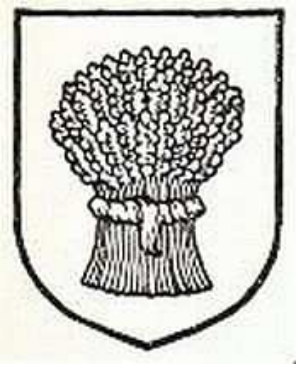
Wednesday, November 9, 2022



HALLGARTEN & COMPANY

Initiation of Coverage

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Auxico Resources

(CSE:AUAG, OTCQB:AUXIF)

Strategy: LONG

Key Metrics	
Price (CAD)	$0.45
12-Month Target Price (CAD)	$1.48
Upside to Target	229%
12mth hi-low	$0.45-$1.58
Market Cap (CAD mn)	$32.22
Shares Outstanding (mns)	71.6
Fully diluted	140.2

Auxico Resources

Amassing Critical Mass in Strategic Metals

- + Auxico Resources is morphing from a rank-and-file explorer into a specialty metals trader and developer diversified across metals and continents
- + Company just announced the appointment of Frederick Kozak (former President at Appia Rare Earths) as the new President and Chief Executive Officer
- + Through an accord with an unlisted sister corporation (Central America Nickel), the company has access to Rare Earth Elements (REE) and other critical metals for sale into global markets
- + Rare Earth prices have held firm at levels substantially above the average levels of the last ten years
- + In its own right it has access to a flow of Tin concentrates from a tailings reprocessing operation in the Brazilian state of Rondonia
- + In Colombia, Auxico has a uniquely endowed project with exposure to Rare Earths, Titanium, Hafnium & Zircon (with meaningful Coltan, Gold, PGMs and Iridium)
- + The Rare Earths in the Democratic Republic of the Congo (DRC) and Colombia are hosted in monazite sands which, at an average +50% Total Rare Earth Oxides (TREO), makes operations low-cost compared to competitors
- + The legacy Mexican asset could be developed eventually or monetized for shareholders benefit
- ✘ China still has the whiphand in REE-pricing and can sink prices, suddenly, at will
- ✘ Proximity to Venezuela creates some issues for evolving the Colombian project
- ✘ The Tin price, after a stellar run, has become a victim of Chinese machinations has been pushed down aggressively
- ✘ The environment for funding REE project builds remains tough so capex to the low side is a must

A Feast of Specialty Metals

The whole specialty metals complex finds itself in a different world, with some constants from the Commodity Supercycle period of 2002-2008 which was the last “day in the sun” for the exotica of the metals space, and yet much changed, as well. The pandemic, associated shipping crisis and other mysterious X-factors impacted to levitate prices out of their long Vale of Misery.

The Russia-Ukraine war has knocked back most of the metals complex severely but with quite noticeable variations. In specialty metals/minerals Rare Earths and Antimony have held their ground, while Tin (the high-flyer of the preceding two years) has been brutally chopped back from over $50,000 per tonne to a shade above $20K per tonne.

With exposure to these metals, Auxico could chose to be static, and suffer the slings and arrows of outrageous fortune, or grasp the opportunity to rethink the frequently ossified viewpoint the miners take when beset by the cyclical downturns that the mining space suffers with frequent regularity.

In the case of Auxico it has looked at its exposures to various metals and divined that vending/trading the metals, without mining the metals, is the best stance in the short-term to provide topline revenues while evolving the projects towards cashflow-generating status, i.e. standing on their own feet.

In this note we shall look at this trading strategy, the assets it encompasses (and the arrangements therewith), the other specialty metals assets (Colombia) and finally the status of the original flagship precious metals project in Mexico.

In a Trading Frenzy

The old adage that, in a mining boom, it is those that sell the shovels to the miners, rather than the miners themselves, that make the money is a perennial truism in the space. It might equally be said of the traders in metals. It is no coincidence that the, largely European-based, traders are much larger than most of the miners they serve, and they make money whether metals prices are down or up. The traders are not without their travails (Metallgesellschaft, Sumitomo Metals or REFCO) but their downfalls are way fewer than those suffered by those venturing their funds on mainstream mining activities.

The lesson here has not been lost on Auxico. Particularly in the Rare Earth space where miners (until the last two years) have found it very hard to make a buck, one might ask the question “who is making money on REEs?” and it would appear that intermediating in the space is better than pursuing the low value-added pursuit of actually mining the material.

The decision to move into trading of REEs (and Tin and others) is, partly, being enabled by China’s own feckless over-exploitation of its own REE resources. This has resulted in the Chinese needing to scour the markets for supplies of REE concentrates.

Central America Nickel

It is important early on to mention Central America Nickel Inc. (CAN) as this unlisted entity is a key source of access for Auxico to transactions and has somewhat of a symbiotic relationship with the subject of this Initiation. CAN has a shareholding of ~3.56% in Auxico.

This is a Canadian corporation focused on the processing and purification of energy and critical metals (Ni, Li, Co, Cu, Mn, V, Sc, Nb, Ta, Ir and REE) using a patented ultrasound extraction technology (called UAEx). This process eliminates the use of pressure processing, thereby minimizing temperature, energy use, chemical use, emissions and waste, while increasing overall recovery rates.

The Connection

CAN is a significant shareholder of Auxico, and also a joint venture partner in two ways: (1) CAN has

licensed its patented ultrasound assisted extraction technology to Auxico, to be used at any of its projects and (2) Auxico is the exclusive sales agent for trading out of the DRC - for every monazite sale that is conducted.

CAN's Assets

However, the asset of most relevance as far as the Auxico story is concerned is the trading entity, Kibara Minerals. Auxico has access to Rare Earth ore in the DRC through CAN's 76% owned subsidiary, Kibara Minerals.

Kibara has the exclusive option to purchase nodular monazite (a mineral sand) from a mining cooperative in DRC.

The Rare Earth Resource

A recent report by the engineering firm RD Consultants has estimated this Rare Earth deposit with a volume exceeding one million tonnes in the first metre of the deposit containing the following: Gadolinium (Gd): 1.03%; Lanthanum (La): 8.10%; Neodymium (Nd): 11.50%; Samarium (Sm): 1.99%; Praseodymium (Pr): 2.92%; Dysprosium (Dy): 0.20%; Europium (Eu): 0.29%; Yttrium (Y): 0.41%; Cerium (Ce): 19.90%.

Samples have returned amounts of Terbium oxide (4.17%), Neodymium oxide (11.05%) and Praseodymium oxide (18.2%). CAN is actively producing and selling Rare Earths hosted in monazite sands with average grades over 50% TREO.

The Tantalite Potential

Of possible future interest there is the Bafwasende tantalite deposit. DRC has some of the biggest tantalite reserves in the world and Kibara has access to high-grade tantalite and niobium ore in the Bafwasende tantalite deposit through an exclusive supply agreement with a local cooperative.

The ore in the deposit is extracted from a traceable non-conflict artisanal site, with no child labor employed, which enabled Kibara to get a mineral exportation license from the DRC and apply for the ITSCI membership. Two recent prospecting missions were recently conducted by a local independent geological team and the most recent sampling indicated an average value of 34.66% of Ta^2O^5.

The Bafwasende niobium/tantalum deposit has ore grading up to 55% Nb^2O^5, and up to 30% Ta^2O^5.

Other CAN Interests

Kibara also has access to the Okelenge Copper-Silver Project which recently made high-grade copper surface sampling discoveries across a company-controlled VMS.

Nichromet Guatemala and Rio Nickel Guatemala, both in Guatemala, hold substantial reserves of Nickel, Cobalt, Scandium and REM. CAN controls 100% of Nichromet Guatemala and Rio Nickel Guatemala,

companies that collectively control 300 square kilometres of mineral rights in two major nickel laterite deposits, namely the Rio Negro nickel deposit and the Santa Cruz deposit, which are both open laterally and at depth and located 10-15km from the port. These assets combined with UAEx extraction will allow CAN to produce battery grade nickel sulphate to address the global nickel supply deficit. Santa Anita I and Santa Anita II exploitation permits contain 30 historical holes drilled by International Nickel Co. (Inco), with an estimated reserve of 9.6 mn tonnes at a grade of 1.63% Ni, to a depth of 4.8 meters.

The DRC Trading Arrangement

As mentioned Kibara has the exclusive option to purchase nodular monazite from a mining cooperative in DRC for a period of two years and renewable thereafter.

The DRC – REE and Coltan

The seemingly complicated nature of the Brazilian trading arrangement is nothing compared to the deal that prevails in the DRC.

In essence, the deal here is that an (as yet) unlisted sister company of Auxico (Central American Nickel) has a Rare Earth (e al.) concession in the DRC and Auxico has a right to the economics of the sale of Rare Earth concentrates from deposit.

The DRC REE Asset

The monazite sands operation in the DRC is called the Obaye project. Access from the city of Kisangani in the province of Tshopo, is approximately 445 km by a motorable road, (i.e. the National road N3) passing through the territory of Lubutu in the province of Maniema, to the town of Walikale in North Kivu. From there, there is a walk of at least 2.5 hours, crossing the Lowa River by means of a canoe to reach the village of Obaye.

The asset was the subject of a NI43-101 report by Richard Dufour of Groupe RD on Montreal and dated December 2020.

The concession PE-71 is located on a succession of hills with a mountainous relief, with a plain dominated by watercourses being the object of some artisanal exploitation.

We might note that Rare Earths are not on the Dodds-Frank list of Conflict Minerals. That is not to say that REE are not, in some cases, actually conflict minerals. On this score we might point the finger (and have done) at China's activities in Burma in this metal (and Tin and Antimony).

The REE Trading Arrangement

Auxico signed a sales agency agreement in late March 2022, for the trading of non-radioactive Rare Earth concentrates from the DRC in the form of monazite sands. The off-take agreement has a five-year term, for a minimum amount of 18,000 tonnes of concentrates during the term i.e. 300 tpm, with a target objective of 1,000 tonnes of concentrates per month.

The first trade of 96 tonnes of concentrates was finalized end of April 2022, second trade for 192 tonnes was finalized early July. The material was sold at a final price of US$ 6,500 per metric tonne for a value of US$ 1.24mn, of which Auxico receives a 15% trade commission.

Samples analyzed by SGS South Africa had on average 14.95% Neodymium and 3.4% Praseodymium, and ~60% TREO.

The DRC Tantalum (Coltan) Asset

The Bafwasende artisanal deposit, a traceable non-conflict artisanal site, is located 200 km from Kisangani in the north-central part of the DRC. A full exploration permit covering an area of approximately 45.87 km^2 has been issued by the Ministry of Mines of the DRC.

Tantalite ore from the Bafwasende deposit has been tested by two independent groups. Impact Global Solutions, based in Delson, Quebec, performed laboratory tests on samples from the Bafwasende deposit, with grades of 22% Nb^2O^5 (niobium pentoxide) and 46% ^{Ta2O5} (tantalum pentoxide). Other reports confirmed similar findings, including ore up to 55% Nb^2O^5 and 30% Ta^2O^5.

In 2020, one of the potential buyers of this tantalite ore also performed its respective tests, which resulted in 42.04% Ta2O5 and 22.93% Nb^2O^5, which identified the Bafwasende Tantalum deposit as a high-grade columbite mineral source. In 2020, initial geological surveys were carried out at the Bafwasende Tantalum deposit on foot, focusing on a known source of Ta^2O^5 in an area of 400-metres in length by 200-metres in width.

A total of seven exploration pits were dug over the identified mineralization zone and columbite concentrates recovered from the site have shown an average grade of tantalum pentoxide (Ta2O5) in excess of 30%. An aerial study of the permit and the surrounding areas was conducted by JAPOSAT in March 2021 which reconfirmed the initial mineralization and has identified three additional areas of interest within the same basin.

The Tantalite/Niobium Trading Arrangement

Auxico has signed a joint venture agreement with Kibara Minerals for the export of Tantalum and Niobium ores from the DRC. Kibara has an exclusive supply agreement with a cooperative for the purchase of tantalite ore from Auxico and partner Covemin, a commodity trading firm based in Zurich, which has established relationships with the global buyers of tantalite ore; AUXICO and Kibara will collaborate on a trading operation of tantalum and niobium-bearing ores from the Bafwasende deposit.

The Lasell Deal on Tantalum

In late June of 2022, the company announced the signing of an off-take agreement with the Lasell Company for a supply of up to 1,000 tonnes per month of Tantalum ore with a targeted purity of 30% Ta^2O^5 content. Lasell will have a right of first refusal on production exceeding 1,000 tonnes per month. Initial trial shipments of 25 tonnes per month are expected to begin in 4Q22, with plans to expand into

commercial production over the course of 2023. The initial term of the agreement will be 10 years, automatically renewing for a second term of 10 years subject to mutual agreement.

The pricing will be based on the Asian Metal Index, or a similar industry benchmark, with delivery on CIF terms. Recently, the market price of tantalum concentrates at 30% Ta^2O^5 was approximately US$107,000 per metric tonne (data sourced from ISE).

Lasell Company Ltd. is a globally diversified investor-operator founded in Thailand in 2007, when it started to trade minerals by collecting and recycling a range of specialty metals, such as Tungsten, Nickel, Cobalt, Titanium, and some REEs. Lasell has grown from just trading minerals and now operates two processing plants in Thailand. With the upcoming off-take agreement for Ta^2O^5 from the DRC, Lasell intends to dedicate one plant entirely to Tantalum processing, to produce high-grade Tantalum concentrates.

Tin (etc) in Rondonia

The first discovery of cassiterite in Rondônia occurred in 1952, in a rubber plantation in the area around the Machadinho River. After some mineralogical studies, the area was claimed for mineral exploration in 1953.

Around 1955, there was a tin rush in Rondônia, when new supergene deposits were discovered around the granite massifs of Pedra Branca and Caritianas. Afterwards, between 1957 and 1961, new discoveries were made of the mineral deposits of Santa Bárbara, Jacundá, Massangana and Candeias.

In the 1960's, Rondônia was responsible for more than 50% of the tin produced in Brazil. The artisanal miners (*garimpeiros*) historically only mined high Sn content deposits with 4 to 5 kg SnO^2/m3, whereas other deposits, e.g. in Malaysia, are mined at grades of about 1 kg SnO^2/m^3.

In 1969, the Brazilian Government initiated a program to assess and organize the mining of cassiterite in Rondônia. In 1970, the Rondônia Tin Project (RTP) was created by federal decree. At the same time, the government invited and encouraged mining companies to operate the tin deposits.

Bom Futuro

In the middle of 1987, loggers harvesting wood near the Santa Cruz River municipality of Ariquemes, discovered a large amount of cassiterite (Bom Futuro Garimpo). The information was passed to the company MS Mineração Ltda., which immediately acquired the area for research. The *garimpos* (artisanal mines) became attractive to former employees of mining companies, to farmers in the region and even to local entrepreneurs who saw artisanal mining as a way to expand their profits.

The mining activity and the consequent commercialization of the ore directly violated the legislation. As a form of legalization of the artisanal mining activity, in order to guarantee the mining rights of MS Mineração Ltda., and avoid environmental damage, DNPM created an ordinance in 1988 determining that all commercialization of the cassiterite produced in the Bom Futuro Garimpo was undertaken by

MS Mineração Ltda., which in turn would pass on a percentage to each business group legally established and operating in Rondônia.

In order to solve the problems of the Bom Futuro Garimpo, the Brazilian Tin Company SA (EBESA) was created in June 1990, bringing together the largest cassiterite producing groups in Rondônia. A protocol of intent was signed in 1992 between the artisanal miner's cooperatives and EBESA to jointly formalise the operations of the *garimpos*.

EBESA estimated that, from 1987 to 1995, the production was of the order of 80,000 to 100,000 tons of Sn contained in concentrates.

It is the tailings from this past operation that Auxico is focusing its efforts.

Ownership

In 2001, there was a total transfer of operational activities from the Bom Futuro mine to Cooperativa dos Garimpeiros de Santa Cruz Ltda. (COOPERSANTA), which assumed responsibility for mining production and environmental protection. COOPERSANTA is part of the Cooperativa Metalúrgica de Rondônia Ltda. (COOPERMETAL) group, a cooperative organization focused on tin mining, and which originated in the agreement for the development of mining in the Bom Futuro mine area. In 2005, the mineral rights were fully transferred to COOPERSANTA, which integrates the most important cassiterite producers in the region.

COOPERSANTA owns the mineral rights in Bom Futuro, and CEMAL holds the mining license in Massangana. The mining permits for Cachoeirinha belong to Metalmig S.A., and the Santa Bárbara claim is licensed to ERSA, a holding of Companhia Siderúrgia Nacional (CSN).

The Deal with the Local Holders

Auxico signed, in June 2022, a joint venture agreement with Cooperativa Estanifera de Mineradores da Amazônia Legal Ltda. (CEMAL) for the production of various concentrates from the Massangana tailings.

Under this agreement Auxico will earn 85% of the profits of the Joint Venture by first, paying US$2mn over the year from June 2022, and secondly, by providing the JV with the necessary capital to engage in the produce the concentrates.

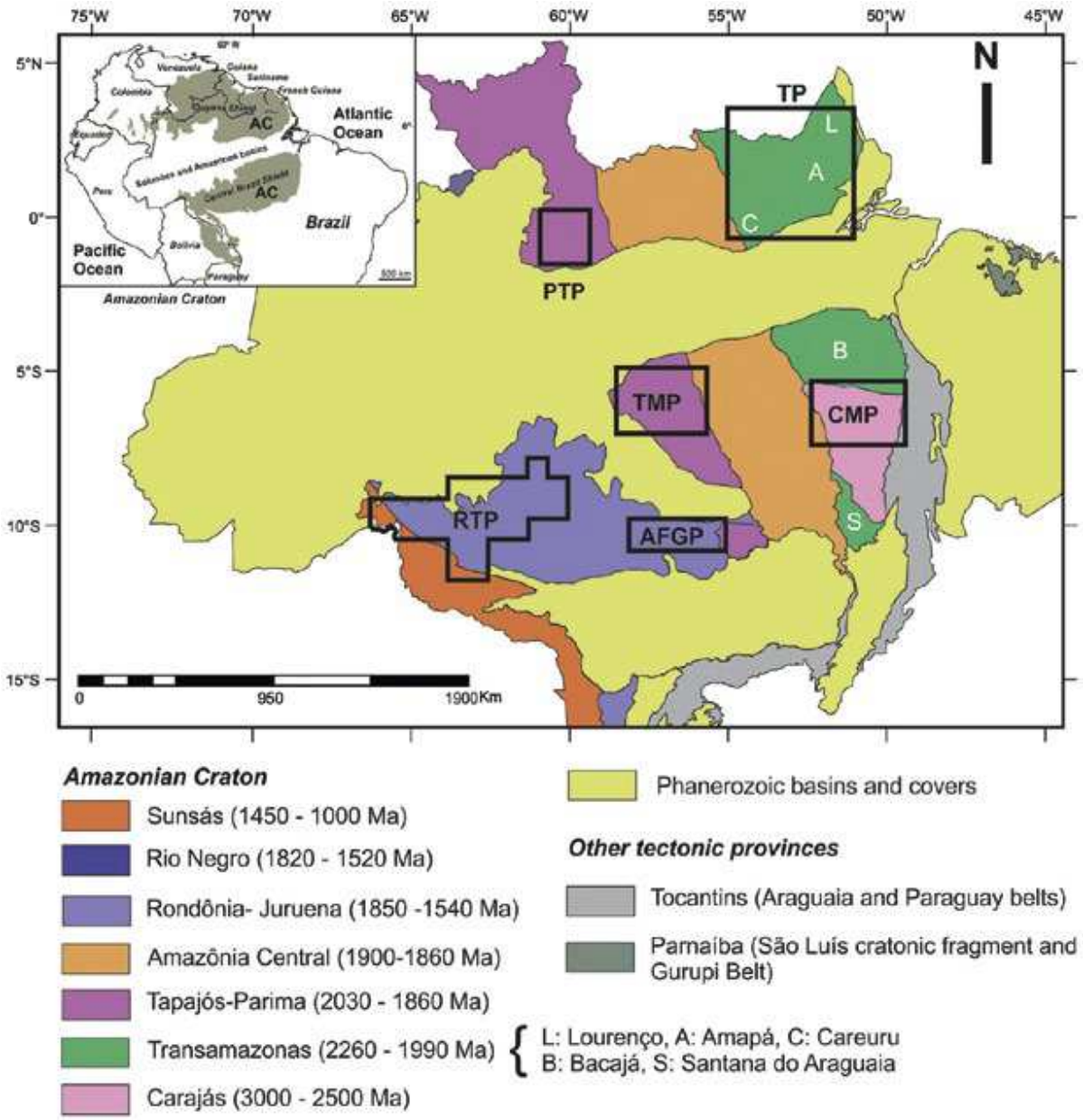
Payments are scheduled as follows:

- the first payment of US$500,000 will be made within 30 days of the date that the Agreement was signed
- the second payment of US$250,000 will be made on or before September 30, 2022
- the third payment of US$250,000 will be made on or before December 31, 2022

- and final payment of US$1,000,000 will be made on the anniversary of the first payment.

Geology

The Tin deposits being accessed by Auxico have been the object of the study titled 'Investigation of tin and tantalum ores from the Rondônia Tin Province, northern Brazil, to develop optimized processing technologies', prepared by the German Mineral Resources Agency and Geological Survey of Brazil.



The RTP is situated in the basement rocks of the southwestern part of the Amazonian craton (AC). The AC is separated into the northern block (Guiana Shield) and the southern block (Brazilian Shield) by the

Amazonian Basin, a sinistral transcurrent fault system that is attributed to the Jurassic period, when the Gondwana continent broke up.

The RTP is located in the Rio Negro-Juruena Province and is composed of Palaeoproterozoic to Mesoproterozoic metamorphic rocks which were intruded by several events of Rapakivi magmatism between 1600 Ma and 970 Ma.

The primary Sn deposits (W-Ta-Nb) are closely associated with late-stage peraluminous, partly porphyritic alkali feldspar granites.

Primary ore is associated with greisen related to the magmatism of the Rondônia intrusive suites. The Rondônia suite is an ensemble of granitic bodies distributed in the middle north of the state, and rocks of this suite occur in the deposits at Cachoeirinha, Bom Futuro and Massangana. The Santa Clara Intrusive Suite occurs more at the northern part of Rondônia state and is related to the greisen hosting the primary tin ore in the Santa Bárbara deposit (Santa Bárbara Hill).

Secondary ores, the main focus of the DERA study, are the most important ore type and are mined in all the studied deposits. Some researchers assert that the supergene tin mineralizations are associated with two sedimentary sequences. These sequences are a product of a depositional system related to arid to semi-arid conditions associated with the Illinoian and Wisconsinian glaciations. Both sequences are enriched with cassiterite.

The Tailings

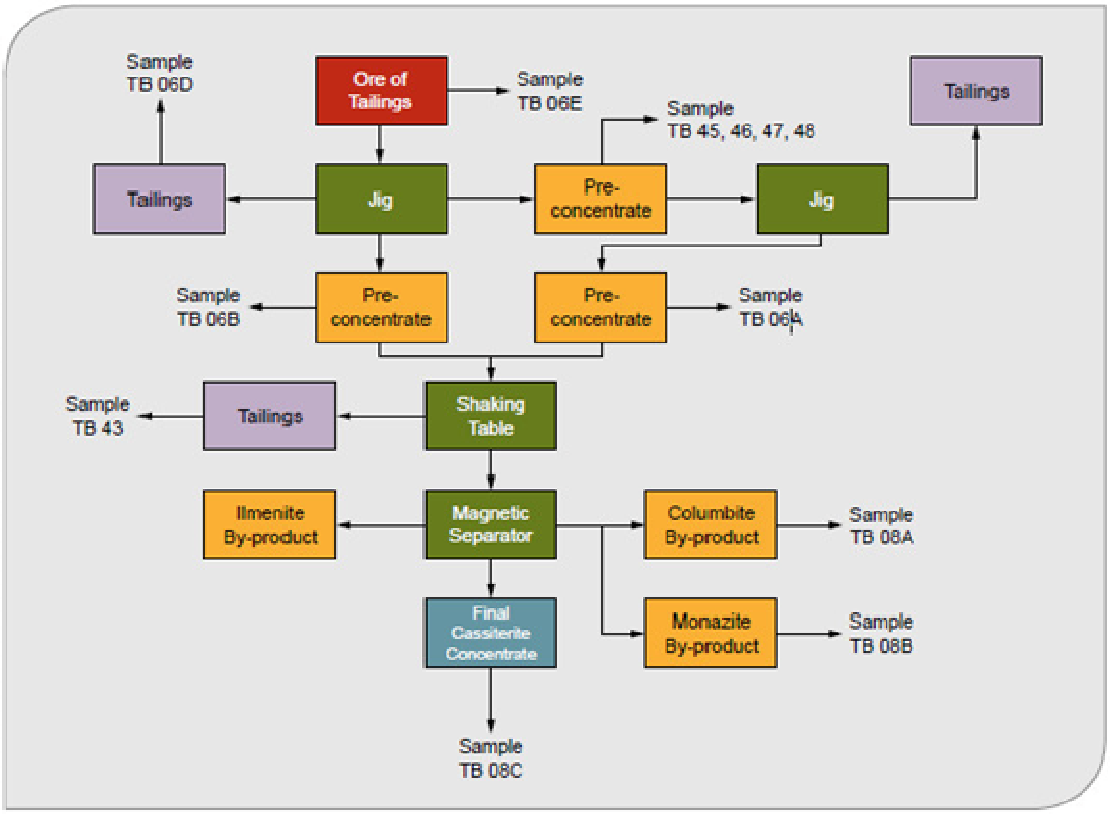
To some extent the geology, both local and regional, is moot at this time, as the main focus is the tailings resource from the past long-term mining at the sites. Thus, in the Massangana area, the main activity is the mining and re-processing of tailings.

The mineral processing starts with a first jigging step. The produced first pre-concentrate from this jigging (TB06B) goes to the shaking table of the CEMAL facilities. The output from the second chamber (2nd cama) of the first jig is forwarded to a second jig where the process is repeated. To represent this output from the second jig chamber, four samples from different localities were collected (TB45, TB46, TB47 and TB48). The second jig produces a pre-concentrate (TB06A) and its tailings are discarded at the mining site (TB06C).

The preconcentrate from the first and second jigs undergoes gravity separation on the shaking table, and the cassiterite pre-concentrate from this process goes to the magnetic separator to produce the final cassiterite concentrate (TB08C).

Columbite (TB08A), monazite (TB08B) and ilmenite concentrates are produced as by-products of the magnetic separation. The tailings from the shaking table process were also sampled (TB43).

The process flow is shown below:



The mineral processing flow in the Massangana CEMAL plant, including the sampling spots, is Pre-concentrates from the 1st cama of the jigs at Massangana are generally of good quality with high cassiterite grades of about 70% (representative of the percentage in the area according to MLA) and economically interesting contents of Columbite-tantalite (~3 %), with significant amounts of ilmenite (~20 %). These pre-concentrates are ready for further processing (e.g. magnetic separation) and can be fairly easily upgraded.

Geochemical analysis of pre-concentrates and tailings is used to crosscheck the MLA results, but also to determine whether the processing works well or if economically important elements are lost into the tailings during processing.

Bringing Zircon and Hafnium into the Equation

Tailings from the initial jig process still contain quite high concentrations of Sn, Zr and Nb. In this case, the analyses of the different grain size fractions show high Sn (0.4 wt. %), Zr (0.7 wt. %) and Nb (900 ppm) values in the fines (60 – 100 µm grain size). This indicates that quite a significant amount of cassiterite, zircon and columbite is lost during jigging. This is one of the main reasons for further processing testing.

Geochemistry (overview)

Sn values approx. 10% to high, due to XRF interference

material	Ce ppm	La ppm	Nd ppm	Y ppm	Sm ppm	Sn %	Th %	U %	Ta %	Nb %
Massangana Columbite conc.	27310	12910	11980	2165	2302	0.97	0.47	0.09	4.83	34.07
Massangana Monazite conc.	191600	97720	67000	10110	11010	9.61	3.37	0.13	0.42	0.19
Massangana Cassiterite conc.	n.d.	n.d.	n.d.	900	n.d.	54.92	0.09	0.03	1.70	2.87
Massangana placer	1804	724	576	1044	91	1.41	0.06	0.01	0.04	0.17
Massangana tailings	19130	9156	8634	7251	1434	0.65	0.49	0.07	0.07	0.37
Massangana slag	15900	7828	6803	2520	1109	26.65	0.36	0.05	0.82	3.07
Bom Futuro ST-concentrate	3747	1629	1570	1556	270	10.41	0.17	0.18	0.94	2.14
Bom Futuro stockpile 1	2677	1033	1023	916	169	1.86	0.05	0.01	0.23	0.35
Bom Futuro pre-concentrate 1	2898	1101	1103	955	189	2.02	0.05	0.01	0.22	0.35
Bom Futuro pre-concentrate 2	2871	1132	1132	1034	208	2.10	0.06	0.02	0.25	0.42
Santa Bárbara tailings	87	67	54	51	n.d.	0.15	0.01	0.00	0.00	0.01
Santa Bárbara ST-concentrate	66	49	44	8	n.d.	10.02	0.01	0.00	0.01	0.02

XRF Data (BGR)

Critical values of radioactivity for transport to/within EU: 0.29 % (2900 ppm) ThO_2; 0.1 % (1000 ppm) U_3O_8

Source:Deutsche Rohstoffagentur

Even the tailings from the shaking tables show economic concentrations of Sn (0.8 wt. %), Zr (2.2 wt. %), Nb (0.9 wt. %) and Hf (0.8 wt. %).

The major Hf bearing mineral is zircon and the DERA report posits that it is therefore worth considering the production of zircon concentrates as well for Zr and Hf extraction. However, higher radiation levels mainly due to U incorporated within zircon has to be taken into consideration, and therefore needs further investigation.

The Resource

The Massangana tailings are estimated to contain 30 million tonnes of material (non-compliant with NI 43-101), that were the object of the aforementioned study prepared by the German Mineral Resources Agency and Geological Survey of Brazil.

Massangana Tin Tailings	TREO %	Sn %	Th %	U %	Ta %	Nb %
Tailings	4.56	0.65	0.49	0.07	0.07	0.37
Monazite Concentrate	37.74	9.61	3.37	0.13	0.42	0.19
Columbite Concentrate	5.67	0.97	0.47	0.09	4.83	34.07
Cassiterite Concentrate	0.09	54.92	0.09	0.03	1.70	2.87

The monazite concentrate originating from the tailings and provided to Auxico by CEMAL was analyzed by Coalia Research Institute in Thetford Mines, Quebec, and was found to contain 63.49% Total Rare Earth Oxides (TREO).

Potential Production

One can muse upon the potential of the project to produce Rare Earths and Tin as it gains momentum. The company provides these (non NI-43 101) projections based upon the information from the PrimeStar and German projections.

Prospective Production from Massangana Project

	Minerals Sands @1K tpd throughput	Av Ore Grade %	TPD	TPM
Total REE Oxide (TREO)	84	3%	29.5	649
Tin (Sn)	6	54%	3.2	71
Niobium (Nb)	10	39%	3.9	86

Auxico stated in June 2022 that it planned on launching a Feasibility Study to process some three million tonnes per annum of tailings at a rate of 10,000 tonnes per day, in order to produce the concentrates outlined in the table above as the first phase of the project. The objective of this project is to produce 135,000 tonnes of monazite concentrate per year, 19,500 tonnes of cassiterite concentrate (Tin), and 45,000 tonnes of Columbite concentrate (50% niobium + 5% tantalum).

Phase 1 of this project will be launched within the next 12 months and all the necessary permits are in place to execute these activities. During this phase, Auxico will be conducting a pre-production study including site visits and sampling to verify the current resource and validate the present indications.

Phase 2 will involve the construction of the ultrasound-based processing facility capable of eliminating the radioactive elements that are contained in the tailings. The plant will have a capacity of 100,000 tonnes per year in order to produce Rare Earth concentrates meeting international norms for the transportation of these materials.

In Phase 3, these REE concentrates from Brazil (50,000 tonnes) will be shipped to the US for final separation of the Rare Earth elements. To this end, the company has prepared a scoping study for the refining of Rare Earths at a facility in Little Rock, Arkansas.

The total capital expenditure for the concentration plant in Brazil, and the elemental separation in the US, has been estimated at US$300mn.

The Brazil Tin Trading Arrangement

In late August 2022 an offtake agreement was signed with Cuex Metal AG, for the purchase of commercial tin concentrates (cassiterite) from the company's Massangana Tin Tailings project. Cuex is the Swiss subsidiary of Shangai Qunxian Industrial (Group) Co., Ltd., a bulk commodity Chinese trading company.

The agreement represents a purchase of 3,600 tonnes per year, over a period of five years, for a total of 18,000 tonnes of commercial Tin concentrates. Auxico intends to build a 2,500 tonne per day processing facility in Rondônia that could produce on a yearly basis: 6,000 tonnes of cassiterite, 90,000 tonnes of ilmenite, 13,500 tonnes of columbite, 90,000 tonnes of zirconium and 37,500 tonnes of monazite. Actual outputs from the processing of the Tin tailings will be better understood when an upcoming large scale sampling program is completed as part of the field work to prepare an NI 43-101 compliant resource report.

A recent economic forecast commissioned by Auxico, and prepared by the Brazilian independent company PrimeStar, projected robust annual revenues and EBITDA, but this analysis will be revised once the full field sampling program results are analyzed.

The company is in the process of negotiating additional offtake agreements for cassiterite, columbite, zirconium and Rare Earths. The start of commercial production could commence around the end of

2023. The project CapEx is estimated at ~USD$30 million, but this estimate is currently being reviewed.

Colombia

The Colombian assets of Auxico are a very intriguing mélange of specialty metals. The company acquired the surface rights to 1,482 hectares in the province of Vichada, Colombia. The project stretches across two adjoining properties; the Agualinda and the Mynastic projects. The concession is close to the Orinoco River (the second largest river in the northern half of South America, after the Amazon) which represents the border between Colombia and Venezuela.

Additionally, the company signed an MOU to earn a 70% interest in 20,000 hectares of land owned by the indigenous community of Guacamayas-Maipore, for the exploitation of industrial sands (Tantalum ore). The properties are located within a strategic area designated by the Colombian government for its potential for Tantalum, Niobium and Rare Earths.

The Minastyc property is located 870 km east of Bogota, Colombia, at the eastern end of the *Llanos Orientales* and can be reached via commercial daily flight from Bogota to Puerto Carreño or by using Highway 40 through Villavicencio to Puerto Carreño located at the junction of the Rio Meta and the Rio Orinoco. The Eastern Highway 40 may be hazardous especially during intense precipitations. From Puerto Carreño, the property can be reached by boat on the Rio Orinoco some 14 km to the south or by road, 60 km from Highway 40 to the south and to NNE on dirt roads and tracks in grassy flat lands

Geology

There is a NI43-101 report on this project, with an effective date of March 28, 2022, which was commissioned by Auxico. The report was prepared by André Ciesielsk and Joel Scodnick.

The property area is composed of specific sandy quaternary deposits accumulated over the millennia along the Rio Orinoco, specific grass vegetation and limited forest cover along streams. A concentration

of forest also exists around number of granite inselbergs (one is shown below) distributed all along and on both sides of the Rio Orinoco.

The eastern plains of Colombia (known as the *Llanos Orientales*) Neogene and Quaternary deposits are mostly composed of sedimentation originating from the Eastern Cordillera and higher grounds to the west. It also originates from slow dismantling of the Guiana Shield high grounds to the east and south and from aeolian processes. Along the Venezuela/Colombia border, further east in the Rio Meta and the Rio Orinoco area, recent deposits are mostly fluviatile, composed of grit, gravel, sand, iron oxide and hydroxide, clay, etc.

The property also lies in recent Holocene detrital mostly alluvial and coluvial deposits formed along the Rio Orinoco and the tributary rivers. Limited contemporary aeolian dune and loess deposits are also recorded in the property area. The authors of the NI43-101 posit that it is possibly underlain by older Pleistocene and Neogene deposits.

The property mineralization is located within the Neogene alluvial sediment horizons underlying the top soil and composed of Ti, Nb, Ta, Sn, ± Zr ± V and REE minerals like Ilmenite ($Fe2TiO^3$), Columbo-Tantalite ($(Mn,Fe)^4(Nb,Ta)^8O24$, Cassiterite ($Sn\pm(Ta,Nb,W,Mn,Sc)O^2$), Monazite ($(Ce,La,Nd,Th)PO^4$), Ta-Rutile (Ti,Ta,Fe)O2). These minerals are known to be contained in the Parguaza rapakivi granite, mostly concentrated in the late pegmatitic and aplitic phases and in greisen zones related to hydrothermal alteration.

Below can be seen trenching work in Zone 50 of the Mynastic project.

The Meteoric Impact Theory

A probable meteoritic impact of importance was discovered in 2004, is located 248 km SW of Puerto Carreño. The mix of metals is attributed to the relatively close proximity of an historic asteroid impact point. It forms a large curvature, along the Rio Vichada, 150 km west of the Rio Orinoco. The circular structure is 50 km wide and at least 30 million years old. It has affected the Neoproterozoic granitic basement and the Cenozoic cover and possibly the Parguaza granite Ta-Nb-REE mineralization, as in the Sudbury case. A simulation undertaken in 2018 showed up to 1 m of ejecta thickness in the Minastyc property area. Work stills remain to be done to assess the likelihood of the impact and its influence on the basement mineralization.

Exploration

Auxico has made a significant Rare Earth discovery (with TREO content of 56.81%). This area's endowment is attributed to the aforementioned asteroid-strike, rich in REE, which extends past Puerto

Carreño. Subsequent to a sampling program of 23 pits, the samples were sent to and analyzed by Coalia Research Institute in Thetford Mines, Canada.

Test results on a sample from a separate pit on the property resulted in 47% Tin content, plus Tantalum, Niobium, Scandium and REEs. This sampling was the result of a satellite imagery interpretation study, which identified over 20 priority exploration targets.

A systematic initiative of digging ~250 pits using shovels has been executed via a grid system. The samples are currently with Actlabs in Canada with results expected in 3-4 weeks. These will form the basis for an updated NI43-101 resource.

The NI 43-101 report on the Minastyc project indicated that a representative 3.2 tonne bulk sample from two locations of the Area 50 pit returned Total Rare Earth Oxides grading 68.25% and 65.57% respectively, and subsequent discoveries on areas adjacent (at 1.6-9km distance) to the company-controlled property which confirmed the presence of mineralization with significant Rare Earth grades.

Precious Metal Potential

Test results, showing gold, platinum, titanium, zirconium and hafnium, have been measured in samples, taken from the Minastyc property. Within the first metre from surface, 14 samples from these areas gave an average head grade of 9.5 g/t of gold, and 13.5 g/t of platinum (from 8 of the 14 samples that returned grade).

Mineral Sands?

The Ferricrete formation is a hard, erosion-resistant layer of sedimentary rock, usually conglomerate/ breccia, that has been cemented into a duricrust by iron oxides. In this instance it is essentially a massive sulphide iron cap with ilmenite and pyrite and is found in several extensive areas on the Minastyc property.

Satellite imaginary interpretation from the Japosat survey suggested that 150 hectares are represented by the Ferricrete formation, having the same signature as the sample areas from Area 50, the TA Area, and two other areas. Based on these observations in the field and from the satellite interpretation, the company's technical team estimated a minimum of 250,000 tonnes of material is represented by this Ferricrete layer in the first metre from surface at Area 50 and the TA area.

In April of 2022 the company released results of test results on samples taken from the Area 50, TA Area and two other areas. Fine concentrates taken at various sample points included up to 24.5% Titanium, 7.8% Zirconium, and 2.4 kilograms per tonne of Hafnium .

The Rare Earth content has been identified in layers of mineralized below the surface layer. Its worth noting also that the presence of Thorium has not been observed within the top metre.

The Tin-Tantalum Sampling

The company reported, in June 2021, the discovery of a high-grade Tin-Tantalum target area on the Minastyc property (with titanium, niobium, scandium and hafnium credits). This was the subject of pit sampling. Samples previously taken from the Tin-Tantalum target area were the result of pan concentration and screening, and were sent to Canada for analysis by Coalia Research Institute in Thetford Mines. The table below shows the results of selected samples from the Tin-Tantalum area.

Tin-Tantalum Target Area

	SnO2	Ta2O5	Ti2O5	Nb2O5	Sc2O3	HfO2	Yb2O3
Sample #1	33.75%	25.08%	15.50%	7.45%	0.590%	0.34%	0.12%
Sample #2	44.60%	18.71%	11.46%	8.15%	0.380%	0.24%	0.21%
Sample #3	62.13%	12.58%	6.40%	5.35%	0.290%	0.16%	0.21%
Sample #18	47.20%	9.29%	0.07%	3.24%	0.130%	0.06%	0.40%
Average grade across 4 samples	46.92%	16.42%	8.3575	6.05%	0.348%	0.20%	0.24%
Market price/ton US$	$18,000	$158,000	$3,000	$170,000	$3.8mn	$80,000	$50,000

*Note: market pricing may vary

Previously announced samples from pits on the controlled property displayed test results of 33.75-62.13% Tin content, inferring the development potential of a major Tin operation in Colombia.

Previous samples from the property contained high-grade Titanium rock sample, with 42.85% Titanium, 25.44% Niobium, 8.28% Tantalum and 53.53 g/t of Iridium. Samples found in a different zone on the property, originating from a rock sample, contained 30.41% Tantalum, 23.30% Niobium and 24.47% Titanium.

Rare Earths - Sales Agreement

Auxico entered into a commercial agreement with Minampro Asociados S.A.S. for the exploitation and trading of industrial sands to supply a minimum of 25 tonnes of tantalum concentrates originating from the Minastyc project. Minampro Asociados S.A.S. is licensed for the buying, selling and exporting of various minerals, and holds the exclusive purchase agreement with indigenous community Guacamayas-Maipore. The Colombian government has estimated the potential for several millions of tonnes of coltan reserves.

Potential REE Production

The company is in the process of obtaining the environmental and exploitation permits.

Following the environmental assessment and approvals, the company would have the capacity to sell up to 500 tonnes of RE concentrates per month from its Minastyc property. To begin this process the company only needs to secure a small-scale mining permit.

Tin – Sales Agreement

In late October the company added to its burgeoning portfolio of trading arrangement when it announced that it had signed a joint-venture agreement for Tin trading operations in Colombia. This arrangement provides Auxico with a 70% profit share on all sales of Tin ore executed with Gracor S.A.S..

This agreement represents a significant amount of Tin, with the objective of exporting a minimum of 100 tonnes per month of Tin concentrates at average grades exceeding 65% tin content. This commercialisation could potentially commence as of the end of December 2022.

Gracor's principal business is the purchase of Tin from the indigenous population in the state of Vichada, Colombia. Gracor is purchasing ore rich in tin content, sourced from and hosted in alluvial sands on surface, on properties in close proximity to the Minastyc project. Auxico will be providing Gracor with the working capital to increase its direct purchases and will sell Tin according to international standards and in relation to offtake agreements already in place, including the previously announced offtake with Cuex Metal AG and other commercial agreements that are currently being negotiated.

UAEx

In addition to the trading joint venture on the DRC assets, Auxico and CAN have a joint venture agreement which provides Auxico with access to Ultrasound Assisted Extraction (UAEx) which is CAN's patented technology for the processing and extraction of critical minerals.

The process, by eliminating the use of pressure processing (thus minimizing temperature) reduces energy requirements, chemical inventory, and accordingly emissions and waste. While it increases overall recovery rates, UAEx also adheres to stringent environmental standards.

This technology is a proprietary leaching extraction method utilizing already existing commercial grade ultrasound technology to significantly shorten the timeline and reduce the cost of extracting high value metals.

As is well-known, Thorium is a major bugbear of the Rare Earth industry, particularly for those developers with a preponderance of monazite material. UAEx is a solution to remove radioactive Thorium from Rare Earth reserves, making the concentrate non-radioactive and eligible for international shipping. Using UAEx, the Thorium content in the concentrate was reduced to less than 0.1%, Furthermore UAEx is has been proven effective on Rare Earth samples, achieving +80% recoveries of select Rare Earth elements.

The accord with CAN gives Auxico the worldwide rights to AUEx's gold and silver extraction process. The goal being to re-direct artisanal mining towards sustainable processing with an environmentally friendly, mercury-free, cyanide-free technology. The Minamata Convention was created in order to eliminate the use of Mercury (Hg) which causes harm to human health and the environment, as around 20 million artisanal miners around the world use mercury for mining.

The UAEx process has been found to be efficient on high-value RE samples with, for example, ~84% recoveries of selected Rare Earth elements over 2-hour leaching period. The process successfully removes Thorium (Th) content, making the concentrate non-radioactive and eligible for international shipping; with Th reduced to less than 0.1% (i.e. below US/EU shipping standards). The concentrates produced from Brazil and Colombia employing this process are intended to be exported to a US or Canadian-based plant for refining.

REE Grades

Symbol	Brazil %	DRC %	Colombia %	Bolivia %	Average UAEx Recovery %
CeO2	35.90	31.61	31.09	20.86	85.72
Dy2O3	0.28	0.09	0.72	0.49	86.63
Gd2O3	0.17	0.73	0.75	4.68	87.47
La2O3	15.17	9.41	9.40	5.49	85.41
Nd2O3	9.04	12.34	9.49	10.77	84.74
Pr6O11	0.89	2.58	2.44	1.57	85.94
Sm2O3	0.90	1.99	1.81	8.66	86.02
Y2O3	1.14	0.49	0.50	1.63	76.26
Total REE (%)	63.49	59.24	56.2	54.15	84.77

SAMPLING ABOVE ON AUXICO PORTFOLIO AND JOINT VENTURE PROPERTIES;

Tin - Stumbles on the Road Back

This metal is widely as the pivotal technology metal. RTZ published a ranking of metals by the use in key applications and Tin was noted as, by far, the most ubiquitous and vital in making the technologies that make the modern world work.

Since the collapse of the Tin Cartel in the early 1980s the metal has struggled to regain its position in the top tier of industrial metals (along with the big base metals). All attempts at price rallies eventually came to grief. The price move in Tin over the past two years has finally exorcised the ghost of the Tin Cartel which has haunted the Tin market for so many decades.

No other metal has labored for so long under such a burden of history. While it took a decade to clear away the physical overhang of metal from that debacle the high-water mark in prices from the period seemed to create a point at which investors felt “beyond here there be speculators”. The chart below shows the last fifty years and it looks anything but a smooth ride.

Source:Trading Economics

In reality inflation and changed/expanded usages of the metal combined with declining grades and a dry pipeline of projects set up the metal for an eventual rerating. Curiously it was in the darkest hours of the pandemic that the definitive turn in Tin's fortunes occurred.

For a long time, Tin consumers have rested upon their laurels and imagined that providence would provide them with on-going supplies at attractive prices for their margin expectations. As long as low-cost, low-tech alluvial production out of Malaysia and Indonesia could act as a price suppressant the end-users were happy and moreover unconcerned. However, such a scenario meant that there was minimal investment in new production and the pool of wannabes became very shallow indeed.

New Kids on the Block?

The flush of developers early last decade when prices held firm between $19-22,000 per tonne for several years has been reversed with most drifting away into other activities or meeting their demise (e.g. Kasbah). In recent years the only new addition of note has been Alphamin (TSX-v: AFM) which added another 4% to global production. Many thought this would suppress prices, instead Alphamin, since the inception of its production the whole Tin space rode the upward wave of the Tin price tsunami. The universe of Tin producers and serious developers is still thin despite two years of (upward) price correction. Then, along came the pullback of the last six months, which should push back the aspirations of the newest generation of Tin wannabes.

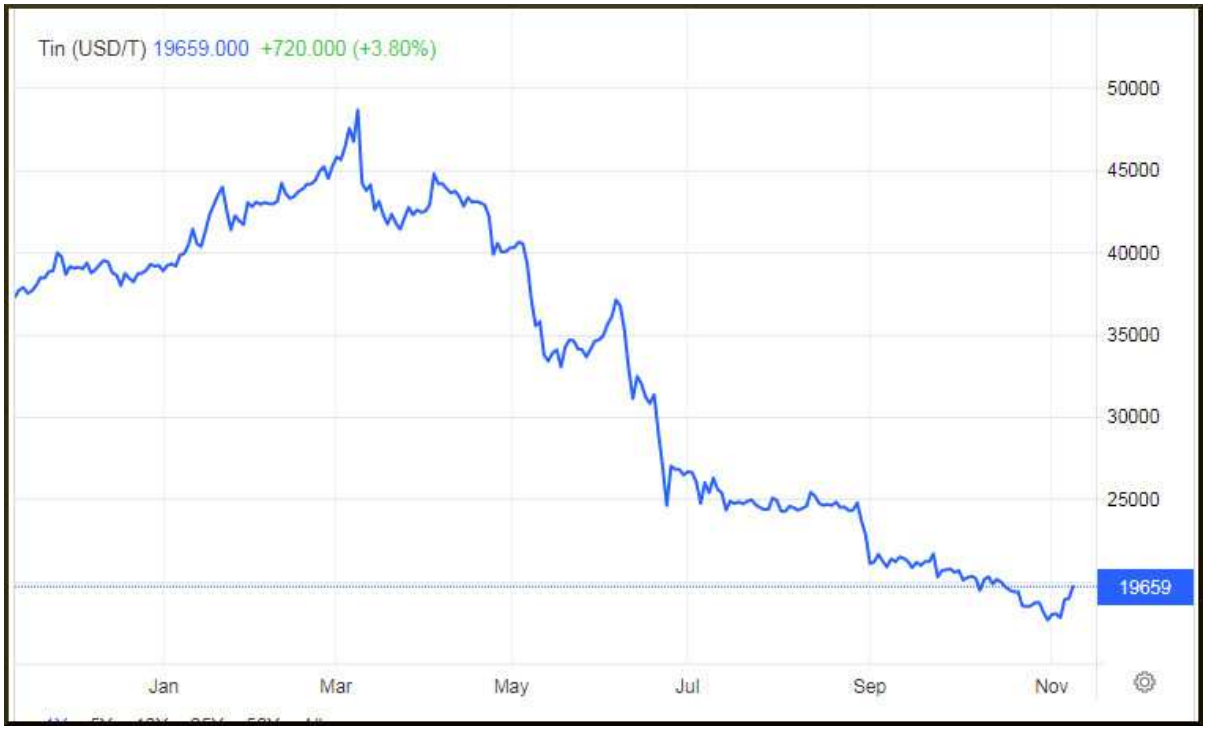
The main Australian producer, Metals X (MLX.ax) remains a prisoner of Yunnan Tin, undiversified and somewhat blinkered in its vision. The other developers of note are both in the Iberian Peninsula, a historic Tin mining area that had fallen into the footnotes of the history books. However, the work done by Strategic Minerals Europe (NEO:SNTA, FRA:26K0) at the Penouta mine (largely tailings reprocessing until now) and Elementos Limited (ELT.ax) at Oropesa has not even added a percentage point of new production, thus far, to an extremely constrained world supply picture.

Outlook

Despite the last decade showing a potential emerging supply crisis for tin, the price largely went sideways, or down. From now on the supply dynamic will be the prime motor of the space. Future demand was incorrectly estimated by parties such as the Tin Association and the USGS at the beginning of the decade. Their premise was that a massive shift to Tin solders would fuel a shortage. This created false expectations. The decline in traditional sources and their non-replacement is tangible though. Now is a good time to be bringing on new projects, but the only projects on the horizon (and accessible in the public markets) are Mpama South, tailings reprocessing in Namibia and the two developments in Spain.

After peaking at $32,500 per tonne in 2011, the price sagged again but then spent the period between 2016 and 2019 locked in a range between US$21,000 & US$23,000.

The chart below shows the metal has faded significantly since its highs reached in March of this year, and recently broke through the key $20,000 per tonne resistance level. .



Source: Trading Economics

Until mid-2021 we were musing as to whether the price surge had its roots in the pandemic/shipping crises but since that time it has become clearer that it is a crisis of supply. Not that supply has declined (after all Alphamin added to global supply) but rather that the sheer lack of other new supply sources combined with organic growth in tin demand has tipped the balance. This has given all tin suppliers traction again in pricing but so few have the latitude to increase production that most are just sitting back and enjoying the ride, trying to enhance their margins rather than making big expenditures in production.

There is more than a whiff of Chinese manipulation about the current pullback in Tin pricing. Chinese growth may be off-target, but its consumption should not be any lower than, say, one year ago and this goes for Western economies as well. There has been no surge in production. This leads us to suspect that an order has come from somewhere to reset the price lower and this can be done (for a while) by selective dumping of stocks onto a soft market to achieve an inordinate downward price move. We would expect prices to be closer to US$30k by the end of 2022 and over that level in 2023.

Rare Earths Rising

In the last three years the Rare Earths space has gone from mild buzzing to a full furore. Despite this

there has not been a massive burgeoning of projects, as in 2009-11, nor has there been many additions to the number of viable projects in the United States

The awakening in Rare Earths has been spurred by the invective related to the almost total dependence of the US economy (and its military) upon externally-sourced Rare Earths, primarily from China.

The renewed interest of politicians and investors coincides with the on-going slide in China's own internal production (particularly in Heavy Rare Earths). This changes the dynamic from the one which has reigned for the last eight years, where China definitively had the whiphand. With Chinese supplies under a cloud and the West having added no capacity in recent years, the scenario is one of shortages and rationing, particularly with regard to those REEs most used in EVs and 5G.

REE Producers Still Thin on the Ground

From over 300 claimants to be potential Rare Earth producers in 2011, at the end of the last Rare Earths boom, the number of developers had shrunk to less than twenty survivors by 2019.

While Mountain Pass (then embedded in Molycorp) was advanced to production by the time that the curtains came down in 2011, and Lynas entered the tiny ranks of producers, all the rest of the projects from the 2009-2012 period have been marking time (or were vaporized). Mountain Pass died (and has been reborn) and the others went through a long somnolence.

On Monazite Sands

In the first Rare Earths boom the overwhelming chatter of the promotional classes was related to bastnäsite, carbonatites, and even eudialyte. Monazite sands got some attention but were largely downplayed due to the issue of radioactivity.

While the other much vaunted mineralisations have fallen by the wayside, increasingly the focus, for better or worse, has been on lesser-known host mineralisations, with Ionic Adsorption Clays, monazite sands and recycling of urban waste and miscellaneous tailings all making a running.

Monazite is a primarily reddish-brown phosphate mineral that contains Rare Earth elements. It is an important ore for Thorium, Lanthanum, and Cerium. It is often found in placer deposits with India, Madagascar, and South Africa having large deposits of monazite sands. The deposits in India are particularly rich in monazite. Monazite is radioactive due to the presence of thorium and, less commonly, uranium.

In fact, monazite was the only significant source of commercial Lanthanides from the first exploitation of Rare Earths through until the start of the so-called Mountain Pass era. Concern over the disposal of the radioactive daughter products in monazite, such as Thorium, resulted in bastnäsite displacing monazite in the production of lanthanides in the 1960s due to its much lower thorium content.

The radioactive element of monazite sands has not stopped the evolution of projects such as that of Energy Fuels (NYSE: UUUU, TSX: EFR) in the US, which is processing sands sourced from the operations of Chemours (NYSE:CC) in Georgia. Reputedly though Energy Fuels are importing material for processing at their White Mesa mill where they extract the radioactive element form the ore. In May of 2022, EFR acquired over seventeen mineral concessions in the State of Bahia, Brazil totaling 15,089 hectares which hold significant quantities of heavy minerals, including monazite, to feed Energy Fuels' emerging REE supply chain.

We would also note that ilmenite sands have a monazite component and the product is being sourced from Madagascar currently (Iluka & RTZ) and from up and coming players like Sheffield Resources (ASX:SFX - which we highlighted in our recent Monthly) have sellable monazite ores.

Monazite ores can be transported internationally in Class 7 sealed shipping containers.

If the Chinese are prepared to take and process the material from Auxico's suppliers then it should not prove a hindrance to expanding trade. In our talks with management they mentioned the potential to send ores to either Energy Fuels or the Saskatchewan Research Council in Saskatoon. The latter is still only a limited site with processing capability of only 3,000 tpa.

Zircon & Hafnium

These two minerals appear in some mineral sands formations and, interestingly, are apparent in both the Brazilian tailings and the Colombian project. Reference should be made to our Hafnium Review of August 2020.

Zirconium is as a corrosion-resistant material of construction for the chemical processing industry. It is also used to make superconducting magnets, with additional uses include surgical instruments, photographic flashbulbs and in making glass for televisions.

Hafnium is a good absorber of neutrons and is used to make control rods, such as those found in nuclear power stations and submarines. Hafnium has been alloyed with several metals including iron, titanium and niobium. It is also used for microprocessors/chips. It is combined with other elements to make compounds that can endure extreme temperatures. Hafnium oxide is used as an electrical insulator in microchips, while hafnium catalysts have been used in polymerisation reactions.

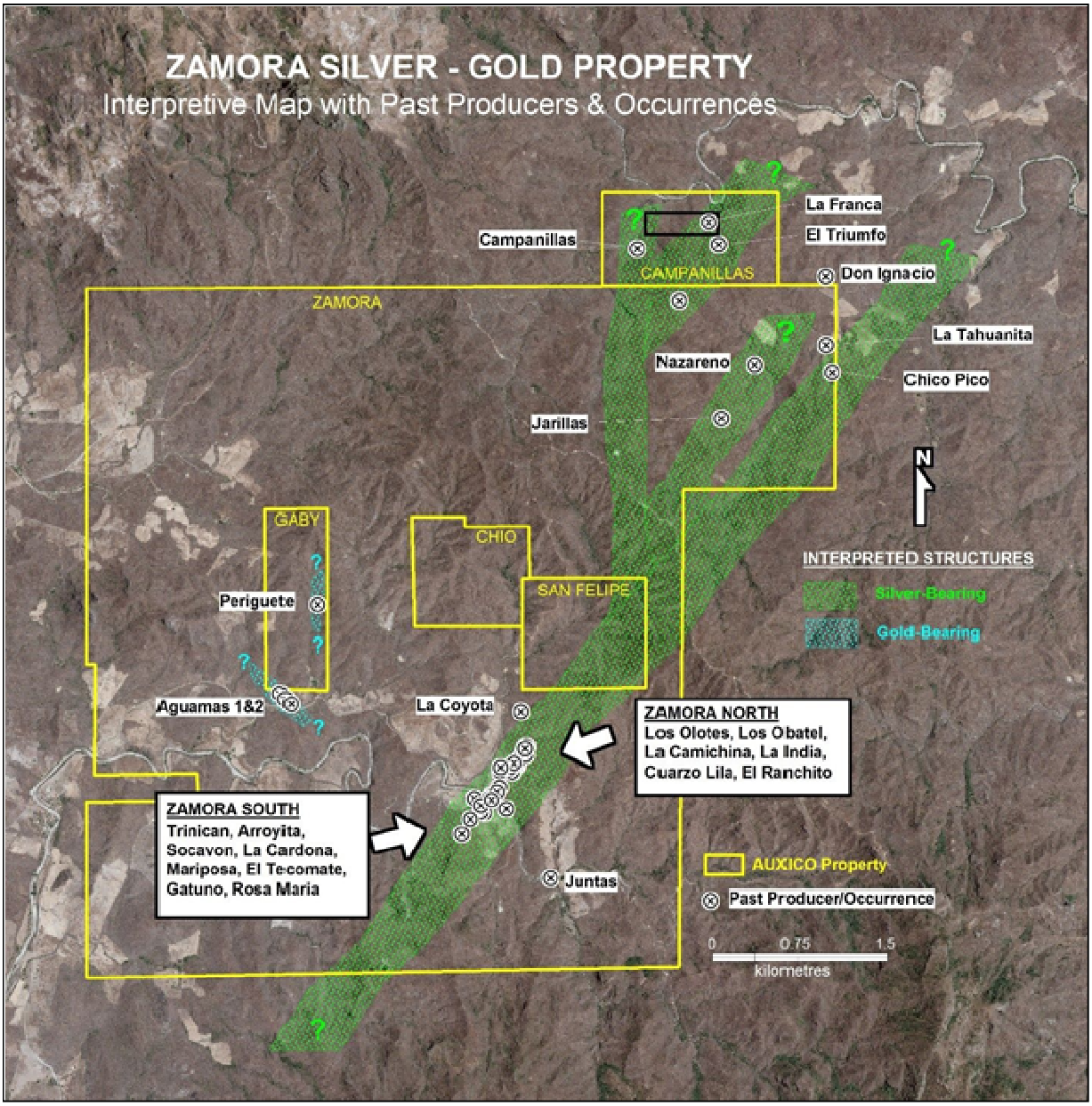
Mexico – Silver & Gold – On the Backburner

The precious metals targets of the company have sunk in the priority list of management as the more exciting possibilities of Tin and REEs (and other specialty metals) have risen in its estimation.

The company's long-time flagship asset has been the Zamora Silver-Gold project located in Sinaloa, Mexico, and covers an area of 3,388 hectares, contains 23 historical gold/silver mines/prospects that had historical production over the last 100 years.

Auxico has a 100% undivided interest in the Zamora Property subject to a 2% NSR. A 1% NSR may be purchased by Auxico at any time for USD500,000.

Access is good with the Zamora project located 85 km southeast of the city of Culiacan and some nine kilometres northeast of the village of El Espinal, from which the property is easily accessible year-round via gravel roads. The concession map is shown below.



The main source of information on the project is a NI 43-101 Technical Report, authored by Joel

Scodnick B.Sc., P.Geo., dating from August 2016.

History

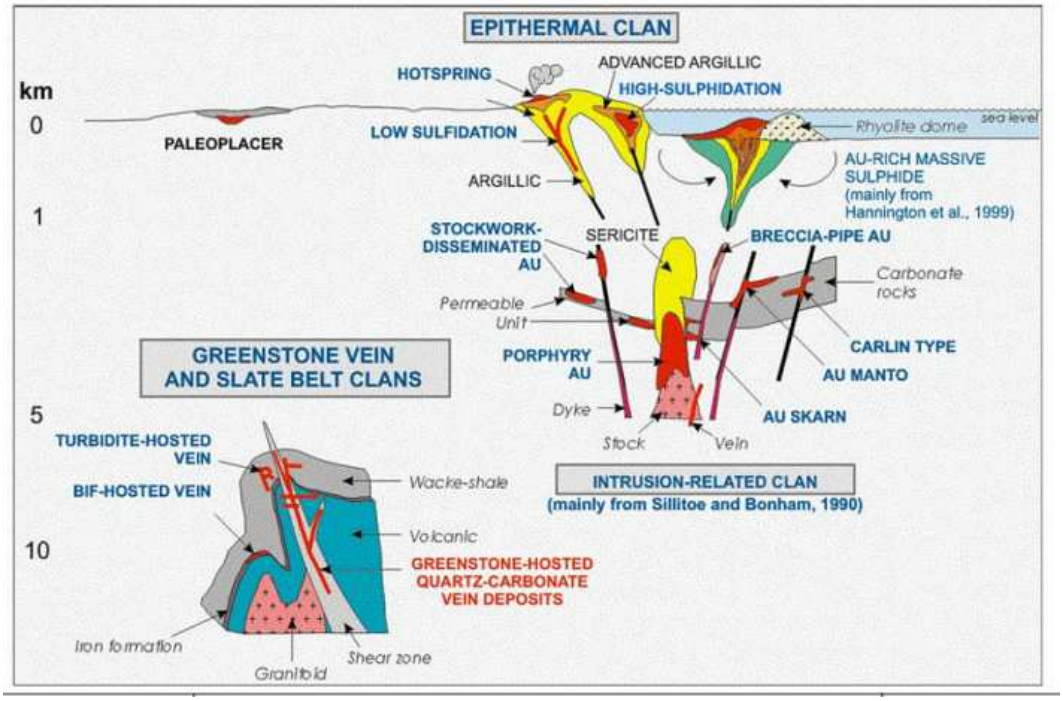
Historical underground workings date back to the 1800's, where an undetermined amount of ore was mined following the main vein structures. According to historical records the Zamora property is characterized by fifteen mines/prospects, fourteen of which were identified by the author of NI43-101 dating from 2017, while one, the Aguamas Mine was not located.

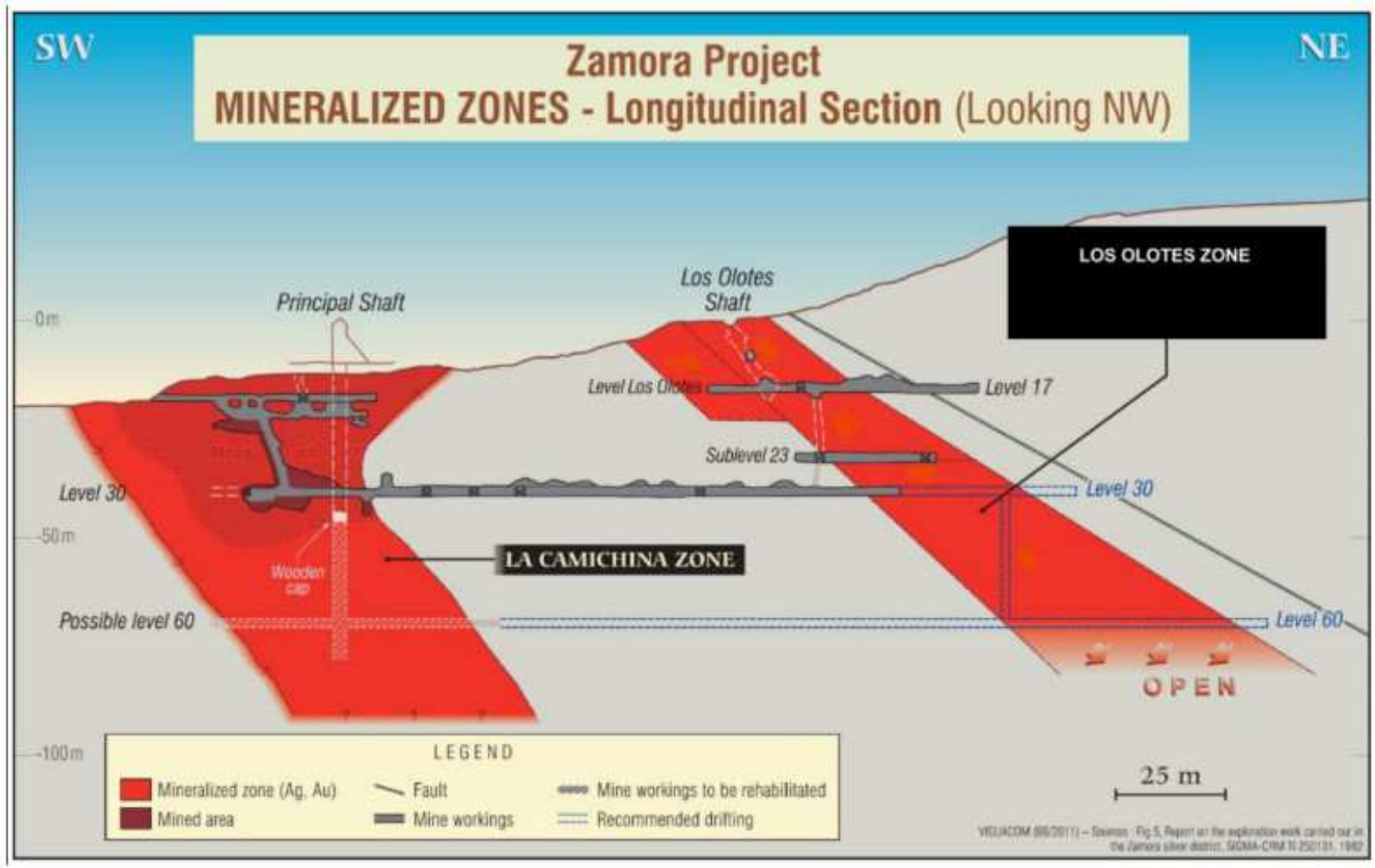
The most important of the mines is La Camichina and although there is not a very big waste pile in the immediate area of the vertical shaft, it appears, according to a report written in 1982 by Antonio B. Flores Martinez, Ing. for the CRM, that La Camichina was sunk down to about 100m below the surface and a fair amount of ore was extracted down to at least the -60m level. La Camichina was abandoned for reasons that are unknown.

According to all available data, there has never been a milling operation or concentrating plant on the property as the ore was so rich that it was direct shipping ore (DSO) to the La Minita plant located approximately 25 km from Zamora.

Geology

The basement of the area is represented by tuffaceous breccia consisting of subangular to angular fragments of andesite up to 10 cms in diameter. Below is a conceptual cartoon of the geological structure posited for Zamora.





Cross section Cross Section through La Camichina & Los Olotes adits

According to the QP, Joel Scodnick, who has been working on other epithermal silver-gold deposits and mines in Mexico and spent two years exploring the property, Zamora has the potential to host a significant silver-gold deposit. Work so far has demonstrated that the mineralizing events and alteration patterns cover a very large area and that none of the historic workings appear to have been mined below 60 – 100m which is considered very shallow. These types of deposits are known to exceed more than 1,000-1,200 metres in depth.

Exploration

Before Auxico arrived there had been only limited exploration on the Zamora property.
During the 2014 exploration campaign, eight out of the fifteen historical mines/prospects were sampled. The sixteen mines/prospects occur over a distance of 10 km x 5 km and the exploration program of 2014 identified what is believed to be a low-sulphidation epithermal system for most of the property which displays intense hydrothermal alteration patterns in every one of the historic mines visited, and sampled.

This exploration program confirmed the high-grade nature of certain areas of the Zamora project where silver samples as high as 14.4 kg/t were returned. That particular sample of 14.4 kg/t Ag was randomly selected from a stockpile just outside the portal at the Campanillas Mine.

Auxico undertook a sampling campaign in 2018 over selected areas on the property, which confirmed the high-grade nature of the silver and gold mineralization. One sample taken from a stockpile outside the Campanillas portal assayed as high as 14.6 kg/t of silver and 15.53 g/t of gold.

Target

The two major ore bodies are defined as La Camichina which was intensely mined and is characterized by the Zamora Vein, and the Los Olotes zone which is formed by the intersection of two vein structures, Los Olotes and Zamora, and represents the main exploration and development focus due to its high-grade ore pockets. Los Olotes appears to be oriented more north-south (NS) than the Zamora Vein which has a northeast-southwest (NE-SW) trend. It is believed that this ore still exists at Los Olotes and was not mined out. The two vein structures are separated by a crosscut which runs from La Camichina to Los Olotes, approximately 115 metres apart.

The 2017 Technical report concludes that the field work demonstrates that 90-95% of the mineralized zones line up and thus “it could easily be demonstrated that a potential exists for hundreds of millions of tons of ore, possibly more” if testing of the area between Los Olotes and Campanillas can prove that there is a continuous orebody. Its posits that there may be a strike length of almost 7km for a deposit of low- to medium-grade, with sections of high-grade ore.

Looking Forward

A recovery in the fortunes of gold and silver could prompt a number of potential outcomes at Zamora. A revival of the exploration and development of the project is an obvious outcome if precious metals rebound strongly.

Possibly more attractive, if the Rare Earth/Tin and specialty metals prove to be substantial money earners, might be a spin-out (distribution in specie) of the gold/silver activities to the shareholder base combined with a raise so the Mexican business can make its own way in the world.

Earnings & Outlook

Trading revenues can be even more subject to vagaries of the markets than metal mining activities. As the mines (for now) are not under the company's control it is essentially dependent upon the productivity of the quasi-artisanal miners (as far as the DRC is concerned). However a virtuous circle of higher sales for Auxico, greater revenues to the miners could lead to miners upping their game (technologically and in terms of equipment deployed) to move steady state production to a higher level than might currently seem doable, principally by Auxico/CAN providing facilities for the artisanal miners to acquire light machinery et al. to up their production and recovery of concentrates.

The calculations on the DRC commissions are rather straightforward:

- 1st trade: total revenues ~US$458,000 x 15% = US$68,700
- 2nd trade: total revenues ~US$1,248,000 x 15% = US$187,200

In the last weeks of September the company announced the execution of the third and fourth trades of a cumulative 432 tonnes of REE concentrates/monazite sands from the DRC.

This brought the total sold to 720 tonnes of monazite since April of 2022, representing a total provisional value of US$3.8mn. As per the signed sales agency agreement with CAN, Auxico will retain a commission equal to 15% of the sales price.

The material from the third and fourth trades was sold for a total provisional value of US$2.1mn. A total of US$1.1mn has been paid, while the balance will be settled upon delivery of relevant contractual documents and the material arriving at the final destination.

Initial testing on samples of the material indicated an average grade of 14.01% Neodymium, and a TREO grade of ~60%. The samples of the material were analyzed by SGS South Africa.

Projected revenues

Based upon the reported sales thus far some projections can be made. The company's objective is to increase the export to 1,000 tonnes per month in 4Q22. At current market prices of US$6,000 per tonne, this would represent an annual sale value of ~US$72 million, of which Auxico will retain a 15% commission.

Payment terms on these trades are 90 days. Therefore, based on 1,000 tonnes per month and utilising the 2nd trade metrics (similar grades therefore the total revenue divided by 192 tonnes), this equates to US$6,500/t, therefore US$6.5mn per month and a potential US$78mn per year. At a 15% commission rate that would imply $11.7mn accruing to Auxico for expediting these transactions.

B**oard & Management**

A management shakeup in the last month brought about the entry of two new directors to the board and the appointment of one of those as the new CEO.

Mark Billings, Chairman, is a former investment banker, having raised hundreds of millions of dollars for small-cap companies, including several junior mining companies. He has an MBA from Harvard Business School and he is a Chartered Financial Analyst. He founded and managed companies in the junior resource sector, in addition to being CEO, CFO or a director of a number of publicly traded resource companies in Canada and abroad.

Frederick Kozak, CEO, was appointed in recent weeks to replace Pierre Gauthier, he has held several resources executive and capital markets leadership positions, with a keen specialization on rare earths. He previously held the position of President at Appia Rare Earths & Uranium (TSX-v:APP). He spent the latter part of his career as a senior executive and board member of private and public companies, including as co -founder of a start-up public international oil and gas exploration company. Prior to that, he worked as an equity analyst, notably at Canaccord Genuity and Haywood Securities. He is a graduate of the University of British Columbia, Faculty of Applied Science (Geological Engineering), and the University of Western Ontario (Ivey School of Business.

Richard Boudreault, non-executive director, has held executive positions in organizations of all sizes in both the private, public and governmental sector. He is recognized for his Governance, Regulations and ESG issues. He has led organizations across a variety of sectors including advanced materials, natural resources and metallurgy, clean technology, and on energy (hydrocarbon and nuclear). From 2005 to 2014, he was CEO of the cleantech metallurgical process and mining Orbite Aluminae, where he raised over $140mn in financing from institutional and government sources and grew the firm from start-up to publicly traded company with a valuation of $500mn at exit. He has developed REE processes and specializes in heavy elements extraction, separation and purification. He holds a bachelor’s in applied

physics, an MBA and a professional master's degree in engineering, which he earned at Cornell.

Joseph Lau, a non-executive director**,** holds a BSc. (Chem) from Concordia University and an MBA from University of Ottawa. He is the Founder and Chairman of Rockhound Limited in Hong Kong. Since his return to Hong Kong in 1994, he served in senior executive positions across various industries, including financial services, RE, telecom and retail jewelry. He is a member of the Chemical Institute of Canada and the Canadian Institute of Mining Metallurgy & Petroleum.

Sheldon Inwentash, non-executive director**,** is an entrepreneur/investor, who is Chairman and CEO of ThreeD Capital Inc., aToronto-based venture capital firm specializing in investments in the junior resource, blockchain and AI sectors. He has more than 30 years of investing experience and has been instrumental in raising $15B for his portfolio companies over the last 15 years. He led Pinetree Capital and created significant shareholder value through early investments in Queenston Mining (acquired by Osisko Mining Corp. for $550mn), Aurelian Resources (acquired by Kinross for $1.2bn) and Gold Eagle Mines (acquired by Goldcorp for $1.5bn).

Buzz West, non-executive director, a former soldier and head of Reuters, Middle East and Africa, Mr. West has spent the last 25 years as an entrepreneur in the fields of natural resources, high technology and security. He has recently retired as the group chairman at Kingswood Holdings Ltd., the owner of KWWealth, having assets under management of approximately £12 billion. Highly experienced in the financial services arena, he was the founder and chairman of Ashcourt Rowan plc, which had assets under management of approximately £6bn. He was also the chairman of the leading loss adjustor GAB Robins, taking them from management buyout to trade sale to the US group Crawford. He was the senior non-executive director to the Norwegian telecom company, Norcon plc.

Melissa Sanderson, non-executive director, was appointed at the same time as the new CEO. She is an executive with 30 years of experience in mining, business and government relations, and most notably the founder of Ethically Sustainable Growth (ESG+). She previously served as a senior diplomat, including as *Charge d'Affaires* leading the US Embassy in the DRC. She is a Professor of Practice at the Thunderbird School of Global Management in Arizona, and previously served as Vice-President International at Freeport-McMoRan.

Risks

The whole specialty metals complex finds itself in a different world, with some constants from the Commodity Supercycle period of 2002-2008 which was the last "day in the sun" for the exotica of the metals space, and yet much changed, as well. It is worth enumerating some of the risks that may be faced:

- Tin not bouncing back
- Tantalum moving lower

- A return to weak Rare Earth prices
- The REE market is still controlled largely by China
- Weak silver prices holding back monetization of Zamora
- Excessive number of competing projects could crowd the scene and investors' attention in the event that REE prices remain robust

Rare Earth prices are not likely to go lower than the levels they have been at in recent years, even the Chinese are not running a charity anymore. Prices have been ebullient for the last three months but there is no rationale for them to even vaguely test the highs of 2011-12. The Chinese have learnt their lesson from last boom and that lesson is that the best way to maintain control and discipline market players is by aggressive predatory pricing.

We might also note that, at least for now, the Chinese are the main buyers for monazite sands and they hold the whiphand in dictating prices (particularly discounts to the going market rates for REE concentrates with certain mixes of REEs and radioactive elements). However, the Chinese are increasingly forced buyers of REE concentrates if they are to have any chance of remaining the dominant player in REEs now that they have lost their dominance in the production of Heavy Rare Earths. They would not want this repeated in the "Lights" such as Nd and Pr.

With the EV "revolution" finally gaining traction outside of China the potential for greater demand for REE magnets from the quarter is enhanced. We see no reason for REE demand to slacken and indeed there is the potential for it to finally start to meet some of the bullish projections of 10 years ago.

The issue for monazite sands is radioactivity. This has not stopped the evolution of projects such as that of Energy Fuels in the US and if the Chinese are prepared to take and process the material from Auxico's suppliers then it should not prove a hindrance to expanding trade.

Conclusion

With tough times in the mining share markets the old truism of production, production, production has brought revenues first to the minds of investors when making their allocations. While the commission revenues that Auxico is earning on its trading may not strictly be "top-line" revenues they certainly beat sitting and waiting for the turn in markets to initiate a project and then the long-haul to get it to production.

The DRC may not be an investors' favorite but Auxico has shown that Rare Earth sands from this non-traditional REE province can be a money-spinner, while conflict-free Tantalum has the potential to add a further stream to the revenue mix in that jurisdiction.

The trading arrangements now provide a sustainable revenue stream proven over four transactions -

mitigating risks by securing supply for offtake agreements as two other projects are concurrently moving towards production phases; Brazil and Colombia, The spread across multiple jurisdictions reduces supply, political and regulatory risks and can potentially accommodate various off-takers Cuex, Lasell, Gracor and others currently in discussion.

The fall in the Tin price has frustrated some of the potential to advance faster the Brazilian project, but it has also knocked out of contention those projects with higher capex. As a tailings reprocessing operation the opex at Massangana must fall in the lower quartile of Tin projects at this time. The upside though is contained in the REE component in these tailings, with REEs still holding at the best prices they have seen since the demise of the unlamented boom of 2009-2012. The REE space has, undoubtedly, much better fundamentals and staying power than the last go-around.

In Colombia, the picture is more tilted towards minerals sands, without discounting the potential of a plethora of other precious and specialty metals evident in the mineralisation. Once again we have the potential of monazite to underpin the economics of whatever else is exploited from the project's rich mineral mix.

Both Brazil and Colombia also have the potential to have Zircon and Hafnium as sleeper by-products.

Investors are still largely in a time-warp thinking this is a Mexican precious metals play (for which both the name and the ticket do not help) however the action is elsewhere and in very different metals. It's time for the pivot to being regarded as mainly a critical metals play. The stock price has recently been plumbing new lows which is a trend at odds with the market's obsession with the shortage of Rare Earths production. In its own small way, Auxico has joined the mere handful of listed names outside China that are actually trading/producing a Rare Earth product even if it is only a concentrate at this point.

If anything a name change is in order to leave behind the precious metals aura that has long surrounded this stock.

A re-rating is somewhat inevitable now that Tin has bottomed and started ticking up and the volumes of REE product out of Auxico's various projects starts to trend upwards. Thus we have initiated Auxico Resources with a **LONG** rating on Auxico Resources with a 12-month target price of $1.48.


AVAG Daily
11/08/22
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
Volume
©BigCharts.com
800
600
400
200
0
Thousands
Dec
22
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov

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