Intermin Resources Limited (IRC) – Profiting from its Small Mining Projects

- Intermin Resources Ltd (IRC) intends to self-fund its exploration through the development of a number of small mining projects (SMPs) in the Kalgoorlie to Menzies region of WA’s Eastern Goldfields, that are expected to be treated in various arrangements with nearby operating plants.

- IRC’s first SMP is Teal, which has achieved production and profitability in less than one year, with initial profit payments starting in May 2017. IRC applied an innovative approach to removing the ~35m pre-strip above the supergene ore zone blanket, involving a 75/25% profit share investment with a contractor. Ore is trucked to the Paddington plant in batches with the first revenue payment (~50% of 80% of the grade) made after 2 weeks and the revenue less costs settlement balance a further 6 weeks later.

- Average grades of the Teal batches appear to range from ~2.5g/t to possibly ~4.5g/t, with the first 5 batches totalling ~51kt @ ~3.0g/t (~5koz). Potentially higher grades may be achievable from the thicker, broader southern “half” as grade control had intercepts up to 375g/t, and the original resource model was top-cut at 20g/t. IRC has estimated that it expects to produce ~15 to 16koz @ an AIC of ~A$1030 to A$1090/oz from Teal Stage 1.

- The next SMP is currently expected to be Goongarrie Lady, through one of 3 nearby plants (eg Davyhurst, Paddington). Apart from the infill of the current resource, there are a number of regional prospects that appear to have potential promise. However, like Menzies (see ERA’s September 2016 report on IRC) they come under the EGS JV, although EGS has stated that Menzies may form part of its 2nd Menzies-Ida production hub, and made the part 2 payment of the placement for 6.25m IRC shares at 12c for $750k on 1 June 2017.

- Intermin has a number of mostly brownfields exploration possibilities that could follow on from Goongarrie Lady such as the Jacques-Peyes extension, although a number of the newer areas could have greater upside potential such as Baden Powell, Olympia, the many prospects within the Blister Dam tenement package, or Anthill on the Zuleika Shear.

- IRC has a number of JVs and royalty streams that could provide additional cashflow or additional scenarios, such as the Janet Ivy 50c/t production royalty, with Paddington having recommenced mining there (based on the fresh low, medium & high grade site stockpiles near the pit). The royalty applies to any form of treatment, ie by plant or heap-leach.

Other Key Points:

- IRC intends to increase exploration amongst its various projects and prospects using its generated cashflow.

- Exploitation of one of the newer prospects appears to be more likely than the Stage 2 treatment of Teal’s deeper arsenic refractory sulphide as it would require a different treatment partner than Paddington, and has yet to be arranged.

- Evolution has started exploring the Binduli JV with IRC, while EGS was expected to start exploring in the Menzies area in 2H 2017, given its proposed 2nd hub timetable.

- Infrastructure appears to be very good for IRC's Projects, with established dirt haul & main roads, treatment plants and proximity to either Kalgoorlie or Menzies.
Corporate Overview

This is ERA’s first updated report on Intermin Resources Ltd (IRC), following our initial report dated 20 September 2016 (which is available on www.intermin.com.au or www.eagleres.com.au). Intermin has not made any further issues or raisings in the period since September 2016, apart from the part 2 placement of 6.25m shares at 12c to EGS for $750k on 1 June 2017, and using its shares to acquire prospects such as 60k shares for Yarmony in November 2016, 0.5m shares for Kanowna North in January 2017, and $0.3m cash for Anthill, which with exercised options has resulted in the current 206.7m fpo shares in issue. There are also 16.3m options that are in-the-money at 7.5c to be paid by 30 June 2017, with a further 5.0m management options also in-the-money at 7.5c by 31 July 2018, (out of a total of 46.7m options).

For this report, ERA revisited Teal and Goongarrie Lady, plus some of the new prospects for potential SMPs as shown in Figures 1a & 1b: being Baden Powell, Olympia, 5 of the ~8 prospects at Blister Dam, Anthill, Janet Ivy South, the possible Jacques-Peyes link & some old workings west of Goongarrie Lady.

Intermin has a number of JVs in which other companies are farming-in as shown in “blue” in Figure 1a, being the Binduli JV with Evolution in which EVN started exploration drilling in April 2017, focusing on an areas SE of Teal, as part of the $4.5m earn-in by 2020 for 70% of the area. While the farm-in by EGS over Menzies and Goongarrie relates to expenditure of $5.5m by 2022 to earn 65%. EGS has stated that Menzies may form part of their second hub covering the Menzies – Ida region, and to do that EGS logically (ERA view) could need to start exploring at Menzies in the second half of 2017.

The Lehmans JV relates to a JV with Saracen over a 10% interest, free-carried to a DTM in some tenements near the Thunderbox Gold Mine. Often overlooked is the Janet Ivy royalty of 50c/t for any material processed (by the current owner – Norton/Zijin’s Paddington) from the tenement (which hence involves through the plant or low grade to the heap leach). The ground is hard (porphyry) but Norton were clearly mining it based on the stockpiles (Low, Medium and High Grade) near the pit (seen from the haul road bypass). Reserves have been estimated by IRC as ~1.5mt plus another ~8.5mt in low grade resources, (which could potentially become ~$250k to $500kpa).

Intermin also has two non-core non-gold jvs, being Nanadie Well with Mithril (MTH) with a current resource of 151ktCu & 74kozAu, in which MTH are spending $4m by 2021 to earn 75%. The prospect also has apparently some Cu-Ni-PGE targets that were expected to be drilled by MTH in 2017, and on 19 June, MTH reported an intersection of 30m of disseminated to massive chalcopyrite (Cu) from 248m. The other JV is in Richmond (QLD) with unlisted AXF Resources who are spending $6m by 2021 to earn a 75% interest in a Vanadium-Moly resource that apparently has metallurgical issues, with bulk samples being sent to China for processing testwork. And there is still that historic RWD Minerals shareholding.

Teal Mining Alliance and Area

Intermin’s main project has been the Teal Mining Alliance in which an innovative financing approach was taken because the orebody is essentially a supergene blanket under ~35m of cover and which becomes low recovery refractory in the sulphide. Financing was hence required for the ~35m pre-stripe, and IRC was able to enter into a profit share with a local earthmoving contractor to mine at close to cost, such that the contractor invested $2.1m, followed by $2.1m by IRC & then some extra costs for wall repair.

The ore is transported to and treated by Paddington who pre-pay after 2 weeks : 50% of the check-sampled assay grade (at Paddington also supervised by IRC) x 80% of the spot gold price at the time that the last delivery of the batch occurs x a 90% recovery. With the final profit paid 6 weeks’ later being 100% x the actual recovery (possibly 93% or 94%), less the prepaid revenue, less the transport and processing costs. The initial revenues / profits repay the contractor’s $2.1m, then IRC’s $2.1m loan, then IRC’s exploration cost, then the extra cost split, then the profit is split 25% to the contractor and 75% to IRC.
The initial Teal JV just covered Stage 1 of the open-cut being mining the northern ~half, followed by the southern ~half as shown in Figure 2a. Fig 2a shows the grade control results at the time of our visit, with no visually clear ore shoot pattern apart from the blanket-like supergene mineralisation. There are some very high grade intercepts in the grade control in the south up to ~375g/t as shown in Fig 2b.

Figure 2. Schematic Plan & Section of the Teal Pit’s South End, and Grade Control Cross-Sections of Teal
a. Schematic Plan & Section of the Teal Pit’s South End  
   b. Grade Control Cross-Sections through Teal

The original plan was to mine the oxide and treat it at Paddington, then mine the deeper arsenic-refractory sulphide, processing perhaps through NST’s Kanowna Belle or KCGM’s Fimiston plant. However, no agreement has yet been made. The mineralisation appears to be very difficult (ERA view) to identify in the almost vertical rocks shown inset in Figure 3a, and is apparently associated with the yellowish/limonite honeycomb forms in the clayey rock, that actually require some explosive to achieve fragmentation.

Figure 3. Views of the Teal Pit Looking South and North  
a. View of Teal Pit Looking South  
b. View of the Teal Pit Looking North

Fortunately the southern end of the Teal pit has a greater rock strength of 10 (mafic basalt/gabbro would be ~200) away from the wall foot’s 1 as shown in Figure 3b on the weak eastern side of the pit, so it is currently intended to strip-mine the pit across from SW to NE, and hence place the least strain on the eastern wall. Despite the slips, the oxide mined in the north was expected to still be ~60kt to 65kt, along with higher grade because the intersected higher grades were conservatively top-cut at 20g/t, with the first batch at 2.7g/t and the batch at the time of our visit being ~4.2g/t on the stockpile near Teal.

Figure 4. Geological Plan of Teal to Peyes to Jacques, & Long Section of Teal to Peyes, View & IP Image  
a. Geological Plan of Teal to Peyes and Jacques  
b. Long Section of Teal to Peyes, with Peyes View & IP Image

Some exploration has occurred at Peyes / Jacques with a view to linking them with Teal as shown in Figure 4a, and there are shoot projections in the long section and possible links in the IP Image inset in Figure 4b. However, the metallurgy is thought to be similar to Teal (ie refractory sulphide) and have similar ~35m cover. Since no refractory treatment arrangement has yet been made, perhaps the exploration dollar (ERA view) could generate higher value elsewhere first.
Goongarrie Lady and Goongarrie

Goongarrie Lady is located ~80km N of Kalgoorlie or ~40km S of Menzies, immediately east of the sealed highway to Menzies, and ~5km south of the clustered mining centre of Goongarrie shown in Figure 5a.

Figure 5. IRC’s Goongarrie Prospect Area, and Scoping Plan and 3d Schematic Model of Goongarrie Lady

The scoping study completed in April 2017, envisaged mining a shallow open-cut as shown in Figure 5b, producing 142kt @ 3.4g/t for 15.6koz over ~7 months, resulting in ~14.7koz based on a 94% recovery at an AIC of <A$1100/oz for ->$7m at A$1600/oz, for a funding requirement of ~<$1.6m. The ore was expected to probably be toll treated at either Paddington or EGS’ Davyhurst plant. The feasibility study for Goongarrie Lady was expected to be completed in SQ 2017, with mining starting possibly in DQ 2017.

Figure 6. Cross-Section through Goongarrie Lady, and View to Southern End of Goongarrie Lady pit

The geology looks fairly straightforward with the mineralisation dipping west both in section in Figure 6a and visually in Figure 6b (the white discolouration in Figures 6b and 7a is due to gypsum crystals on the under-water surface). There are some material intercepts below the open-cut of 12m @ 9.9/t in Figure 6a, because it was left after the pit historically flooded due to a major rain event. There also appears to be a second parallel structure to the east as shown by the stub in the 3d pit shell design, and there are possible extensions on strike at each end of the pit as inferred in the model shown inset in Figure 5b.

Figure 7. View of Goongarrie Lady and Cross-Structure, & Views of old workings at/near Goongarrie NW

The position of the stub coincides with a cross-structure in the wall of the open-cut with a number of flats coming off it as shown in Figure 7a. The terms of the exclusion from the JV entitle IRC to have 100% of the first 25koz. As part of the visit ERA looked at the old workings west of the hill adjacent to Goongarrie Lady (Goongarrie NW?) and containing old workings, as shown in Figure 7b. There appeared to be no drillholes and at least 3 parallel veins striking NW/SE that had been mined historically. However, this area of old workings is contained within the JV that EGS is farming-in to earn 65%, restricting IRC exploration.
Other Exploration Prospects

Intermin has a number of exploration prospects as shown by the red tenement areas in Figures 1a and 1b, of which ERA visited what was currently thought to be the most prospective and which were expected to possibly report (depending on approvals etc) by: SQ2017 (Olympia and Anthill), DQ2017 : (Blister Dam – which is really a project containing ~9 prospect areas), MQ 2018 (Baden Powell & Janet Ivy South). The other prospects not visited by ERA are also expected to report results during the coming year to JQ 2018.

Olympia

Olympia is a greenfields exploration target located south on strike from the ~1.4moz refractory Aphrodite deposit. Olympia has been identified through geochem with ~5 distinct anomalies as shown in Figure 8a. The area itself has been broadly worked with signs of historic alluvials and dry-blowing as shown in Figure 8b. With ppb values of ~70 and a few >100 (peak of 169ppbAu), calcrete & laterite, it may have potential.

Anthill

Anthill is an old prospect that has baffled a few exploration/mining company geologists. It lies west of the Zuleika shear as shown in Figure 1b, NW on strike from Bullant & contains a broad 2004 JORC resource of 5mt @ 1g/t due to some high grade intercepts but uncertain geology (based on gold in Black Flag sediments adjacent to basalt although the vg that ERA saw in diamond core in Figure 10a was in quartz). As an area, its northern section has been extensively scraped and prospected as shown in Figure 9a, although the underlying anomaly has been sparsely tested as shown in Figure 9b with most of the drilling over the south anomaly. However, as seen inset in Figure 10a, the actual strike of the mineralisation has not been clearly determined, possibly because a fold passes through the tenement as shown in the geological plan. Further east there is an old pit that strikes NNW/SSE but that aligns with the geology on that side. IRC intend to grid pattern drill the south anomaly and may try to repeat the director’s hole with its vg of 145g/t.

Figure 8. Geochem Anomalies and Geology Plan of Olympia, & Views of Minor old Worked Areas at Olympia

Figure 9. Views of Anthill’s Northern Area, and Aeromag of Anthill

Figure 10. Geological Plan and Historical Drilling at Anthill, and Geological Plan incl Anthill and Blister Dam
Blister Dam
You only appreciate the size and possible content of some of the tenements when travelling around them take Blister Dam as shown in Figures 1b and 11a, which straddles both the Zuleika and Kunanalling shear zones, and contains a number of prospects, of which ERA visited Blister Dam, Chadwin and Seven Seas.

Figure 11. Geological Plan of the Blister Dam Prospects, and Views of Blister Dam East Prospect
a. Geological Plan of the Blister Dam Prospects
b. Views of Blister Dam East Prospect

Blister Dam Prospect
Blister Dam East has the right prospective ingredients of catrock chips in the foreground of Figure 11b, Black Flag black shale sediments further ahead, light green basalt, calcrete, possible BIF, and a vast cleared prospected area in the distance (shown closer inset in the Figure). Blister Dam itself has a NE/SW cross-structure that can be projected off the plan shown in Figure 11a to the historical Thiel Well workings (which ERA did not visit). It had a historical intercept of ~14m @ 2.9g/t at Figure 12a, but apparently drillholes 20m either side of the hole failed to intersect anything. However, they were searching for a NNE/SSW structure parallel to the Zuleika shear, whereas instead it may strike NE/SW to Thiel.

Figure 12. View of the Blister Dam Prospect, and Views of Chadwin East Prospect
a. View of the Blister Dam Prospect
b. Views of Chadwin East Prospect

Chadwin Prospect
There are some old workings striking NW/SE at Chadwin East, however, the spoil areas appear to be low (ie not sunk very deep). As shown in Figure 12b greyish quartz veins (the greyish colour is often a good indicator) were followed, but in this case there are a mix of thin & blocky in the almost vertical sediments. There has been some drilling which apparently had intercepts of ~3.5g/t & 11g/t in the clump of 4 holes.

Figure 13. Views of Old Workings at the Seven Seas Prospect, and Views of the Seven Seas Prospect
a. Views of Old Workings at the Seven Seas Prospect
b. Views of the Seven Seas Prospect
Seven Seas Prospect
The Seven Seas Prospect is conceptually in line/on strike of NST’s Carbine (~5km further SE) as shown in Figure 10b, and has old workings that have little cover, consisting of a series of near vertical veins that were partly stope and which strike NW/SE as shown in Figure 13a. Despite the obvious structure, little drilling appeared to have occurred to try and intersect the structure mined. There were some vertical drillholes, but being vertical probably missed most of the possible mineralisation. The area itself is extensively littered with iron-rich laterite, & some old drillholes have black shale fragments as in Fig 13b.

Baden Powell Prospect
Two other exploration prospects ERA visited were Baden Powell and Janet Ivy South which are both shown in Figure 1b and currently scheduled for exploration in MQ 2018. Of the prospects, ERA thought that Baden Powell was very interesting, because the historically mined mineralisation appears to have followed a NW/SE structure that has been influenced by a stockwork under a particular bounding quartz-vein structure that changes between the north & south end of the pit as shown in Figure 14a. Hence the north near surface was mostly barren low grade, with better intersections possibly plunging north at depth. However, south and SW where the vein traverses off out of the pit there are no signs of exploration drilling. Since the bounding vein dips west there, historical drilling to the west would probably have missed it, especially if it strikes NE/SW as shown by the historical drilling plan mostly to the SW in Figure 14b. Further SE on strike of the pit were some historical minor old workings, prospecting and costeaning.

Janet Ivy South Prospect
The Janet Ivy South Prospect is a recent acquisition for a small amount of IRC shares, and lies SE on strike from Janet Ivy. The prospect like Janet Ivy is contained within hard porphyrys, and there are some historical overgrown old workings that strike along with veining in the area NE/SW as shown in Figure 15a, compared to the usual NW/SE. Historical drilling has mostly been to the NE, looking for NW/SE mineralisation, however, there are also some old workings off-lease to the north that also clearly strike and have been stope NE/SW. IRC intend to drill, checking for possible NE/SW & NW/SE mineralisation. A possible drawback for Janet Ivy South may be its too close proximity to infrastructure shown in Fig 15a.

Exploration Upside Potential
Although Intermin does have a number of other exploration prospects as shown in Figures 1a and 1b, what should not be overlooked are its Menzies tenements in which EGS (Eastern Goldfields) is farming-in & expected to start exploration in 2H 2017, especially given that historical g/t gold grade intersections were often double digit, (anything less than that was ignored as too low or classified as “not typical Menzies”). The tenements are extensive and have been covered in more detail in ERA’s September 2017 report on Intermin (available on www.eagleres.com.au), and broadly consist of those shown in Figure 15b.
Financial Considerations and Upside Potential

With Teal now in production and receiving revenue from Norton/Zijin due to processing at Paddington, IRC expect to recoup its initial $2.1m loan, its ~$2.2m exploration cost, the 50% extra spent on the wall remediation and then 75% of the remaining profit. IRC had expected to earn more from Teal, however, the refractory sulphide ore (after the Stage 1 North and South oxide/transition have been treated at Paddington) needs to be treated in a different plant than Paddington – possibly Kanowna Belle or KCGM’s Fimiston – but probably later in IRC’s mine life.

The scoping study on Goongarrie Lady inferred a possible outlay of ~$1.6m, which IRC should be capable of providing based on the expected returns from Teal (and given IRC’s net cash of ~$1.9m at 31 March 2017, expected inflow of ~$1.22m from the listed in-the-money at 7.5c option conversion by 30 Jun 2017, and expected expense of ~$2m in JQ 2017). The cashflow from IRC’s 100% of Goongarrie Lady has been estimated to be >$7m at a gold price of A$1600/oz.

There are a number of exploration targets, some of which are included in this report, and any of which could result in a discovery, further small mining project, and influence IRC’s share price.

Management

Board of Directors

Peter Bilbe – Non-Executive Chairman since 2016. Peter is a mining engineer with over 40 years’ experience in the Australian and International mining industry at the operating, corporate and business level, with comprehensive operational experience. Peter has held a number of senior positions and is currently Non-Exec Chairman of IGO.

Jon Price – Managing Director since 2016. Jon is a metallurgist and mineral economist with over 25 years’ experience in WA and overseas in all aspects of mining from finance, exploration, development and construction. Jon was GM at Paddington and St Ives, and was the founding MD of Phoenix Gold.

Lorry Hughes - Executive Director (Business Development) since 2015. Lorry is a geologist with over 20 years’ experience and has held a number of senior management positions on mining and development projects with major companies such as RIO and Barrick. Lorry was previously MD & CEO of South Boulder Mines Ltd.

Peter Hunt – Non-Executive Director (since inception, ie over 20 years). Peter is a Chartered Accountant who holds and has held a number of directorships in listed and unlisted companies.

Bianca Taveira - Company Secretary since 2010 - Bianca has been providing administration and secretarial services to many listed and unlisted public companies for 18 years.

Senior Management

David O’Farrell - Exploration Manager since 2012. David is a geologist with over 25 years’ experience in all aspects of exploration, development and mining in Australia and overseas, having worked on many operations and projects.

Grant Haywood - Mining Manager since 2016. Grant is a mining engineer with over 25 years’ experience in underground and open-cut mining operations, having managed projects from feasibility study through to operations mostly in the WA goldfields for junior and multi-national gold mining companies.

Chart of Intermin Resources Limited (June 2016 to June 2017) (Source : www.yahoo.com)

IRC’s share price has drifted lower along with a number of the junior gold stocks...

...and as been finding support at about 9c to 9.5c...

...despite its positive outlook and expected improving cashflows

Disclosure

Intermin Resources Limited commissioned Keith Goode (who is a Financial Services Representative with Taylor Collison Ltd ACN 008 172 450, and is a consultant with Eagle Research Advisory Pty Ltd ACN 098 051 677) to compile this report, for which Eagle Research Advisory Pty Ltd has received a consultancy fee. At the date of this report Keith Goode and his associates held interests in shares issued by Intermin Resources Limited. At the date of this report, Taylor Collison Limited or their associates within the meaning of the Corporations Act, may hold interests in shares issued by Intermin Resources Limited.

Disclaimer

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