

RESOURCE UPDATE - SITE VISIT | PUBLISHED ON 10 FEBRUARY 2023

SMI: Bendigo-Ophir, the 3Moz World Class Gold Discovery You've Never Heard Of.

SMI.ASX | SANTANA MINERALS LIMITED | MATERIALS | METALS & MINING

PRICE
A\$ 0.82 /sh

TARGET PRICE
A\$ 1.75 /sh
(FROM A\$0.90 /sh)

RECOMMENDATION
SPECULATIVE BUY
(UNCHANGED)

ANALYST
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Event

Santana Minerals makes strong progress at their Bendigo-Ophir-Gold Project, NZ.

Maiden Indicated Resource. Project Mineral Resource Estimate increases to 3Moz @ 2.3g/t

Euroz Hartley's site visit notes.

Impact

- Global resource increased by 1Moz to 3Moz, with grade increasing from 1.8g/t to 2.3g/t. Maiden indicated Resource of 279koz at 4.3g/t. Discovery cost of ~A\$3.50/oz.
- Rise-and-Shine (RAS) has all the hallmarks of a world-class ore body, with the critical mass to underscore mining studies.
- Site visit confirms confidence in the people, project and jurisdiction.
- Recent mining approvals within 6 months of submission at Federation Minings Snowy River project set a strong precedent for permitting in New Zealand.

Action

Santana Minerals has added 2.6Moz of high-grade gold to the BOGP in 2 years. The site visit and MRE update confirmed our belief that this is a growth story that could be developed. RAS is a high-grade, high-tonnage, free-milling ore body with access to fresh water, hydropower and a readily available residential workforce within the supportive mining jurisdiction of Otago on the South Island of New Zealand. Oceana Gold has operated the 5Moz Macraes Gold Project 90km away for 33 years. Four diamond drills and one RC rig continue to drill on the project.

SMI is by a highly experienced management team that has taken multiple projects into production globally (including NZ). SMI trades below peer EV:Rsc Metrics (Avg Peers A\$46/oz v SMI \$40/oz), particularly when considering the grade (Avg Peers 1.6g/t v SMI 2.3g/t). We believe the ore body has similarities to the Capricorn Minerals Karlawinda mine, however, the RAS position on the side of the hill could support 200-250kozpa development. We take a conservative view on the various risked development scenarios (cross-checked with developer EV:Rsc metrics) and set our PT midway between the EH Gold Price Deck valuation (A\$1.50/sh) and the Au Spot Valuation @ \$2705/oz (\$2.00/sh).

We maintain our Speculative Buy recommendation and increase our PT from \$0.90/sh to \$1.75/sh.

Catalyst

- >2,000m of exploration results at Rise-and-Shine
- Metallurgical results (Stage 3 onward)
- Mining studies – CY23
- Resource upgrade – Mid CY23
- Commence permitting process – CY23

MARKET STATISTICS

Share Price	0.82 A\$/sh
Issued Capital	
Fully Paid Ord	148.8 m
Options (var. prices)	2.2 m
Total Dil. FPOrd	151.0 m

Market Capitalisation (Dil)	\$124 m
Enterprise Value	\$117 m
Cash	\$6.7 m
Debt	\$0 m

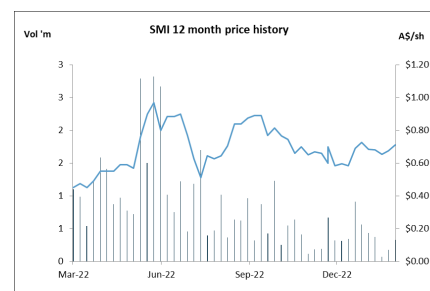
Directors

Norman A Seckold	Chair
Tony McDonald	NED
Richard E Keevers	NED
Frederick Bunting	NED
Warren Batt	NED

Shareholders

Depot Corp.	9.1%
Mustang Resources	5.2%
Calm Holdings	2.4%

Performance



Source: Euroz Hartleys

Executive Summary

With 3Moz of Resources Santana is fast becoming a developer story.

We value Santana on a risked development scenario of the Rise and Shine (RAS) deposit, which forms the majority of the resource at the Bendigo Ophir Gold Project (BOGP).

We make the assumption that this project will be developed and evaluate the various (conservative) development scenarios. The chosen scenario combines open-pit and underground mining. A methodology that fast-tracks ore recovery by opening up multiple mining fronts (derisking delivery).

We set our PT midway between the EH Gold Price Deck (A\$1.50/sh) and the Valuation at current spot prices @ \$2705/oz (\$2.00/sh).

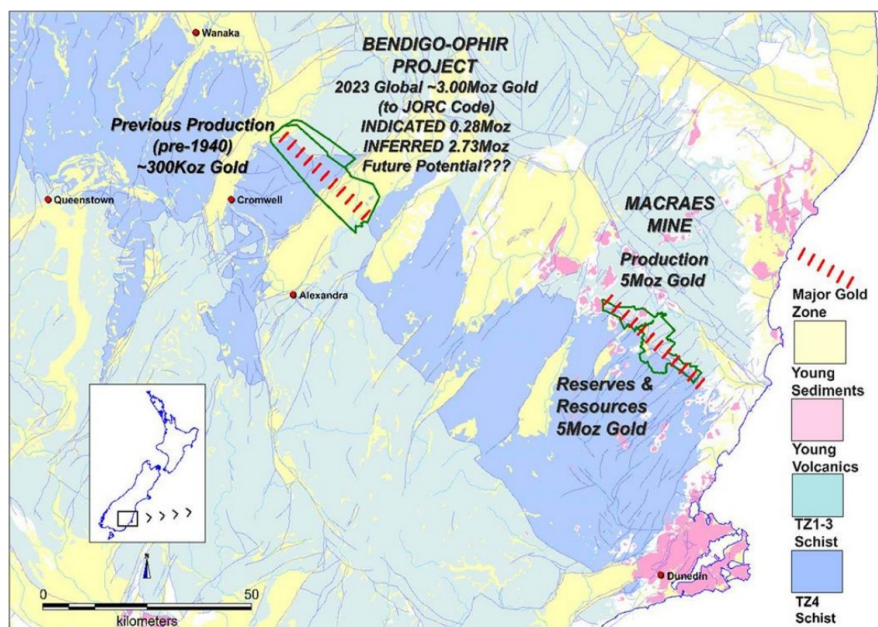
We maintain our Speculative Buy recommendation and increase our PT to \$1.75/sh.

Figure 1: EH Asset Valuation

ASSET VALUATION		
	A\$m	A\$/sh
(+) Bendigo-Ophir Project	413	1.27
(+) Other	-	-
(-) Corporate	(3)	(0.01)
(+/-) Hedging	-	-
(+) Exploration	69	0.21
(+) Unpaid Capital	-	-
(+) Cash	7	0.02
(-) Debt	-	-
EH Deck Prices (US\$1700/oz and AUD:USD 1:0.74)	485	1.50
Valuation at Spot A\$2705/oz	648	2.00

Source: Euroz Hartleys

Figure 2: Location of the project in NZ



Source: Santana Minerals

We consider the risks and opportunities in our assessment and risk our DCF model appropriately.

The opportunities far outweigh the risks.

Figure 3: Key Opportunities and Risks

Risks	Opportunities
Water (Contamination and management)	Community Support (Strong)
Ground conditions (Fragmented but manageable ground)	Ore-body dimensions and grade (Thick and high-grade)
Permitting (Water, atmosphere (dust), meteorological, flora, fauna, heritage, cultural, waste management underway)	Materials Handling (Surface Contours can utilise gravity vs Haulage)
	Location (Close to - 'but far enough' from Queenstown, Cromwell, Clyde & Alexandria)

Source: Euroz Hartleys

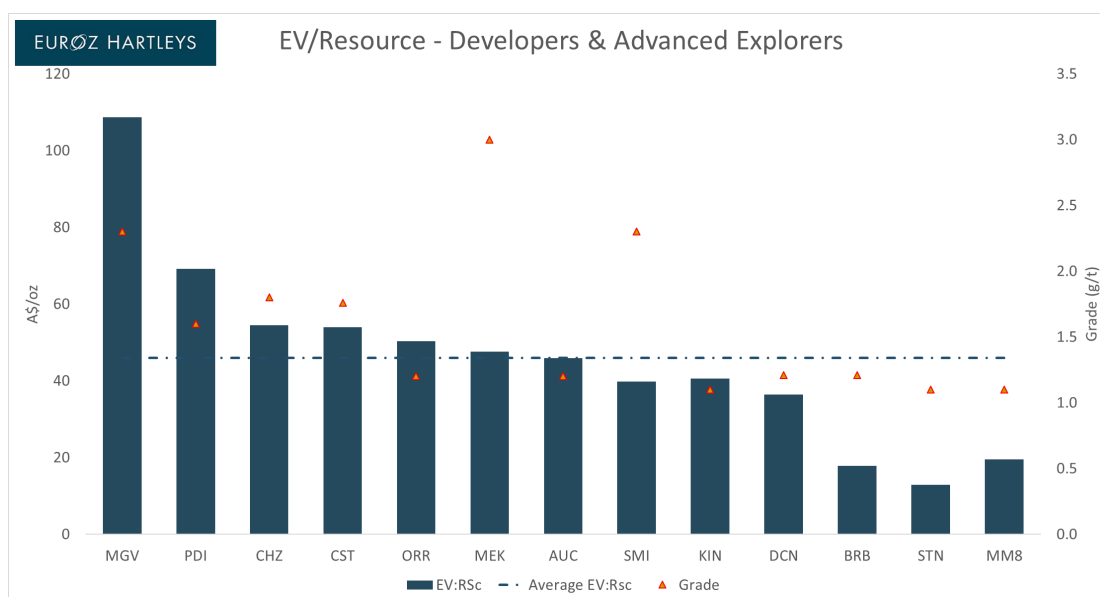
Competitor metrics demonstrate the quality of the asset and the relative 'discount' that SMI is currently receiving in the market. This is particularly true if we look at the overall grade of 2.3g/t. We can only put this down to perceptions around permitting which we hope to explain in this analysis.

Figure 4: Euroz Hartleys Gold Comps for advanced explorers.

Company	Ticker	Price A\$/sh	M Cap A\$m	Net Cash/(Debt) A\$m	EV A\$m	Resource koz	Reserve koz	EV/Rsc A\$/oz	EV/Rsv A\$/oz	Grade g/t
Musgrave Minerals	MGV	0.20	115	15	101	927	0	109	na	2.3
Predictive Disc Ltd	PDI	0.18	321	32	289	4,181	0	69	na	1.6
Chesser Resources	CHZ	0.09	53	6	47	860	0	55	na	1.8
Castile Resources	CST	0.10	23	6	17	315	202	54	84	1.8
OreCorp Ltd	ORR	0.44	176	21	154	3,072	2,600	50	59	1.2
Meeka Metals Limit	MEK	0.06	60	7	53	1,115	0	48	na	3.0
Ausgold Limited	AUC	0.05	106	6	99	2,160	1,280	46	77	1.2
Santana Minerals Lt	SMI	0.84	122	7	115	2,900	0	40	na	2.3
KIN Min NL	KIN	0.05	56	-1	57	1,407	283	41	201	1.1
Dacian Gold Ltd	DCN	0.11	134	44	90	2,466	437	36	205	1.2
Breaker Res NL	BRB	0.29	95	77	17	981	0	18	na	1.2
Saturn Metals	STN	0.17	26	7	19	1,470	0	13	na	1.1
Medallion Metals	MM8	0.15	20	-1	21	1,100	0	20	na	1.1
Average						1,766		46	126	1.6

Source: Euroz Hartleys as at 9/2/2023

Figure 5: Metrics show that SMI is currently under-valued against peers. Particularly if you look at the grade and potential for growth.



Source: Euroz Hartleys

We also analyse Tier 1 assets that have underscored the success of Companies in the past and compare it to the Santana RAS deposit to demonstrate the quality of the project.

Figure 6: Comparison of World Class Deposits that have undermined ASX listed Company success in the past.

Company	Asset	Resource (Moz)	Grade (g/t)	Strike (m)	Depth/Plunge (m)	Thickness (m)	Production (kozpa)
Northern Star	Karari	1.1	3.2	800	1000	3-20	90-110
Capricorn	Bibra	1.1	1	1800	345	2-15	115-125
Predictive	N.E. Bankan	4.1	1.69	1500	600	15-50	-
Ore Corp	Nyanzaga	3.1	4	600	700	2-20	240-250
WAF	Kiaka	4.2	1.69	2000	600	Up to 200m	210-230
Santana	RAS	2.66	2.5	450	1700	4-32	TBC

Source: Appendices to Various ASX Resources Releases

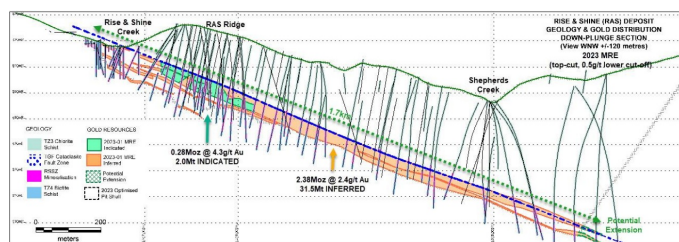
Of particular interest are the similarities between Santanas RAS and Capricorn Metals Karlawinda mine. The exception here being RAS is on the side of a hill which would allow simultaneous mining from surface and underground.

Figure 7: Comparison of the SMI - Rise and Shine Deposit with the CMM - Karlawinda Bibra Deposit.

	RAS	Bibra
Dip (Degrees)	23	28
Down Dip length (m)	1700	1000
Strike (m)	450	1800
Thickness (m)	4 to 32	2 to 15
Grade (g/t)	2.3	0.7
Ounces (Moz)	2.6	2.1
Strip Ratio	10-12	3.9
Metallurgical Recovery (%)	90%+	90%+

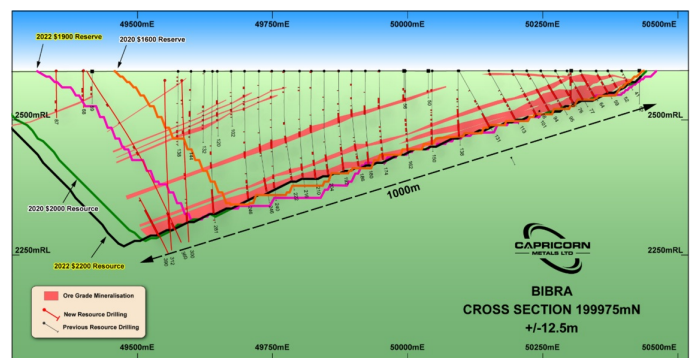
Source: Euroz Hartleys

Figure 8: Santana Minerals Rise and Shine Deposit (RAS)



Source: Santana Minerals

Figure 9: Capricorn Metals Karlawinda Project - Bibra Mine



Source: Capricorn Metals

Images below taken whilst on the site visit summarise they key aspects of the project.

Figure 10: Contouring of natural landscape can be used to 'hide' waste.



Source: Euroz Hartleys

Figure 11: A view from the top of the 2.9Moz RAS deposit.



Source: Euroz Hartleys

We considered numerous mining scenarios in a DCF methodology.

A summary of our DCF modelling scenarios is below.

Figure 12: The combination of Resource Growth with grade has naturally led to valuation growth.

Scenario	Consideration	Old Vals.	New Vals. @ EH Gold Price Deck	New Val. @ Spot A\$2705/oz
1	Open Pit Only	\$0.75/sh	\$1.46/sh	\$1.87/sh
2	Open Pit and Underground	\$0.90/sh	\$1.50/sh	\$2.00/sh
3	Underground Only	\$0.66/sh	\$0.74/sh	\$1.18/sh

Source: Euroz Hartleys

We set our PT midway between the EH Gold Price Deck (A\$1.50/sh) and the Valuation at current spot prices @ \$2705/oz (\$2.00/sh). We crosscheck our valuation on average EV:Rsc metrics for developers at \$197/oz. Under this metric, the Company EV in a development scenario for 3Mos would sit at \$591m or \$1.82/sh (fully diluted to production).

To this end, our PT increases to \$1.75/sh.

We are aware of general perceptions related to permitting in New Zealand - and create our own outlook on how and when a mining scenario may eventuate. Our financial model is based on this timeline with the first ore in all scenarios in FY27.

Figure 13: Euroz Hartley's assumption on potential execution strategy and time-line.

	CY23				CY24				CY25				CY26				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Technical Studies	Scoping		Pre Feasibility				Feasibility Study		DFS	Funding							
RMA & Consent	Baseline Studies				Preparation		Application			Consent							
Minerals Permits				Mining Permit application													
Activity	Exploration									Grade Control		Pre-Production	Mill Build Starts	Mining			Mill Commission

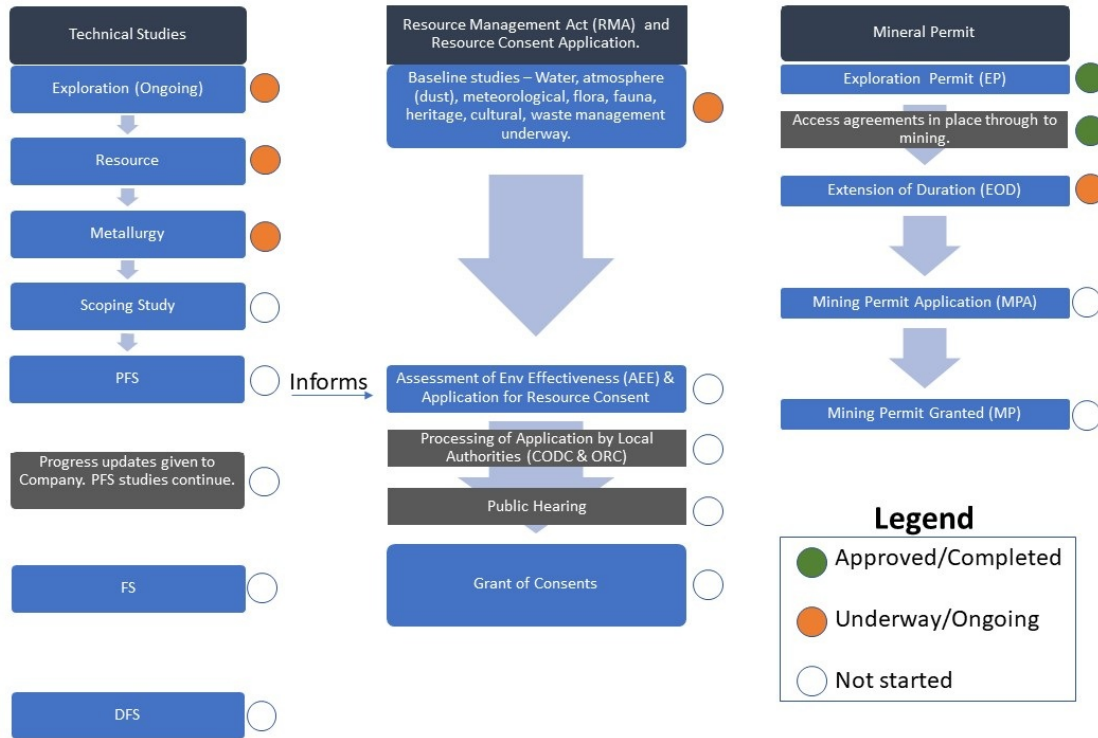
Source: Euroz Hartleys Outlook ONLY. NOT SMI GUIDED.

We have developed a 'score-card' based on the regulatory approval process in New Zealand as a litmus for SMI's position on the permitting timeline.

Santana is following a methodical process to eventual Resource Consent.

We are buoyed by Federation Mining's recent Resource Consent being granted in 500 days (which included the time to prepare the document). One year of preparation and consultation and 6 months of processing from the Government.

Figure 14: A diagram explaining the Permitting Process in New Zealand



Source: Euroz Hartleys

Figure 15: Euroz Hartleys sensitivity evaluation.

Our Market Sensitivity
Price Target \$1.75/sh
Valuation \$1.46/sh

Bull Scenario \$2.23/sh
 Gold price maintained to A\$2705/oz. Mining costs reduce as company enters full production and inflationary pressure dissipates. Ore-body mining recovery increases.

Base Scenario \$1.46/sh
 EH Gold Price Deck. Maintain inflated costs, and risked appropriately for this stage of the Companies life.

Bear Scenario \$0.74/sh
 Company is not allowed to mine open-pit. Underground mining only, costs escalation continues.

Source: Euroz Hartleys

Analysis

Our revised analysis considers six key areas;

- DCF Modelling
- Risks and Opportunities
- The Permitting Process
- Peer Comps

DCF Modelling

Our Initiation PT of \$0.90/share (28th November 2022) was based on a combination of Open Pit and Underground Mining.

We review our previous assumptions based on information provided in the latest MRE and our observations from site. **We combine our own experiences completing mining studies and building and developing mines in Australia, coupled with our own experiences in navigating the permitting process in New Zealand in the development of this model.**

The Table below summarises our previous PNAV12% compared with our updated PNAV12%.

Figure 16: he combination of Resource Growth with grade has led to across the board valuation increases.

Scenario	Consideration	Old Vals.	New Vals. @ EH Gold Price Deck	New Val. @ Spot A\$2705/oz
1	Open Pit Only	\$0.75/sh	\$1.46/sh	\$1.87/sh
2	Open Pit and Underground	\$0.90/sh	\$1.50/sh	\$2.00/sh
3	Underground Only	\$0.66/sh	\$0.81/sh	\$1.28/sh

Source: Euroz Hartleys

Based on the results above, we take a conservative view, and set our PT midway between the EH Gold Price Deck and the Valuation at current spot prices. To this end our PT increases to \$1.75/sh.

Resource Upgrade Specifics

In our modelling, we only consider the development of the RAS deposit. We refer to the recent Resources Appendices upon which our own assumptions are based. There are six mineralised domains. The top 2 domains contain 95% of the total RAS MRE, for 2.5Moz @ 2.6g/t. All thicknesses are minable in open-pit and underground scenarios.

We only consider the ounces at RAS in our modelling. We do not model potential growth from RAS or other prospects.

- Domain 1: Domain 1 is the largest, extending 1600 m down plunge (023°), is typically 300 m – 450 m wide (E-W) and 4 m to 32 m thick (vertical, average 14 m).
- Domain 2 extends 1700m down plunge (023°), is 200 m – 450 m wide (E-W) and 2 m to 30 m thick (vertical, average 11 m).
- Open Pit mining at a rate of 1-6Mtpa is assumed in determining a 0.5g/t cut-off, and underground mining at a higher cut-off of 1.5g/t. An 89% average recovery is assumed in the creation of the resource wireframes.
- A minimum mining width of 2m was used, and no dilution or mining recovery has been applied.
- 98% of the mineralisation is in fresh-rock.
- Just 47,263m have been drilled at the project as of December end.
- Baseline studies of Water, atmosphere (dust), meteorological, flora, fauna, heritage, cultural, and waste management are underway.

DCF Key Variables and Assumptions

Figure 17: Euroz Hartley's Analysis of Potential Mining Scenarios

	Open Pit Only	Underground & Open Pit	Underground Only
Ground Conditions	Manageable. Little ground support.	Optionality and flexibility where ground conditions are difficult.	Dilution expected. Ground support required everywhere.
Haulage	Straightforward	Straightforward	Straightforward
Ore-body parameters	Conducive to Open-Pit Mining. Dilution expected. We model 20%. Strip Ratio of 10-12:1	Two mining fronts. Blending. Dilution expected. We model 20% O/P and 20% U/G dilution. Strip Ratio of 10-12:1	Dilution likely, reduced mining rate. Higher cost. We model 20% U/G. Strip ratio irrelevant - boxcut only.
Grade	Assume 2.3g/t in-situ.	O/P – 2.3g/t in-situ. Underground 4g/t in-situ.	UG - 4g/t in-situ
Pastefill	N/A	Yes	Yes
Mining Recovery U/G	N/A	75%	75%
Processing	Low risk. Larger mill. 3Mtpa. Recovery 89%. Processing cost \$20/t.	Low risk. Large mill. 4Mtpa. Recovery 89%. Processing cost \$20/t.	Low risk. Smaller mill. 1.5Mtpa. Recovery 89%. Processing cost \$26/t
Capex	\$280m	\$330m	\$180m
Risking	EH Intellectual Property	EH Intellectual Property	EH Intellectual Property
Debt/Equity Split	50/50	50/50	50/50
Cost	Mining Cost - \$4/BCM	Mining cost (O/P) - \$4/BCM Mining Cost (U/G) - \$100/t Pastefill cost - \$20/t	Mining Cost (U/G) - \$100/t Pastefill Cost - \$20/t
WACC	12%	12%	12%
AISC	A\$900-A\$1000/oz	A\$1200-A\$1400/oz	A\$1700-A\$1900/oz
Oz profile	150-175kozpa by year 3.	200-250kozpa by year 4.	100-150kozpa by year 3.

Source: Euroz Hartleys

Figure 18: Euroz Hartleys summary of key risks

	Open Pit Only	Open Pit and Underground	Underground Only
Ground Water	Limited flows, risk on pit wall stability.	Limited flows, little risk on pit wall stability. Limited risk is evident for UG mining.	Limited risk is evident for UG mining.
Discharge and Water Management	Can be managed.	Can be managed.	Can be managed.
Inrush and Water Management	Exposure to rainfall events and ramp closure.	O/P exposed to rainfall events. Underground optionality to continue.	Low risk if designed correctly.
Public Access	Manageable	Manageable	Manageable
Scheduling	Schedule constrained noting mountain slope. 'Single mining area'. Mine everything.	Greater flexibility in the schedule. Greater ore movements. High-grade optionality.	Schedule constrained but high OVMs supports multiple mining fronts from less capex. Can high-grade.
Technical Risk	Simple.	Greater skillset required.	Complicated.
Permitting	Greater surface impact likely greater permitting oversight.	More complex due to surface disturbance and two mining methods.	Less surface impact, reduced permitting oversight.
People	Simple mining method.	Complex requiring various disciplines.	Complex but single discipline.

Source: Euroz Hartleys

Risks

Water

Hydraulic discharge into freshwater systems is a key risk for any industrial activity in NZ. This is not a risk that is exclusive to mining, **but one that all industrial business must adapt to.**

High rainfall events in the BOGP area recently did not result in any water reaching nearby water-bodies. Otago remains New Zealand's driest regions.

Water discharge (if any) can be managed, through filtration systems and other capital which are not expensive (\$1-\$2m). Permits will be required for any discharge (as they are in Australia). We cite recent mining approvals for Federation Mining in Reefton, who operate right on the boundary of Conservation land. We believe, any water discharge will look to this operation as a model for future approvals if required.

The Otago Regional Council (the permitting authority) has >30 years experience from the Macraes operation which has always maintained a very high standard of water management. We saw this ourselves when we visited Macraes.

Fresh local water requires little filtration for processing, lowering costs. (In Western Australia most water on sites are hyper-saline and requires reverse osmosis and desalination before it is used in the processing facility). Water is a key component for dust suppression and processing. We note that NZ have vast water bodies and do not foresee water access as an issue (unlike Western Australia). A 120L/s water line is utilised for the adjacent cherry farm and station.

Ground Conditions

Ground conditions will present manageable challenges. In some instances, this may work in the Companies favour.

These challenges are standard in the industry, and can increase costs - particularly considering the shallow dip of the ore-body.

The ore-zone is fractured (see core images on Company releases) and is fractured with impact, and we expect the following;

- Open Pit: The relatively fractured ore zone will result in easier fragmentation, but make blasthole and grade control drilling challenging. Expect marginal additional cost.
- Underground: Fractured ground makes drilling and charging difficult. As underground mines are scheduled constrained, broken ground can slow down the schedule considerably. Expect slower ramp up, and slightly higher costs (may need a floating production drill rig to hole clean).

Permitting

Permitting is a complex and resource intensive process. Just like Australia. New Zealand does however have stricter controls when it comes to certain areas. We could consider the general Tier 1 mineral consent as the Australian equivalent of operating in Class 1 Nature Reserves – strict, but manageable under the right conditions.

Here are four reasons why the market may perceive NZ to be anti-resources - and our view on those decisions.

- All underground coal mines were closed after the Pike River Disaster which killed 29 underground coal workers.
 - EH: Underground coal mining is high risk. A Royal Commission in 2013 resulted in a complete overhaul of the Mining Regulations and a new Health and Safety at Work Act was legislated in 2015. A new police investigation re-started in 2017. The investigation into Pike River is still ongoing

- Jacinda Arden announced in 2017 that labor would not allow any new mining permits on Conservation land.
 - EH: This is yet to be ratified and will require a complex and time consuming consultation process. A recent poll suggested that the National NZ party was preferred over Ardens Labor government. The Nationals NZ are prioritising the removal of red-tape in the upcoming elections.
- The Country has banned all new offshore Oil and Gas exploration in 2018.
 - EH: A decision that will make NZ reliant on foreign supply. Current fuel price in NZ, NZ\$2.13/l Diesel (AU\$1.93/L). The Government continues to issue onshore oil and gas exploration permits.
 - EH: The NZ Government is committed to developing its renewable minerals sector.
- The Country introduced laws that put in strict controls around water management.
 - EH: Controls are manageable. NZ has a complex network of rivers and streams, and these laws put the health of the waterways ahead of humans. Pollute one and you risk polluting many. The South Island has a thriving fisheries industry which logically must be protected.

There are two approval streams for mining projects in NZ. The processes work together, with the result being Resource Consent. There are differences between Consents and Permits.

Mineral permitting

- Crown minerals (which includes all gold) is administered under the Crown Minerals Act 1991 (or CMA, and subsequent amendments) by Ministry of Business, Innovation and Employment's (MBIE) NZ Petroleum and Minerals (NZPAM)

Resource consenting:

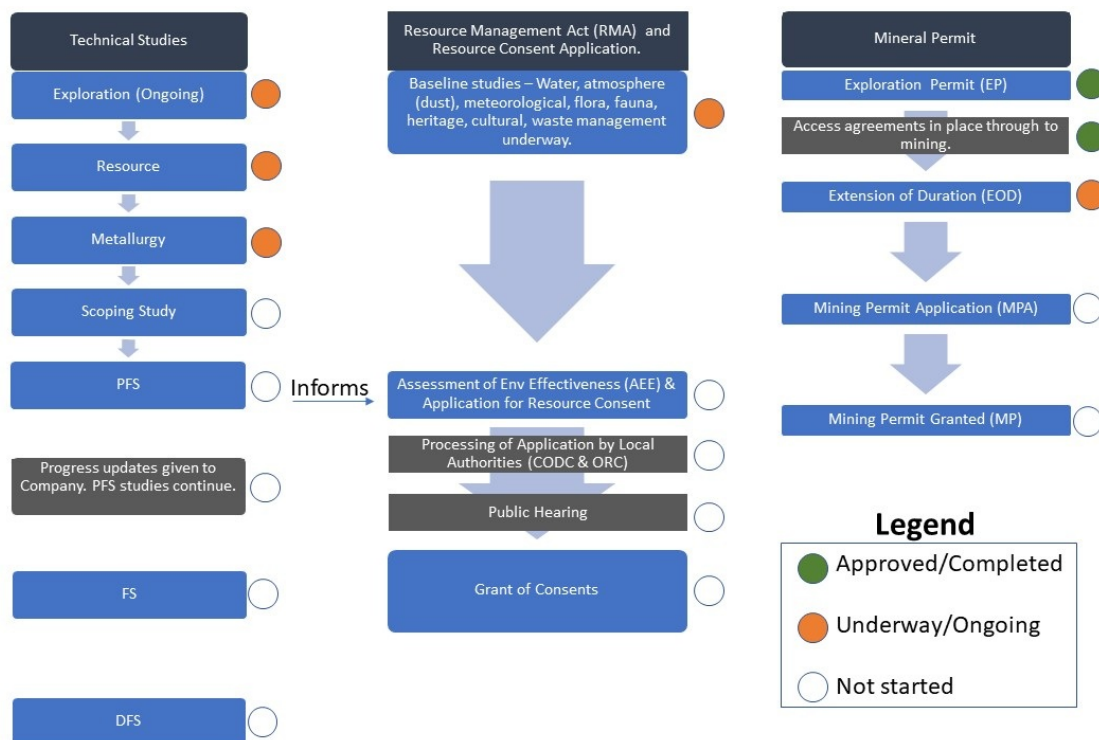
- Comes under the Resource Management Act 1991 (or RMA, and subsequent amendments) and is administered by the local authorities depending on the effects on the activity being consented.
- For BOGP, the Central Otago District Council (CODC) will administer land use consents and building consents, while Otago Regional Council (ORC) will administer consents that affect water and air. There is a lot of crossover between the two.
- The Ministry for the Environment (MfE) is responsible for developing and implementing National Policy Statements and National Environmental Standards that must be met under the RMA.
- A resource consent is permission from the local council for an activity that might affect the environment and that isn't allowed 'as of right' in the district or regional plan.

We refer readers to this [document](#) which outlines the various permits required for land access. Land access is the first step toward being awarded an exploration or mining permit.

We refer readers to this [document](#) which outlines the requirements for prospecting, exploration and mining permits.

Below we simplify the mining and exploration process in New Zealand. For cases related to Conservation Land information can be found [here](#) on page 8.

Figure 19: A diagram explaining the Permitting Process in New Zealand and the status of SMI



Source: Euroz Hartleys

Figure 20: Euroz Hartley's interpretation of potential execution strategy and time-line. .

	CY23				CY24				CY25				CY26				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Technical Studies	Scoping		Pre Feasibility				Feasibility Study		DFS	Funding							
RMA & Consent	Baseline Studies				Preparation		Application		Consent								
Minerals Permits				Mining Permit application													
Activity	Exploration									Grade Control		Pre-Production	Mill Build Starts	Mining			Mill Commission

Source: Euroz Hartleys

We believe that this particular paragraph in the Otago District Councils plan is important to note – as it could indicate the Council's favourable view of mining;

“Future land uses anticipated in the District include new horticulture and tree crop developments, increased viticulture, increasing diversification and participation in recreation and tourist orientated activities, and an upsurge in mining due to advances in technology that enables more efficient extraction of minerals with less adverse environmental effects.”

We note that some sections of the company's land-holdings at the BOGP are on Conservation land related to the historic Bendigo Reefs. We do not consider this part of the tenement material as it is outside of the RAS mining area.

A search of the government database suggests there are 352 active mining permits in New Zealand. We note that Federation Mining and Oceana-Gold are the only Gold Companies in operation on a Tier 1 permit. Tier 1 permits are complex, higher risk and return mineral operations requiring a more hands-on, proactive management and regulatory regime. Any underground operation falls under this banner.

A search of all other existing and operating Tier 1 mines on the New Zealand Government database resulted in 29 active mining operations across the country.

We note that the following mines have recently been granted mining permits in New Zealand;

- Federation Mining, Reefton, South Island (500-day permitting process). Adjacent to Conservation land.
- 3 x Low-impact mining activities in the Otago Region.

We believe the Company will use the mining study expected in the middle of the year to lodge a mining permit application. Not to be confused with mining consent, which is done through the EPA and DOC.

Whilst there is no guarantee (even in Australia), the Company is well placed in our opinion to receive the mining permits, and resource consents.

Figure 21: Active Tier 1 (complex mining) permits in New Zealand.

Permit Type	Permit Operator	Permit Status	Minerals	Location (Region)
Coal Mining Licence	ROA MINING COMPANY LIMITED (100%)	Active	Coal - Opencast, Coal - Underground	West Coast Region
Coal Mining Licence	BT MINING LIMITED (100%)	Active	Coal - Opencast	West Coast Region
Coal Mining Licence	BT MINING LIMITED (100%)	Active	Coal - Opencast	Waikato Region
Coal Mining Licence	GREENBRIAR LIMITED (100%)	Active	Coal - Opencast, Coal - Underground	Southland Region
Coal Mining Licence	BT MINING LIMITED (100%)	Active	Coal - Underground	Waikato Region
Mining Permit	TIGA MINERALS AND METALS LIMITED (100%)	Active - Change Pending	Garnet, Zircon, All minerals in this group	West Coast Region
Mining Permit	OCEANA GOLD (NEW ZEALAND) LIMITED (100%)	Active	Gold, Silver	Waikato Region
Mining Permit	OCEANA GOLD (NEW ZEALAND) LIMITED (100%)	Active	Gold, Silver	West Coast Region
Mining Permit	FITZHERBERT INVESTMENTS LIMITED (100%)	Active	Gold	West Coast Region
Mining Permit	ROA MINING COMPANY LIMITED (100%)	Active	Coal	West Coast Region
Mining Permit	TRANS-TASMAN RESOURCES LIMITED (100%)	Active - Change Pending	Ironsand	Taranaki Region
Mining Permit	CHATHAM ROCK PHOSPHATE (NZ) LIMITED (100%)	Active - Change Pending	Phosphate, Rare Earth Elements, Yttrium, Chromium, Cobalt, Lithium, Molybdenum, Nickel, Strontium, Vanadium, Aluminium, Magnesium, Sodium, Manganese, Zirconium, Fluorine, Silicon	Canterbury Region
Mining Permit	BROKEN HILLS HISTORIC MINE LIMITED (100%)	Active	Clay, Gold, Quartz, Silver	Waikato Region
Mining Permit	BATHURST COAL LIMITED (100%)	Active - Change Pending	Coal, Aggregate	Southland Region
Mining Permit	ROA MINING COMPANY LIMITED (100%)	Active	Coal	West Coast Region
Mining Permit	OCEANA GOLD (NEW ZEALAND) LIMITED (100%)	Active	Gold, Silver, Tungsten	Otago Region
Mining Permit	BRM DEVELOPMENTS LIMITED (100%)	Active	Gold, Aggregate	West Coast Region
Mining Permit	Utopia Horizon Investments Limited (100%)	Active	Gold, Ilmenite, Ironsand	West Coast Region
Mining Permit	NEW TALISMAN GOLD MINES LIMITED (100%)	Active - Change Pending	Gold, Silver	Waikato Region
Mining Permit	BT MINING LIMITED (100%)	Active	Coal	Waikato Region
Mining Permit	OCEANA GOLD (NEW ZEALAND) LIMITED (100%)	Extension Pending	Gold, Silver	Waikato Region

Source: Euroz Hartleys Sourced from NZPAM Online Database Export

Key Opportunities

Ore Body Dimensions

The Rise and Shine (RAS) deposit is comparable to other world-class gold orebodies.

Figure 22: Comparison of World Class Deposits that have undermined ASX listed Company success in the past.

Company	Asset	Resource (Moz)	Grade (g/t)	Strike (m)	Depth/Plunge (m)	Thickness (m)	Production (kozpa)
Northern Star	Karari	1.1	3.2	800	1000	3-20	90-110
Capricorn	Bibra	1.1	1	1800	345	2-15	115-125
Predictive Ore Corp	N.E. Bankan	4.1	1.69	1500	600	15-50	-
WAF	Nyanzaga	3.1	4	600	700	2-20	240-250
WAF	Kiaka	4.2	1.69	2000	600	Up to 200m	210-230
Santana	RAS	2.66	2.5	450	1700	4-32	TBC

Source: Appendices to Various ASX Resources Releases

Materials Handling

The terrain is much steeper than we anticipated. This is helpful for materials handling as gravity can be utilised much more efficiently. In our modelling, we assume that standard trucking with diesel is utilised.

Figure 23: Image shows location of where waste could be stored. In the valley naturally hidden.



Source: Euroz Hartleys

We draw the reader's attention to the following material movement options which may be considered in any future mining study;

- Electric or Hybrid Fleet: Regenerative braking going downhill. Lighter returning uphill.
- Trolley Assist: Utilising a 'tram-like system to power an electric fleet.
- Conveyor System: Use a conveyor system to move ore from the mine to the mill.
- Lift system: Material is sent down full, and the weight of the ones going down pulls the empty carts back up.

Local Community Support

The local Community supports mining. Cromwell was founded on mining in the 1800's.

Local residents we met were excited about the project, with many comments made about the reliance on tourism (which is seasonal) and the unaffordability of housing.

We also note that all current personnel are locals who live within 100km of the mine. They are part of the Community. Some also have children in community schools. Kim Bunting (Director and Project Manager) has operated in the area for 35+ years and has strong relationships with the Community (demonstrated by the interactions we saw).

We recognise housing affordability has become an issue in New Zealand (as it has all over Australia). This is a regional problem that the Government is trying to address as a priority. We believe that the resources sector offers hospitality workers (who are traditionally at or just above the minimum wage) an opportunity to get entry into a high-paying job - and the chance to build a home. Further, mining offers local businesses diversification in their offerings and product lines to support mining activity.

SMI has secured landowner agreements with both freehold owners in Bendigo Station & Ardgour Station. Interestingly, both families have a history of local mining. These agreements are executable through to mining. The government leasehold is currently held by Matakanui Station, who have agreed to an acquisition option with SMI and land access until such time. Land access is a key determinant of further approvals. Significantly, all parties have a favourable view of the Project being developed, which is essential in acquiring the required permits.

Location

We believe that the South Island of New Zealand is a mining-friendly jurisdiction.

The mine is <100km from the world-famous adventure sports hub of Queenstown. With an abundance of activity in the area, which is far more attractive than the red dirt of remote Western Australian operations. The operation will offer staff an opportunity to work closer to home. NZ citizens doing FIFO into Australia will find this job attractive, noting the 10-hour flight time each way into Western Australia. Likewise, Australians seeking a better lifestyle will look to NZ options. We have seen this recently with the movements of personnel from Western Australia to the Macraes and Waihi operation.

The position of the mine is hidden from view from any residential and high-traffic areas.

Figure 24: Picture at the top of the RAS deposit.



Source: Euroz Hartleys

Photos from Site Visit

Figure 25: Core processing shed owned by SMI



Source: Euroz Hartleys

Figure 26: Oceana Gold's Macraes Operation. Note quality of rehabilitation work, and the high standard expected for miners in New Zealand.



Source: Euroz Hartleys

Figure 27: Oceana Gold Macraes Operation waste dump abutting Conservation land. On either side of this piece of Conservation land are two large open pits which are being mined. SMI dirt is NOT Acid Mine Drainage (AMD) forming like Macraes. We can expect less regulatory oversight on this fact alone.



Source: Euroz Hartleys

Figure 28: Kim Bunting (Director and Project Manager) outlining tenement ownership and access agreements from the Southern Boundary of the Project.



Source: Euroz Hartleys

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We hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities, and we are not in possession of, nor does this Research contain any inside information.

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Santana Minerals Limited (SML.ASX) | Price A\$0.82 | Target price A\$1.75 | Recommendation Speculative Buy;

Price, target price and rating as at 10 February 2023 (not covered)*

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