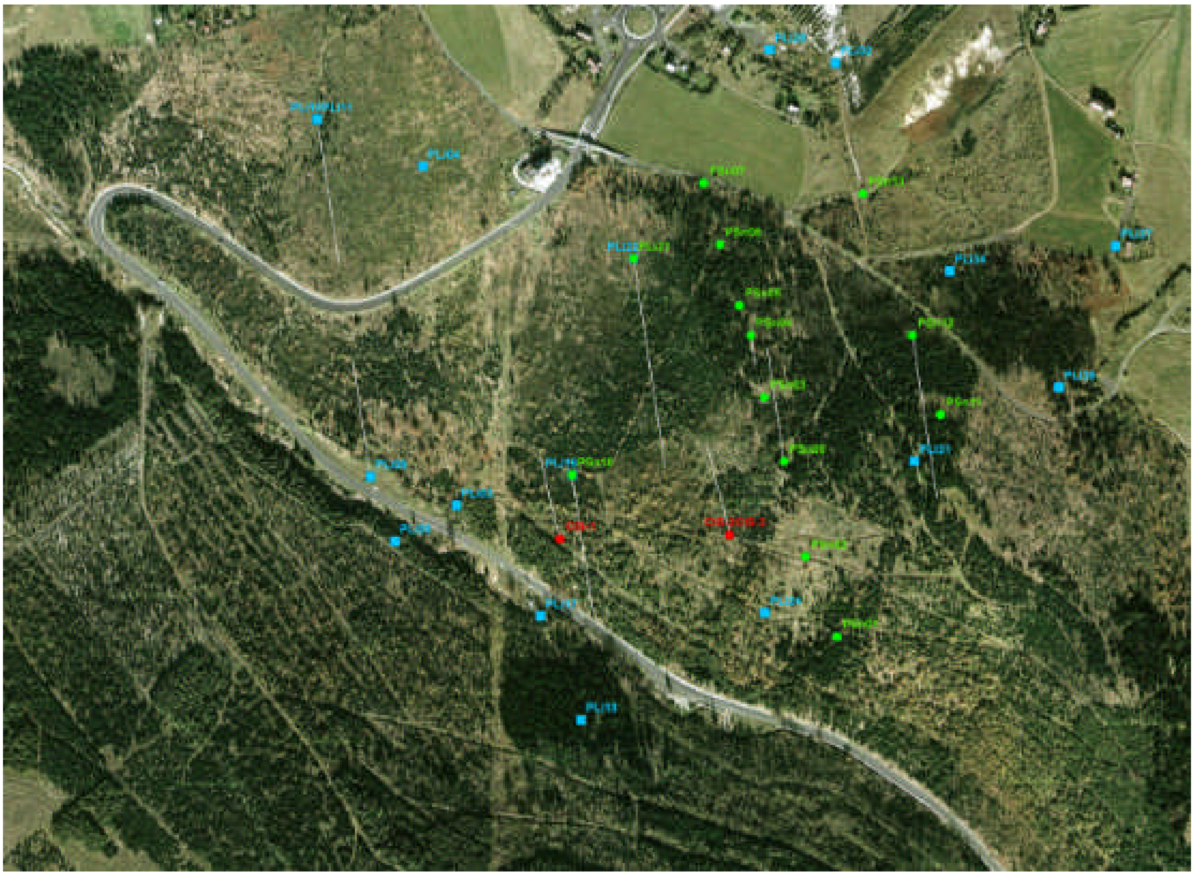

Figure 5.1: Location of 2014 Drillholes (red) at Cinovec

Access to the drill sites was by a newly constructed gravel road off the main Dresden road on the south side of the ridge just below the prominent hairpin bend (Photo 5.1).

The location of CIS-1 was inspected, the collar of which is now marked by a cemented cap (Photo 5.2).

Photo 5.1: Drill Access Road, CIS-1 to the Right, CIS-2 & 3 Left

Photo 5.2: Cemented Collar, CIS-1

5.2 Core Storage & Logging

During the site visit, WAI was able to view selected core from the three holes drilled in 2014 which is currently kept in the new office situated on the main road to Altenberg in Dubi. The remainder of this core is being temporarily stored in a compound close to the old Cinovec mine site.

The core is kept on Dexion racking (Photo 5.3) in well labelled core boxes with appropriate drill marker tags. Each box contains approximately 6m of core which shows a high core recovery (with the exception of a few clay altered areas).

Photo 5.3: Core Logging Area

All the core viewed was either half or quarter core and has been logged and sampled.

5.3 Geological Inspection

The three sections of core examined showed broadly similar geology in that all are capped by the rhyolites below which lies the greisen altered granites and derivatives therefrom (Figure 5.2).

As a general characteristic, the highest lithium grades tend to be associated with the main greisen zones (typically darker and more silicified) which in turn are often broadly coincident with the highest tin values (and usually tungsten). However, these trends are <u>not</u> always seen, so assay grades are important in defining the higher grade zones.

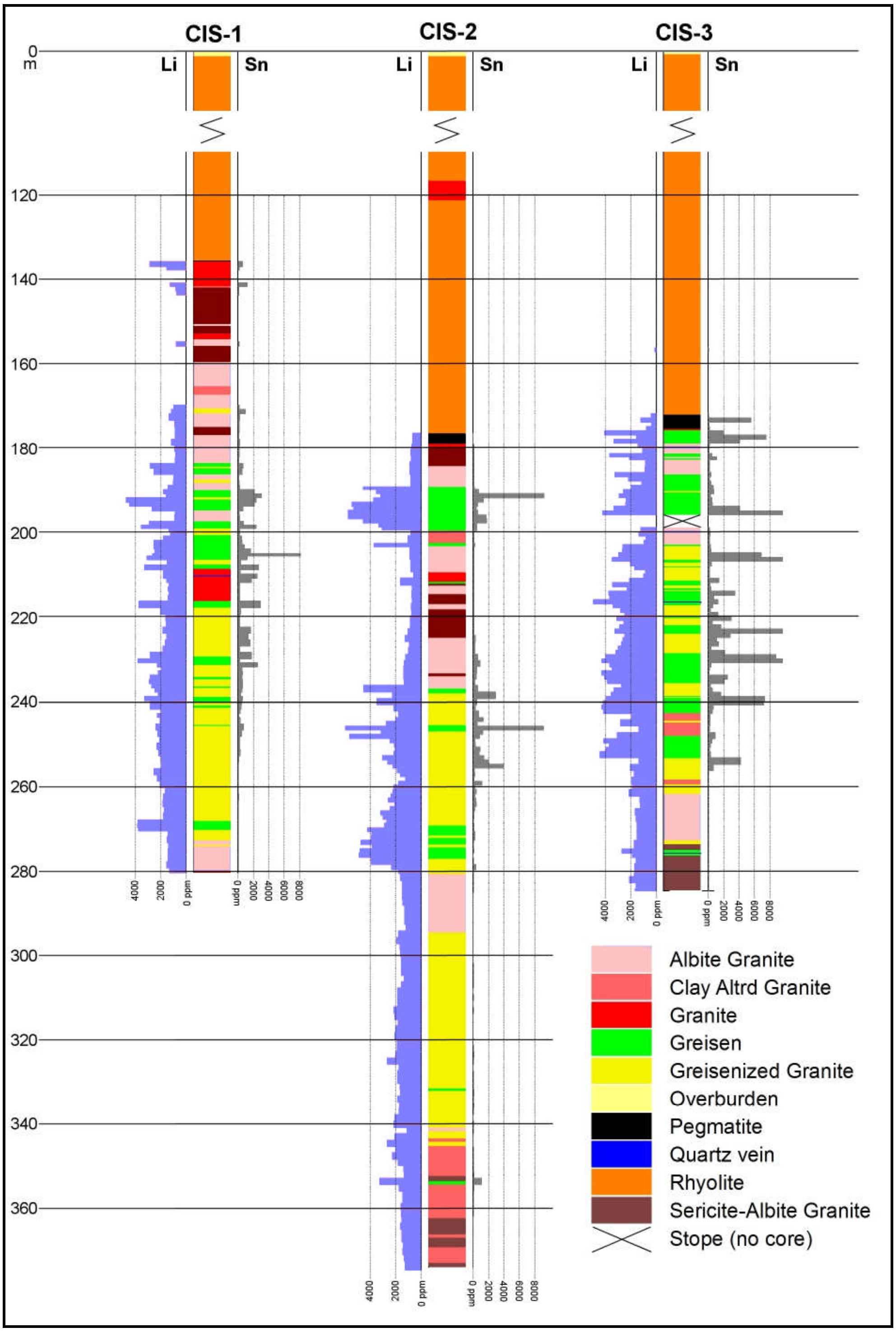

Figure 5.2: Schematic Logs of the Three Drillholes

One important feature which has a direct bearing on the resource base is that the highest lithium grades are always located in the upper parts of the intrusion in line with classic greisen formation. The increase in mica in the core is often clearly seen (Photo 5.4).

As mentioned above, although high tin values are often associated with these areas, it is not a mutually exclusive relationship as can be seen by Figure 5.3 which shows the distribution of the lithium and tin resources in relation to the recent drilling.

Photo 5.4: CIS-2, High Lithium Zone 245-249m

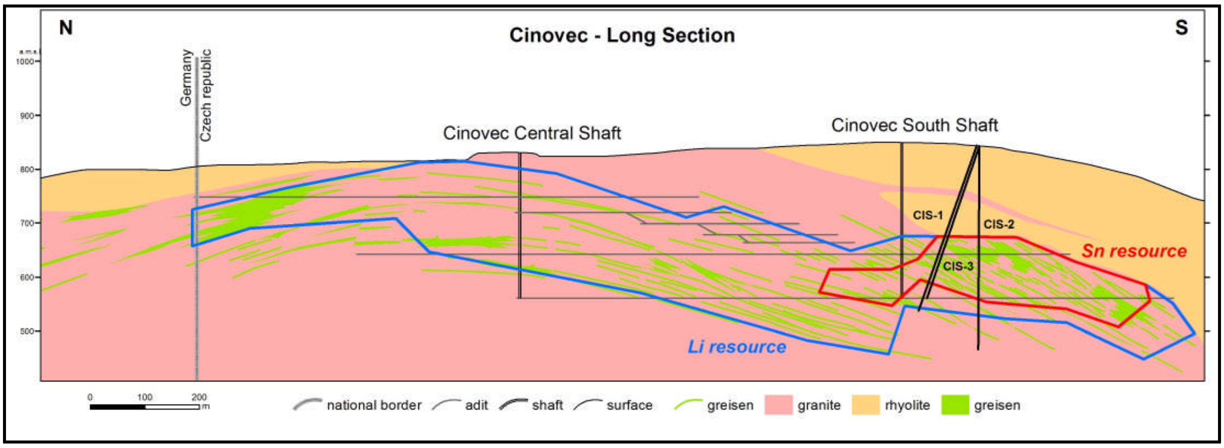

Figure 5.3: Lithium and Tin Resources in Relation to the 2014 Drillholes

WAI Comment: *the 2014 drilling has been successful in that it has corroborated the existing knowledge of the geology and mineralogy of the Cinovec South mineralisation and at the same time provided samples for further metallurgical testwork.*

6 RESOURCE ESTIMATION

6.1 Introduction

A Mineral Resource model and Estimate, prepared in accordance with JORC, was produced for the Cinovec deposit by Widenbar and Associates Pty Ltd ("Widenbar"), an Australian based consultant, in February 2012. This was audited by WAI in in January 2013. Widenbar subsequently updated the Mineral Resource estimate in April 2015 to include a revised interpretation of the lithium mineralisation and new drillhole data. This mineral resource estimate was again audited by WAI and forms the mineral resource presented here.

The Mineral Resource Model was created in the Micromine software package. WAI was given the mineral resource model and a copy of the mineral resource estimation update report (Cinovec Lithium Resource Estimation Update January 2015).

The current resource estimate is based on data available at the time, which includes data for Cinovec South and Cinovec North. The spatial distribution of mineralisation is such that Cinovec North is dominated by lithium, whereas tin, lithium and tungsten comprise the metal signature of Cinovec South.

WAI has conducted a review and audit of the mineral resource estimate based on the data available to them. WAI utilised CAE Mining's Datamine Studio 3® software to carry out the audit of the mineral resource block model.

6.2 Current Mineral Resource

The current Mineral Resources as of April 2015 estimated by Widenbar are quoted separately for Sn and Li, as the resources show an overlap of mineralisation and are modelled separately. The resources are reported at a number of cut-off grades. The estimates are given in Table 6.1 and Table 6.2 below.

Table 6.1: Cinovec Tin Mineral Resource

Category		Gross							Net Attributable							Operator
	Cut-off Sn %	Tonnes (Mt)	Sn %	Sn t	W %	W t	Li %	Li t	Tonnes (Mt)	Sn %	Sn t	W %	W t	Li %	Li t	Geomet s.r.o.
Indicated	0.4	0.6	0.69	4,140	0.06	360	0.26	1,560	0.6	0.69	4,140	0.06	360	0.26	1,560	
	0.3	1.2	0.52	6,240	0.06	720	0.25	3,000	1.2	0.52	6,240	0.06	720	0.25	3,000	
	0.2	2.8	0.36	10,080	0.05	1,400	0.24	6,720	2.8	0.36	10,080	0.05	1,400	0.24	6,720	
	0.1	7.0	0.23	16,100	0.05	3,500	0.23	16,100	7.0	0.23	16,100	0.05	3,500	0.23	16,100	
Inferred	0.4	7.0	0.66	46,200	0.06	4,200	0.22	15,400	7.0	0.66	46,200	0.06	4,200	0.22	15,400	
	0.3	12.8	0.52	66,560	0.05	6,400	0.22	28,160	12.8	0.52	66,560	0.05	6,400	0.22	28,160	
	0.2	27.3	0.37	101,010	0.04	10,920	0.22	60,060	27.3	0.37	101,010	0.04	10,920	0.22	60,060	
	0.1	72.7	0.23	167,210	0.03	21,810	0.21	152,670	72.7	0.23	167,210	0.03	21,810	0.21	152,670	

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves and are prepared by Widenbar in accordance with the guidelines of the JORC Code (2012)..
3. The effective date of the Mineral Resource is April 2015.
4. All figures are rounded to reflect the relative accuracy of the estimate

Table 6.2:Cinovec Lithium Mineral Resource

Category		Gross							Net Attributable							Operator
	Cut-off Li %	Tonnes (Mt)	Li %	Li t	W %	W t	Sn %	Sn t	Tonnes (Mt)	Li %	Li t	W %	W t	Sn %	Sn t	Geomet s.r.o.
Inferred	0.4	9.4	0.46	43,240	0.02	1,880	0.08	7,520	9.4	0.46	43,240	0.02	1,880	0.08	7,520	
	0.3	44.8	0.36	161,280	0.02	8,960	0.07	31,360	44.8	0.36	161,280	0.02	8,960	0.07	31,360	
	0.2	219.4	0.26	570,440	0.02	43,880	0.05	109,700	219.4	0.26	570,440	0.02	43,880	0.05	109,700	
	0.1	514.8	0.20	1,029,600	0.02	102,960	0.04	205,920	514.8	0.20	1,029,600	0.02	102,960	0.04	205,920	

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves and are prepared by Widenbar in accordance with the guidelines of the JORC Code (2012)..
3. The effective date of the Mineral Resource is April 2015.
4. All figures are rounded to reflect the relative accuracy of the estimate

Addition unclassified mineralisation, defined as Exploration results, are reported within the model using a 0.1% Li cut-off. This is quoted as some 350-450Mt at 018%-022% Li representing a large, low grade potential lithium resource.

> ***WAI Comment:*** *WAI has reviewed the block model and the mineral resource estimates produced from the block model, and can confirm that these correspond with those stated by Widenbar in the tables above.*

6.3 Database

6.3.1 Data Received

WAI received a block model and drillhole database files in .csv format, although WAI did not receive any of the sample composites used for estimation. WAI believes the resource model was created using Micromine software. The following files were utilised by WAI for the purpose of the audit:

Drillhole Database

- Cin_Assays_Jan_2015.csv
- Cin_Collars_Jan_2015.csv
- Cin_Geology_Jan_2015.csv
- Cin_Surveys_Jan_2015.csv

Micromine Resource Model

- Cinovec_Model_May_2015.csv

6.3.2 Drillhole Database

The drillhole Database comprised Collar, Survey, Assay, and Geological data. The majority of this is historic, with the addition of 3 diamond core holes drilled in 2014. A summary of the drillhole database is given in Table 6.3 below.

Table 6.3: Cinovec Drillhole Database Summary (WAI 2015)

Year	Number of holes/channels	Number of assays
Pre 2014	945	41,560
2014	3	342

WAI has carried out a review of the Sn distribution for the different drilling types in the database. The results of this can be seen in Figure 6.1; this identified no significant difference for the different sampling methodologies. No information relating to core diameter or sample size is available within the database.

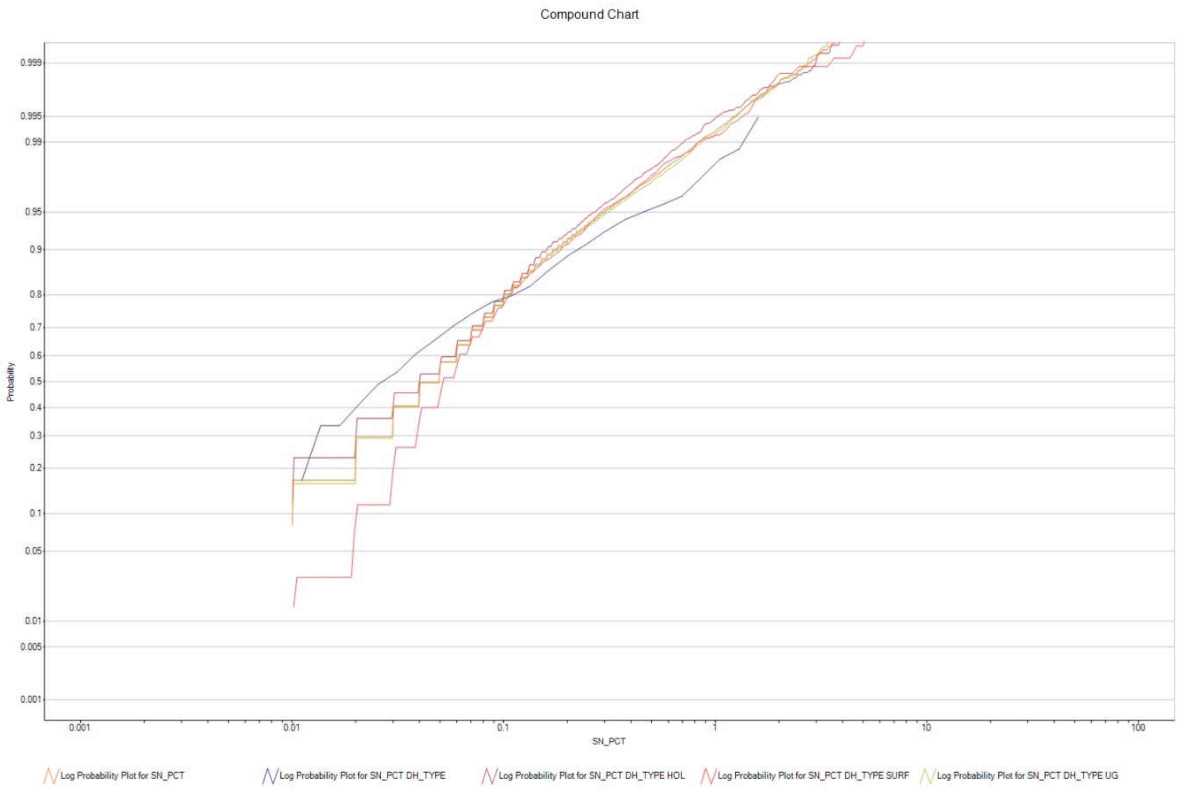

Figure 6.1: Log Probability Plot of Sn% by Drillhole Type (WAI 2015)

6.3.3 Block Model

The 2015 resource block model was received in .csv format, fields in the model included, W%, Sn%, Li%, ROCK, DENSITY, RESCATSN, RESCATLI, and SNEQUIV. WAI has used the Block model file and the granite wireframe file from the previous 2013 audit for this audit.

6.4 Quality Assurance and Quality Control

6.4.1 Introduction

The Widenbar report discusses that there is very little QA/QC data available, although some historical production data from trial mining is available for reconciliation. The three holes drilled during 2014 were subject to QA/QC sample analysis.

> ***WAI Comment:*** *WAI has not seen details of any QA/QC data for the historical drilling and as such is unable to comment on the quality of the historical data. However, the database received by WAI was found to be in good order and checks carried out on the drilling data did not identify any errors.*

6.4.2 Core Recovery

Core recovery is recorded for approximately 40% of the data in the database. About one percent of the total samples has less than 70% recovery. WAI does not deem this a significant proportion.

However, samples of less than 70% recovery are likely to be of dubious quality and could be removed from the database.

6.4.3 2014 QA/QC Review

6.4.3.1 Introduction

Quality assurance is the assembly of all planned and systematic actions necessary to provide that assay data has precision and accuracy within generally accepted limits for the sample and assay method used in order to have confidence in resource estimations.

Quality control is the operational techniques to ensure that an adequate level of quality is maintained in the process of sampling, preparation and assaying exploration samples. Quality control aims detecting the problem, while the purpose of quality assurance is preventing them.

The QA/QC programme should be implemented to assess precision, accuracy of the laboratory and possibility of contamination thereby confirm that the data used is of a sufficient quality for the mineral resource estimate.

Precision refers to the random measurement error and commonly assessed by the duplicate samples. Accuracy refers to the systematic error and assessed by Certified Reference Materials (CRM). Contamination is assessed through blanks, which are commonly prepared from barren samples.

There is little or no QA/QC data available for the historical sample data. As such the accuracy and precision of the data cannot be verified. During 2014 a drill programme comprising 3 holes was conducted for which QA/QC controls were implemented. There is also limited production data for the mined areas of the project, which could serve as a useful check against the estimated mineralisation.

WAI has reviewed the QA/QC results for the Cinovec Lithium-Tin Project, and in the opinion of WAI, EMH has partly followed an industry standard QA/QC programme with the insertion of duplicates, standards and blank samples. Therefore, there is a limited number of control samples and information available. The QA/QC programme consisted of 3 duplicate, 23 standard samples and 3 blanks.

6.4.3.2 Standards

Four different standards were used by the Client: one low grade Sn (Low Sn), one high grade Sn (High Sn), one wolframite (W standard) and one lithium standard (Li standard). WAI has not seen reference to the provenance of the standards used and as such WAI assumes that these are custom made reference materials as there is no information regarding CRM ID and their standard deviations.

WAI has reviewed the QA/QC plots provided by the Client and recommends that ±5% and ±10% are acceptable and warning limits. These should be applied during the preparation of the plots as the standard samples were not supplied with a certificate outlining the degree of variance of the standardised assay value.

Following the application of recommended control limits, WAI prepared a QA/QC Plot for Standard Li as shown in Figure 6.2.

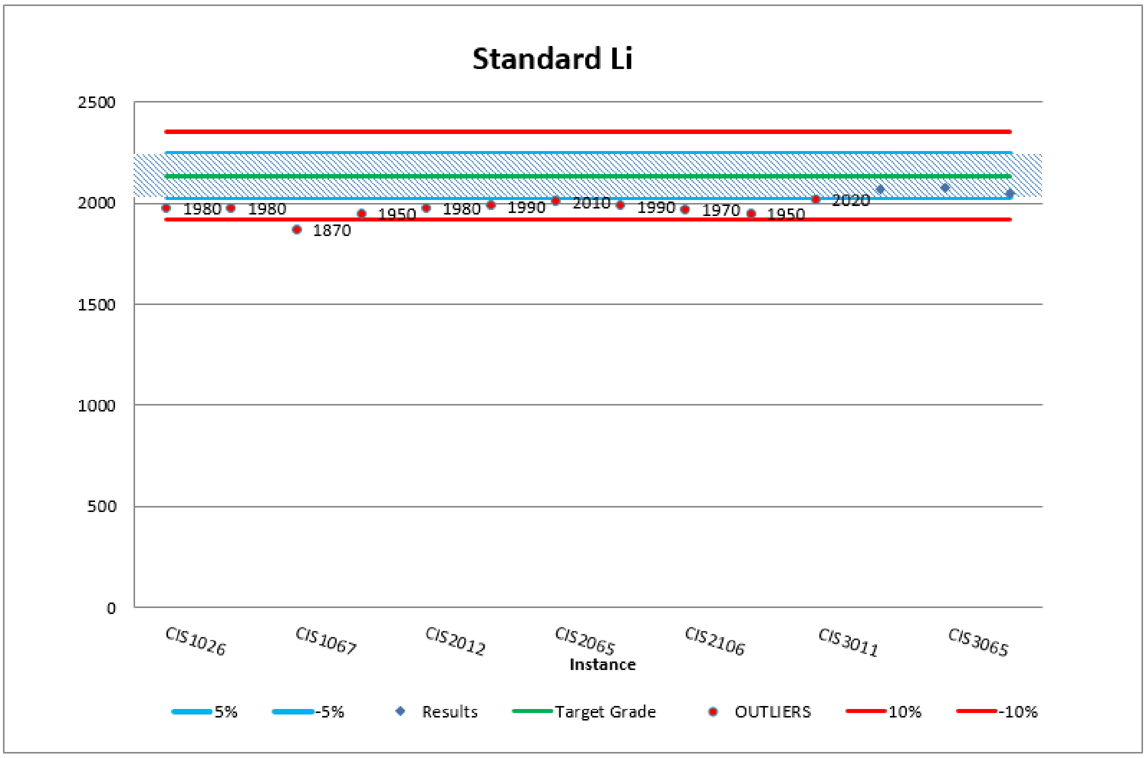

Figure 6.2: Standard Li

6.4.3.3 Blanks

Although the number of blanks in the dataset is insufficient, all blanks analysed were within the acceptable limits for tin and lithium which is 5 times higher than the detection limits (Table 6.4).

Table 6.4: Blank Samples

Sample_ID	Sn_ppm	Li_ppm
CIS1036	<1	<10
CIS1079	1	<10
CIS2041	3	10

6.4.3.4 Duplicates

EMH inserted 3 duplicates into the sample stream, as summarised in Table 6.5. The tin and lithium assays have high standard deviations indicating high variability which is to be expected in this type of deposit. However, the difference between means of the original and duplicate is high for tin, although it is still within the acceptable limit of over 50%. The correlation coefficients between the original and duplicate assays also indicate a satisfactory level for tin and excellent level of precision for lithium being close to one.

Table 6.5: Duplicate Summary

	Original Assay (Sn ppm)	Duplicate Assay (Sn ppm)	Original Assay (Li ppm)	Duplicate Assay (Li ppm)
Mean	597	717	3523	3430
Median	639	538	2910	2900
Standard Deviation	137	315	1563	1402
Range	265	548	2940	2650
Minimum	443	532	2360	2370
Maximum	708	1080	5300	5020
Sum	1790	2150	10570	10290
Count	3	3	3	3
Correlation Coefficient	0.69		1.00	

6.4.3.5 2014 QA/QC Conclusion and Recommendation

Based on the provided data, in the opinion of WAI, the Cinovec exploration has an acceptable level of precision and is suitable for Mineral Resource estimation. Improvements will be required to the QA/QC procedures to increase confidence in the data when further exploration is carried out.

The current QA/QC procedure employed by EMH can only monitor precision, accuracy and contamination level at the assaying stage. A comprehensive quality control programme should monitor precision, accuracy and contamination level at each stage of the analytical process from the sampling stage through to assaying in order to minimise the error. Therefore, WAI recommends that EMH should improve their QA/QC procedures to be able to assess the following elements of the analytical process:

- Sampling precision through insertion of field duplicates;
- Sub-sampling precision through insertion of coarse duplicates;
- Contamination during sampling through insertion of coarse blanks;
- Analytical accuracy through insertion of certified reference material and check samples;
- Analytical precision through insertion of pulp duplicates; and
- Contamination during assay.

6.5 Resource Estimation

6.5.1 Background

The 2015 Sn resource estimation methodology remains unchanged from the 2012 estimate, albeit with the addition of the three new drillholes, comprising 342 additional samples.

The lithium resource estimate has been revised, involving a revision of the indicator cut-off grade, variography and estimation search ellipse.

6.5.2 Topography

Surface topography data were the same as in WAI's 2013 audit, where WAI received topographical data from the client in the form of ESRI Arc GIS polyline files which was converted into Datamine format by WAI, and a surface Digital Terrain Model was created from the polylines. Contours were at 5m elevation intervals.

6.5.3 Statistics

Widenbar carried out basic statistical analysis for both Sn and Li samples. These showed roughly Log-Normal type distributions.

There is no mention in the 2015 report regarding top-cutting, and as such, WAI assumes that the top cut values used in 2012 were applied, as the model contains no values above 5% Sn or Li which were determined from the log probability plots. Top-cuts were applied to both Sn and Li datasets and these were set at 5%. The Li data set contains only 3 samples above 5% whilst the Sn data set contains 11 samples.

> ***WAI Comment:*** *The statistical analysis section of the report is brief. However, the assumptions made and top-cuts applied to the data set seem reasonable.*

6.5.4 Li Variography

Variography was carried out by Widenbar on the mineralised Li samples which produced ranges of approximately 150m North-South and 20m East-West (Widenbar 2015). WAI assumes that variograms were used only to determine range of influence for samples as inverse distance interpolation was used for the estimation.

6.5.5 Block Modelling

The block modelling process carried out by Widenbar involved a multi phased approach. Initially a volumetric block model was produced using a 5m x 5m x 2.5m block size. The top of the granite wireframe surface was used as the bounding top surface with cells being filled to a depth of 400m AOD. This volumetric model was then used for subsequent lithological and grade interpolations.

A Lithological model was produced using indicators for granite and greisen lithologies; these data were interpolated into the block model using an Inverse distance cubed methodology. The rock type definition in the block model was used purely to define different density values in the block model.

> ***WAI Comment:*** *The lithological model provides a reasonable representation of the lithology as defined from drillhole logs which has been validated by Widenbar with geological cross sections. There are a few minor inconsistencies in the model where gaps in the drilling data have resulted in lithologies not being interpolated into the model. The lithological model has been used purely for assignation of density values.*

6.5.6 Definition of Mineralised Zones

Mineralised zones were defined through indicator modelling of Sn grades above 0.1% and Li grades above 0.08%. The lithium cut-off was revised from the 2012 value of 0.1% Li. Assay tolerances for both Sn and Li appear to be around 0.01% which is below the chosen cut-off grades and therefore will have little bearing on the mineral resource. The initial indicator models were produced independently of each other. From this, solid wireframes were created around the indicator models to constrain the subsequent grade estimation.

> ***WAI Comment:*** *Rather than using purely indicator modelling to constrain mineralised domains, it may be possible to conventionally wireframe the major zones of mineralisation using conventional profile definition or using a specialised wireframing package such as leapfrog.*

WAI has reviewed the grade distribution between the main lithologies, granite, greisen and other lithologies. This identified a distinct difference between the granite and greisen grades. Although the distribution shapes are similar, the greisien mineralisation appears to show higher grade mineralisation. The results can be seen in Figure 6.3.

> ***WAI Comment:*** *Although WAI has satisfactorily audited the resource model, limited information within both the 2012 and 2015 reports precludes a full understanding of how the model has been assembled. Notwithstanding this, the review of the grade distribution between rock types suggests that it could be of use to separate granite and greisen mineralisation in order to isolate the different grade populations.*

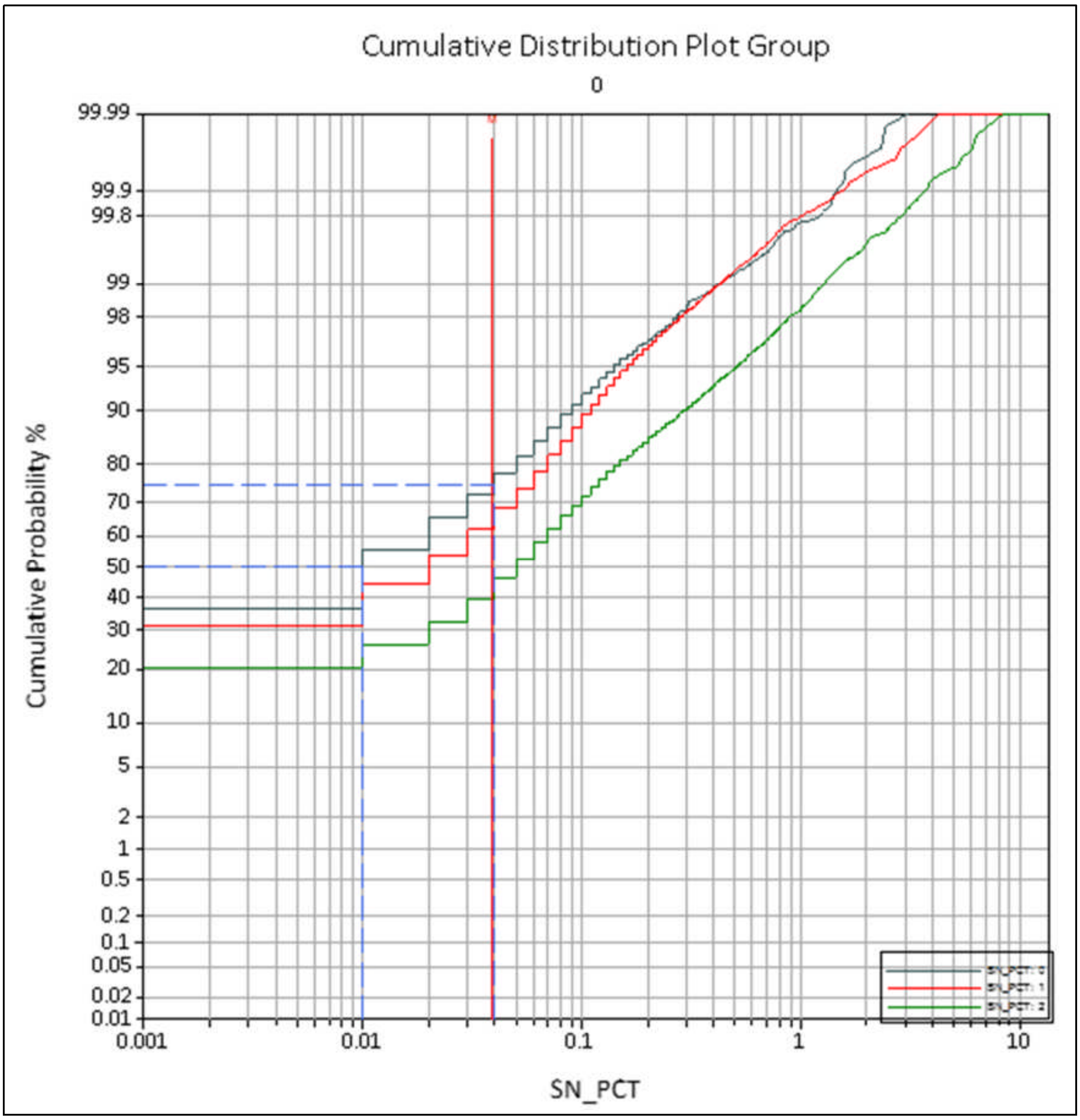

Figure 6.3: Log Probability Plot of Raw Drillhole data split by Rock Type (Granite Red, Greisen Green Other Lithologies Black

6.5.7 Density

Density values used for mineral resource estimation remained unchanged from 2012. Density values used for the Widenbar estimate are given in Table 6.6.

Table 6.6: Density Values Used in Widenbar Resource Estimate	
Rock Type	**Density (t/m³)**
Granite	2.57
Greisen	2.70
Undefined/near surface material	2.60

Four further density tests were undertaken in September 2014 at the GEOtest a.s. laboratories in Czech Republic on samples from CIS-3 from various depths with values ranging from 2.56 to 2.74 which appear to be in line with those used for the resource estimation.

> ***WAI Comment:*** *The recent density results appear to be in line with previous estimates and are in the region of what would be expected for the given rock types.*

6.5.8 Estimation

The 2012 Tin estimate was updated with the three new drillholes, other than this it is believed the methodology is unchanged from 2012. Widenbar used a phased approach to estimate resources. An initial unconstrained model was created using a 75m x 75m x 7.5m search ellipse to interpolate grades into the unconstrained model, grades estimated were Sn%, W%, Li% (Widenbar 2012).

Subsequently, an indicator model using a cut-off of 0.1% Sn was produced. WAI assumes the results from the Indicator model where then encapsulated by wireframes for Sn and Li independently, these wireframes were then used to constrain a final grade estimation. The grade estimation used was reportedly Inverse Distance Cubed. Figure 6.4 shows the Widenbar level plan of the lithium unconstrained model.

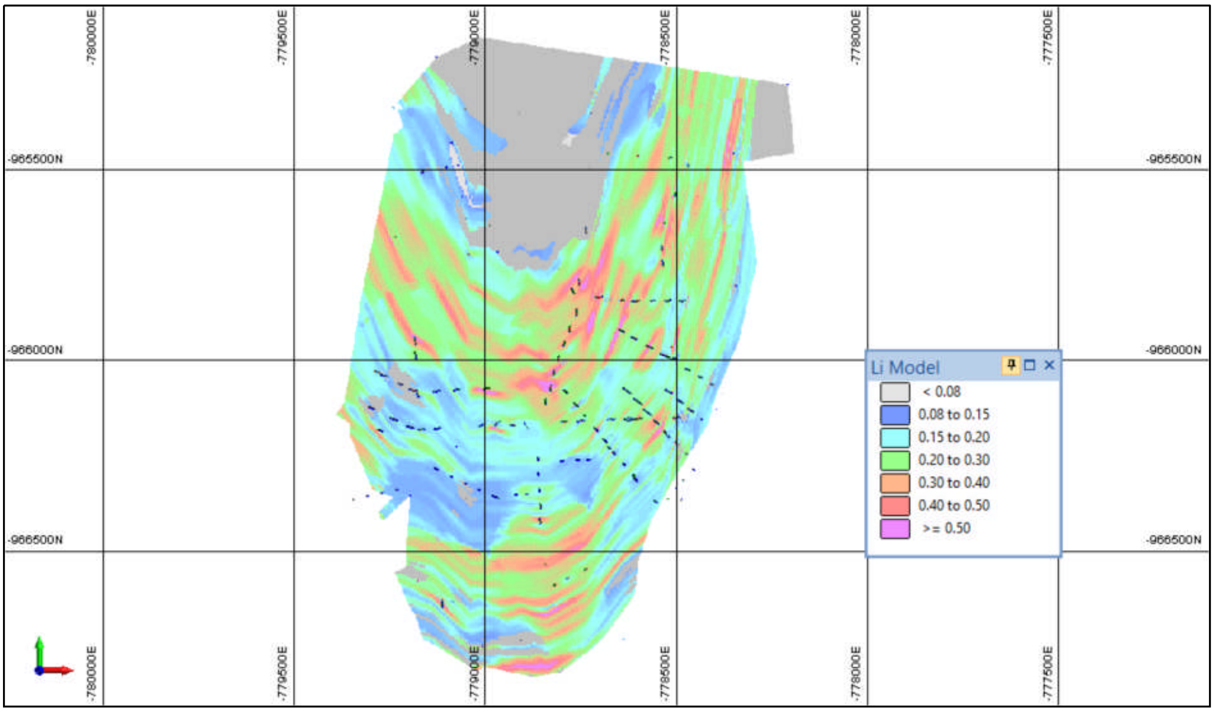

Figure 6.4: Lithium Model Level Plan (Widenbar 2015)

The 2015 report details amendments to the Li estimation methodology. The base indicator cut-off for Li was 0.08% Li. A primary search ellipse of 150m x 150m x 7.5m using a minimum of 5 and maximum of 15 samples, a secondary search of 300m x 300m x 12.5m was used to estimate any further unestimated cells. The search was carried out using unfolding planes which allowed the development of variable search ellipses. However, there are few details within the report detailing this process.

***WAI Comment:** There is little detail of the use of unfolding planes in the Widenbar report. WAI postulates that this refers to directional control of the search ellipse for grade estimation. Furthermore, the information available to WAI regarding grade estimation was limited to the draft estimation report of 2012 and the update report of 2015 which is essentially an addendum to the 2012 report. Both reports are rather vague on the details of the grade estimation methodology. This limits the ability to audit the model and confines the audit predominantly to block model validation.*

6.5.9 Depletion

No depletion of underground development or workings was built into the model, nor made available to WAI, although it is reported in the 2012 estimation report that this information was flagged into the model. However, it does not appear to be coded into the 2015 model. WAI did receive a string data of the underground development in the 2013 audit, which was reviewed by WAI.

6.5.10 Validation

Validation of the resource model is not discussed in detail in the Widenbar 2015 report. No reconciliation between the 2015 block model and the historical production data was carried out.

WAI has carried out model validation exercises on the Widenbar model, which included visual comparison of drilling sample grades and the estimated block model grades, and SWATH plots to assess spatial local grade variability.

A visual comparison of Block model grades vs Drillhole grades was carried out on a sectional basis for both Sn and Li mineralisation. Visually, grades in the block model correlated well with drillhole grade for both Sn and Li. Example cross sections of visual grade comparisons are shown in Figure 6.5 and Figure 6.6.

Swath plots were generated from the model by averaging composites and blocks in all 3 dimensions using 20m panels. Swath plots were generated for the Sn and Li estimated grades in the block model, and these should exhibit a close relationship to the composite data upon which the estimation is based. As the original drillhole composites were not available to WAI, 1m composite samples based on a 0.1% cut-off for Sn and a 0.08% cut-off for Li were created for the purpose of SWATH analysis. Example Swath plots are shown in Figure 6.7 and Figure 6.8.

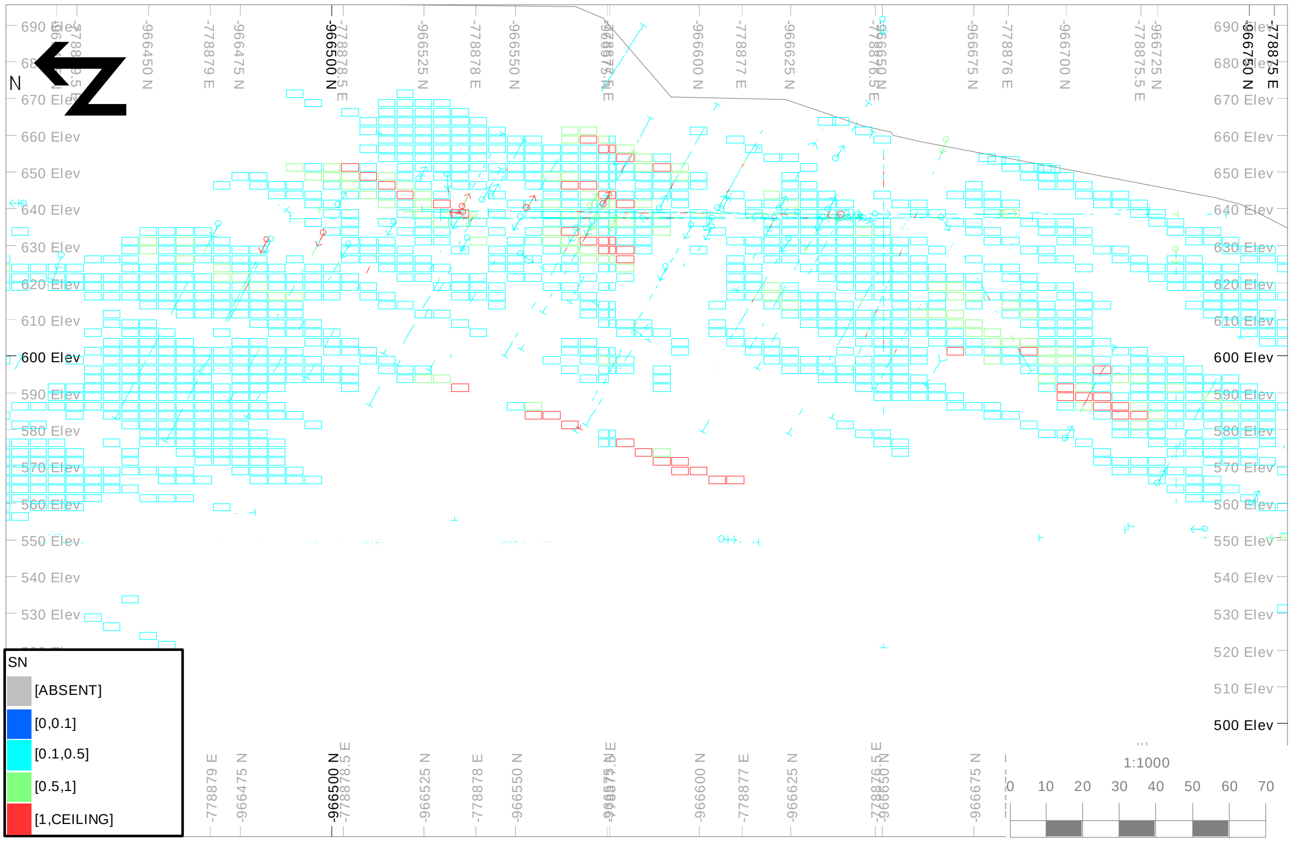

Figure 6.5: Sn Visual Grade Comparison

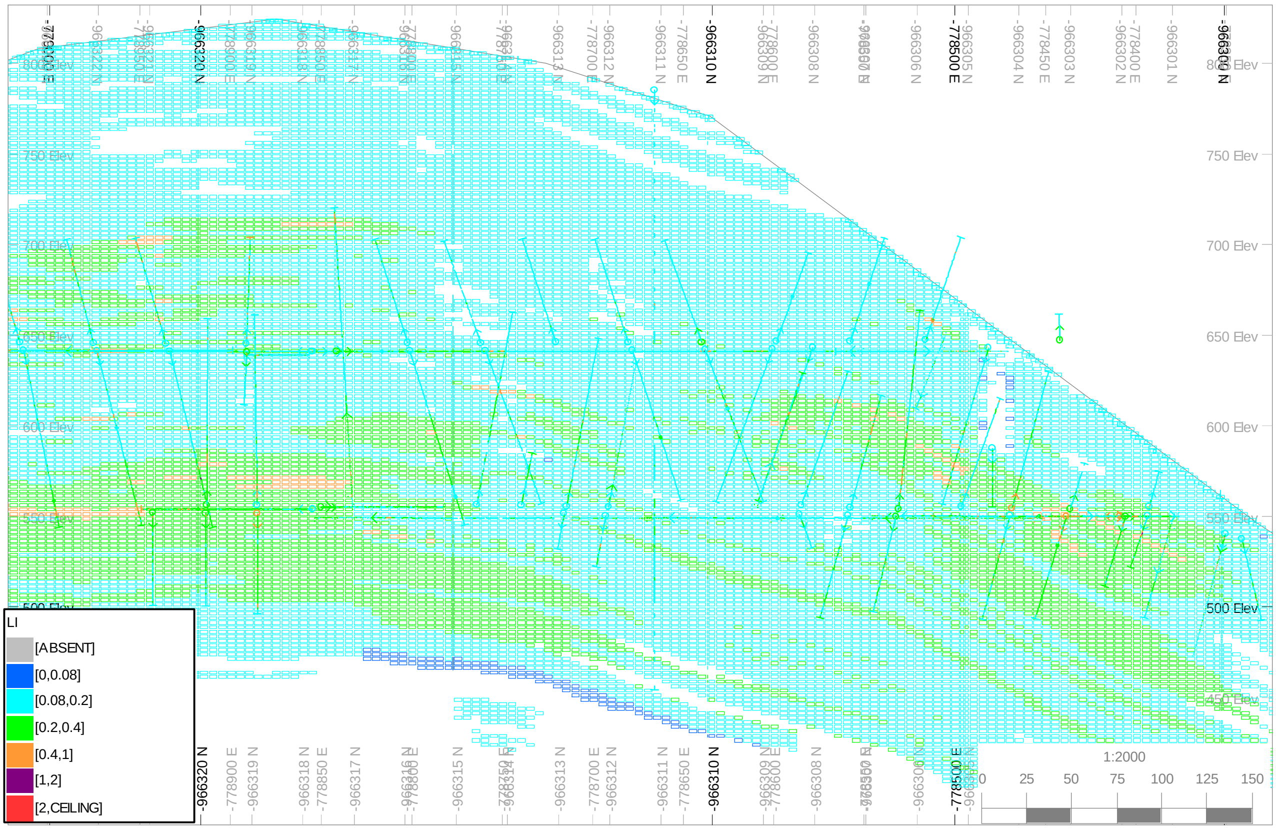

Figure 6.6: Li Visual Grade Comparison

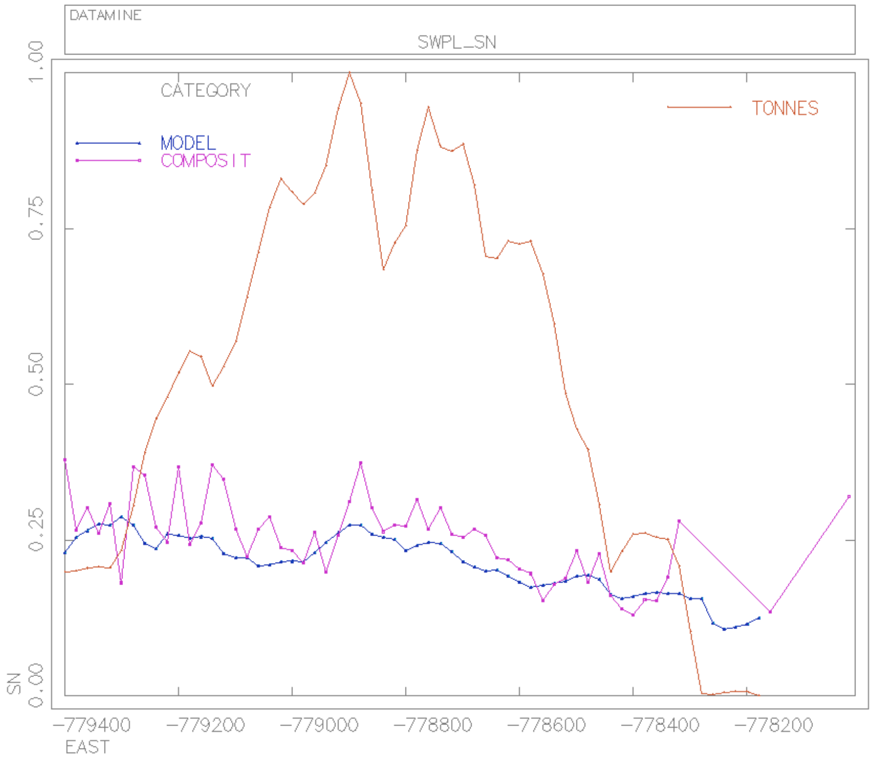

Figure 6.7: Sn Swath Plot by Easting Using 20m Panel Size

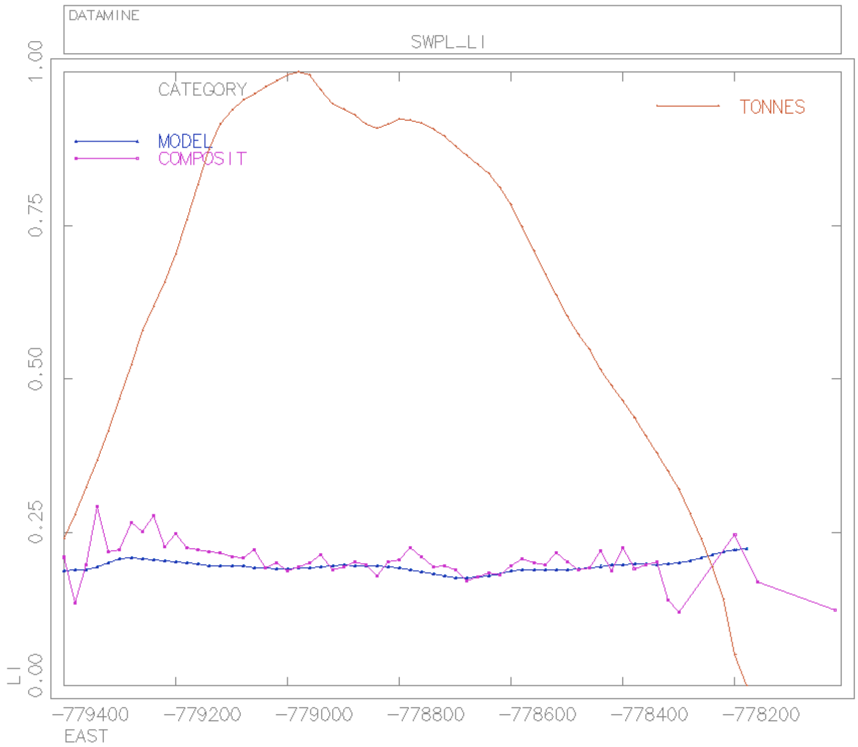

Figure 6.8: Li Swath Plot by Easting Using 20m Panel Size

Overall Swath plots illustrate a good correlation between the composites and the block grades. As is visible in the SWATH plots, there has been a large amount of smoothing of the block model grades when compared to the composite grades which tends to be typical of the estimation method.

WAI Comment: *Grade validation of the model shows that the grades provide a reasonable representation of the drillhole data.*

6.5.11 Comparison with 2012 Model

WAI has conducted a comparison of the 2012 and 2015 global Widenbar resources for both Sn and Li. Generally there is a slight increase in metal content for the resources, presumably due to the addition of new data. The Li grade in the Sn resource has doubled which is likely due to the inclusion of Li mineralisation areas within the Sn resource. The results of the comparison are given in Table 6.7 and Table 6.8.

Table 6.7: WAI Comparison of Widenbar 2012 and 2015 Global Tin Resource

Cut-Off (Sn %)	Tonnes (Mt)	Sn (%)	Sn Metal (t)	W (%)	W Metal (t)	Li (%)	Li Metal (t)
Cinovec Tin Resource (2012)							
0.3	13.4	0.51	68,340	0.05	6,700	0.11	14,740
0.2	28.1	0.37	103,970	0.04	11,240	0.11	30,910
0.1	74.2	0.23	170,660	0.03	22,260	0.11	81,620
Cinovec Tin Resource (2015)							
Cut-Off (Sn %)	Tonnes (Mt)	Sn (%)	Sn Metal (t)	W (%)	W Metal (t)	Li (%)	Li Metal (t)
0.3	14	0.52	72,800	0.05	7,000	0.22	30,800
0.2	30.1	0.37	111,370	0.04	12,040	0.22	66,220
0.1	79.7	0.23	183,310	0.03	23,910	0.22	175,340
Cinovec Tin Resource Difference (2012 vs 2015)							
Cut-Off (Sn %)	Tonnes (Mt)	Sn (%)	Sn Metal (t)	W (%)	W Metal (t)	Li (%)	Li Metal (t)
0.3	0.6	0.01	4,460	0	300	0.11	16,060
0.2	2	0	7,400	0	800	0.11	35,310
0.1	5.5	0	12,650	0	1,650	0.11	93,720

Table 6.8: WAI Comparison of Widenbar 2012 and 2015 Global Lithium Resource

Cut-Off (Li %)	Tonnes (Mt)	Li (%)	Li Metal (t)	W (%)	W Metal (t)	Sn (%)	Sn Metal (t)
Cinovec Lithium Resource (2012)							
0.4	10.8	0.47	50,760	0.02	2,160	0.06	6,480
0.3	36.8	0.38	139,840	0.02	7,360	0.06	22,080
0.2	133.6	0.28	374,080	0.01	13,360	0.04	53,440
Cinovec Lithium Resource (2015)							
Cut-Off (Li %)	Tonnes (Mt)	Li (%)	Li Metal (t)	W (%)	W Metal (t)	Sn (%)	Sn Metal (t)
0.4	9.4	0.46	43,240	0.02	1,880	0.08	7,520
0.3	44.8	0.36	161,280	0.02	8,960	0.07	31,360
0.2	219.4	0.26	570,440	0.01	21,940	0.05	109,700
Cinovec Lithium Resource Difference (2012 vs 2015)							
Cut-Off (Li %)	Tonnes (Mt)	Li (%)	Li Metal (t)	W (%)	W Metal (t)	Sn (%)	Sn Metal (t)
0.4	-1.4	-0.01	-7,520	0.00	-280	0.0	1,040
0.3	8.0	-0.02	21,440	0.00	1,600	0.0	9,280
0.2	85.8	-0.02	196,360	0.00	8,580	0.0	56,260

6.5.12 Classification

Resources for Sn and Li mineralisation were classified and reported seperately by Widnebar. Sn Mineralisation was predominantly classified as *Inferred* except the area affected by new drilling (Figure 6.9) which was classified by Widenbar as *Indicated*. Li resources were classified by Widenbar as *Inferred* where the maximum distance to samples used for estimation was less than 100m.

WAI assumes that this is largely due to the lack of QA/QC data as drill spacings and data continuity from undeground exploration are good.

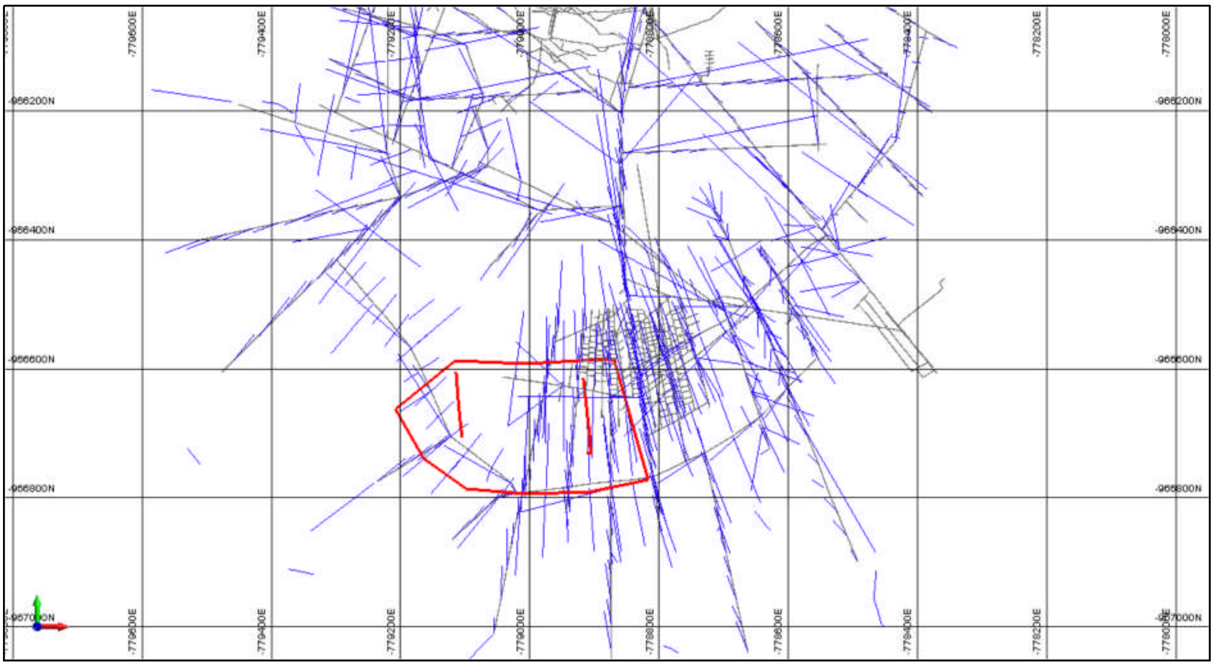

Figure 6.9: Area of Sn Mineralisation Affected by New Drilling Classified as *Indicated* Resources (Widenbar 2015)

> ***WAI Comment**: WAI considers the resource classification of Li resources appropriate for the data available. However, WAI believes the classification of a small amount of the tin resource as Indicated is inappropriate, given that the update is based on only three new drillholes, which although broadly coincident with known mineralisation, only provide a small increase of data density. Notwithstanding this, WAI believes that the inclusion of Indicated or otherwise is not an issue with regard to the global resource estimate.*

6.5.13 Conclusions

The Widenbar model appears to have been prepared in a diligent manner and given the data available provides a reasonable estimate of the drillhole assay data at the Cinovec deposit. The reports made available to WAI are rather brief and do not seem to discuss the methodology used in any detail. This brevity of detail results in a lack of transparency in the estimation methodology.

WAI believes the classification of Indicated Resources for the Sn mineralisation is generous, given that the update is based on three new drillholes which do not provide direct validation of historical data, only an increase of data density.

The dataset for Li is not as comprehensive as the Sn dataset and as such the continuity of the Li model is not good. However, WAI is of the opinion that the block model and resource estimate appear to be robust, and appropriate for the level of data available.

Whilst WAI believes the block model is suitable for the current dataset, if the project is to be progressed, then the confidence in the model and the dataset would have to be improved. An upgrade of the resource classification would be possible through a process of confirmatory drilling and acquisition of QA/QC data to demonstrate the accuracy and precision of the data. WAI understands that a confirmatory drilling programme will take place during 2015.

There is a significant further resource potential below the current Cinovec South resource, which is terminated by a horizontal floor determined by lack of data. In the past, drilling was terminated at certain depths regardless of the geology and the grade. The block model shows some of the best tin and tungsten grades immediately above the floor of the current geologic model.

6.5.14 Recommendations

In order to progress the project further and improve confidence in the mineral resource model, WAI would recommend that as part of any further drilling, a programme of confirmatory drilling of twinned holes be carried out in order to validate the historical drilling.

WAI recommends that as the project is progressed the mineralisation be wireframed in order to accurately represent the mineralised structures, and subsequently a block model be created from these mineralised envelopes which would allow a more coherent block model for mine design purposes.

7 MINING

7.1 Introduction

Details in this section of the CPR come from the European Metals Cinovec Tin Project Scoping Study, Mining Scope. Bara Consulting, March 2015, Report No. 2014-114-02.

Access to the Cinovec mining area will be achieved through the refurbishment of the existing hoist and ventilation shafts which were closed 15 years ago and the development of a new decline. Once underground access is achieved then:

1. Existing footwall tunnelling will be redeveloped to the enlarged dimensions through slyping; and
2. The on-ore development will be mined.

The ore will be mined through longhole open stoping techniques using trackless mining equipment and excavated using 40t LHD trucks.

7.2 Mining Method

The orebody, which is largely flat or shallow dipping, will be mined by longhole open stoping some 25m high using mechanised equipment. The mining method will be enhanced by the proposed cut and fill techniques with cemented paste back fill to ensure overall ground stability and maximise recoveries.

From the Bara scoping study it has been summarised that where the orebody dip is less than 50°, the stope will be vertical, whilst when the dip is greater than 50°, the stopes will be angled to the orebody dip.

Following geotechnical studies, it has been confirmed that no mining or ore extraction will be carried out within a vertical distance of 100m of surface.

Longhole open stoping ore extraction is a natural choice to achieve high underground production rates in this type of deposit.

Based upon the annual production of up to 2Mtpa, stoping will complete 11 stopes per month, although keeping paste back filling at this speed will become the overall controlling factor. Therefore, it is recommended that the paste plant and stope backfilling capability is reviewed to ensure a match to ore extraction before finalising an annual production rate.

7.3 Geotechnical

7.3.1 Introduction

As part of the Scoping Study, a review of the underground geotechnical design was conducted. The report, being at Scoping Study level, indicates expected low confidence levels in the analysis due to minimal test results, availability of data, or use of regional/nearby data. Overall, the information will be sufficient only to provide indicative designs and plan pre-feasibility investigations.

The analysis within the Bara report was based on information provided by EMH. The information consisted of historical data and records from the previous mining operation as well as limited laboratory tests undertaken by EMH.

The report has used the NGI Q-System by Barton for rock mass classification and the stability graph method developed by Mathews, modified by Potvin, for empirical stope hangingwall spans. Both systems have been used extensively in operations and have a proven track records in their use.

7.3.2 Available Data

The only data available, highlighted by Bara Consulting, is a table of four uniaxial compressive rock strengths tests and Rock Quality Designation (RQD) measurements from the three boreholes drilled in 2014 (CIS-1, CIS-2, and CIS-3). Although not stated, WAI has assumed no geotechnical mapping or core logging (oriented or un-oriented) are available.

7.3.2.1 Uniaxial Compressive Strength Data

Uniaxial strength tests have been conducted on one borehole, (CIS-3) at different depths of different rock units for each test. The rock strengths reported are within expected ranges for the lithology types reported, and data withstanding, appear to be competent.

7.3.2.2 RQD

RQD is defined as the percentage of intact core pieces, longer than 100mm in the total length of core measured. The core should be at least NW size (54.7mm) in diameter and should be drilled with a double-tube core barrel, Hoek, 2000. The cores from CIS-1 to CIS-3 meet these standards.

The tables of RQD are presented over lithology intervals, it is not stated if the RQD has been measured over the entire lithology domain or reported as an average from a set interval length. The tables of data report RQD only, the number of samples, minimum, maximum, range, or deviation is not reported, which limits variability review of the lithology from the average or expected rating.

There is one erroneous result reported in Table 3.2 of the Bara report which states that the RQD of Pegmatite is 78.6% over an interval range reported as 0.1m. This does question how the RQD interval is measured and how the RQD has been recorded.

WAI would recommend that the original logging sheets be compared to the drill core, or review via photos of the core.

7.3.3 Rock Mass Classification

The NGI Q-System is applied for rock mass classification; the Q-System uses parameters related to design tables to allow six parameters to be related to a standardised result table. The first 14m of ground is highly weathered overburden, so has low rock mass ratings, which would be expected and appropriate.

Whilst the ratings appear reasonable for general rock mass conditions, it is not clear how they relate to in-situ conditions at Cinovec.

If data are available, alternative classification methods such as Bieniawski's RMR classification system should be considered to compare or give confidence from more than one rock mass rating system.

7.3.4 Empirical Hangingwall Design

The stability graph method plots a stability number (N) against hydraulic radius (HR). The stability number is based on the Q-System, with modifications for rock strength/induced stress (A Value), joint orientation (B Value), and stope orientation (C Value). HR is a measure that is able to represent the influence of size and shape of a design surface.

Whilst the HR's from the stability graph prove good starting parameters, numerical modelling and back analysis during operations to adapt the graph to the deposit should be completed.

The application of the empirical span analysis is sound, however determining the factors for both the rock mass classification system and the stability number factors is critical. Based on the Bara report, further clarity is required for some of the factors as these have been determined and others used have been based without in-situ data. As this is a scoping study this is expected, but this ultimately affects the results of the stability analysis and the confidence in the stope sizing for design or other works.

At this project stage, this lack of data is expected, but the assumption should be made clear so the results can be fully understood. As a note, the analysis has focussed on the hangingwall surface, in further analysis, a review of abutments and crowns of the stope surfaces should be included in the design.

7.3.5 Backfill

The report has significant sections for different types of backfilling method; paste fill is selected as giving the highest extraction ratio and largest stope spans. Table 3.8 in the Bara Scoping Study reports the stope strike, maximum vertical length, and extraction ratio for various scenarios of open stoping and different fill types.

WAI requires further clarity as how values have been determined based on the different fill types as the calculations and formulas are not presented. The Bara report has assumed paste fill has the highest strength given its composition, but due to the assumptions or lack of data available, further information is necessary to understand how the reported spans are determined.

Given the importance of backfill for the mining method, numerical modelling is recommended in further studies to model the influence of the stope spans with backfill.

7.3.6 Rib & Sill Pillar Sizing

Rib and sill pillars have been analysed using flexural beam analysis by Mitchell (1991). A minimum FoS of 1.5 has been used for sill pillars and a minimum FoS of 2.0 has been used for rib pillars.

The selected FoS are reasonable for short to mid-term internal pillars. The pillar sizing against stope span appears reasonable, the calculations and formulas are not presented, but based on the stope span and laboratory strengths, the arrangement appears appropriate.

7.3.7 Conclusions

The review of the geotechnical section has showed rock mass classification; empirical hangingwall design, backfill design, and pillar design have been completed to determine an appropriate mining method and arrangement. Whilst some equations or methods for determining factors are not presented, the application of the methods appears correct, and appropriate for the project.

The results of the analysis are based on limited or assumed data, the lack of in-situ data is expected at this project level, but is required for the methods of analysis used. Generally, due to the requirement of in-situ data, these analysis methods are not conducted because the results are based on incomplete or limited data, limiting their confidence and suitability.

Whilst WAI has little doubt the assumptions selected or derived are appropriate for Cinovec, the assumptions used for the analyses should be clearly stated and this effect highlighted when reviewing the results. The results of the analysis give an excellent first pass design and arrangement, but should be supplemented by further geotechnical investigation, and updated with in-situ data where possible, to confirm or adapt the designs.

WAI recommends further geotechnical investigations and updates to the existing works with collected data, and supplements to the design with numerical modelling at a later stage.

7.4 Stope Design

Stopes have been divided into primary and secondary, with the primary stopes to be extracted and back filled before the secondary stope mining commences.

According to the Bara scoping study the stopes will be limited by the geotechnical conditions and will operate at 25m height by 10m wide and the length will be between 40 – 80m long depending upon the geotechnical calculations.

Figure 7.1 and Figure 7.2 show the stope arrangements for steeper and flatter parts of the orebody respectively.

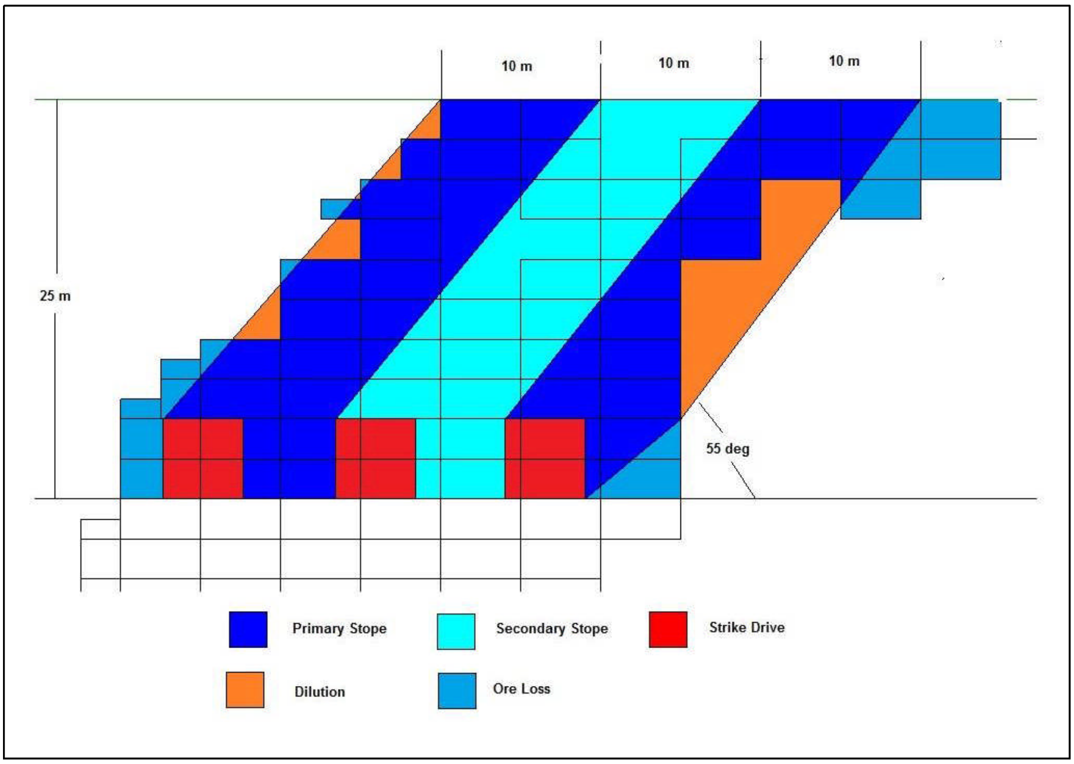

Figure 7.1: Steep Orebody Stope Arrangement – Section View

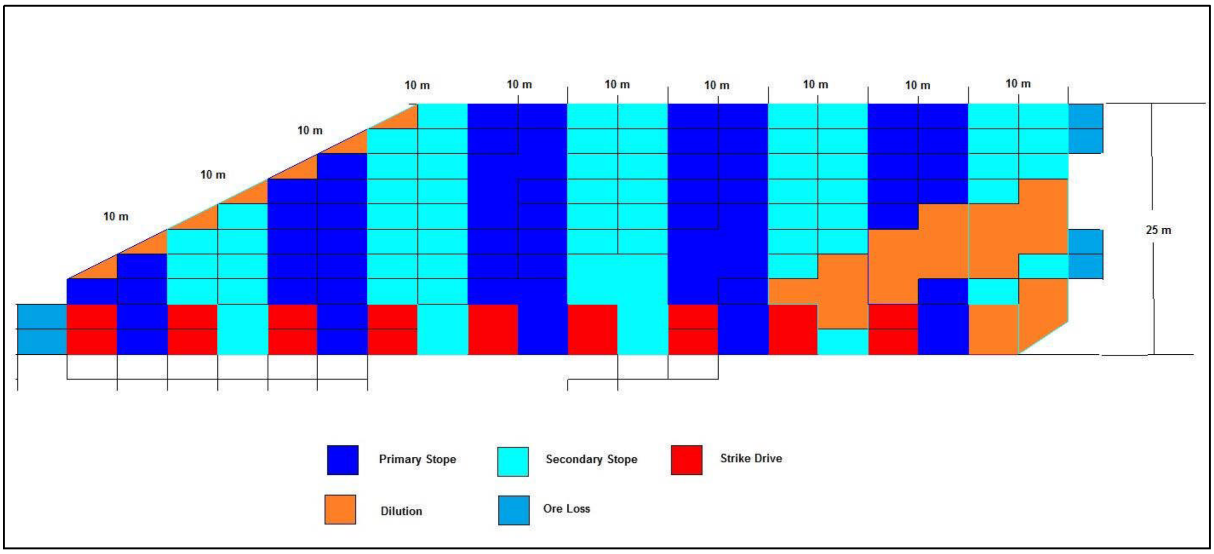

Figure 7.2: Flatter Dip Orebody Stope Arrangement – Section View

Stope development will proceed in the following way:

1. From the Footwall drive, access drives will be developed on 25m intervals to provide access to the orebody.
2. From the access drive ore drives are developed along strike.
3. Where the orebody is greater than 10m, then ore drives will be developed at 10m centres, with these ore drives becoming the drilling and mining drives.

   WAI Comment: *The stope design is heavily dependent on the geotechnical nature of the ground conditions, and maximising the strike length of the stopes reduces the pillars and increases overall recovery. The proposed 80m back length appears excessive when the geotechnical conditions require the mined out stope to be back filled. A shorter stope length may be more appropriate.*

Positioning of the drill drives are critical considering the shallow dip of the ore body.

7.5 Mine Design

7.5.1 Initial Development

According to the Bara report, the new mine area is a Southerly extension of the existing closed and abandoned, Cinovec mine. This Southern extension was initially explored at the time of original mine underground activity through development of the footwall drives on two levels (640mRL and 550mRL), and cross-cuts were developed to intersect the ore body.

For the new project, initially the mine would be accessed through the existing abandoned shafts, Ci-2 and K20225 (Figure 7.3) which would be refurbished and utilised as part of the future operation, with shaft Ci-2 planned to be the hoist shaft and K20225 planned to be the intake ventilation shaft.

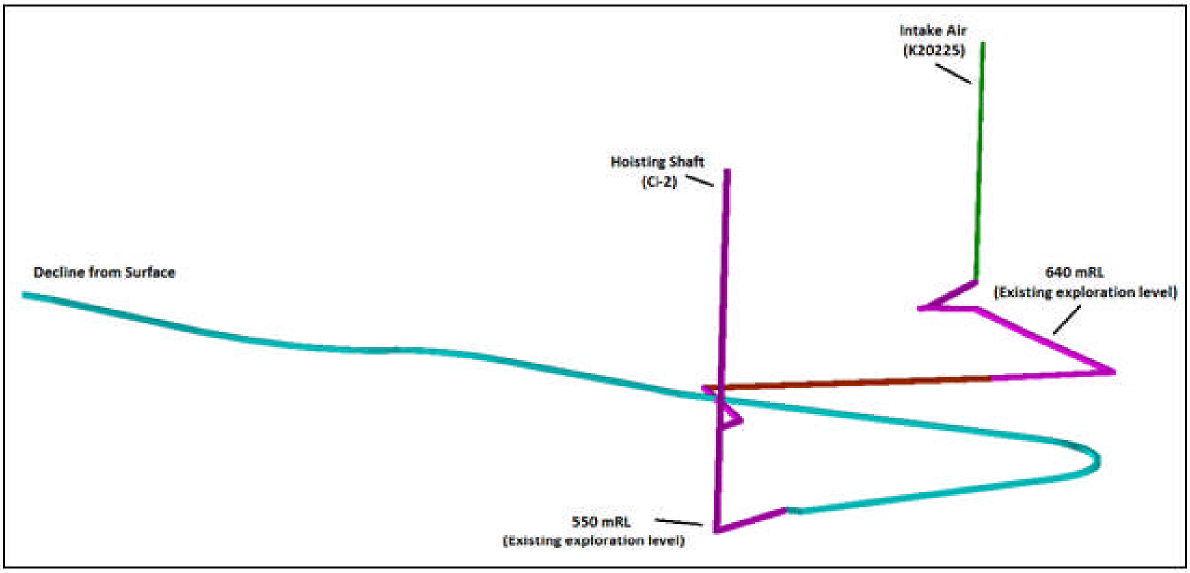

Figure 7.3: Initial Mine Development

7.5.2 Development Design

Following the initial development to provide access to the existing underground levels, the previously developed areas will be mined further to match the larger mining equipment size now envisaged to meet the production goals which will be achieved by slyping out the drives to the required sizes.

Once the existing tunnelling of the footwall drives and access drives are developed to the size required, then the ore drives will be developed along strike.

7.5.3 Materials Handling

Materials handling will be carried out using trackless equipment. Sandvik underground mining equipment has been identified for the study, but the final equipment selection will be subject to a more detailed study.

The extraction from the open stopes will be carried out by the Sandvik TH540 which are matched to the Sandvik LH517. The 40t LHD trucks will haul the ore and waste to the central Ci-2 shaft where it will be hoisted to surface.

Sandvik type equipment would provide a reliable service and well as production support through the life of mine. The selected size equipment seems best suited to the planned operation.

Table 7.1 shows the proposed mining equipment fleet.

Table 7.1: Equipment Fleet Summary (Bara)

Equipment	Manufacturer	Description
TH540	Sandvik	Truck (40t)
LH517	Sandvik	LHD (17t)
DL331	Sandvik	Longhole Drill Rig
DD321	Sandvik	Development Jumbo
Charmec 6605	Normet	Charge-up
Utilift 6330	Mornet	Scissor Lift
120K	Caterpillar	Grader
DS311	Sandvik	Rock Support Drill

7.6 Mine Schedule

Within the Bara report, the annualised tonnage have been calculated to be between 1.5 – 2.0Mtpa, and although not unreasonable, it does appear high.

The Cinovec Mineral Resource considered for mining by Bara is:

Tonnes (M)	Sn Equivalent	Sn (%)	W (%)	Li (%)
38.6	0.59%	0.29	0.04	0.24

The life of mine will be in excess of 20 years based upon the Tin Equivalent tonnage, although an ultimate mine life may be dependent upon the final decision as to which mineral (Tin or Lithium) is the production driver as the markets change. Clearly, the potential Li ore tonnage is significantly greater than the Sn ore tonnage.

7.7 Mining Operations

7.7.1 Development

All lateral development has been designed to 4.5m high by 5.0m wide to allow for the 40t LHD trucks, with the decline developed to 5.0m by 5.0m for improved ventilation intake. The decline and lateral development will be mined using Sandvik DD321, a two boom jumbo capable of multiple applications, face drilling, cross-cut drilling and bolt hole drilling.

7.7.2 Stoping

Stoping can commence once the ore drives are completed. Initially slot raises will be developed which will be extended to create a void. Stope drilling will be achieved using a Sandvik DL331 which is a one man operated top hammer longhole drill capable of drilling up to 23m. The drill rig will drill 20m rings, to a maximum of 10m width.

7.7.3 Backfilling

Once the stope has been mined out, backfill will be placed into the stope from the level above. Backfill will comprise of hydraulic fill made from tailings from the process plant with 8.0% cement. The hydraulic backfill mix will be prepared on surface and will be pumped to the selected site through a dedicated pipe line.

> ***WAI Comment:*** *A geotechnical study is required to confirm that both the primary and secondary stopes require backfilling. In addition, a review should be made for back tipping waste into the empty stopes prior to back filling.*

7.8 Ventilation

The scoping study ventilation design has been based upon international best practice, and the mine will be served by 3 intake airways, a single 5.0m by 5.0m decline, the existing hoist shaft (Ci-2) and the existing K20225 Shaft.

7.9 Air Distribution

The mine will be placed under negative pressure by having the main exhaust fans placed in the return airway system.

Fresh air will be drawn into the mine via the decline, the downcast hoisting shaft (Ci-2) and K20225 Shaft. It will be drawn into the footwall drives where it will be drawn by fans and columns into the access cross-cuts and be delivered into the stopes.

Air will then flow out of the access crosscuts along the footwall drives and into the Return Airway system (RAW).

The RAW system will consist of 2 x 3.1m diameter raise bored raises (approximately 200m long) from the top of the orebody to the main surface fans (Figure 7.4).

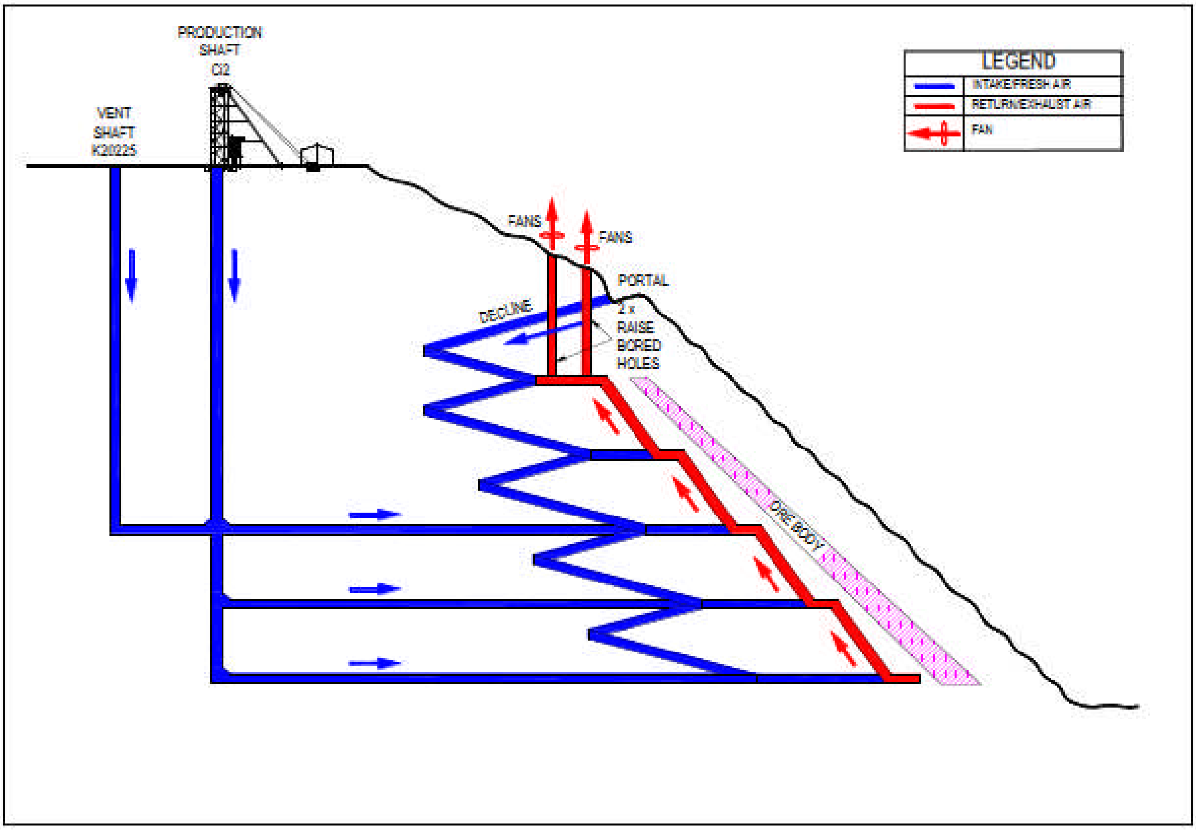

Figure 7.4: Schematic Diagram of the Ventilation Layout

7.10 Winter Heating of Intake Air

During the winter months with the low seasonal temperatures, the installation of a heating system is required on the intake air to provide warm air to both the workforce and to prevent formation of ice on the decline and in the downcast hoist shaft.

> ***WAI Comment:*** *The mine is situated in Central Europe where winters are cold, and being relatively shallow the underground temperature may be too low to operate through the winter months without a heating system; therefore a heating study including costs is recommended, although this is unlikely to have a significant impact on capital costs.*

7.11 Mining Losses and Dilution

Planned ore losses and dilution were estimated by calculating the area of expected ore intersection, losses and dilution. Planned dilution from ore drives and stopes is estimated to be 7%. To account for unplanned dilution and ore loss, an additional 3% ore loss and dilution was included in the mining inventory calculation, giving total ore loss of 10% and dilution of 10%.

> ***WAI Comment:*** *The overall dilution and ore loss is not unreasonable, although based on wider international documentation there is room to consider a higher dilution level of 15% considering the mining method.*

7.12 Primary Access

7.12.1 Decline

From the Bara report, a single, 5m by 5m decline will be driven from a portal entrance, which has not been designed in detail, nor location identified, although this will be on the south side of the ridge above the Altenberg main road.

The location of the portal entrance will also be the chosen with respect to the location for the process plant, paste plant, workshops and offices.

The decline will serve as a fresh air intake airway, with a fan and ducting providing the intake air.

> ***WAI Comment:*** *Geotechnical review of the tunnel ground rock conditions is recommended in order that suitable rock bolting and supporting techniques can be implemented from commencement of the development.*

7.12.2 Vertical shaft Ci-2

The existing Ci-2 vertical shaft which is 418m deep is to be used for the permanent production hoisting and to serve as a fresh air intake ventilation airway. There is no service hoist as all men and material will be transported through the decline. The rock hoisting shaft will also act as the second means of egress.

The existing 4.5m diameter Ci-2 shaft is concrete capped, although it is not known if the shaft is concrete lined (Figure 7.5). The shaft will be mucked out and re-equipped for rock hoisting.

It is planned that the production areas will be supplied with service water by means of piping down the shaft.

7.12.3 Rock Hoisting

Plans have been made to install a double drum hoist capable for hoisting all the ore and waste using the two 13.5t rock skips.

Based upon the Bara report, the two skip hoist Ci-2 Shaft appears matched to the required production requirements, and has the ability to be re-equipped to handle larger sized skips if production levels require.

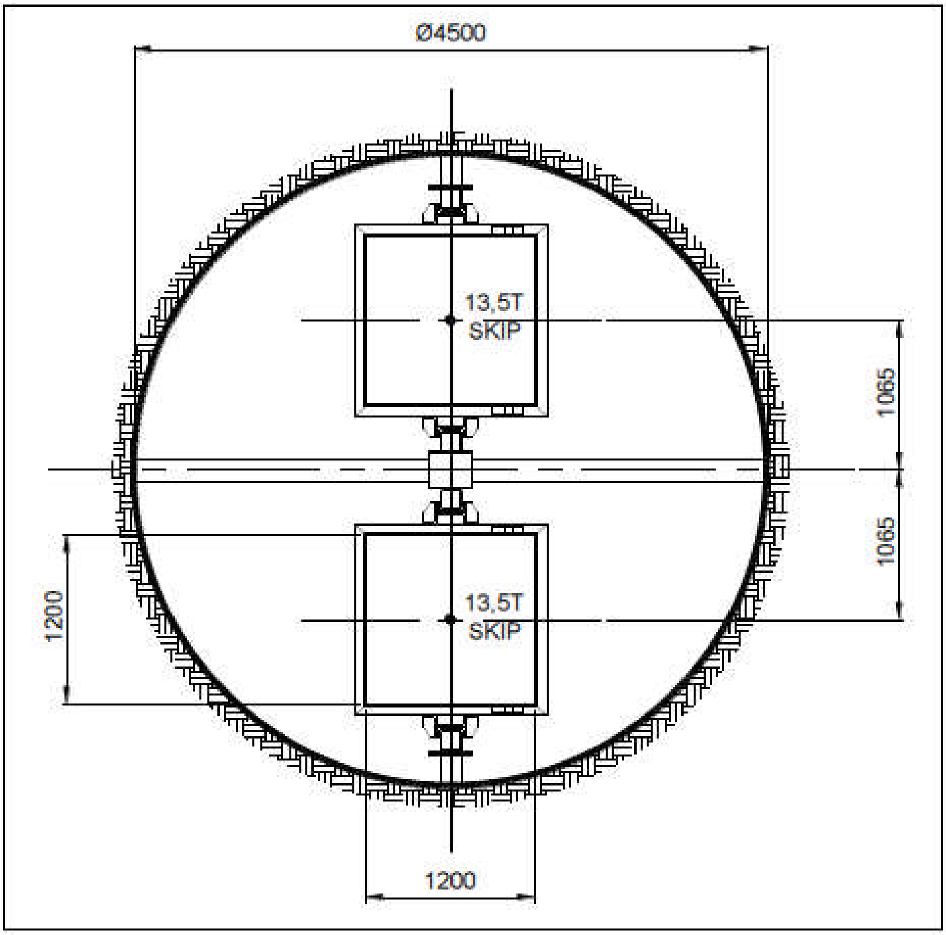

Figure 7.5: Ci-2 Vertical Shaft Cross Section

7.13 Shaft Depth

Existing station elevations have been identified and the levels are as follows;

Level	Collar elevation	Metres below surface
Collar Elevation	868mRL	0mbc
First exploration level	640mRL	228mbc
Second exploration level	550mRL	318mbc
Loading box level	490mRL	378mbc
Shaft Bottom	450mRL	418mbc

Conditions within the Ci-2 shaft should be mainly unchanged from 15 years ago when it was capped, although it is not known if any fill material was placed in the shaft. Moreover, there is sufficient room within the shaft dimensions to accommodate a protected fixed ladder-way access which will provide the second access manway to the underground workings.

7.14 Vertical Shaft K20225

The K20225 shaft is believed to be open, but partially flooded, is 4.8m by 2.5m in size, and is the only dedicated ventilation shaft. It will be used as a fresh intake airway. K20225 shaft will not be equipped or used as a man access.

If this shaft were dewatered, access to the old workings could be made, and the installation of a further ladder-way would provide an additional man access.

7.15 Services Infrastructure

7.15.1 Mine Water infrastructure

7.15.1.1 Introduction

Table 7.2 shows a Water Balance for the proposed mine.

Table 7.2: Cinovec Water Balance Table (Bara)

		Peak Mined Tonnes (tpm)	175,000
Stream	**Item**	**Average Flow Rates**	
		m^3/month	**m^3/day**
1	Ground Water Inflow	12,960	430
2	Service Water to Mining Sections	200,000	6,670
3	Backfill		
3A	Drainage	4,600	150
3B	Flushing Water	50	<10
4	Losses		
4A	Evaporation	10,650	360
4B	Hoisted Rock	8,000	270
5	Inflow to Settler	198,960	6,630
6	Flow to Clear Water Dam	194,980	6,500
7	Water in mud to Process Plant	3,980	130
8	Service Water to Tank	194,980	6,500
9	Top Up from External Supply	5,020	170

7.15.1.2 Ground Water

No new geohydrological ground water data are available and all information within the Bara Scoping Study has been based upon the mine's previous pumping capacity of 300l/min (430m^3/day) with this rate being assumed for the design of both the temporary and permanent pumping systems.

7.15.1.3 Service Water

The average underground service water requirements of 6,670m^3/day is based upon a "rule of thumb" ratio of 1 tonne of water per tonne of rock blasted.

7.15.1.4 Dirty Water Handling (Temporary)

A relay dirty water pumping system will be utilised while the decline is being developed.

7.15.1.5 Clear Water Pumping (Permanent)

A clear water pumping system will be utilised as the permanent dewatering and return water handling system for the mine.

7.16 Mine Power Infrastructure

According to the Bara report, a 9MVA supply will be required (Table 7.3) to supply the Cinovec mining operation (which is assumed the local authority will provide). Emergency power will be supplied by a 2.5MVA diesel generator which will be located adjacent to the main mine substation.

Table 7.3: Cinovec Mine Electrical Loads (BARA)

Item	Description	Load (kW)
1	Hoisting Plant	2,450
2	Ventilation –Surface and Underground	4,190
3	Surface Infrastructure	1,155
4	Mining	1,200
5	Underground Pumping & Infrastructure	2,489
	Total Installed kW	11,484
	Diversity Factor	60%
	Power Factor	0.8
	Maximum Demand (MVA)	**9**

> ***WAI Comment:*** *Considering the demand from the process plant, ventilation and underground pumping, a greater emergency power diesel generation capacity is necessary as both water pumping, ventilation and in the event of a black out, process control, cannot be switched off immediately without safety or costly repercussions. WAI recommends that the backup generation capacity matches 50% of the mines power demand.*

7.17 Conclusions and Recommendations

1. Longhole open stoping ore extraction is a natural choice to achieve high production rates, given the deposit orientation and production tonnage requirements.
2. It is recommended that the "actual" paste back filling capability is review as the paste backfilling capability will become the controlling factor for the daily production rate.

3. The stope design is dependent on the geotechnical nature of the ground conditions, and with existing information, an 80m back length is excessive based upon the level of geotechnical investigation carried out. A more conservative back length should be considered.
4. WAI recommends that a study be considered for back tipping the underground waste into the mined-out open stopes, to both reduce the waste hoisted out of the mine and support the paste backfill.
5. WAI recommends when working with shallow dip open stopes, higher dilution recovery factors could be considered.
6. An underground optimisation study is recommended to consider both Sn and Li independently rather than working with a "Sn equivalent tonnage". With an optimised underground design shell, a mine design could be carried out to estimate the Mineable Resource.
7. Considering that there are two shafts already mined, these should be excavated and evaluated prior to commissioning the decline. With the two shafts operational then there may not be the call to develop a decline and all equipment should be transported underground through the shafts. WAI recommends that the need for a decline be reviewed.
8. As K20225 Shaft is open, but flooded, WAI recommends that this be dewatered to allow a geotechnical study to be carried out and access to the underground old workings gained.
9. Considering the cold winters, additional studies are recommended for the heating systems required and costings for operating for up to 6 months of the year in the PFS.
10. WAI recommends that additional "Emergency diesel generation" capacity is available in the event of an electrical black out which is sufficient to cover water pumping, process circulation and ventilation.

8 PROCESSING

8.1 Introduction

The "CJ" ore type is known to be more refractory than the majority of ore types that were treated at Cinovec, due to its fine grained and disseminated nature. WAI has been provided with brief summaries of the historic testwork undertaken on CJ ore and the flowsheets that were developed for its treatment when the Cinovec plant was operating. To supplement this information, EMH have undertaken a short programme of testwork at ALS Laboratories on a 12kg sample of drill core.

8.2 ALS Testwork 2015

8.2.1 Head Sample Analysis

Some 12kg of cut core in 16 bags were sent to ALS Metallurgy from Cinovec for mineralogy and gravity separation assessments. The sample was a composite of 16 drill core collected from Holes CIS-2 and CIS-3 (drilled by EMH in 2014), with individual segments weighing between 0.47 and 0.75kg. Head analyses using XRF and ICP of the Composite sample are summarised in Table 8.1.

Table 8.1: ALS Sample Head Analysis

Element	Grade	Unit
CaO*	0.99	%
Fe*	2.29	%
SiO_2*	72.9	%
Sn*	0.28	%
WO_3*	0.08	%
Al	1.96	%
Cr	80	ppm
Cu	40	ppm
Fe	1.84	%
K	2.72	%
Li	3,150	ppm
Mg	<0.05	%
Mn	1,720	ppm
Pb	90	ppm
S	<0.05	%
W	430	ppm
Zn	770	ppm
S	0.05	%
C	0.04	%

Note: All elements analysed by ICP except those with * which used XRF

The sample assayed 0.28% Sn, 0.08% WO_3 and 3,150ppm Li. The elemental tungsten assay of 430ppm W is inconsistent with the WO_3 value. Sulphur and carbon levels were low.

8.2.2 Mineralogy

XRD results indicated that the composite contained some 55% quartz, 20.6% zinnwaldite, 9.6% lepidolite and 6.4% topaz. Mineralogical assessment indicated a moderately fine liberation point for cassiterite with 65% or higher liberation for cassiterite grains below 150µm.

The optical mineralogy results for cassiterite are given in Table 8.2.

Table 8.2: Composite Sample Cassiterite Liberation

			Binary with						
Fraction	**Sn Dist**	**Free**	**Sh**	**Wf**	**Zw**	**Tz**	**Fl**	**OG**	**Ternary+**
+212	5.1	0	1	0	38	0	0	30	31
+150	7.1	34	0	0	10	0	13	34	8
+106	11.4	65	0	0	7	0	0	19	9
+53	27.5	86	0	0	3	0	1	9	0
+20	27.8	95	0	0	0	0	1	4	0
TOTAL	**78.9**	**76**	**0**	**0**	**5**	**0**	**2**	**12**	**4**

Sh=scheelite, W=wolframite, Zw=zinnwaldite, Tz=topaz, Fl=fluorite, OG = other gangue

The results showed good liberation of cassiterite below 150µm with 86% free cassiterite in -106+53µm fraction and 95% free cassiterite in -53+20µm fraction.

The tungsten distributions between scheelite and wolframite are given in Table 8.3.

Table 8.3: Tungsten Mineral Distribution

Fraction	**W Distribution**	**Sh**	**Wf**
+212	4.4	35	65
+150	9.8	20	80
+106	13.4	17	83
+53	25.2	23	77
+20	23.1	10	90
TOTAL	**75.9**	**18**	**82**

The results show that 75.9% of the tungsten is >20µm and that 82% of the tungsten in this size range is present as wolframite and 18% is present as scheelite.

The optical mineralogy results for wolframite are given in Table 8.4.

Table 8.4: Composite Sample Wolframite Liberation

			Binary with						
Fraction	**W Dist**	**Free**	**Sh**	**Wf**	**Zw**	**Tz**	**Fl**	**OG**	**Ternary+**
+212	4.4	98	0	0	0	0	0	1	1
+150	9.8	45	0	0	0	0	0	50	4
+106	13.4	73	0	0	0	0	0	8	18
+53	25.2	79	0	0	0	0	0	18	3
+20	23.1	83	4	0	0	0	7	0	0
TOTAL	**75.9**	**76**	**1**	**0**	**0**	**0**	**2**	**14**	**5**

Sh=scheelite, Zw=zinnwaldite, Tz=topaz, Fl=fluorite, OG = other gangue

The results show the generally good liberation characteristics of the wolframite, averaging 75.9% but ranging between 45% and 98%.

The sulphides observed in the +20µm fractions included all those species commonly found as accessories in Sn-W deposits. The sphalerite present was consistently an unusual yellowish-green colour (suggesting the presence of a trace element, i.e. possible Mn, In, Hg or Cd) with minor chalcopyrite-disease and forming minor binaries with galena and pyrrhotite.

8.2.3 Heavy Liquid Separation

Coarse heavy liquid separations were performed on fractions of crushed ore between 0.60 and 12.5mm. The results showed that some 59.7% of the sample mass reported to "floats" with 43.7% of the tin, indicating that pre-concentration at coarse sizes is ineffective.

Fine heavy liquid separations, below 212µm, were also performed. The results showed that some 61.0% of the sample mass could be effectively rejected to "floats" with associated tin losses of only 6.3%.

8.2.3.1 Gravity Testwork

A gravity locked cycle test with six cycles was performed at gravity separation partitions of 75µm and 30µm. The flowsheet for the testing is given in Figure 8.1.

The sample was ground to 80% passing 75µm and then screened at 75µm. The oversize was subjected to a gravity separation to generate a concentrate. The tailings were reground and added to the next cycle feed. The -75µm from the original screening was subjected to a size separation in a Cyclosizer. The – 7µm and the -30+7µm products were assayed as final products. The +30µm fraction was subjected to a gravity separation to produce a "fine concentrate". The middlings product was recycled after regrinding to the next cycle and the tailings were assayed as "fine gravity tailings". The test results are given in Table 8.5.

The test results indicated that some 68.8% of the tin (1.6% mass) reported to the combined concentrates which assayed 13.8% Sn. The levels of SiO_2 in the concentrate were 27.8%, indicating that tin grade could be further upgraded by gravity processes. Tungsten recovery was 50.6% to a concentrate grading 2.64% WO_3.

Some 28.9% of the tin, with 57.3% of the mass, remains in the -30+7 micron fraction (quartz equivalent) and it is possible that further processing by flotation or Falcon (multi G) separation could be investigated to improve the overall tin recovery.

> ***WAI Comment:*** *Recovering further tin and tungsten values from this product remains a goal for the Company prior to flotation or Falcon.*

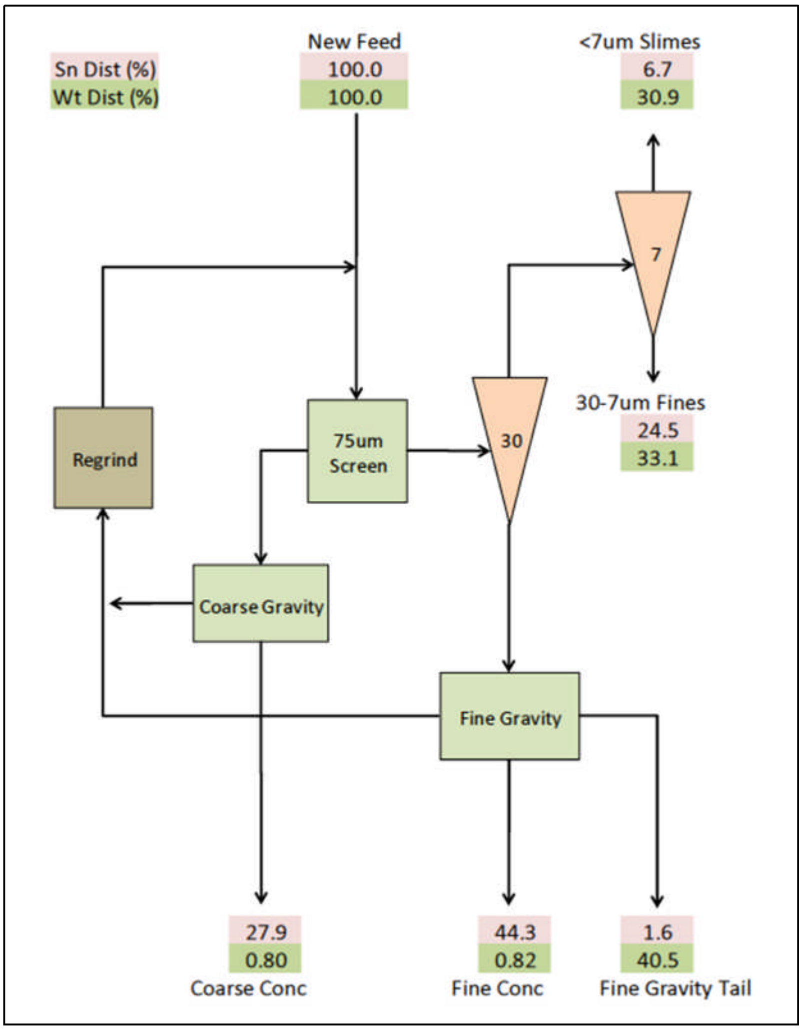

Figure 8.1 : Gravity Locked Cycle Test Flowsheet

Table 8.5: Results on Locked Cycle Gravity Tests			
Stream	**Mass %**	**Sn %**	**WO3 %**
Gravity +75 mics conc.	0.76	10.89	2.46
Distribution %		26.57	23.24
Gravity concs (-75+30µm)	0.78	16.86	2.82
Distribution %		42.21	27.32
Combined concs.		**13.91**	**2.64**
Distribution %	**1.53**	**68.8**	**50.6**
Fine gravity tails	38.18	0.01	0.02
Distribution %		1.53	10.68
-30+7 µm	31.16	0.23	0.06
Distribution %		23.34	24.22
Slimes –7µm	29.12	0.07	0.04
Distribution %		6.35	14.54
Calc. Feed	100.0	0.31	0.08
Distribution %		100.0	100.0

8.3 Lithium Testwork

EMH entered into a Memorandum of Understanding with Cobre Montana NL Limited (now Lithium Australia) to investigate the potential for recovering lithium from the Cinovec ore. Cobre has a license to apply a unique process, developed by Strategic Metallurgy, to extract lithium from micas to produce lithium carbonate.

Two programs of work were conducted. The first involved sighter tests using Cinovec gravity tailings samples. These tests were preliminary in nature and conducted to initially assess the amenability of the Cinovec gravity tails for lithium concentration and extraction by flotation and atmospheric acid leaching.

The results are summarised as follows:

- The mica in the fine gravity tailings (-38+7µm) and coarse gravity tailings (-75+38µm) samples was successfully concentrated by flotation, achieving >95% Li recovery and achieving grades up to 1% Li;
- Lithium was successfully extracted from the flotation concentrates by atmospheric acid leaching, achieving >95% Li extraction; and
- Lower lithium extractions were evident for the gravity slimes (<7µm), suggesting a refractory lithium mineral is present in the ultra-fine fraction.

Based on the outcome of the sighter testwork, a second testwork program of work was conducted, with the aim of developing the process to extract and recover lithium as lithium carbonate from the Cinovec ore.

A Master Composite was prepared from a continuous drill hole and contained 0.30% Li, 0.26% Rb, 1.91% Fe, 2.86% K and 5.65% Al. The composite was milled, then subject to a series of batch tests including de-sliming, flotation, leaching, impurity removal and product recovery.

The results are summarised as follows:

- The mica was concentrated successfully by flotation after de-sliming. Approximately 22% Li loss was associated with slimes (21%) and flotation tailings (1%). However, the sample was ground to match the tin testwork sizing, in reality, EMH plan to extract mica at a lot coarser size thereby significantly improving recovery;
- Leaching of the mica concentrate extracted 92% of the lithium into solution;
- The lithium contained in the leach residue was associated with fine particle sizes and is likely to be a refractory lithium mineral (not zinnwaldite);
- The lithium losses associated with leaching equates to 6.2% of the lithium contained in the ore;
- Lithium in solution was successfully separated from the main impurities aluminium, rubidium, caesium, iron, manganese and calcium by a series of crystallisation and precipitation steps;

- Lithium precipitation was evident in some precipitation tests, probably as an insoluble fluoride. However, precipitated lithium re-dissolved when contacted with high acid containing leach solution;
- The lithium losses associated with the impurity removal circuit equates to 1% of the lithium contained in the ore;
- Battery grade lithium carbonate was recovered from the liquor post impurity removal via the addition of potassium carbonate. The product contained 99.66% Li_2CO_3, 106ppm K, 16ppm Rb, 54ppm Ca, 72ppm Na, 18ppm Fe, 90ppm P and 1042ppm S; and
- Potassium sulphate was crystallised from the liquor post lithium carbonate recovery. The product contained 97.5% potassium sulphate. The main impurities were rubidium (1.17%) and sodium (0.14%).

It was concluded that the testwork data justified a 70% lithium recovery from ore to final product.

WAI Comment: *WAI has not been provided with the test details but only with a Cobre summary report of the test programme findings.*

8.4 GR Engineering Services Study

8.4.1 Introduction

In 2015 GR Engineering Services (GR) undertook a Scoping Study for a 2Mtpa plant to recover tin and tungsten from the ore. The main objectives are summarised as follows:

- Definition of the processing plant requirements for the project; and
- Estimation of the capital and operating costs associated with the project (to an accuracy limit of ±30%).

This study covered the following aspects of the Project:

- Review of data;
- Processing facility;
- General infrastructure and plant services including;
- Process plant power requirements;
- Process plant water supply requirements;
- Engineering design and construction;
- Capital costs; and
- Operating costs.

8.4.2 Historic Ore Processing at Cinnovec

8.4.2.1 Introduction

In their review, GR stated that the original Cinovec processing plant was built in the 1940s. It was a classic gravity separation plant, as the ore mined was of vein type with relatively coarse grains of cassiterite (SnO_2) and wolframite ($(Fe,Mn)WO_4$), grown into quartz (vein) or zinnwaldite (lithium mica).

The ore was crushed and ground in rod and ball mills. Jigs were used to recover coarse-grained mineral and shaking tables were used to recover the fine-grained mineral. The concentrate from gravity separation was dried, ground and split by magnetic separation into tungsten and tin-tungsten concentrates. In the final years, magnetic separation was abandoned and one tin-tungsten concentrate was produced (28% tin and 29% tungsten).

The recovery rates for tin and tungsten were consistent. At head grades of 0.38% tin and 0.28% tungsten, the recoveries were 70%, and 65%, respectively. As the head grade decreased toward the end of mining, recoveries also declined.

8.4.3 Flowsheet Development for CJ Ore

8.4.3.1 Pilot Tests

The CJ ore is different from Cinovec ore. The cassiterite and wolframite are finer grained and disseminated in greisen (as opposed to quartz or zinnwaldite at Cinovec). As a result, an alternative flow sheet was developed between 1960 and 1971 by UVR Mnisek pod Brdy. Testing culminated with a pilot plant test in 1970, where three batches of CJ ore were tested, each under slightly different conditions, with and without a jig. The best result, with a tin recovery of 76.36%, was obtained from a batch of 97.13t grading 0.32% tin. The gravity concentrate mass recovery was 0.46%, the concentrate grade was 52.6% tin with 3 to 8 % tungsten and the tail grade was 0.075% tin. This process is shown in the process flow diagram in Figure 8.2 and involves jigs; whereas the alternative process did not use a jig and the tin recovery was 56% from a sample with a higher head grade.

The concentrate was further refined to increase the tin grade for smelting. The goals were the removal of topaz and remaining waste, removal of tungsten minerals, removal of sulphide (arsenopyrite and galena) and removal of iron abrasion coatings. Figure 8.3 is the process flow diagram that was developed for the concentrate upgrade.

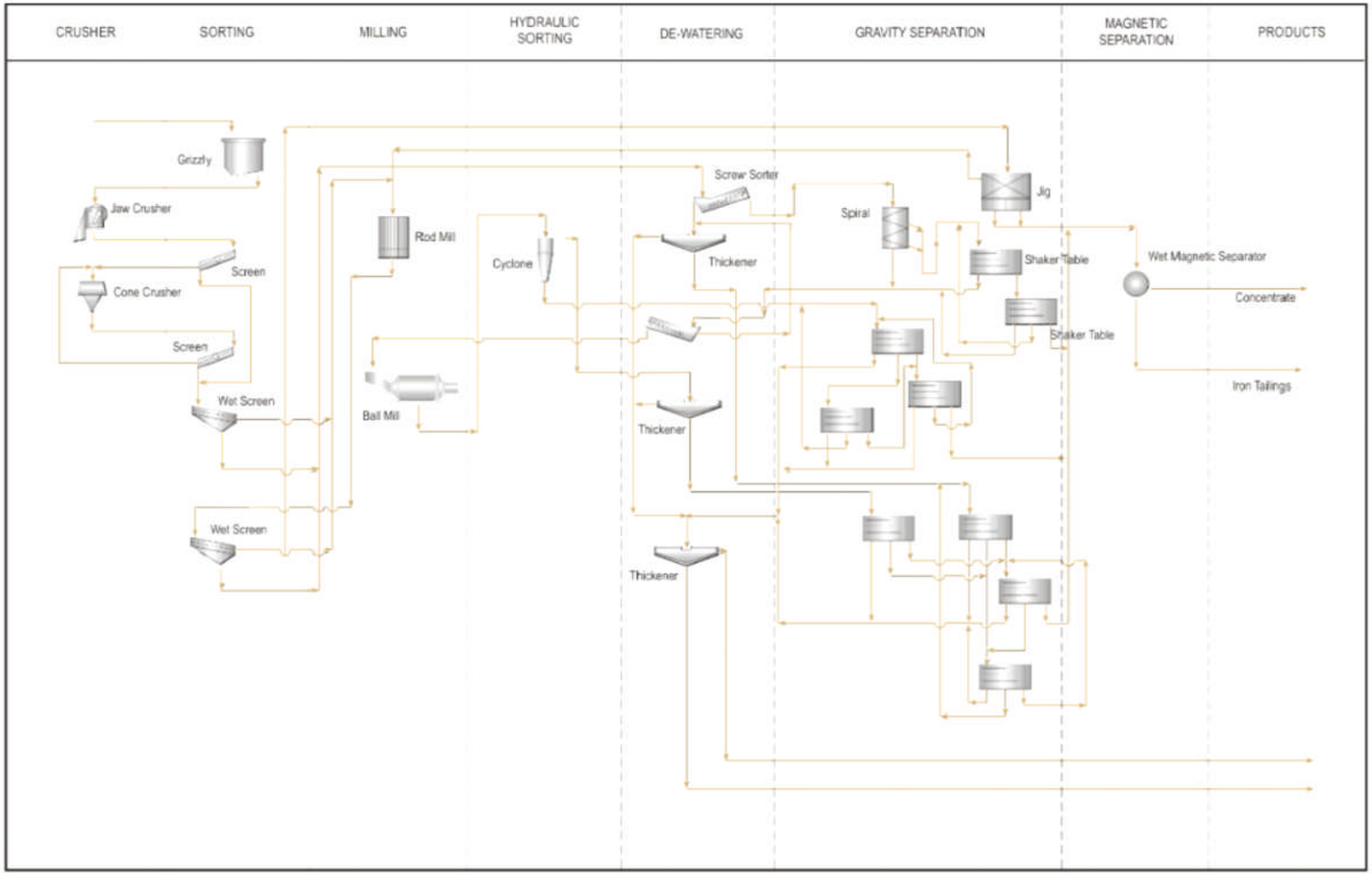

Figure 8.2: Gravity Process Flow Diagram for CJ Ore

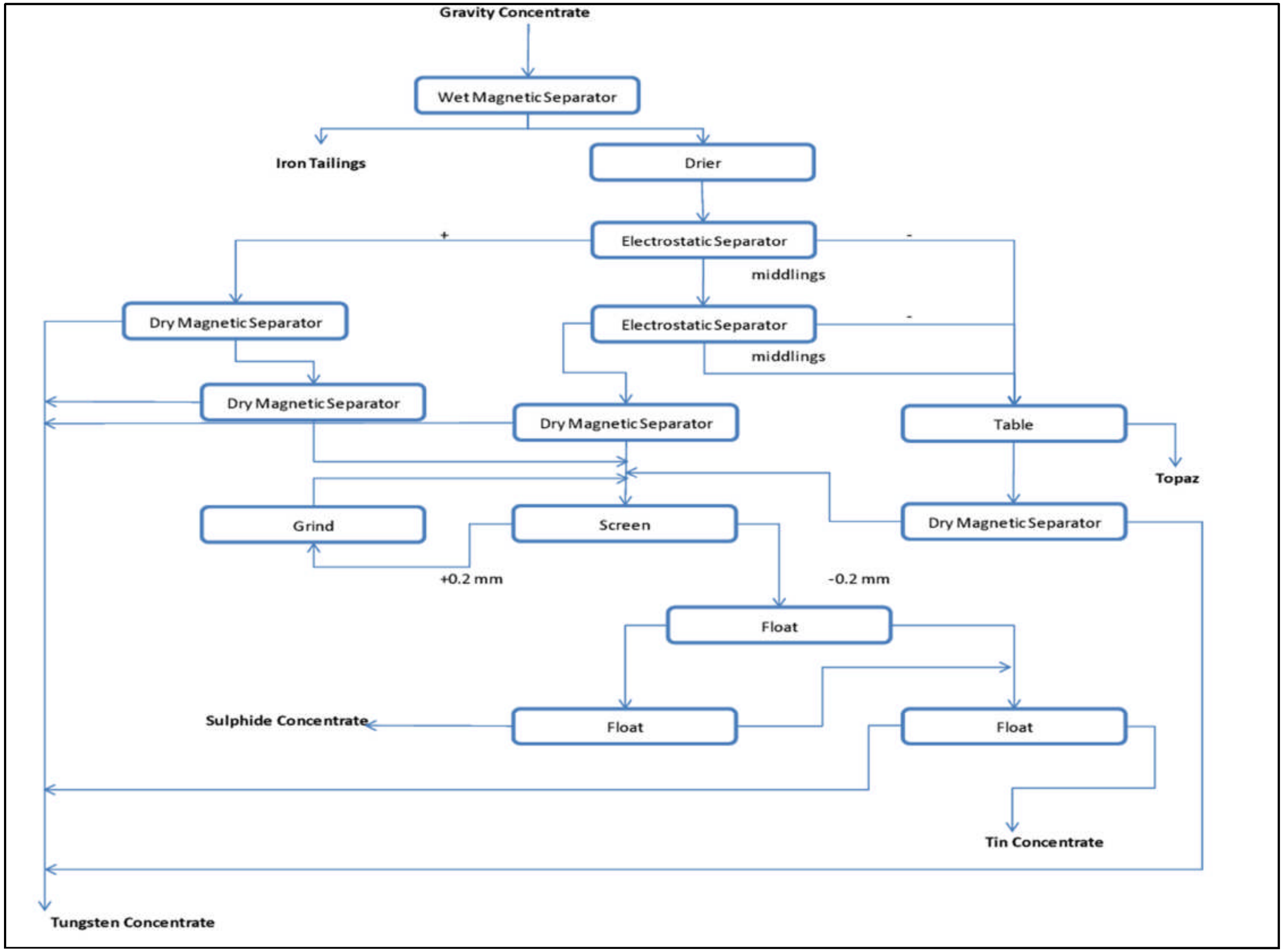

Figure 8.3: Cleaner Process Flow Diagram for CJ Gravity Concentrate

The upgraded concentrates were as follows:

- Tin concentrates – tin stage recovery (during concentrate clean up) of 96.13% and tungsten recovery 7.36% **for a concentrate grade of 74.28% tin and 0.63% tungsten**; and
- Tungsten concentrates – tin recovery 3.39% and tungsten recovery 84.31% during concentrate clean-up **for concentrate grade of 14.53% tin and 46.25% tungsten.**

WAI Comment: *The tungsten recovery to the gravity concentrate is not reported and therefore the overall tungsten recovery cannot be determined. WAI has not reviewed the basis for this flowsheet.*

8.4.3.2 Plant Trials

In 1972, CJ ore was treated through the Cinovec gravity plant. Two batches (2,885 and 3,045t) were processed, with head grades of 0.357% tin and 0.031% tungsten and 0.324% tin and 0.026% tungsten respectively. The recoveries were 56.55% for tin and 48.24% for tungsten. The raw gravity concentrate graded 54.62% tin and 4.88% tungsten.

With an increasing proportion of CJ ore coming through the plant, a modernisation programme was implemented (1980 to 1984) in order to improve recoveries. The improvements included two stage crushing in the shaft (jaw crusher and cone crusher). The crushed ore was conveyed to the process plant. The plant process was essentially a three-stage gravity process. The first stage involved milling in a rod mill, vibrating screens, spirals and cone splitters and shaking tables. The second stage (intermediate gravity stage) included milling of the coarse overflow from the cone splitter and shaking tables, with subsequent separation on further shaking tables. The third stage (microgravity) involved treatment of slurry in cyclones.

The concept for the GR process design study was based on preliminary metallurgical testwork undertaken by EMH. The basis of the design is the process design criteria derived from the following metallurgical testwork reports:

- ALS T0926-1 March 2015
- MODA Microscopy report January 2015

On the basis of this work and agreed assumptions between EMH and GRES, process design criteria were developed.

The tin recovery used in the scoping study was 80% with a tin concentrate grade of 50% tin. The WO_3 recovery used in the scoping study was 53% with a tungsten concentrate grade of 60% WO_3.

Both the recoveries and concentrate grades used in the scoping study were inferred from the limited characterisation and metallurgical testwork performed on a 12kg sample of drill core from the deposit with an additional 10% tin recovery assumed from flotation of the fines fraction of the ore.

8.4.4 Process Description

GR assumed that the processing plant will comprise the following unit processes:

- Two stage crushing and screening;
- Fine ore storage;
- Primary grinding and classification;
- De-sliming and hydraulic classification;
- Gravity concentration;
- Regrind of gravity middling product;
- Sulphide and tin flotation;
- Concentrate thickening, filtration and thermal drying;
- Magnetic and electrostatic separation to produce separate tin and tungsten products; and
- Tailings disposal.

The processing plant will utilise a two stage crushing plant. Ore will be delivered into a ROM bin via front end loader (FEL) and will then report to the primary jaw crusher via a variable speed apron feeder. The discharge from the primary jaw crusher will report to the product screen. The product screen will be a double deck vibratory screen. The oversize material from each deck will report to the secondary cone crusher. The discharge from the cone crushers will combine with the primary jaw crusher discharge and report back to the product screen. The undersize from the product screen will report to a fine ore stockpile. The target P_{80} from the crushing circuit will be 15mm.

The grinding circuit will be two stages consisting of a rod mill and a ball mill. The primary rod mill will be fed from the fine ore stockpile via the reclaim feeders. The discharge from the rod mill will be pumped to the classification screens. The screen oversize will report to the secondary ball mill while the screen undersize will report to the primary cyclones. The P_{80} from the grinding circuit will be 212µm.

The gravity plant will consist of a series of cyclone classifiers, a hydrosizer, spiral concentrators and shaking tables. The primary cyclone overflow will report to the coarse classification cyclones. The primary cyclone underflow will report to a static trash screen and then to a low intensity drum magnetic separator to remove magnetic tramp that would interfere with the spiral separation. The non-magnetic stream will feed a hydrosizer to remove slimes ahead of the primary spirals. The tails from the primary spirals will report to the tails thickener. The concentrate and middlings from the primary spirals and the underflow from the coarse classification cyclones will report to the coarse spirals.

The concentrate from the coarse spirals will report to the shaking tables for further upgrading. The middlings from the coarse spirals will report to the middling spirals and the tails to the tails thickener. The coarse classification cyclone overflow will report to the medium classification cyclones. The underflow of the medium classification cyclones will report to the medium spirals. The concentrate from the medium spirals will report to the shaking tables. The middlings from the medium spirals will report to the middling spirals and the tails to the tails thickener. The concentrate from the middling spirals will report to the shaking tables. The middlings from the middling spirals and the tailings from the shaking table will be reground in the gravity regrind mill before being recycled to the coarse spirals. The middlings from the shaking tables will be recycled back to the feed of the medium spirals.

The concentrate from the shaking tables will report to the concentrate dressing circuit for further upgrading. The concentrate dressing circuit will consist of a conditioning tank, rougher and scavenger flotation and a wet high intensity magnetic separator (WHIMS). The conditioning tank will overflow into the first rougher flotation cell. The flotation concentrate will report to the concentrate thickener and the tails to the WHIMS. The flotation tails will report to the WHIMS. The WHIMS non-magnetic fraction will report to the concentrate thickener. The WHIMS magnetic fraction will report to the tails thickener.

The fines flotation circuit will consist of cyclone classification, sulphide flotation, tin rougher, scavenger and cleaner flotation and gravity concentration. The fines classification cyclone overflow (-7µm) will report to the tails thickener. The cyclone underflow will report to the sulphide scavenging flotation feed conditioning tank. Reagents will be added to the conditioning tank that will overflow to the sulphide rougher flotation. A sulphide concentrate will be recovered and will report to the tails thickener. The flotation tails will report to the tin conditioning tank. Reagents will be added to the conditioning tank that will overflow into the tin rougher cells. The tail from the tin roughers will be report to the scavenger flotation cells. The concentrate from the roughers and scavengers will be directed to the tin cleaners. The tin cleaner tail will be recycled back to the roughers and the scavenger tail will report to the tails thickener. The tin cleaner concentrate will feed a continuous Falcon gravity concentrator.

The concentrate will join the dressing circuit product in the concentrate thickener. The concentrate handling circuit will comprise of a concentrate thickener, concentrate filter and concentrate dryer. The slurry concentrate will be mixed with flocculant to increase the settling rate prior to thickening and then thickened to approximately 50% (w/w) solids. The thickener underflow will then be further dewatered on a vacuum belt filter. The cake, with a residual moisture of around 15%, will be fed into a LPG fired concentrate dryer to produce a dry product with a moisture of less than 0.5%. The dried concentrate will then be fed to the dry separation plant.

The dry separation plant will consist of dry magnetic separators and electrostatic separators. The magnetics fraction treated by electrostatic separators. The conducting fraction will be the final tungsten concentrate. The non-magnetic fraction treated by electrostatic separators and the conducting fraction will be the final tin concentrate.

8.4.5 Capital Cost Estimate

GR Engineering estimated the capital cost of a 2Mtpa plant for tin and tungsten extraction to be $72.4 million at Scoping Level (+/- 30%).

8.4.6 Operating Cost Estimate

GR Engineering estimated the process operating cost to be $11.24/tonne.

> ***WAI Comment:*** *WAI has reviewed the GR Engineering process design and plant costings and finds the study to have been undertaken to a high standard but is based on very limited metallurgical testing, namely the single 12kg sample submitted to ALS. The flowsheet on which the costings are based should be viewed as conceptual.*

8.5 Lithium Australia Lithium Process Design

8.5.1 Introduction

After completing their testwork on the Cinovec ore, Lithium Australia developed a flowsheet to recover lithium from the Cinovec gravity tailings using their proprietary and patented process. The process is described in general in the following sections although certain aspects are not fully detailed, presumably due to the confidential nature of the technology.

8.5.2 Mica Flotation

Tailings from the tin flotation plant will be processed in a flotation circuit to recover lithium mica minerals to a flotation concentrate. An amine type collector will be used to selectively recover mica minerals from the tin plant tailings. Slurry pH in the flotation circuit is reduced through addition of sulphuric acid in order to optimise mica mineral flotation. The mica flotation circuit is made up of a rougher and cleaner circuit.

8.5.3 Leach Feed Preparation

The mica concentrate from the flotation circuit will pumped to a cyclone cluster to classify the cleaner concentrate into a coarse and fines fraction. Coarse mica reports to the cyclone underflow and fine mica, along with the majority of the acid consuming gangue minerals recovered to the cleaner concentrate, reports to the cyclone overflow. The cyclone products pass top thickener ahead of the leach circuit.

8.5.4 Mica Leach

The mica leach vessels are agitated tanks connected in series and operated at ambient pressure. High pressure steam spargers in each leach vessel allow for the control of the leaching temperature. Acid is used to leach the metal elements in the mica mineral structure. Coarse and fine mica concentrate streams will be introduced to the mica leach at separate points in order to maximise leach efficiency.

Coarse mica concentrate from the leach feed preparation circuit is pumped into the first mica leach vessel. Acid is added to the first mica leach vessel at a predetermined ratio to the coarse mica concentrate in order to maintain a target free acid concentration in the leach. Fine mica concentrate from the leach feed preparation circuit is pumped into the third mica leach vessel.

The contents of the last mica leach vessel are pumped to the mica leach tailings filtration circuit.

8.5.5 Mica Leach Filter

The contents of the final mica leach vessel are pumped to a pressure filter where the remaining solid leach residue is separated from the leach liquor for disposal. The leach liquor produced in initial filtration of the leach residue is pumped to the impurity removal circuit. Addition of wash water in a washing stage displaces remaining leach liquor still entrained in the filter cake and maximises filtrate recovery. The wash water and filtrate collect in a separate sump and are pumped to the head of the mica leach circuit.

8.5.6 Impurity Removal

Leach liquor from the mica leach contains soluble impurities. It is necessary to remove these impurities prior to production of lithium carbonate and potash in order to prevent contamination of these products. These impurities are removed via a combination of crystallisation and precipitation reactions.

WAI Comment: *The methodology of impurity removal is not clearly stated.*

8.5.7 Impurity Removal filter

Slurry from the final impurity removal tank is pumped to a pressure drum filter unit where the precipitated solids are separated from filtrate for disposal.

Addition of wash water in a washing stage displaces remaining filtrate still entrained in the filter cake and maximises filtrate recovery. The filter cake is transferred to a sump where it is re-pulped with process water and the filtrate bleed stream to allow for the slurry to be pumped to the tailings storage facility.

8.5.8 Lithium Carbonate Precipitation

Lithium in the impurity removal filtrate, predominantly present as lithium sulphate, is to be recovered as lithium carbonate. Potassium carbonate is used to precipitate relatively insoluble lithium carbonate out of solution. The solubility of lithium carbonate is inversely proportional to temperature, whilst the solubility of other salts in the filtrate is directly proportional. Increasing the temperature of the solution in the lithium precipitation circuit causes increased precipitation of lithium carbonate. The solubility of the remaining salts in solution increases at increasing temperature and as a result a relatively pure lithium carbonate precipitate can be formed.

***WAI Comment: There is no overall mass balance for the process to enable a judgement to be made on its economic viability**. WAI notes that the cost of potassium carbonate, used in the process, is currently approximately $1,000 per tonne versus $600 per tonne for potassium sulphate which is a by-product. Also, there is no energy balance for the process.*

Filtrate from the impurity removal filter is pumped to an agitated buffer tank at the head of the lithium precipitation circuit. Filtrate from the SOP crystallisation circuit is also pumped to the buffer tank. Potassium carbonate solution is added to the buffer tank at a predetermined ratio to precipitate lithium in the filtrate as lithium carbonate. The slurry in the buffer tank is pumped to the first of 3 agitated tanks fitted with steam heating coils to raise and maintain the slurry temperature. The agitated tanks provide sufficient residence time for the formation of lithium carbonate precipitate.

***WAI Comment:** the work undertaken by Lithium Australia indicates that their proprietary process route can be used to recover 70% of the lithium in the Cinovec ore. It is important that further testing involving continuous pilot scale testing is undertaken in order to confirm the effect of recycling the various process streams and to identify any quality issues with the lithium carbonate and potassium sulphate products. It is assumed that sulphuric acid is used as the lixivant (although this is not clearly stated) and the costs of an acid plant will also need to be considered if no local source of acid is available.*

8.5.9 Process Costs

A computer model was developed by Lithium Australia using results of testwork and mining schedule modelling. The data generated was used to develop Scoping Study capital and operation costs for the processing plant at +/-35% accuracy. The main battery limits included processing 2.0Mtpa of gravity tails at a grade of 0.215% Li, to produce approximately 16,000tpa Li_2CO_3 and 82,000tpa K_2SO_4.

Strategic Metallurgy predicted a Capital cost of $163.3 million for a 2Mtpa plant, excluding an acid plant.

The operating cost for the tailings treatment was predicted to be $1,593 per tonne of Li_2CO_3 produced, net of potassium sulphate credits. This excludes any credits from Sn and W that may accrue. Without potassium sulphate credits the cost of lithium carbonate production is $4,861 per tonne.

8.6 Conclusions

The limited testwork undertaken on the Cinovec CJ ore type at ALS indicates that the cassiterite and tungsten minerals can be recovered by conventional gravity processing to produce a gravity concentrate grading 13.8% Sn and 2.64% WO_3 with tin and tungsten recoveries of 68.8% and 50.6% respectively.

This concentrate was not processed further so final recoveries cannot be determined from this work. Historic metallurgical information suggested that the gravity pre-concentrate can be upgraded with cleaning stage recoveries of 96% and 84% to give separate concentrates grading 74% tin and 46%

tungsten, although this was achieved on a pre-concentrate with a significantly higher tin grade of 52.6%.

The tin recovery used in the GR scoping study was 80% to a tin concentrate grade of 50% tin. The WO_3 recovery used in the scoping study was 53% with a tungsten concentrate grade of 60% WO_3.

The ALS testwork indicated a gravity tin recovery in the region of 66% (68.8% x 96%), assuming the upgrade efficiency from historic metallurgical data. GR also allowed for a further 10% tin recovery using flotation to recover values from the fine tailings stream although no testwork has been undertaken and reported to date. The overall tin recovery figure of 80% does therefore appear to be reached by taking a generally optimistic view. WAI considers this achievable, but this has still to be demonstrated.

Similarly, the ALS work gave a tungsten gravity recovery of 50.6% to a low grade concentrate of 2.64%. The historic upgrade efficiency of 84% would only give an overall recovery of 42%, compared with the GR study figure of 53%.

Further metallurgical development work may result in improvements in recoveries to those used in the GR study but at this stage of the project's development final recovery figures can only be broadly estimated.

GR Engineering estimated the capital cost of a 2Mtpa plant to be $72.4 million at Scoping Level (+/-30%) and the process operating cost to be $11.24/tonne which WAI considers reasonable.

Lithium Australia has a license to apply a unique process, developed by Strategic Metallurgy, to extract lithium from micas. Acid leaching of the Cinovec gravity tailings has demonstrated that 70% of the lithium can be recovered into a lithium carbonate product. The process involves atmospheric leaching using sulphuric acid. The general description of the flowsheet is satisfactory although lacking in detail such as mass and energy balances.

Strategic Metallurgy predicted a Capital cost of $163.3 million for a 2Mtpa plant, excluding an acid plant. Thus, the capital cost of a combined Li, Sn & W processing complex is in the order of $236M.

The operating cost for the tailings, exclusive of any Sn and W credits that may accrue, was predicted to be $1,593 per tonne of Li_2CO_3 produced, net of potassium sulphate credits. Without potassium sulphate credits the cost of lithium carbonate production is $4,861 per tonne.

WAI cannot comment on the accuracy of the cost estimates due to the confidential nature of the Strategic Metallurgy technology.

9 ENVIRONMENTAL & SOCIAL ISSUES

9.1 Environmental & Social Setting and Context

Cinovec is located within a 90 minute drive north of Prague on the Czech/German border. The site is situated on a ridge in the Ore Mountains in the Teplice Region of Czech Republic at an altitude of 835 metres above sea level.

The area is an historic mining district spanning the past 600 years with tin, tungsten, uranium all being important. It is believed some 40,000t of tin have been extracted from Cinovec up until 1990 when the mine closed.

The property is located in a sparsely populated area made up primarily by holiday homes within the alpine border area surrounded by farmland valleys that contain timber plantations. The nearest town is Dubi some 10km south of the property with a reported population of 8,026 inhabitants. Dubi is known as a Spa town, famous for its glass and porcelain production.

The climate is semi-alpine in the humid continental zone with high precipitation and low temperatures. The warmest average temperature is July at 17.5°C. Winter has prolonged freezing periods with the coldest month being January with minimums of -6°C.

9.2 Land Use

Land use around Cinovec is primarily forestry interspersed with holiday homes.

In terms of ownership, most of the land belongs to the State and the Client states that few problems are anticipated with regards to the acquisition of surface rights for any potential underground mining operation.

9.3 Water Resources

Cinovec is within a region characterised by post mining landscape where the natural water balance is influenced by past underground mining. It is understood the historic workings are flooded to level 3 which drains across the border into Germany.

Whilst the current water balance is not fully characterised, there is an on-going European Regional Development fund cross-border project called VODAMIN to investigate the effects of past mining activities on the water quality of ground and surface waters. The scope of this project includes hydrological, hydrochemical and hydrogeological investigations assessing the impact of underground mining in Zinnwald/Cinovec.

9.4 Communities and Livelihoods

The town of Dubi is 10km south of the site and is expected to be where the local office of European Metals will be located. Other settlements close to the site include Cinovec itself which extends to Zinnwald-Georgenfeld on the German side of the border. The area has a rich post-mining history and is now characterised by alpine holiday homes with recreational activities such as golf and mountain biking.

The principal power source to the site is a 22kV transmission line that runs to the Cinovec mine from neighbouring coal mining and power producing region, and is operational. Highway 8 runs beside Cinovec and connects the Czech Republic with SE Germany and on to Dresden some 49km north of the site. Cinovec is also located 5km from the Altenberg railway station in Germany via sealed road, with a second station located 8.2km downhill from the mine on a paved road in the village of Dubi, in Czech Republic.

9.5 Project Status, Activities, Effects, Releases & Controls

At present the project has limited facilities although it is understood that European Metals is considering an option to purchase 40,000m^2 of land in the northern part of the license, directly above extensive historic workings.

> ***WAI Comment:*** *the selection of an area for surface facilities is an important part of project development and should sit alongside the ESIA. Should the project wish to fulfil international standards, this would enable the facilities and their locations to be assessed in accordance with their potential for environmental and social impacts in conjunction with other project constraints.*

9.6 Environmental Management

At present, the project does not hold any formalised environmental, social and health and safety management systems or policies.

The Client is very active as regards public consultation and has initiated mapping of landownership and stakeholders in the area. Initial public consultation meetings have also been held.

The Client is looking to begin environmental baseline data collection ahead of the pre-feasibility study. Due to past mining activities on site, it is anticipated there are a number of studies and previous baseline assessments, which if suitable, will reduce the need for extended sampling.

> ***WAI Comment:*** *It is recommended that the collection of baseline data is incorporated into a wider management plan and system to be implemented by an on-site health and safety manager when appointed. The risk assessment undertaken as part of the potential ESIA would also provide the required risk assessment for the current and proposed facilities.*

9.7 Licence and Permitting

European Metals holds two exploration licences; Cinovec, granted in 2010, which has now been successfully renewed for a further 5 years, and Cinovec II, granted in 2011 (which is currently being re-newed), by the Ministry of Environment, and is compliant with the environmental requirements of these licences.

The application for the preliminary mining licence must be agreed in advance by the Ministry of Environment. Any licence for the extraction of an amount over 10,000 tonnes/year is subject to an environmental impact assessment, completed by the issuance of an environmental opinion of the Ministry of Environment which determines the conditions for the preparation and realisation of a mining project.

The upfront payment of a rehabilitation bond is required under the mining code prior to the issue of a full mining licence, although the amount of this bond is not known at this time. In addition, an annual payment, derived from mining revenue, is paid by the company into the reclamation fund.

WAI is not aware of any historic environmental legacy associated with previous mining and assumes that Base Line surveys will define the current position in terms of ring fencing any liabilities the Group may face.

10 CONCLUSIONS & RECOMMENDATIONS

The Cinovec project represents a significant opportunity for the development of a large lithium-tin underground operation with the potential for open pit extraction should surface rights be acquired.

The extensive knowledge gained from previous mining as well as data collected from the three core holes drilled in 2014 provides a high degree of confidence in the understanding of the geology and mineralisation of the deposit.

The Mineral Resource estimation work has shown that a large lithium ore tonnage is present coupled with a much smaller tin (and tungsten) ore tonnage, with the latter mineralisation being more restrictive in location.

The results of the 2015 Scoping Study clearly showed that given current and forecast metal prices, Cinovec is likely to be a lithium play with by product tin. However, future price fluctuations may change this dynamic.

Given the favourable location of the deposit with respect to local infrastructure, markets and manpower, the extensive knowledge already gleaned on the geology and mineralisation, coupled with the positive results from the limited process testwork done to date, the Cinovec project has the potential to be a significant producer of both lithium and tin (with lesser amounts of tungsten).

Notwithstanding this, significant further work is required to develop the project, not least of which will be the implementation of an extensive infill and confirmatory drilling programme which WAI understands to have recently commenced.

Coupled with this will be further metallurgical testwork to better understand the metallurgy and mineralogy of the various ore types, particularly the lithium ores, as well as define a preliminary process flowsheet.

In addition to this, given the expected poor ground conditions in some parts of the orebody, it is likely that more detailed geotechnical investigations will be required to flesh out the stope design and overall mine development, although any limitations highlighted by this work are not expected to be hugely detrimental to overall project development.

Taken together, the results from these works will form the basis of a Pre-feasibility Study that will define the project parameters and economics in more detail.

A preliminary budget of up to approximately AUD$220,000 has been allocated for the initial work programme over the next 12 months. There are no minimum work commitments under the terms of the Cinovec Project exploration licences. The overall objective is to proceed as quickly as possible to development and production of the Project based on of the existing defined resource envelope. The initial work programme will therefore focus on additional in-fill drilling. The total amount of drilling will be dependent on the results achieved and the initial programme will be between 500 to 1000 metres of diamond drilling (at a total cost of up to approximately AUD$ 150,000) to provide further cores for the metallurgical assessment of the potential lithium recovery process, metallurgical testwork and early pilot plant work.

Preliminary work on acid leaching of the Cinovec gravity tailings demonstrated that 70% of the lithium may be recovered into a lithium carbonate product. The process involved atmospheric leaching using sulphuric acid. The initial objective of the additional metallurgical study (which is budgeted to cost up to approximately AUD$ 70,000) will therefore be to assess this lithium recovery process further.

WAI supports this approach and the proposed initial budget seems reasonable. Any further in-fill exploration drilling to establish a lithium inferred resource and commence a Pre-feasibility Study to define the project parameters and economics in more detail, would be subject to an additional budget at that time.

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