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## Tectonic Gold

6<sup>th</sup> September 2021

**High-grade focused Australian gold portfolio with multi-million ounce potential projects to be joint ventured or sold to majors**

Tectonic Gold Plc became AQEX listed in 2018 following the reverse takeover (RTO) of Australia based gold explorer, Signature Gold. This brought into the company impressive R&D, big data and exploration capabilities which had been developed in Australia on other Intrusive Related Gold System (IRGS) regions around the world. Tectonic is focused on the huge global gold opportunities in large-scale high-grade IRGS projects, which investors are just beginning to wake up to.

### Identified and proven gold bearing systems in a highly prolific area

Tectonic Gold is well positioned to provide the majors with replacement projects. The company has two large, advanced projects, one of which could be a Mt. Morgan (12Moz gold) lookalike, in a highly prolific gold belt. Gold bearing systems have been consistently intersected by drilling on both projects, with each of them having multi-million ounce potential.

### Drilling resumes at Specimen Hill following copper porphyry

The 2020 drilling programme successfully intersected epithermal gold and copper-gold porphyry mineralization. There are short-term plans to complete a short round of drilling at the flagship Specimen Hill project to further investigate these two principle mineral systems that formed from multi-phase hydrothermal events.

### Joint venture deal with major or cash disposal looks very close now

Highly compelling exploration results from the large Biloela Project show that tremendous value could be unlocked here. Majors are watching, with Rio Tinto pegging acreage that Tectonic released next door to its flagship project.

### Exploration results and industry metrics suggest 500% upside

Our conservative valuation highlights the potential. We coverage of Tectonic is updated with a target price of 6.60p and **Conviction buy** stance.

Table: Financial overview. Source: Company accounts & Align Research

Year to end June	2019A	2020A	2021E	2022E
Revenue (£'000)	24	295	-	-
PTP (£'000)	(1,119)	208	124	960
EPS (p)	(0.12)	0.04	0.04	0.12

*This investment may not be suitable for your personal circumstances. If you are in any doubt as to its suitability you should seek professional advice. This note does not constitute advice and your capital is at risk. This is a marketing communication and cannot be considered independent research.*

**CONVICTION BUY**  
Price target – 6.60p



#### Key data

EPIC	TTAU
Share price	0.99p
52 week high/low	1.87p/0.275p
Listing	AQEX
Shares in issue	940.42m
Market Cap	£9.3m
Sector	Mining

#### 12 month share price chart



#### Analyst details

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## Business overview

### Tectonic Gold Operations

Tectonic Gold is a mineral exploration and development company that is focusing upon the global opportunity that lies within large-scale, high-grade Intrusive Related Gold Systems (IRGS) in stable jurisdictions. **The company is seeking to apply its bespoke R&D, big data and exploration methodologies which has been developed in Australia and other IRGS regions around the world.** Currently, the company has gold exploration and development interests in Australia, along with a non-operating interest in diamond and mineral sands interests in South Africa.

- **Australia** – **The company has an extensive exploration portfolio of 450km<sup>2</sup> of tenements in Queensland.** Eight gold bearing systems have been defined in current leases where Tectonic's research and exploration has defined the scope to ultimately hold multi-million ounce gold resources in each system. Discoveries have been made and now Tectonic is seeking to define JORC compliant resources and embark on feasibility studies and mining lease approvals.
- **South Africa** – Tectonic has a non-diluting 10% equity interest in Deep Blue Minerals which has a producing diamond mine within the Alexkor diamond fields. Plus, it has a non-diluting equity interest in a Heavy Mineral Sands project, also at Alexkor, where it has partnered with an experienced group that are in the process of taking over operational control of the asset into the future.

### Intrusive Related Gold Systems

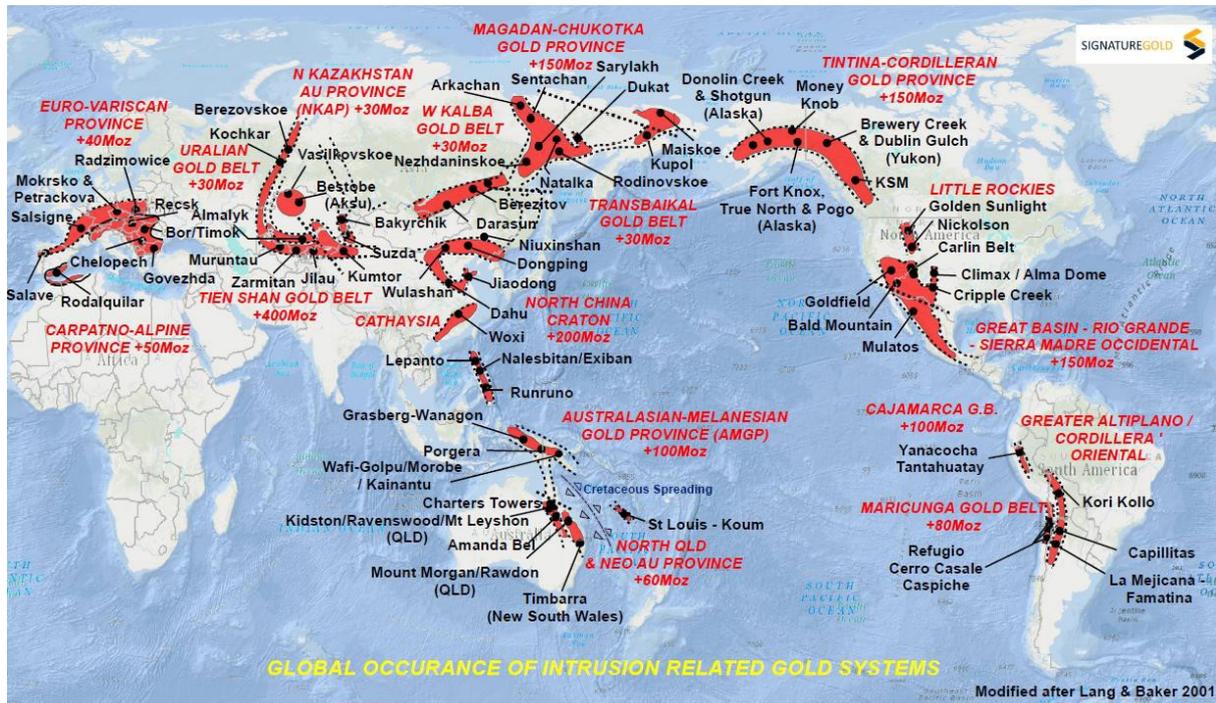
Intrusive Related Gold Systems (IRGS) represent a new frontier for the discovery of significant, large gold deposits. This is a relatively recent development as there was little comprehensive research into the actual genesis of gold deposits until the 1980s. Developments since then seem to have re-written the rule book, with several well-known big gold deposits and large gold mines now being reclassified as IRGS deposits.

During the 1990s, a series of very rich gold discoveries in some of the most rugged terrain in North America (Canada and Alaska) were made in an area which is now called the Tintina Gold Province (TGP). This led geologists to question the then current models. Within the TGP, other mineral deposits were known to exist, including copper, lead, zinc and silver, but these were volcanogenic massive sulphide (VMS) deposits.

The gold deposits in Tintina originated from volcanic activity and were caused by volcanic intrusions into the older rocks. The large placer gold deposits (alluvial gold deposits) found there have been created by the weathering of these rocks.

In fact, the TGP is an arc which spans 1,200 - 2,000 kilometres (various sources give different figures) and around 200 kilometres in width extending from northern British Columbia across the Yukon and through SW Alaska to the Pacific. Along most of this entire length the TGP lies between the Kaltag-Tintina fault systems in the North and the Farewell-Denali fault systems in the South.

Large IRGS deposits have since been shown to occur in certain tectonic belts on a worldwide basis. Very characteristically, the age of IRGS and the host rock are similar, and the metals are derived from a granite intrusion. Essentially, there are three types of settings which are hosted within the intrusion, hosted close to the intrusion or close by in the overlying sediments.



Location of IRGS deposits around the world. Source: Company

Besides the TGP, other well-known world-class IRGS deposits can be found in the North Kazakhstan Auriferous Province, Kazakhstan and the North China Craton. These seem to be important reference sites which provide a good example of not only the large scale, but also the high-grade potential of IRGS. China has been the world's largest producer of gold since 2007 and it is thought that a quarter of this production comes from reserves that are hosted within IRGS in the North China Craton.

An important point to note is the real spread of IRGS around the so-called "Ring of Fire" in the Pacific which extends into Queensland, Australia. This is an extensive ring of volcanoes and other tectonically active processes that have been going on for millions and millions of years. Tectonic Gold's tenements are in the New England Oregon (NEO) area in Queensland, which is seen to possess the same sort of tectonic topography as in the TGP as well as in the North Kazakhstan Auriferous Province and the North China Craton. **This does serve to highlight the real possibility of what may yet be discovered at the IRGS gold deposits in eastern Queensland.**

As IRGS have only really started to be recognised as a major source of world gold production over the past couple of decades, it has led experts to only recently begin to look at existing gold deposits from a new angle. This work has led to some of the major gold discoveries in Queensland being reclassified as IRGS including Ravenswood (4.8Moz gold), Kidston (5Moz gold) and Mount Morgan (12Moz gold).

The team at Tectonic Gold have developed bespoke research & development which, used alongside big data and pioneering exploration techniques, can take advantage not only of the surface signatures of IRGS, but also the mineralisation styles which have been found to relate to deeper porphyry systems. This is in addition to mineralisation systems which past exploration never properly identified. Tectonic's unique skill set that has been developed in Australia can be exported to a host of IRGS systems around the world.

## Background

The company joined AIM in 2004 as Interactive Prospect, one of the UK's leading online direct marketing companies. Since then, the company has had several different guises, including Directex Realisations and Woodbourne Square AG.

In October 2011, a new board took over the management of Woodbourne Square AG and completed a major review of the strategic position and business model. In 2012, the company changed its name to StratMin Global Resources, an investing company focused on seeking out investment opportunities in the natural resource and extractive industries sector. The Directors identified graphite as one such strategic mineral and made an equity investment in Graphmada Equity Pte Ltd, a business which owned a graphite resource in Madagascar. The company initially acquired a 15% equity stake in Graphmada for US\$1.25 million and later in 2012 went on to acquire the remaining 85% holding for £25.5 million in a largely equity-based deal.

Good progress was made at Graphmada but the plant needed further investment for expansion which at the time was not available in a tough market for raising equity funds. In 2015, Bass Metals invested £2 million for a 25% stake in Graphmada Graphite and went on to acquire the entire company from Stratmin. This move not only provided a full funding solution for the Madagascar operations but also allowed the directors to take advantage of more exciting opportunities that they had been exploring. Following this disposal, the company then became a cash shell under the AIM rules, looking to complete a value a reverse takeover (RTO) within the precious metals sector.

In February 2016, the company announced the acquisition of Signature Gold Limited, a specialist Australian gold exploration company focused on large-scale IRGS assets in Queensland, Australia. In the run up to becoming a cash shell, the board had spent a lot of time looking at opportunities across several industries and believed that Signature Gold was an attractive acquisition target which supported the company's strategy to pursue acquisitions of projects in gold exploration and/or mining. StratMin's shares were suspended from trading on AIM pending the RTO of Signature Gold. Delays in a proposed £5 million funding meant that the RTO was not able to be achieved by August 2017 and so under AIM rules, the listing was cancelled.

In May 2018, the company was able to announce the acquisition of Signature Gold, a successful placement, and a re-listing on the AQUIS Stock Exchange (formerly NEX). A Scheme of Arrangement was published by which shareholders in Signature Gold would accept for the acquisition of their company for £9 million, satisfied by the issue of 450 million shares at 2p each. The move was accompanied by the company's name being changed to Tectonic Gold, which better reflected the new corporate strategy. Following the acquisition, the company planned to raise £1 million in a placing at 2p and then become admitted to trading on the AQUIS Exchange at an initial market capitalisation of £13.6 million (at the placement price).

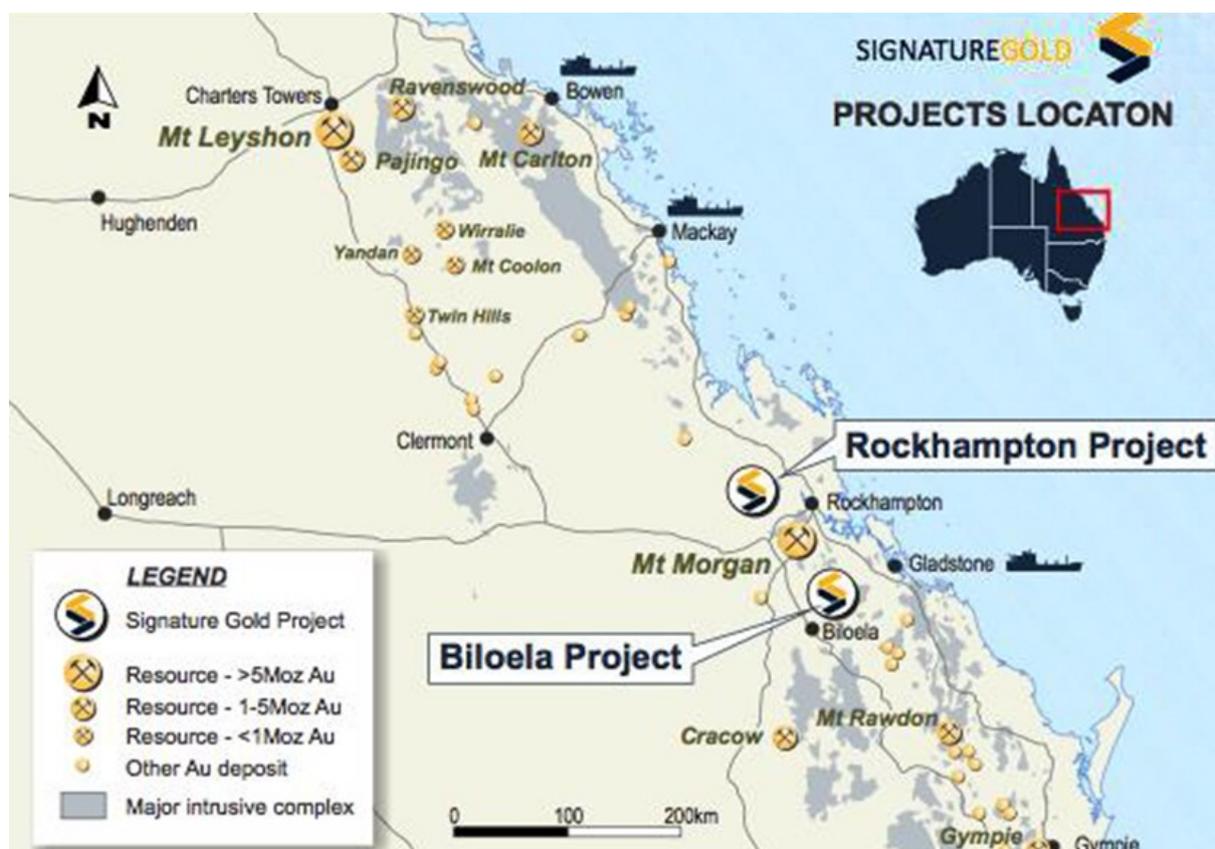
With market sentiment turning against junior exploration companies creating a difficulty environment to raise further exploration funds, the company looked to secure a production ready project to generate cash flows and avoid further diluting shareholders. An opportunity was identified to contract mine diamonds on the South African Government's Alexkor mine site on the west coast of South Africa. Here, AIM-listed Kazera Global has now taken over control and is funding the project into production, with Tectonic retaining a non-diluting 10% interest.

## Current Operations

Tectonic Gold is a natural resources exploration and development company that is focusing on the global opportunity that lies within large-scale high-grade IRGS. In the early 2000s, IRGS was just a topic discussed between academics in Australia. But by the mid-2000s IRGS started to get mentioned in various mining publications. This was the spark that started the development of the business that has become Signature Gold. Tectonic is looking to apply the bespoke R&D, big data and exploration methodologies which has been brought into the company through the RTO, and which has been perfected in Australia along with other IRGS regions around the world.

## Australia

Tectonic has an Australian IRGS portfolio of projects which cover an area of 450km<sup>2</sup>. These have been selected following detailed analysis of the areas of major intrusive complex in central Queensland.

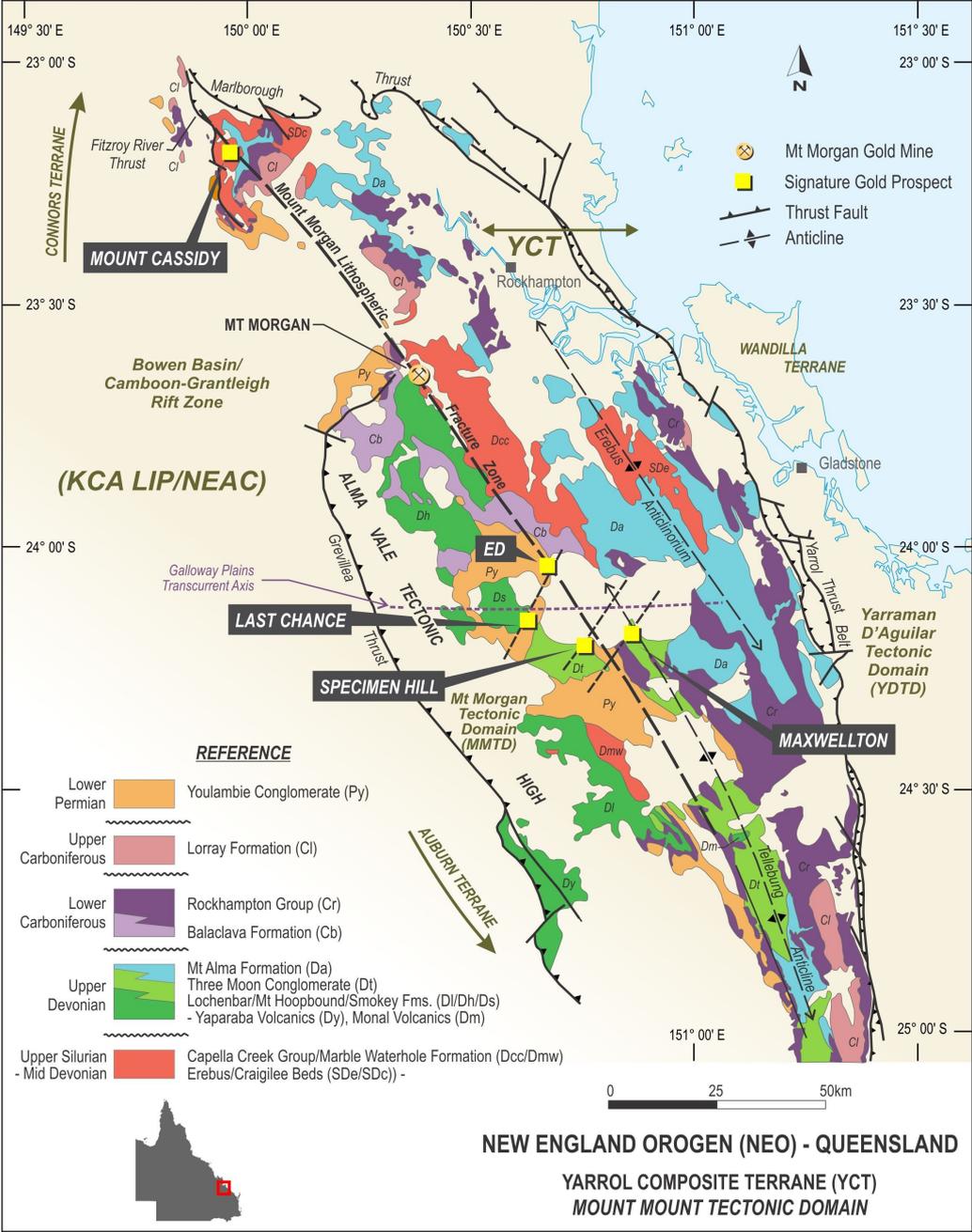


Location of Tectonic's URGs portfolio of Projects. Source: Company

Tectonic, within its portfolio of five 100% owned tenements have identified eight gold mineralised systems, each with the potential for multi-million ounce resources in a prolific gold belt where regional neighbours include major mining companies such as: Resolute, Newcrest, AngloGold, Evolution Mining and Rio Tinto.

Tectonic has identified several potential multi-million-ounce gold mineralised systems previously untested at depth, in tenements where the company has completed more than £7.5 million of exploration work.

These targets have been independently verified as prospective and lie in a belt which contains some major historic gold deposits, such as Mount Morgan (12Moz gold), Kidston (5Moz gold), Ravenswood (4.8Moz gold), and Mount Rawdon (2.0Moz gold). Importantly, these major gold mines have only recently been recognised to be IRGS and been reclassified as such.



Regional tectonic setting of the Biloela and Rockhampton Projects Source: Company.

Tectonic is searching for big targets in elephant country. The company has been focusing on a region which has remained unexplored due to its rugged terrain. Plus, there is a lot of alluvial material covering the primary rocks and so the historical geochemistry has been masked. Over the last two years or so, Tectonic has dropped the Clermont and Sarina projects, which were increasing seen as being non-core. This move has allowed the company to becoming completely focused on the two big potential deposits that the team has discovered at Specimen Hill (Bileola Project) and Mount Cassidy (Rockhampton Project). The company has enjoyed tremendous success in unlocking these projects.

Proven gold bearing systems have been identified at both these leading projects and the team is now targeting the discovery of multi-million ounces (Moz) of gold at each project. In all, Tectonic has found more than 8 defined gold systems and seven of these are located at Biloela and Rockhampton where discoveries have been confirmed and there are multiple drill ready targets.

The discoveries are all the more impressive as they have been achieved with less than 10,000m of drilling, which does suggest that Tectonic might well be building **one of the lowest dollar per ounce gold exploration businesses**.

In 2018/19, Tectonic completed a 2,700m drilling programme which confirmed the discovery of a large-scale gold system under cover, with gold intersected in every single hole and grades running as high as 35g/t gold. Extensive analytics, along with follow up field work during 2019/20, was completed to target further high-grade zones of the gold system. The end result is not only that these discoveries **have been confirmed** but also that walk up bull's eye porphyry drilling targets are considered in place. These represent targets in a prolific gold belt which is the home to Australia's largest gold companies.

It will be the powerful combination of location, scale and grade that Tectonic is hoping to use to either joint venture or sell these projects to the majors. The lead project is at Biloela where there is a total of four discoveries contained in the project package. These are: Specimen Hill, Last Chance, Maxwellton and E.D. Of these discoveries, the priority is Specimen Hill.

### **Reappraisal of the geology of Queensland**

The team has been applying technology to this specific type of mineralised systems for many years, led by Alex Teluk, their former Chief Geologist. Alex had more than 50 years of experience and has been involved in a lot of gold projects in Queensland, looking more closely at the regional view in recent years. It was his belief that the current geological understanding was incomplete, and he does not seem to have been alone in this view as to the north of Queensland, James Cook University had been remapping the geology, as well as to the south. At the same time, it looks as though one of the world's largest gold mining companies Newcrest Mining had been doing similar work.

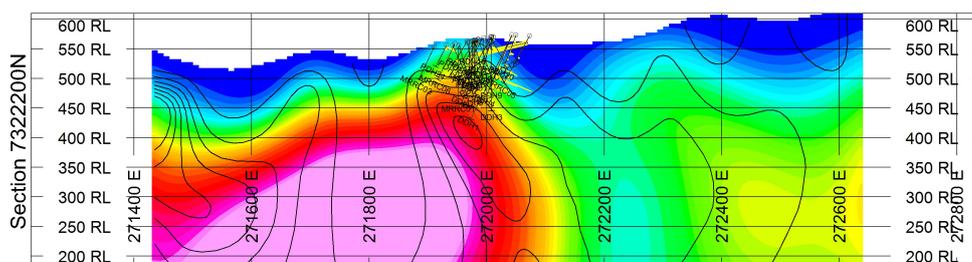
There was a gap in the middle of Queensland which seemed to have been largely ignored from this process of reappraising the geology with the benefit of modern models of mineralisation, probably because this area was more complex. Such work involved finding a mineralised system and tracing it back to a heat source. It had probably only really been done in the past in the time leading up to the recognition of the large Cadia-Ridgeway deposits in New South Wales (now developed into a series of large underground and open-pit gold and copper mines), which bore IRGS tell-tale signs. This seems to have caused a rethink about the geology of Queensland and the Tasman Belt in the late-1990s. Painstaking work by this team over many years dating from the mid-2000s has put Tectonic in a position to be able to take full advantage of its first mover advantage.

## Specimen Hill

At the Biloela Project, Tectonic has pioneered the use of new technologies to discover high-grade gold/copper porphyry clusters in a major gold mining region and Specimen Hill represents the lead asset in this project. Specimen Hill is the top priority, and this prospect is now be drilled for JORC resource definition. The prospect has a 16km<sup>2</sup> anomalous surface geochemical footprint and boasts a porphyry cluster accompanied by multiple epithermal mineralised zones.

Specimen Hill was selected to be the focus of the current development plan as it has well-developed Low to intermediate and high sulphidation epithermal gold-copper mineralised veins that have been identified in numerous locations across the project. In the past, historic mining at Specimen Hill saw more than 8,000 ounces of gold mined at grades as high as 40g/t gold, so the system is known to contain significant gold. Sampling of some of these veins by Tectonic has assayed over 50g/t gold.

Before the 2018/19 drilling programme, a total of 55 historic drill holes covered 300 metres strike to a depth of only 125 metres. These holes were only drilled to such a relatively shallow depth as the previous exploration companies who held the ground before Tectonic were solely focusing on defining a resource that could be mined by quickly via open pit methods. This work was carried out in the days before the recognition of Queensland's IRGS potential and there were growing concerns about the size of mining footprints and highly selective underground operations began to be seen as important development options.



*Magnetic model outputs along section 7322200N. Also shown is the Specimen Hill drilling and SAM MMC contours. Note the best gold intersections at that time appear to be located on the eastern margin of the magnetic body. Interestingly, the SAM MMC model output also shows a coincident high current channelling feature indicating an easterly dip of the source of the mineralisation that has been drilled at surface. Source: Company*

## 2018/19 drilling programme

Tectonic has mapped 1,500 metres strike ahead of drill testing at depth, plus extension drilling. Specimen Hill represents a multi-phase epithermal (gold, silver and copper) and **has scope for multi-million-ounce gold potential**, with also multiple additional targets over an area of 6km<sup>2</sup>. Gold had already been proven from the surface to a depth of 125 metres, and the October 2018 diamond drilling campaign at Specimen Hill (10 holes from the 2,700m) was designed to test two potential porphyry feeder targets as well as validating and extending the existing Main Lodes of known epithermal mineralisation to deeper levels.

Hole	From (m)	To (m)	Interval (m)	Gold (g/t)	Silver (g/t)	Tellurium (g/t)
SHDD09	14.0	14.8	0.8	1.23	151.00	153.50
SHDD11	6.3	7.2	0.9	2.15	0.31	9.79
	59.0	60.0	1.0	1.64	0.30	6.37
	80.2	81.2	1.0	8.25	1.37	19.95
	90.4	91.0	1.6	5.79	20.76	3.27
	Including 0.25m @ 35.2g/t gold, 37.2g/t silver and 15.15g/t tellurium from 90.4m					
	118.0	119.0	1.0	1.35	5.54	5.76

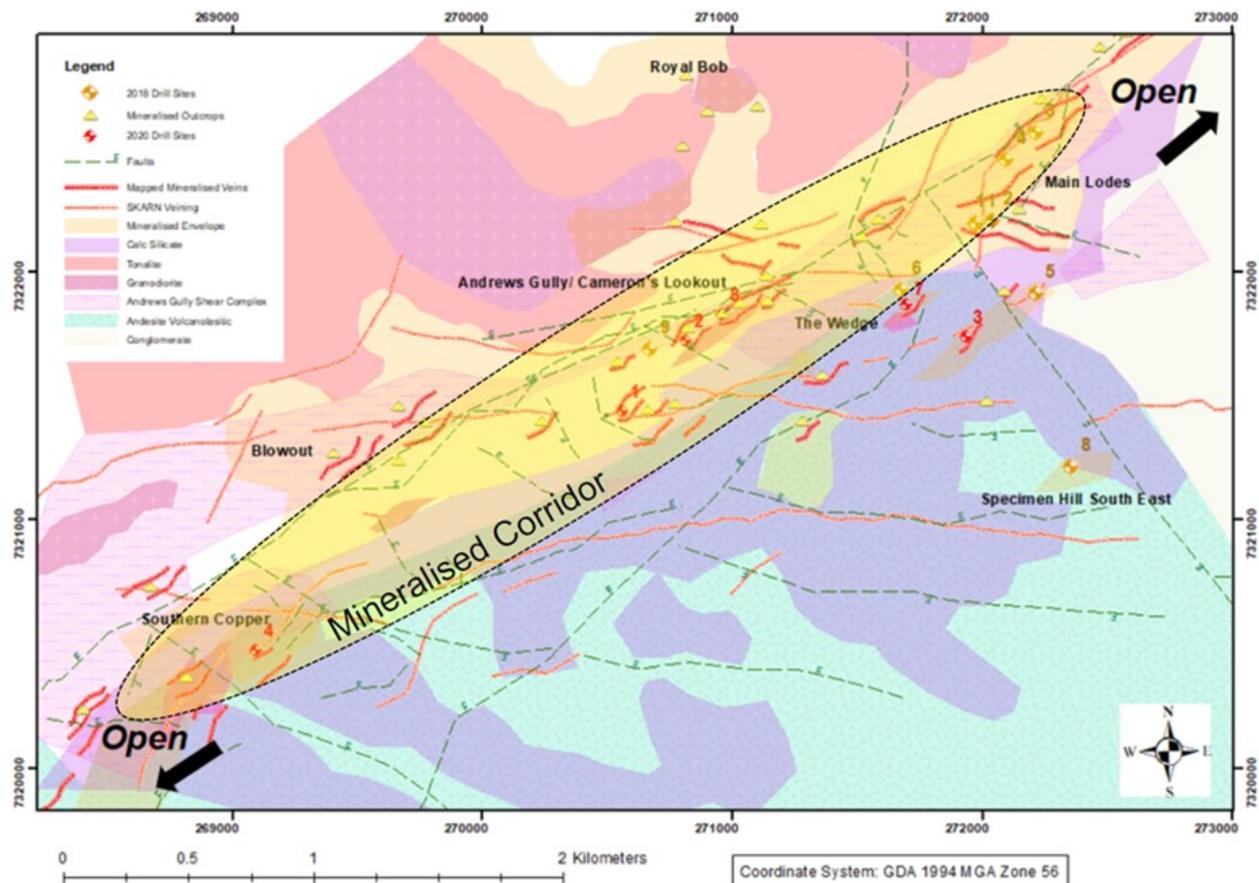
*Significant intercepts greater than 1g/t gold from the Phase 1 diamond drilling programme at Specimen Hill beginning October 2018. Source: Company*

This drilling programme at the flagship Specimen Hill project site was **highly successful**, intersecting further mineralisation in each of the ten drill holes with **high grade gold intersected at gold grades up to 35.2g/t Au and silver grades of up to 37 g/t Ag**. A total of +70 holes have intersected the gold mineralisation. High grades of gold, copper and silver combined, with the surface strike length in excess of 1,500m along with a mineralised feeder being identified from a depth of 300m, which has served to highlight a large-scale system.

Targeting for the drilling campaign was undertaken using Australia's first deployment of the DIAS 3DIP survey system that has been adapted from technology used in deep targeting in the oil and gas exploration industry. Drill core samples were subjected to extensive analysis including Laser Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS). This was used to confirm the genetic link of the known gold near the surface to the feeder system being tested at 500 meters and below.

### 2020 drilling programme

The planned 3,500m drilling programme at Specimen Hill and Mt Cassidy was rained off before the planned 13 holes for 2,000m at Specimen Hill could be completed. However good progress was made (11 holes for 1,430m), and the early results showed that that a vertically extensive ore body some 10m thick has been defined which is tightly controlled within the fault system.



4km long mineralised corridor at Specimen Hill. Source: Company

On top of that gold/copper/silver mineralisation has been mapped over a 4km long strike and tested to 120m at depth. Importantly, this mineralisation remains open in all directions. There looks to be a polymetallic deposit assaying at more than 1.5% copper. The suggestion is that there is a high-grade core of +16g/t gold and up to +15g/t silver over 1m surrounded by a medium grade halo of 3g/t gold and >2. g/t silver over 7m were seen in the first 3 holes assayed. Drill samples from the remaining 8 holes when logged showed similar characteristics.

Hole ID	Easting MGA94 z56	Northing MGA94 z56	RL (AHD)	AZI (MAG)	Dip	Total Depth (m)
SHRC17	270,816	7,321,726	547	055	-66	104
	<ul style="list-style-type: none"> <li>• 7m @ 3.01g/t Au; 2.33 g/t Ag and 0.14% Cu from 96m</li> <li>• Incl. 1m @ 16.30g/t Au; 8.31 g/t Ag and 0.34% Cu from 98m, and</li> <li>• 3m @ 6.95 g/t Au; 5.09 g/t Ag and 0.32% Cu from 98m.</li> </ul>					
SHRC20	270,999	7,321,843	552	214	-70	150
	<ul style="list-style-type: none"> <li>• 9m @ 0.84 g/t Au; 0.62g/t Ag and 0.19% Cu from 18m</li> <li>• Incl. 1m @ 2.37g/t Au from 18m, and</li> <li>• 1m @ 0.85 g/t Au; 2.58 g/t Ag and 1.56% Cu from 23m.</li> </ul>					
SHRC22	271,950	7,321,675	582	144	-70	200
	<ul style="list-style-type: none"> <li>• 1m @ 1.23g/t Au; 15.85 g/t Ag and 1.77% Cu from 136m</li> </ul>					
SHRC24	270,563	7,321,441	560	105	-65	104
	<ul style="list-style-type: none"> <li>• 2m @ 3.69 g/t Au from 79m</li> </ul>					
SHRC27	271,024	7,321,934	552	190	-70	100
	<ul style="list-style-type: none"> <li>• 2m @ 2.09g/t Au and 0.39% Cu from 50m</li> </ul>					

*Significant intercepts from the gold, silver and copper assay results from the 2020 drilling programme at Specimen Hill. Source: Company*

The 2020 drilling programme successfully intersected epithermal gold and copper-gold porphyry mineralisation at Specimen Hill. Analysis of the results clearly demonstrated that the mineralisation at Specimen Hill manifests itself in two ways. At the surface there is a polymetallic high-sulphidation system that has been enriched by late-stage low to intermediate-sulphidation gold mineralisation. At depth, there lies a gold-copper porphyry mineralisation which is coincident with a high-temperature magnetite-rich ore.

## 2021 Mapping work

Tectonic had already successfully mapped a continuous 4km+ of strike from Main Lodes to Southern Copper. Following the 2020 drilling programme the team has been busy on the ground gathering additional data ground surveying, sampling, and assaying; as well as benefiting from spending a lot of time in the core shed. Already this year, several independent specialists have been out to the field including Dr. Brett Davis, who has completed an advanced structural model of Specimen Hill on which the drill targeting will be based. This has been followed by a detailed mineralogical study of the 2018 drilling data by Dr. Greg Corbett to validate the blind porphyry under Main Lodes, to help ascertain deeper drill targeting of this discovery.

This latest detailed mapping work has led to the identification of the old working at Goldsmith's Reef, which was in operation before World War One. Here, high grade veins reporting grades of over 40g/t gold were selectively mined. This is a very exciting prospect as the board has suggested modern mining technology will allow a large-scale open pit mining which could economically exploit this mineralisation to a much greater depth than was possible in the past. Underground mine face samples taken from old workings assayed at +5.4g/t gold and +1.3% copper. Importantly, underground geological mapping of the veins confirmed the continuity of gold and copper mineralisation that has been mapped on the surface. As well as providing high grade mid-point continuity between Main Lodes and Southern Copper. In addition, a second high grade discovery named Overshoot has been found along strike from Southern Copper, where 2.6% copper was returned from assay of exposed mineralisation.

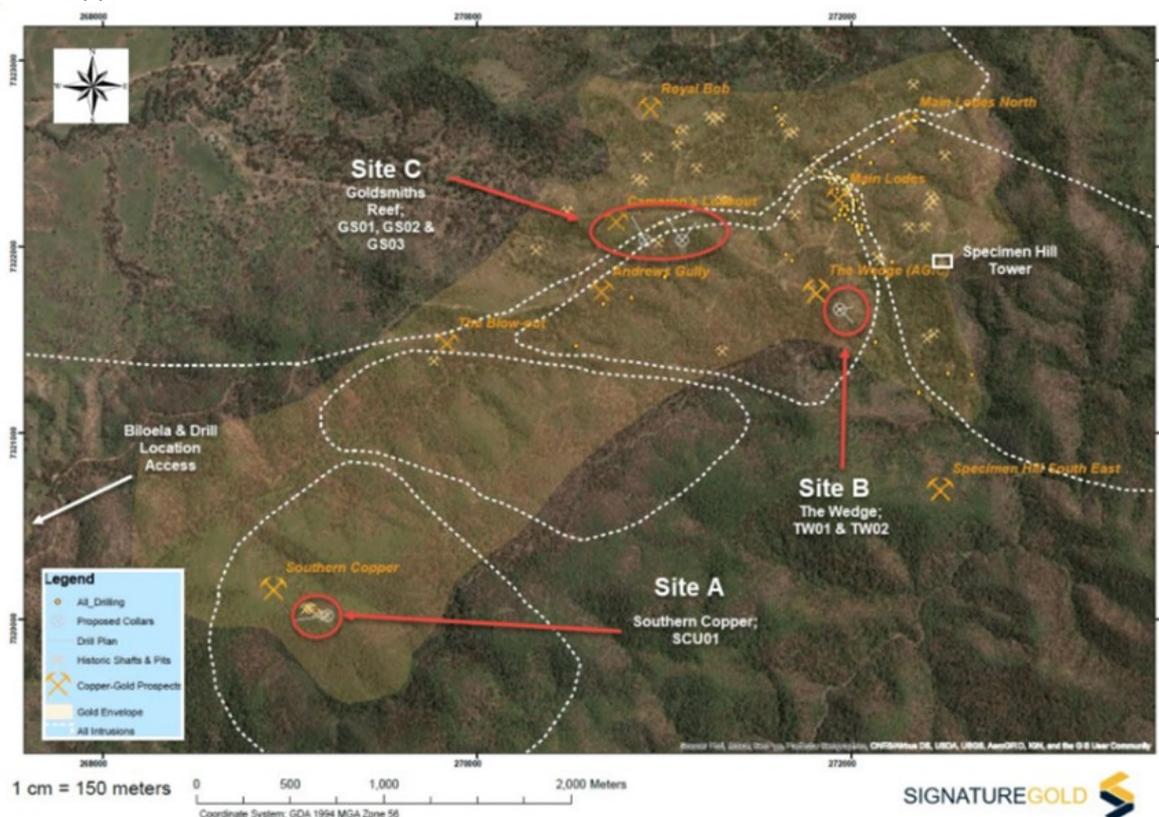
Tectonic’s methodical approach to infilling data along the corridor from the Main Lodes to Southern Copper has continued to reinforce the company’s expectations of the prospectivity of the area. The team know that they have made important discoveries but needed independent technical experts to thoroughly test and validate the mineralisation models. Detailed technical research work has been undertaken at the Centre for Ore Deposit and Earth Sciences (CODES) at the University of Tasmania.

Over the years, CODES has grown substantially and is now widely seen to be a global leader in ore deposit research. Work undertaken by CODES helped in selecting the drill targets as well as more recently assisting by highlighting that all chemistry seems to point a magmatic fluid source that is moderately oxidised and similar to some of other known porphyry signatures. Plus, the gold present is part of the pyrite itself. On top of all that the tell-tale plot of the Epidote (yellow-green crystalline mineral) antimony to arsenic shows that Specimen Hill’s values fit within those seen for other copper-gold porphyry deposits.

### 2021 drilling programme

Tectonic will soon be resuming drilling which is a continuation of the 2020 drilling programme. There are three primary targets at Specimen Hill which are planned to be drill tested in this latest round of 1,250m of drilling.

Southern Copper (SCU01 – RC drill hole to a depth of 300m) – There is evidence of historic copper mining in the area. Geology of the area consists of tuffaceous andesite volcanoclastic rocks which have been intruded by diorite at various levels forming footwalls to copper mineralisation that has been mapped on the surface.

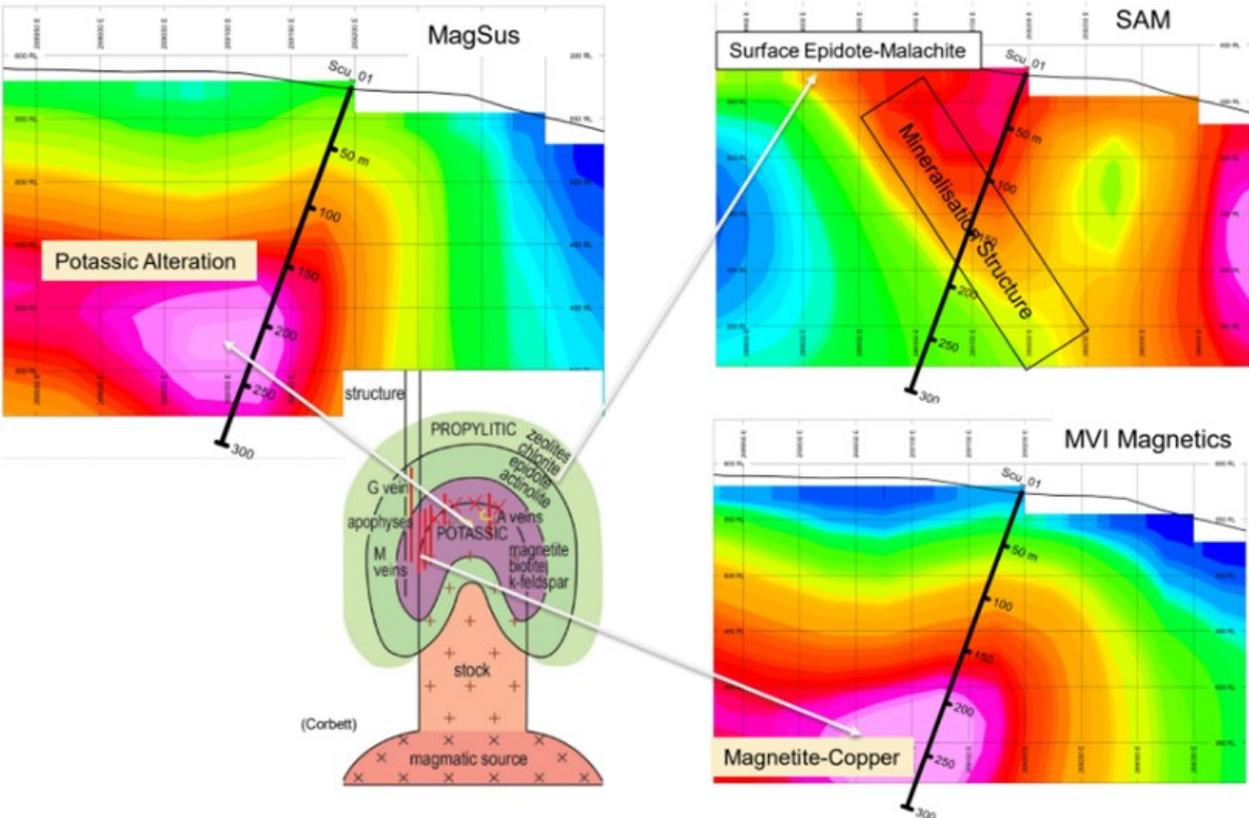


2021 Specimen Hill drill programme site locations. Source: Company

At Southern Copper, the tuffaceous andesite volcanoclastic sequences have been overprinted by mineralised skarn veining which is structurally controlled along deformation fabric and bedding. With the rate and direction (aka vector) for the copper and gold mineralisation within the prospect has been indicated by coincidence with Sub Audio Magnetics (SAM) geophysics. In addition, SAM geophysics has shown that a mineralising structure extends from the surface to intersect with Magnetic Vector Inversion (MVI) magnetics which demonstrating that the projects are analogous with magnetite-copper mineralisation.

The Wedge (TW01 & TW02 – 2 RD drill holes 200-250m deep) – Here the geology consists of volcanoclastic andesite tuffs with intensive silica alteration. At the surface stringers of chalcopyrite emerge and are found to be concentrated around an east-west fault structure which is coincident with SAM geophysics and garnet-actinolite skarn.

The Wedge was drilled in 2020 (SHRC22) and intersected more than 20m of chalcopyrite and magnetite (skarn – metamorphic rock chemically and mineralogically altered by a process called metasomatism where hot, chemically-active fluids flow or diffuse through rocks resulting in recrystallisation and a change in composition) associated with magnetic geophysics. The magnetic-copper skarn is located in a structural trap where mineralisation is coincident with a magnetic geophysical anomaly. The two latest drill holes are planned to test copper and magnetite extensions that form the inner propylitic Epidote-Actinolite alteration associated with the magnetite-copper skarn.



*Southern Copper geophysics compared to the geology. Source: Company*

Goldsmiths Reef (GS01, GS02 & GS03 – 150m, 150m and 175m deep) – At Cameron’s Lookout, Goldsmith Reed appears within a continuous 2-3km mineralised intermediate and high sulphidation epithermal envelope which follows the Andrews Gully Fault. Mapping and sampling along the GS Drive, an adit of this historic mine have identified three key zones GS Zone 1 (first 30m along drive from the entrance), GS Zone 2 (next 60m) and then GS Zone 3.

In Zone 3, intermediate and high sulphidation gold have been found in veins within the dominant foliation (repetitive layering of metamorphic rocks) fed from a mineralising core which has been revealed by SAM geophysics and remnant magnetism. Historically the oxidised upper portion of Zone 3 was mined by stoping.

Zone 1 nearest to the adit entrance consists of low sulphidation mineralisation chalcedonic quartz. Zone 2 is essentially a mineralised breccia zone which is part of the thrusting and brittle fault movement and contains economic grades of copper and gold. Apparently, the geophysics is coincident with these gold and copper bearing structures and reflects the magnetite destruction found in epithermal gold mineralisation. The planned drill holes will test the extent of these mineralised structures down dip and along strike as well as intercepting a number of the Epithermal Gold Reefs that have been mapped in the adit and at surface.

The budget for this follow up work can be found below.

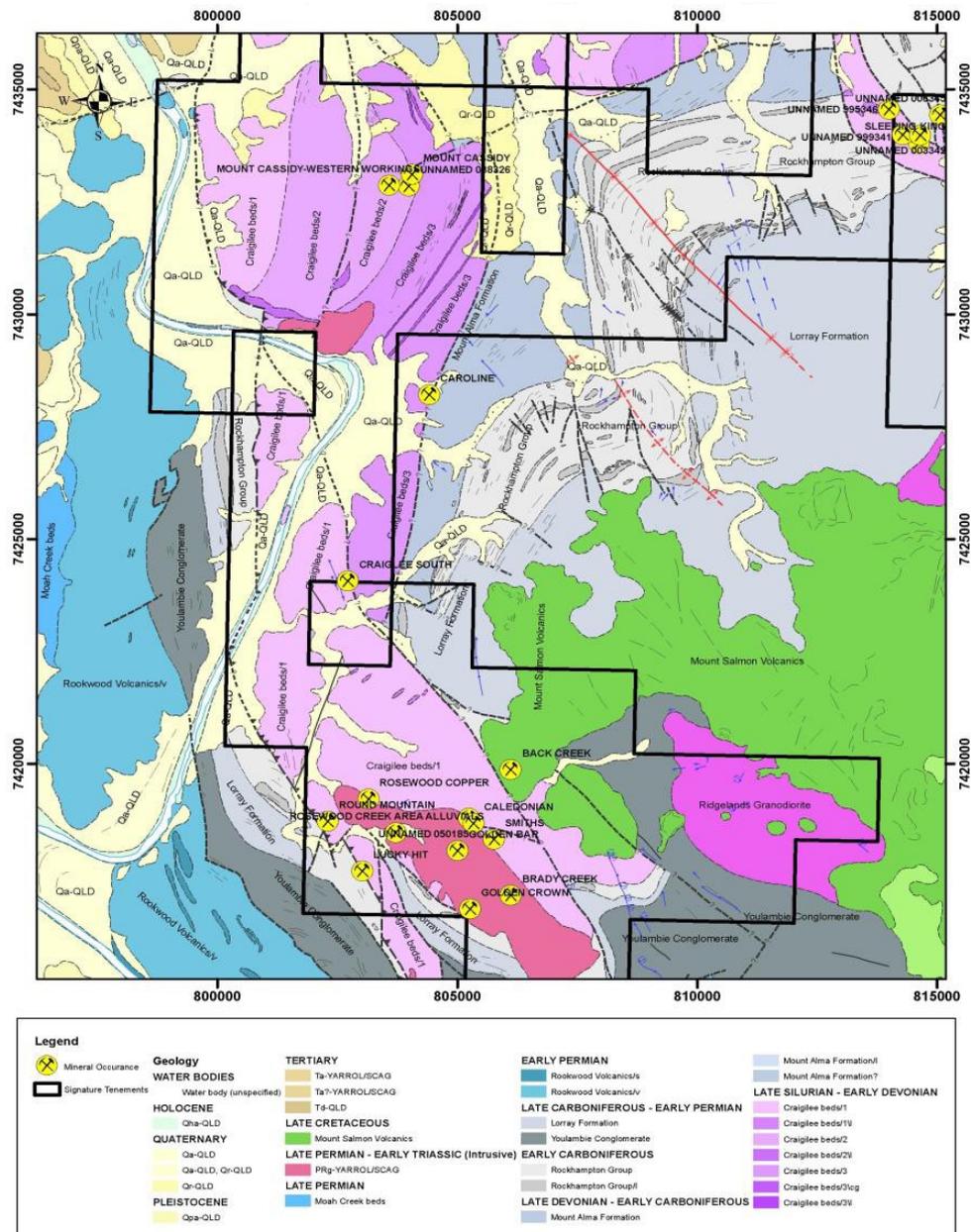
<b>Specimen Hill – 1,250m</b>	
	<b>A\$</b>
Drilling	200,000
Analysis	45,000
Supervision and Rehabilitation	45,000
<b>Total</b>	<b>290,000</b>

*2021 drilling budget. Source: Company*

## Mount Cassidy

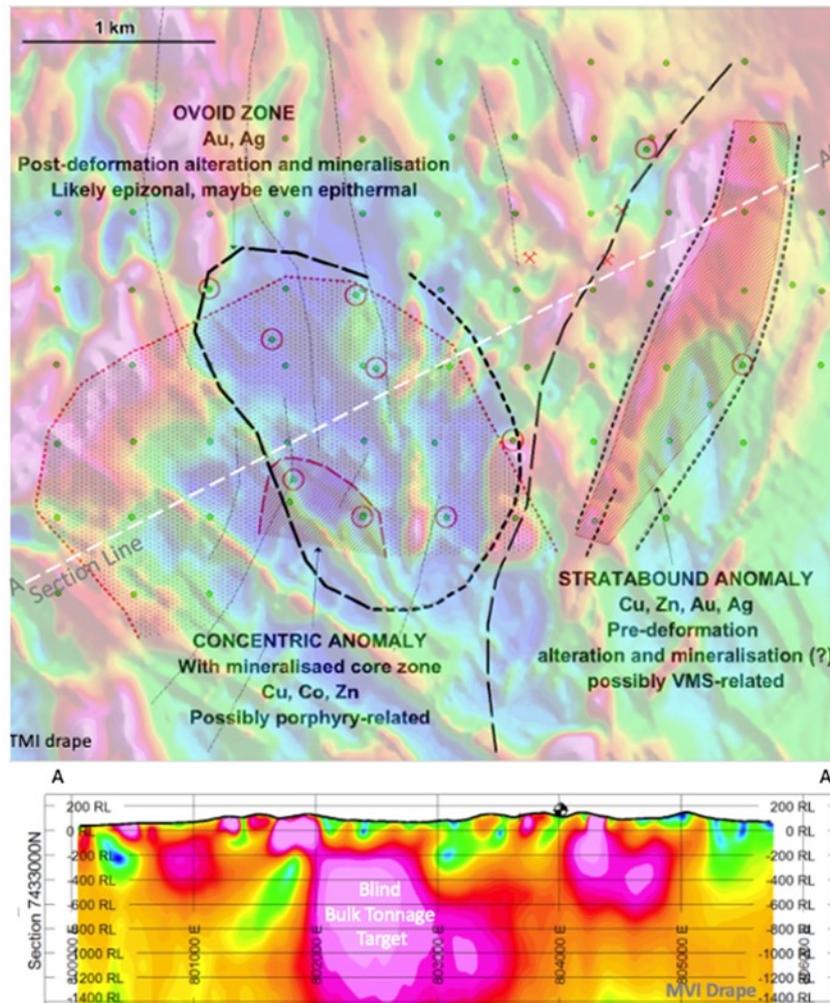
The Mt. Cassidy tenure at the Rockhampton Project will become the clear focus of attention once a deal on the flagship project is concluded. As early as last year, CODES' research programme confirmed the IRGS nature of the magmatic hydrothermal system which is the source of the gold discovery at Mount Cassidy.

This work highlighted that the shear system at Mount Cassidy was shown to host a dilatational gold enrichment with **gold grades in excess of 30g/t** confirmed from rock chip samples. This research work really called for follow-up deep penetrating geophysical mapping to provide final drill targeting on the system.



*Regional geology at the Rockhampton Project. Source: Company*

This location provides a highly attractive geological context for ore deposition for a number of reasons. Firstly, there is a thrust complex along the Rosewood Volcanics. Secondly, magnetite destruction which serves to highlight a buried intrusion. Thirdly, a chargeability anomalism along the dilation zones. Lastly, deep water calstic/volcaniclastics and turbidites are seen to be present in an older setting – deposits which are sometimes called volcanic-hosted massive sulphides (VHMS).



*Blind bulk tonnage target identified at Mt Cassidy. Source: Company*

This ground has been tightly held by Tectonic's founders for twenty years and for good reason. There is no doubt that Mt. Cassidy has multi-phase porphyry and VHMS potential and clearly has all the making of being a Mt. Morgan (>12Moz historic and proximal gold mine) lookalike.

Not only is Mt. Cassidy along strike from Queensland's most famous gold mine, Mt. Morgan, but it also importantly shares similar time and rock sequence. **Mt. Cassidy represents a large scale (4km<sup>2</sup>) copper, gold, silver and zinc system with previous small-scale mining averaging 15g/t gold which confirms high grades.**

Mt. Cassidy has limited surface expression and was discovered by the company using advanced geochemistry and geophysics analysis in conjunction with CODES, which took a good look at this and did all the thin section work as well as petrography (rock classification).

The company has employed advanced geochemical analysis and identified a "blind" IRGS system. However, it can be spotted by a tell-tale arsenic and molybdenum halo that often sit around these anomalies and high molybdenum grades here have confirmed the discovery of gold close to a major heat source **which indicates a large deposit.** Deep penetrating geophysics has identified the IRGS structure and drilling confirmed the large scale.

Hole ID	Easting MGA94 z55	Northing MGA94 z55	RL (AHD)	AZI (MAG)	Dip	Total Depth (m)
MCRC01	804,626	7,432,141	167	070	-65	90
	<ul style="list-style-type: none"> <li>• <b>Target</b> – A remnant magnetised feature and the top western portion of a SAM identified anomaly. Geology is represented by a surface shear structure.</li> <li>• Intercepted an oxidised grey chert with variable pyrite from trace to 2% medium grey / pale green grey speckled variably fgr-mg pervasively silicified, feldspars over Biotite intermediate intrusive, with minimal hematite, quartz veins &amp; epidote altered quartz veins.</li> <li>• Pyrite, &amp; arsenopyrite is disseminated</li> </ul>					
MCRC07	804,972	7,433,446	107	100	-65	100
	<ul style="list-style-type: none"> <li>• <b>Target</b> – A magnetic anomaly with a coincident western portion of elevated magnetic susceptibility.</li> <li>• Intercepted intensely silicified v-fgr Chert that is pale - medium green/grey intercalated with lesser dark grey, to pale green grey speckled variably mg-cg pervasively silicified, feldspars over Biotite intrusive.</li> <li>• Pyrite is disseminated throughout.</li> </ul>					
MCRC09	802,110	7,431,408	131	266	-65	126
	<ul style="list-style-type: none"> <li>• <b>Target</b> – Eastern portion of a linear magnetic and current channelling feature.</li> <li>• Intercepted dark grey / green - fine / medium grained chloritic in places with biotite and white feldspars with minor pyrite fresh and oxidised, minor epidote altered quartz vein's 1 - 5mm parallel occasionally crosscutting from 0 - 103m. Between 103m – 126m end of hole (EOH) dark grey green/pink medium/ coarse grained with biotite and white and increasing pink feldspars down hole.</li> <li>• Disseminated and veiniform pyrites</li> </ul>					
MCRC11	802,638	7,431,956	120	125	-62	150
	<ul style="list-style-type: none"> <li>• <b>Target</b> – Geophysical anomalous eastern portion of a discrete remnant magnetised zone associated with chalcedonic (low-T) quartz.</li> <li>• Intercepted intercalated siliceous sediments with minor epidote, hematite, predominantly unaltered protolith.</li> <li>• Pyrite is disseminated throughout the sediment and does not appear to be vein related - mostly trace to minor throughout hole with Intermittent minor epidote &amp; hematite from 84m to 110m.</li> <li>• A structure containing jasper in association with pyrite ~10% was intersected from 124 - 128m.</li> </ul>					
MCRC12	802,634	7,431,962	120	307	-62	150
	<ul style="list-style-type: none"> <li>• <b>Target</b> – Geophysical anomalous eastern portion of a discrete remnant magnetised zone associated with chalcedonic (low-T) quartz.</li> <li>• Intercepted Intercalated siliceous sediments with the addition of some disseminated pyrite rich mudstones.</li> <li>• Siliceous sediments were drilled to 42m with some trace pyrite. A dyke was intersected between 42-49m containing coarse grained chlorite alteration with biotite and 2% disseminated pyrite throughout.</li> <li>• Chalcopyrite was intersected in a mudstone between 99 -101m.</li> <li>• The rest of the hole intersected siliceous sediments with some minor mudstones (these mudstones have trace to minimal pyrite only) until EOH at 150m</li> </ul>					
MCRC17	802,418	7,432,720	113	060	-64	132
	<ul style="list-style-type: none"> <li>• <b>Target</b> – Discrete near surface magnetic feature associated with a SAM anomaly and highly distinct surface alteration.</li> <li>• Intercepted medium grey / medium grained quartz fs groundmass with occasional biotite.</li> <li>• Disseminated pyrite to 2% variable oxidised and fresh. Epidote over quartz transitioning into medium grey / fine grained siltstone with cross cutting sub-1mm quartz veining and minor magnetite</li> </ul>					
MCRC18	802,076	7,431,577	132	280	-65	30
	<ul style="list-style-type: none"> <li>• <b>Target</b> – Eastern portion of linear magnetic and SAM anomaly.</li> <li>• Intercepted an oxidised chert with ~1 % pyrite to 30m where it intersected a dark grey green/pink, medium/ coarse grained intrusive with biotite &amp; pink feldspars with pyrite.</li> <li>• Hole suspended due to incoming weather system.</li> </ul>					

*Completed holes and geology of the January 2021 drilling at Mount Cassidy. Source: Company*

A hydrothermal event caused a dominant pattern which has been seen in the SAM geophysical results in the N-S central zone and the surrounding area. Analysis of soil geochemical data of the 'C' Horizon, bottom of hole lithology, alteration and SAM has led to the highlighting of the larger anomalous zones.

### **Drilling**

The structure of Mt. Cassidy is a bit of an enigma and is thought to be a structurally anomalous NS-trending mineralised corridor localised above a magmatic centre. Current thinking is that inside this corridor, fault blocks are bounded by dextral strike-slip fault-veins moved by what is termed a "bookshelf shearing process" which is synchronous with a strike-slip faulting in the steeply dipping vein system.

The drilling of 7 holes was completed in January 2021. These holes successfully targeted both gold mineralisation associated with stratabound VHMS body and porphyry copper - SAM chargeability anomalies where high-grade gold has been identified at surface. Grades have not been reported, so they might not have been as high as hoped, but this is first pass drilling and early days in the drill testing this project. Mt Cassidy is obviously shaping up to become a rapidly advancing follow-on project to nearby Specimen Hill.

### **Alluvial Project**

There is a large alluvial field to the south of Mt Cassidy. In July 2021, Tectonic was able to announce a deal to bring a specialist highly experienced alluvial mining group, White Prospecting Pty Ltd, to begin gold mining on this alluvial field. This will be an earthmoving exercise where the old riverbed is stripped down to the bedrock with the gravels from the old riverbed processed using gravity methods to extract the gold. Once stripped back to bedrock, Tectonic's team will take the opportunity to map the exposure mineralisation to match up with that encountered elsewhere in the licence area. The company has negotiated a 7.5% Gross Production Royalty and these funds support exploration and drilling budget.

### **Australian government backing**

Signature Gold became credited as an R&D entity by the Australian government following its work on redefining the regional geological and tectonic models, as well its close work with recognised Australian academics and University and State departments. This tax incentive scheme was established to encourage R&D in Australia. Usually, technology and pharma use this facility - mining companies are generally not included. However, the Directors were able to gain approval for the development of an exploration technology for the IRGS system. **The Australian government is backing Tectonic as the R&D being developed by the company could allow for a second wave of gold mining in Queensland, in an area where 50 million ounces have already been discovered and mined.**

The company has been benefiting from this tax incentive scheme for a number years, which serves to limit dilution for shareholders. Essentially, Tectonic gets 43.5% of all qualifying expenditure back as and R&D grant and most expenditure seems to qualify, including all the drilling.

## South African Investments

Tectonic has a non-diluting 10% stake in Deep Blue Minerals (DBM) which has a producing diamond mine within the Alexkor diamond fields on the Northern Cape coast. Alexkor is a government-owned company that manages diamond-mining concessions in a joint venture with local indigenous landowners in the Richtersveld region. This is formally known as the Pooling and Sharing Joint Venture (PSJV) where Alexkor is the operating partner. The PSJV allocates mining concessions for alluvial diamonds on the coast (beach concessions) and in the water (marine concessions) between Port Nolloth and Alexander Bay. The company also formed Whale Head Minerals which lodged a mining permit over a dual diamond and heavy mineral sands (HMS) opportunity also within the Alexkor diamond fields on the Northern Cape coast.

Early 2019 brought news that Tectonic was farming into a producing diamond mine to provide cash flow to fund its existing gold operations. Over the last 24 months there have been some big changes in the ownership of these projects. Initially, the company entered into a 50:50 JV with VAST Mineral Sands Pty Ltd, a South African group that held the tenement over the mineral sands within the Alexkor diamond fields and then moved to gain a 100% interest.

Fast forward to June 2020 and the company announced the sale of a majority interest in Tectonic South Africa to AIM-listed Kazera Global. As announced previously, in December 2019, Tectonic retained a non-diluting 10% interest in Tectonic SA (rebranded Deep Blue Minerals Pty Ltd) which protects them against any dilution from the 26% holding of incoming Black Economic Empowerment partners. Kazera will hold a 64% interest and raised £750,000 to fund the diamond mining project into production.

At that time, Tectonic also announced that it had incorporated a 100% owned South African subsidiary, Whale Head Minerals Pty Ltd, and applied for a Mining Permit to mine HMS within the Alexkor/PSJV diamond mining area to mine ores with DBM for the dual commercialisation of diamonds and HMS from diamondiferous and mineralised alluvial beach sands. Kazera has committed to buying a majority interest in WHM also, with Tectonic retaining some economic interest, subject to the approval of the Mining Permit under application which is understood to be granted soon.

Now under the control of Kazera, diamond mining operations recommenced in early August 2020. Cash flow from diamond production is expected to deliver fairly constant monthly net profit after tax figures around US\$60,000 that is to be distributed to partners.

A proprietary application is in process for HMS licence under Whale Head Minerals. Production is planned at a rate of 6,000 tonnes per month (tpm). A rapid scale up to this level of production is expected as the HMS will have been building up as a by-product of the marine diamond production. Further research will be presented on this in due course once all applications are approved.

## Strategy for growth

Tectonic Gold is making tremendous progress in identifying and delineating large-scale multi-million ounce IRGS in central NE Queensland. The company does not look at greenfield sites but concentrates its attention and exploration dollars on areas that are highly prospective, have been the subject of historical drilling and might even have seen gold production in the past. Previously, many gold deposits were not fully geologically understood and were incorrectly identified and have since been determined to be IRGS deposits. So, the team is looking for such opportunities and examining for the tell-tale signatures of these potentially large and rich mineralisation systems.

The work in Queensland has been going on for many years and it has been a good mix of both top down and bottom-up studies. Firstly, the area with the greatest potential is worked out by mapping the tectonics and so the work becomes increasingly more granular, looking at the individual projects in these “hot” areas. This has led to the analysis of more than 100 projects over a ten-year period which has been slimmed down to two where all the attention is now being focused.

The real advantage with IRGS is that there are structurally controlled deposits, which means that the gold actually lies in the structure. Such a factor really reduces the risk of drilling. The range of new deep penetrating geophysical tools that are available today allows the structure to be accurately mapped and so IRGS can be discovered at a fraction of the cost of just pattern drilling deposits. In the past, exploration companies misunderstood the mineralisation system, and it has only been as a result of Tectonics’ thorough reinterpretation and analysis that the team has been able to begin to reassess the true gold potential.

Specimen Hill provides an opportunity to potentially unlock multi-million ounces of gold and so represents a potentially high-class asset in a much sought-after gold belt in a world class jurisdiction. The company has a decent exploration acreage in a suitable tectonic setting on the prolific New England Orogen with its well documented mineral endowment. Specimen Hill sits between two major IRGS classified deposits at Kidston Mine (breccia-hosted 4.1Moz gold at 2.08g/t) to the north and the Cadia -Ridgeway Mine (sheeted veins 43.2Moz gold at 2.08g/t) to the south.

The rediscovery of a prolific gold belt at Specimen Hill provides real confidence in the company’s tenacity, perseverance, and methodology. The successful drilling results have come after Tectonic’s comprehensive and extensive geophysics and geochemical work which have allowed the delineation of impressive drill targets. All the work has led to respected independent geological consultants Glazo Consulting being able to point out that Specimen Hill “..possesses the right structural fluid pathways and thermal and mineralogical ingredients to develop into a significant and potentially world-class deposit..”. High praise indeed. Given the scale of the resource that Tectonic is in the process of delineating, it is no surprise that majors are pegging adjacent leases.

At Specimen Hill, the team now know that they have found a porphyry and independent specialists have verified this. A lot of experts have been looking at its flagship project including Davis, Corbett and CODES. Independent structural modelling was undertaken by Dr Brett Davis who was an external expert that Newcrest used in their assessment of Greatland Gold’s multi-million-ounce Havieron Project. Greg Corbett, who has over 40 years’ global experience exploring and evaluating epithermal gold-silver and porphyry copper-gold resources, has been investigating the exploration potential. Structural and geological analysis by Davis and Corbett have confirmed that optimum conditions for mineral enrichment are in place at Specimen Hill.

The Biloela Project bears all the hallmarks of offering the potential to target bulk tonnage IRGS in an area which is largely unexplored but fairly close to previously producing gold mines. The way things are shaping up now, the project represents a big, mineralised field that needs to be unlocked. So far, mineralisation has been found all along a 4km strike length within the Mt Morgan Lithospheric Fracture Zone which bisects the project. Slowly and methodically, the team has been chasing this from both a geological and structural standpoint.

With the sort of drilling results alongside the analysis and confirmation by experts, Tectonic is now moving rapidly to the time when it can probably be able to shortlist potential joint venture partners ahead of agreeing a deal as the big money needs now to be clearly spent at Specimen Hill. Interested majors may include Rio Tinto, Newcrest/Evolution Mining, Fortescue Metals Group (for the copper), South 32. Ravenswood co-owner EMR Capital, the specialist resources private equity company, must be interested in something of such a potential scale in their backyard. Investors must realise that the company's thinking behind engaging Dr Brett Davis and Dr. Greg Corbett was to make sure that Tectonic had the highest calibre validation of its projects emulating Greatland Gold's strategy ahead of partnering with a major gold company.

At Specimen Hill, there are probably two options - either a 50:50 joint venture or an outright disposal whilst retaining a standard 1.5-2% Net Smelter Royalty (NSR). The A\$10 – 30 million which is now needed to be spent to further advance the project will be a job for the majors. The likely scenario will probably be an earn in right in two phases. It will probably go something like this with first A\$2 – 5 million being spent to assess the viability of the project over 2 seasons that could take 18 months and would be equivalent to 3 years of progress with the company's own spending. The best offer would probably result from Tectonic being able to put a decent resource number out there ahead of the second tranche of financing going in. The big money would test the presence of deeper porphyry targets (300-500m deep) towards determining economic viability and ultimate scale of the discovery with Specimen Hill.

Alongside the gold exploration, the entrepreneurial team heading up Tectonic has been able to negotiate several side projects which are starting deliver a growing cash flow into the company which look likely to cover all plc and management costs quite rapidly. First there was the alluvial diamond play in South Africa where an HMS operation is also being developed where Tectonic carries a 10% non-dilutable interest in both projects. Most recently, the market has been advised about a new project at Mt Cassidy which will see the mining of a large alluvial field to the south. This does not affect the company's ultimate far larger plans for the project. In all, these interests look likely to be able to soon bring in A\$2 million a year into the company's coffers. In recognition of the company's R&D on IRGS, the Australian Federal government is effectively a co-investor, which serves to dramatically reduce the required spend on exploration.

Once a joint venture deal has been agreed on Specimen Hill, Tectonic's attention will switch to Mt Cassidy where the same sort of approach will be adopted of using drilling to follow up the surface mapping. That is the benefit of the company having a project pipeline with an extensive database of past exploration, production and drilling. This, combined with the current state-of-the-art technology, means that IRGS deposits can now be identified at low cost. Truth is that the team already discovered the structure at Specimen Hill from high resolution magnetic surveys and 3D IP and, in combination with past drilling records and historic mining, they knew there was gold in the system before it was drilled, which is a nice situation to be in. Similarly, the drilling of the other projects in the portfolio will simply be used to determine the grade and widths and to provide the essential data to establish a JORC-compliant resource and reserves of gold. This will allow analysts to place an informed valuation on the company by peer comparisons. This work will also provide the data to move into feasibility studies and be able to offer the projects to potential buyers more fully formed with further value being added.

## Financials & Current Trading

Losses that have been recorded over the years until 2020 were mainly due to impairment of investments or the loss on disposal of subsidiaries, which reflects the big changes that have occurred at the company, along with administration expenses. Recent revenue has come from diamond operations in South Africa.

Y/E 30 June £'000s	2016A <sup>1</sup>	2017A <sup>2</sup>	2018A	2019A	2020A
Revenue	-	-	199	24	295
Pre-tax profit/loss	-7,405	-538	-3,534	-1,119	208
Net profit/loss	-1,366	-538	-3,336	-859	300

<sup>1</sup> year ending 31<sup>st</sup> December 2016

<sup>2</sup> six months to 30<sup>th</sup> June 2017

*Tectonic Gold five-year trading history. Source: Company accounts*

### 2020 results

Financial results for the twelve months ended 30<sup>th</sup> June 2020 marked a year when the company embarked on a drilling campaign at Specimen Hill and Mt Cassidy where so much was learnt. The team was able to make good progress despite having to deal with a combination of bushfires, COVID-19 and trade wars. Revenue from continuing operations rose to £294,866 with a profit from continuing operations before tax of £207,585 million after expenses. There was a tax benefit of £149,097 which resulted in a net loss for the year from continuing operations of £356,682 of losses on the translation of foreign exchange of foreign subsidiaries, the total comprehensive profit for the year came out at £300,162. The profit per share on a basic and diluted basis from continuing operations came out at 0.04p per share.

### 2021 interims

The 6 months to 31<sup>st</sup> December 2020 cover a period when the company focused on the development of its Australian gold portfolio following the successful sell down of its South African diamond and heavy mineral sands project in June 2020. £402,8000 raised in September 2020 funded a follow-up drilling programme to extend copper and gold discoveries at the Specimen Hill project as well as a small initial drill sampling programme at Mount Cassidy. For the period, the company reported a £60,084 loss before tax and after tax. The total comprehensive loss for the period was £43,651 and a basic and diluted earnings per share from continuing operations came out at 0.007p.

### Latest news

June 2021 saw the company announce a copper gold discovery in an update on Specimen Hill. The big news was that Tectonic had rediscovered Goldsmith's Reef with historic +40g/t artisanal gold production. Underground mine face samples taken from old workings revealed +5.4g/t gold and +1.3% copper. This discovery provided a high-grade mid-point continuity between Main Lodes and Southern Copper. In addition, a second high grade discovery named Overshoot was found along strike from Southern Copper and 2.6% copper was returned from assaying exposed mineralisation. Whilst at Specimen Hill the independent structural mapping/modelling has been completed for drill targeting. At the same time, it was also reported that the company was now ready to bring the drill rig back on site to tackle the depth testing at the Southern Copper discovery.

In July 2021, Tectonic was able to bring news of a gold mining joint venture to fund exploration. The deal is a specialist alluvial mining group White Prospecting Pty Ltd to initiate gold mining on the company's Mt Cassidy licence area. The company will have a 7.5% Gross Production Royalty and these funds support exploration and drilling budget.

## **Risks**

### **Geological risks**

There are a series of technical risk factors concerning the amount of understanding of the geology of the project areas, the mineralisation style being targeted and the distribution and magnitude of the indicators that have been identified in exploration work.

### **Political risk**

The mining industry is arguably the most susceptible sector of the market to political risk largely due to its importance to the host country's economy. Australia is recognised as one of the pre-eminent mining jurisdictions globally, (Fraser Institute).

### **Metal price risks**

Metal prices are highly cyclical and changes in the prices of gold could have a negative or positive impact on the valuation of the company's projects and revenue from the sales of metals. Over the past twelve years or so, the price of gold has been highly volatile, trading between a low of close on US\$700 to a record high of over US\$2,000 per ounce in 2020.

### **Exchange rate risks**

Movements in the value of currencies will have an effect on the company's accounts on translation from Australian dollars, US dollars and South African rand into sterling. Fluctuations in the value of the Australian dollar, US dollar and Rand against Sterling may well have an effect on the valuation Tectonic is awarded, by the market.

### **Future funds**

The market for raising funds for small cap companies may have improved from the difficult conditions a couple of years ago. Despite the rapidly improving environment for junior mining stocks, prompted by the buoyancy of the gold price, there is no guarantee that such market conditions will continue fundraisings in the sector might go back to seeing incoming investors demanding substantial discounts to provide the necessary capital.

## **Board of Directors**

### **Bruce Fulton – Executive Chairman**

Bruce is an experienced geologist and mining executive who previously led the geological effort at Porgera, which has particular relevance to the style of mineralisation being targeted by Tectonic. Following his operational career in mining with companies such as Dominion Mining, Placer Dome and Plutonic Resources, Bruce founded Ophir Partners, an executive search company specialising in the global resources industry. He has been a director of a number of Australian listed and private resources companies including Eldore Resources, Universal Resources, Southern Crown, Larus Energy and Alice Queen, another IRGS explorer. He is a member of the Australian Institute of Company Directors (MAICD); a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM); a member of the Canadian Institute of Mining, Metallurgy and Petroleum (MCIM); and a member of the Society of Economic Geologists (MSEG). Bruce has an M.Sc(Hons). (Earth Sciences) from Waikato University and an MBA from Deakin University. He was appointed as a Director of the Company in 2018.

### **Brett Boynton – Chief Executive Officer**

Brett is an experienced entrepreneur and corporate financier with expertise as an investment banker in capital markets, mergers, acquisitions and private equity, including positions at Credit Suisse, FBR Capital Markets and UBS. More recently, Brett has focused on project development in the resources industry, having founded and funded a number of Australian resource companies including DEI Ltd, Signature Gold Ltd, Chrysos Corporation Limited and Tellus Holdings Ltd. Brett currently heads up the joint venture partner of Agripower Australia Limited, a private equity backed industrial minerals company focused on silicon products. Agripower is one of Australia's largest industrial minerals companies, with an extensive R&D programme and global distribution network, and has a mining, processing and export operation in Queensland proximate to the Tectonic's projects. Brett holds an undergraduate degree in Economics and Accounting from the University of Cape Town, an MBA from Duke University and is a CFA charterholder. Brett has international finance experience as a senior investment banker with UBS and Credit Suisse in London, New York and Sydney. He was appointed a Director of the Company in 2015.

### **Sam Quinn – Executive Director and Company Secretary**

Sam is a corporate lawyer with over 10 years' experience in the natural resources sector, in both legal counsel and executive management positions. Sam is currently the Director of Corporate Finance and Legal Counsel for the Dragon Group, a London-based natural resources venture capital firm, a Non-Executive Director of AIM-quoted Red Rock Resources plc, a natural resource development company, and a Non-Executive Director of LSE standard listed Emmerson plc. During time spent in these roles, he has gained significant experience in the administration, operation, financing and promotion of natural resource companies. Prior to working in the mining sector, Sam worked as a corporate lawyer for Jackson McDonald Barristers & Solicitors in Perth, Western Australia and for Nabarro LLP in London. He graduated from the University of Western Australia in 1999 with a Bachelor of Laws and Bachelor of Arts and is a qualified lawyer in Western Australia and in England & Wales. Sam was appointed as Company Secretary to the company in June 2015 and became a Director in June 2017.

**Dennis Edmonds - Non-Executive Director**

Dennis has a wealth of commercial and corporate experience in southern Africa, having practiced as a corporate solicitor in South Africa - and subsequently in the United Kingdom, specialising in structuring and executing corporate transactions. Dennis has also been employed at board level in the investment banking and venture capital industries. Over the past 15 years he has been a Director of public and private companies, including those operating within the mineral resources sectors in emerging markets. Most recently, Dennis was the Executive Chairman of AIM-quoted Alien Metals Limited, a company with a portfolio of mineral assets in South America and is currently Non-Executive Chairman of Pathfinder Minerals PLC as well as being Co-Chief Executive Officer of Kazera Global Investments PLC. He was appointed a Director of the Company in 2020.

**Senior Management****Peter Prentice – Director of Signature Gold Ltd**

Peter has extensive management experience in developing resource projects in Australia and internationally, including gold, uranium, copper, tungsten, base metals and industrial minerals. He has also had international banking experience, based in London for one of the world's largest project financing banking groups. Peter was the founder and Managing Director of Hargraves Resources, a very successful gold mining business which was listed on the ASX and sold to a large international gold company. Following the sale of Hargraves Resources, he acquired the cornerstone asset of the Signature portfolio, Mt. Cassidy. Peter is Managing Director of the Agripower Australia Ltd group of companies, a private equity backed business that is involved in environmental science and agriculture. Peter has read in and completed studies in Mathematics and Engineering Science – Mining.

**Jon Robbeson – General Manager of Signature Gold Ltd and Director of Whale Head Minerals Pty Ltd.**

Jon is General Manager for Signature Gold. He has previously held senior technical roles in AngloGold Ashanti and Perilya Ltd. and brings with him extensive international exploration, mining operational and risk management experience. He specialises in integrated project development and has an in-depth knowledge of leading projects from exploration stage through feasibility, development, construction, commissioning and into operation.

Jonathan holds a B.Sc. Honours (Geology) from Rhodes University; a Master's degree in Economic Geology from the University of Tasmania, and a Masters of Mining Engineering from the University of New South Wales and is reading an MBA through the Australian Graduate School of Management. He is a member of AusIMM and the Australian Institute of Company Directors. Jonathan is a Competent Person as defined by the 2012 JORC Code for Mineral Resource and Ore Reserve Estimation for various precious, base metal and industrial mineral deposits.

**Dr James Yaxley – Exploration Manager**

Jim has exploration and project development experience starting in the Kalgoorlie gold fields in the 1990's and then progressing to project lead with Ivanhoe, BHP and Kagara in copper, gold and metals. He has been employed by Signature for the last two years. Jim completed his PhD in Hydrochemistry at the Queensland University of Technology, an honour that will be conferred before year end.

**Anne Adaley – Chief Financial Officer of the Group**

Anne has extensive experience in the resources sector, having held senior management roles with a number of listed public Australian exploration and mining companies over the last 25 years. She has also spent more than a decade as Company Secretary for several listed public companies. Anne is a qualified accountant and principal of Australian Mining Corporate and Administrative Services Pty Ltd (AMCAS) which provides Chief Financial Officer and Company Secretarial function and support including accounting, financial management and administrative services on a consulting basis to public listed and private companies as well as unlisted and pre-IPO companies.

## Forecasts

Year End 30 June (000s '£)	FY 2019	FY2020	FY 2021e	FY 2022e
Revenue from continuing operations	24	295	-	-
Expenses from continuing operations:				
Accounting and audit fees	(89)	(60)	(60)	(65)
Administration and office costs	(27)	(10)	(15)	(20)
Corporate costs	(97)	(71)	(70)	(70)
Amortisation and depreciation	(1)	(2)	-	-
Employee benefits, management fees and on costs	(77)	6	10	10
Exploration and tenement costs	(30)	(10)	(10)	(10)
Insurance	(17)	(2)	(22)	(25)
Share based payments	-	-	(139)	-
Legal expenses	-	-	-	-
Impairment of exploration costs	(704)	-	-	-
Bad debt exposure	(64)	-	-	-
Business development costs	-	(9)	-	-
Income from cash generative projects			300	1,140
Other expenses	(39)	(5)	-	-
Net fair value gain on financial assets at fair value through profit and loss	-	78	130	-
<b>Profit/(loss) from continuing operations before income tax</b>	<b>(1,119)</b>	<b>208</b>	<b>124</b>	<b>960</b>
Income tax benefit	326	149	200	250
<b>Profit/(loss) for the year from continuing operations</b>	<b>(793)</b>	<b>357</b>	<b>324</b>	<b>1,210</b>
<b>Discontinued operations</b>				
(Loss) for the year from discontinued operations	(32)	(74)	-	-
<b>Profit/(loss) for the year attributable to the Company</b>	<b>(824)</b>	<b>283</b>	<b>324</b>	<b>1,210</b>
<b>Other comprehensive income:</b>				
Items that may be subsequently reclassified to profit and loss:				
Exchange differences on translation of foreign subsidiaries	(34)	17	16	-
<b>Total comprehensive profit/(loss) for the year</b>	<b>(859)</b>	<b>300</b>	<b>340</b>	<b>1,210</b>

### Earnings per share attributable to owners of the company:

Basic and diluted (pence per share)				
From continuing operations	(0.12)	0.04	0.04	0.12
Weighted average number of shares	688,357,267	697,562,746	834,901,930	1,024,108,188
Total shares plus warrants and options	687,562,746	1,044,906,905	1,124,583,188	1,124,583,188

Source: Company/Align Research

We update coverage of Tectonic Gold with forecasts for the years ending 30<sup>th</sup> June 2021 and 2022. In 2021, the profit share from 10% interest in the alluvial diamond project in South Africa is estimated at £0.3 million, shown under income from cash generative projects. Profit from continuing operations before tax are estimated at £0.124 million, which after an income tax benefit of £0.2 million results in profit for the year after tax from continuing operations of £0.324 million. Earnings per share is determined to be 0.04p.

In the year ending 30<sup>th</sup> June 2022, income from cash generative projects is forecast to rise to £1.14 million with the start of the HMS operations in South Africa as well as the alluvial gold operation at Mt Cassidy. The profit from continuing operations before tax comes out at £0.906 million, and after a tax benefit of £0.25 million, the total comprehensive loss for the year comes out at £1.21 million with earnings per share of 0.12p.

## Valuation

To determine a valuation for Tectonic and a target price which makes sense in the current market, we have looked at both the gold exploration interests in Australia as well as the incoming generating projects. Firstly, at Biloela, we have determined a valuation for the scale of the resource which is fast becoming apparent at Specimen Hill and the short term resource target at Last Chance. Secondly, we have adopted a valuation for the Rockhampton, Clermont and Sarina projects in NE Queensland provided by independent expert HLB Mann Judd. Thirdly, an NPV valuation has been determined for the income generating projects in South Africa and Australia.

### Biloela

**Our valuation has sought to ascertain what Tectonic might be worth in the future if certain milestones, including resource definition targets, are achieved, based on the CPR, expert reports and discussions with management.** Over the past nine years, Signature has painstakingly been working at assembling a portfolio of compelling gold exploration and developing opportunities which are seen to offer the potential for the definition of a mineral resource, each with more than 3 million ounces of gold.

Although Signature had no JORC-compliant resources, the company had completed in-depth internal resource modelling at the two lead prospects which were more than over 230,000 ounces each, that is 233,000 ounces at Specimen Hill Main Lodes and 230,000 ounces at the Last Chance Main Lodes. However, the numbers for Specimen Hill would look to be eclipsed by recent work.

In this update report we have determined a valuation for the increase in the size of the resource anticipated to be delineated in the short-term at Specimen Hill following the recent drilling and analysis, along with a valuation for the short-term resource target at Last Chance. This figure has been determined by reference to the resource inventory that has been modelled internally by the company plus the immediate resource definition targets and the likely true scale of the ultimate potential. In addition, also taken into consideration has been available infrastructure in the vicinity, along with the presence of operating gold mines and majors in the surrounding area.

At Specimen Hill, the team now well and truly see multi-million ounce potential. They have done a little bit of modelling, but the problem is you start putting shapes around things at an early stage you can miss the bigger picture. Just looking at the growing scale that is becoming obvious, along the 4km strike length could be easily looking at 1.6Moz and that does not include the porphyry. Actually, a bit more work might extend this to potentially an 8km strike length as there is a very interesting area to the south with very similar anomalies, although not much work has been done as this is rough country.

Tectonic seems to be keeping tight-lipped about that sort of additional potential. On the other side of the Mt Morgan Lithospheric Fracture Zone there is Maxwellton, which is highly prospective and of course so is Last Chance to the north. There also looks to be another Specimen Hill and seems the real scope to replicate the same structures on the property over and over again. The team has done a lot of work on a 16km<sup>2</sup> area but needs to get a world renowned field mapper out there.

With Specimen Hill now on the map as a discovery, the team plans to follow the mineralisation down to the high-grade material. Once again using all the available technology to put the drill holes in the right place. Using smart technology provided by the likes of CODES has added tremendous value. Working with CODES has given Tectonic access to world renowned geophysicists and scientists as well as state-of-the-art laboratories. Having been rained off, the drilling programme is about to be recommenced. Now 6 holes are planned for 1,205m, which involves some highly attractive drill targets, all being designed to result in a maiden JORC-compliant resource.

**On the back of this analysis, to value Tectonic's resources at Biloela we have chosen to use the 1.6 million ounce figure for Specimen Hill, which we have risked by 50% to remain conservative, giving 800,000oz. Plus the 230,000 ounces at Last Chance gives a total of 1.03 million ounces.** The company believes that the requisite infill drilling and testing of extensions to Main Lodes would allow the evaluation of a JORC definable resource if it is to be done properly. **In this jurisdiction, standard value in the ground is currently running at some A\$110 – 120 per ounce (US\$81-88/oz).**

Tectonic is seeking to rapidly move its IRGS discoveries at Specimen Hill and Last Chance from exploration to the feasibility stage and then sell these projects or de-risk them in joint venture deals with majors. We are confident that the M&A valuation figure provides a reliable benchmark price per ounce on which to derive a valuation that Tectonic's first projects might attract going forward. **Between these two projects we have estimated 1,030,000 ounces, which at A\$115/oz suggests a valuation of A\$118.45 million.**

### **Rockhampton**

In valuing the other project in NE Queensland, we have adopted a valuation provided by Independent Expert HLB Mann Judd. **We know that this is highly conservative as this analysis was carried out when the gold price in Australian dollar terms was around a third less than it is today.** This all dates back to a Scheme of Arrangement document which provided the information to allow shareholders in Signature Gold to make the decision to accept the RTO into Tectonic Gold. It provided two valuations for Signature. One was by Independent Expert HLB Mann Judd, which valued Signature Gold as a company in its entirety and in turn was largely based on a valuation by GeoDiscovery Group of the four projects.

Minerals exploration, discovery and management company GeoDiscovery Group employed two valuation methods. Firstly, the multiple of exploration expenditure method (MEE) which uses a prospectively enhancement multiplier (PEM) to multiply the exploration expenditure by a factor between 0.5 to 3.0 depending on the degree that exploration has created value (or destroyed value) in line with the VALMIN code. Secondly, a comparable market value method which relies on the comparison of Signature's in-ground resources.

Fair value market valuation analysis based on multiples of the exploration expenditures determined values for Rockhampton ranging from A\$2.699 million (low) to A\$2.883 million (high) with A\$2.791 million being the preferred value, which is used in our SOTP table.

### **Income generation projects**

**The diamond project in South Africa is now exhibiting a steadily rising revenue. Also in South Africa, the HMS projects look to be going into operation shortly.** On top of these, there is also now the alluvial project at Mt Cassidy. The management team sees an annual income of A\$2 million coming into the company quite soon from these three interests. We have modelled this over a 10-year period using a 12% discount factor which gives a valuation of A\$27.52 million. Although using a discount factor of 12% already risks the project compared to using the normally applied 5%, 8% or 10% discount factors, to remain conservative we have further risked this figure by 50% as only one of these three projects is as yet in production. On this basis a figure of A\$13.76 million has been used in our further analysis.

**Total**
**Sum-of-the-parts valuation**

Assets	Valuation	
	A\$ million	£ million
Biloela (Specimen Hill and Last Chance)	118.45	63.68
Rockhampton	2.79	1.50
Income generating projects	<b>13.76</b>	<b>7.40</b>
<b>Sub-total</b>	<b>A\$135.00m</b>	<b>£72.58m</b>
Per share basis		
Currently issued shares (940,421,826)		<b>7.70p</b>
Funds to be received from conversion of options and warrants		<b>£2.11m</b>
<b>Total</b>		<b>£74.70m</b>
Fully diluted (1,124,583,188)		<b>6.60p</b>

Source: Align Research

Based on our model, our sum-of-the-parts valuation comes out at A\$135.00 million or £72.58 million. Using the current number of shares in issue (940,421,826) suggests a per share valuation of 7.70p per share. **On a fully diluted basis (1,124,583,188), the valuation per share comes out at 6.60p - which we have chosen to adopt as our target price.**

## Conclusion

Tectonic is a highly compelling stock to buy in our view, with the share price still lying at an unwarranted material discount to our increasing valuation. **It is an unusual play which is highly leveraged to the gold price but has already been de-risked.** The company is a pioneer in the IRGS space in Australia and as such has first mover advantage which has allowed the team to take the first pick of tenements that have the best potential for 3 million ounce plus gold resources to be defined.

Tectonic has a nice clear corporate strategy to develop its Australian gold assets. Investors should really start to get excited by the fact that in the Specimen Hill Area there is more than one deposit/style consisting of Au/Ag and Cu/Au systems resulting from multi-phase hydrothermal events. The team reckons that the architecture of Main Gold sheet system extension is similar to the Kupol mine (>2.5 mozs Au & 31.6 mozs Ag) in the Okhotsk-Chukotka volcanogenic belt, Russia, which is owned by Kinross Gold.

**Looking at some of the recent success stories where gold juniors have negotiated impressive deals with major to joint venture projects, an important lesson seems to be to open up your books to potential partners at an early stage.** There have been site visits a plenty as relations have already been developed with major potential joint venture partners. Truth is that the majors are less anxious about a JORC-compliant resource but really will want to see evidence of a large-scale system and the identification of a large heat source. With Rio Tinto already taking acreage next door at Bileola, there seems to be plenty of interest in the compelling project opportunities that Tectonic is beginning to generate.

**It looks as though the market will not be disappointed by the coming news flow, with the following events on the cards - further drilling at Specimen Hill where every hole last year was a winner, a follow up at Mt Cassidy, announcement of a joint venture in the gold space to drill out Specimen Hill and drilling at Last Chance to follow the gold holes down much deeper.** That's not to mention the sort of the alluvial mining at Mt Cassidy and probably some further development concerning the HMS project in South Africa where there is the scope to create a quite sizeable project. Regular updates from the Australian projects and also about the growing share of earnings from the three cash generative mining ventures.

With all these expected developments, we look forward to being given the chance to update our target price as the company makes rapid progress over the next eighteen months. **Our coverage of Tectonic Gold is updated with a revised target price of 6.60p and a Conviction Buy stance.**

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