

Dear All (7 October 2021)

Herewith our report on **Alto Metals Ltd (AME)** rating it as a **BUY** at **8.6c** with a target of **>20c**

(Note 1 : our/ERA report contains a large number of figures. When reports are posted on our website : www.eagleres.com.au, then the figures are also attached separately and can be viewed in an enlarged often better / higher resolution format. All the figures and the report can be downloaded separately once they are on the website).

Note 2 : this is a report based on historical visits, available information and recent ASX reports, plus my/ERAs RED5 report (<http://www.eagleres.com.au/reports/item/july-2019-red-5-ltd>) – all publicly available. A site visit by ERA has not been possible due to Covid restrictions as I am based in NSW, however, I have visited Alto's Sandstone Area for the reports available on the ERA website, dated July 2016, 2017 & 2018.

Note 3: for those who think they may have dropped off the mailing list, this Alto report is the latest / next one after Kalamazoo / \$KZR in Sept 2020. With Covid, I effectively moved into semi-retirement at the end of March 2020 and put the SMSF into Pension Fund mode (I had said I would retire at the age of 70 which was December 2019). However, I make quite a few comments now on twitter (**under @eagleresa**) and for individual stocks a double search in twitter can be made eg "eagleresa \$AME" because in twitter stock exchange codes are \$code eg \$AME. Currently I have ~3,100 followers averaging ~300k views per month (it just needs a follower with a number of followers to retweet and whatever has been posted, spreads). I expect to possibly still write the occasional report per year, because I enjoy doing them.

Put simply Alto's granodiorites (Lord Nelson, Lord Henry and Bulchina of which Lord Nelson is currently the most advanced) appear to have a number of similarities (~8 similarities) to RED5's granodiorite – and I **only laterally "spotted" it because of visiting and writing ERA's RED5 KOTH report.**

RED5's KOTH has a granodiorite/cooked ultramafic contact with fractured higher grades – as does Lord Nelson (& Lord Henry & Bulchina).

Hence the title :

LN Granodiorite Appears to Have a Number of Similarities to RED5's KOTH

The 8 similarities between the LN and KOTH Granodiorites (which include similar higher grade, average grade, widths, ~95% recoveries, etc) are :

- Granodiorite contact that has cooked the ultramafic harder and become more competent.
- A fractured zone in the granodiorite in the (ultramafic) contact area, injected with mineralisation.
- Higher grades at undulations/ indentations in the granodiorite/ ultramafic contact (Figs 3b, 3c & 4a).
- Average long intersections and resources of ~1.9g/t.
- Higher grade ore shoots within the granodiorite.
- Higher grade lengths of ~ 3.5g/t, inferring the possibility of lower cost bulk stopes (**48m @ 3.4g/t in SRC423 and [5 Oct] 45m @ 3.2g/t in SRC432 at Lord Nelson** compared to KOTH Lemonwood 32kt @ 3.4g/t), and the possibility of over-reconciliation (KOTH ~11% to 14%, LN >40%).
- High recoveries of ~95% (eg Table 1 {KOTH} vs Table 4 {Sandstone}).
- Thickness of the mineable granodiorite resulting in low open-cut SRs (Strip ratios).

And there is an enhancement – AME's Sandstone Granodiorites (Lord Nelson, Lord Henry and Bulchina **appear to contain internal stacked higher grade lodes** – clearly identifiable in Lord Henry, but possibly also in Lord Nelson and Bulchina.

The key to where the higher grades are appears to be the indentations or undulations in the granodiorite / ultramafic contact as illustrated in Figure 3b and in the schematic model of Figures 4a and 3a of KOTH - and the location of the Orion Lode at Lord Nelson in Figures 2b and 3c on page 2 of the report.

Most granodiorites ERA has encountered have average grades **~0.8g/t to 1.2g/t, except for RED5's KOTH granodiorite with an ultramafic contact at ~1.9g/t**, eg p5 of ERAs RED5 July 2019 report [which resulted in the trial Lemonwood stope (**32kt@3.4g/t**), followed in November 2018 by the same hole reporting 330m @ 1.7g/t, plus 234m @ 2.0g/t (D0098) & 127m @ 1.9g/t (D0101)].

Historically, TRY mined **~0.5Moz in 3 granodiorite/ultramafic contact pits (now held by AME)**, being **Lord Nelson (1.4Mt @ 4.6g/t** for ~207koz [49% higher grade reconciliation]), **Lord Henry (0.4kt @ 3.6g/t** for ~48koz [43% higher grade]), & **Bulchina (2.0Mt @ 3.4g/t** [47% higher grade] for 219koz).

There is plenty of comparison detail in this ERA AME Report, however, the reality is if Alto's LN granodiorite has any similarity to even a portion of Red5's KOTH granodiorite, with **\$RED's MC at ~\$500M, \$AME appears to be significantly undervalued at a MC of only ~\$39M.**

And recently (5 October) AME reported the discovery of Juno extending the mineralisation under Lord Nelson to a **~1 km strike length.**

Alto expects to calculate an **upgraded resource by end Dec 2021 or early MQ 2022** (with 10 diamond holes and >100 RC holes still to be assayed. (Lord Nelson was last reported as at May 2020 & Lord Henry May 2017 – ie none of the intersections since then are in the current ore resource).

While we are on the subject of Alto's granodiorites and apart from a **number of double digit grades at Lord Henry** as shown in Figure 7a on page 4 of the report, **there's Bulchina :**

Ok, how many granodiorites have you encountered that have a triple digit grade intersection over 1m ? none ? - I haven't either – so how about a granodiorite that had 6 triple digit grades up to 600g/t (102, 123, 195, 238, 381 & 600g/t) on 2 sections and only 2 of those are possibly supergene (123g/t & 238g/t) – that's **Bulchina** – and not drilled down dip because it couldn't be treated in the oxide plant – and it still hasn't been drilled down dip – because there are too many targets – and hence **it has no ore resource.** It's also no wonder that with those grades, Bulchina over-reconciled by 155% on its gold production from 86koz expected **to 219koz achieved** – of which average **grades at 3.4g/t were 47% higher** than the expected average ore reserve grades of 2.1g/t.

However, the layout of this Alto report **focuses on ERA's perceived 4 areas of upside potential in Alto. :**

- 1. Recent intersections inferring the Lord Nelson granodiorite appears to have a number of **similarities with RED5's KOTH** granodiorite.
- 2. The V-shaped Alpha Domain showing encouraging intersections with **visible gold at Vanguard** through to the deeply weathered **Indomitable.**
- 3. A number of **significant large historical** mines that have **not been mined by open-cut**, and
- 4. Other Prospects : Possibly **underexplored East-West** striking mineralisation, and Bulchina etc.

So aside from Lord Nelson and Lord Henry, which lie on the eastern limb of the "V-shaped" Alpha Domain, **there's No 2 - The Western Limb of Vanguard and Indomitable :**

Alto has established that the **Vanguard Camp** shown in Figure 10a appears to consist of a number of NW/SE striking structures and has intersected visible gold in RC and diamond drilling in laminated quartz veins within a differentiated dolerite (often regarded as the cream of mineralised dolerites). There are many encouraging intersections shown in Figure 10a such as *4m @ 60.6g/t in SRC286*, however, none of these new intersections are in the current inferred resource of 850kt @ 1.8g/t because Vanguard was last reported in September 2018.

The laminated quartz veins are clearly shown in Figure 11a, with the RC visible gold specimen from SRC286 in Figure 11b. The visible gold results from SDD015 were still being assayed.

The Indomitable prospect is notable for its extreme ***depth of weathering to between ~80m to 150m below*** surface as shown in Figure 12b, along with its recent structural interpretation in Figure 12a, both of which were shown in August 2021 at Diggers, including ***many double-digit grades***.

Then there's No 3 - Significant Large Historical Gold Mines that have not been Open-cut

The Sandstone Goldfield would have to be *one of the very few WA goldfields not to have open-cuts over its significant historical gold mines*. At the "V" junction of the Alpha Domain between the eastern Lords limb, and western Indomitable to Vanguard limb, lies the historical mines of **Havilah and Maninga Marley** as shown in Figures 13a and 13b – on which there are no open-cuts (because the plant was an oxide plant that used contract crushers to feed the ore through a grizzly into the plant – ie it couldn't treat hard rock).

In Table 3, it appears that most companies would **probably have had an open-cut** over Havilah and Maninga Marley – but as Troy's plant could only treat oxide ore, they were not mined. In fact apart from part of Oroya, Troy / **\$TRY didn't mine the historical mines, it focused on new discoveries**. In a similar production category is **Hancocks** which consisted of numerous small mines for **its 39.3koz** total. Its location along with the major mine areas of Oroya & Hacks is shown in Fig 14a. The *mega mine open-cut of Kalgoorlie consisted of 100s of small mines* (largest Bonnie Lass 24.6kt / 18.5koz 1902-1922), & Coolgardie similarly – largest New Australasian ~4kt / 10.6koz 1897-1910). **In gold production, Sandstone was annually rated similar to Kalgoorlie** (which may have only been what is now KCGM, or included the regional large mines at Kanowna & Boorara).

The reason for the low gold production was that mining in that ~pre-WW1 era was mostly by **"hammer and tap"** which meant an advance of 30m or 100ft in hard ground could take 1 year (as seen in shaft sinking levels in yearly dates).

The locations of a number of Hancock's ~48 historic mines that were contained in ~82 separate leases are shown in Figure 14b, together with some of their grades ranging from 23g/t at Lady Seddon to a clump of 3 individual mines at ~41g/t and a high of ~160g/t at Lady Ellen.

However, the really sizeable historical mines in the Sandstone Goldfield were **Hacks and Oroya** as shown in Table 3, of which **Hacks** actually produced **more gold than the historic Bellevue** being **~163koz** mostly between 1903 and 1921 at a **higher average grade of almost 20g/t**.

It appears that a North Shoot may have been identified when WMC (who were generally anti-air-leg mining) owned the Sandstone Mining area between 1979 and 1989 (unsuccessfully looking for nickel mineralisation), and undertook drilling of the Hacks mine with a number of vertical RC drillholes despite the lodes clearly dipping west.

The Hacks mineralisation remains open at depth & north & south on strike with stoping having stopped at ~200m below surface – and like Oroya awaits being drilled (& both have no resources).

Although **Oroya** was clearly a significant mine as shown in Figures 18a and 18b, it was **only mined to ~145m** below surface, & although some oxide was mined, the inference in 3d is that the pit could easily be cut back especially with the old sand filled stopes (stained jarosite green) plus flats and veins in the walls.

At 388koz and an average grade of ~15g/t, Oroya was possibly the largest mine of its early 1900s era, although it was still a compilation of a number of mines and leases, as shown in Figures 19a and 19b. Oroya was one of the few historic Sandstone mines in which most of its oxide appeared to have been mined by open-cut, possibly limited by the thin tailings (ERA view >1g/t because no black plastic and pink coloured) at the southern end of the pit (there are a number of old workings immediately south of the tailings).

***And if you want more upside potential there's
No 4 Other Prospects including Possible EW mineralisation, Bulchina & Bell Shapes.***

There are 3 compartment shafts (3 compartments required money to sink them – being typically 1 compartment to hoist ore, 1 compartment for a travelling way (ladders), 1 compartment for pipes and services) at Oroya that **strike EW**, and there are clear EW structures such as Ballarat & Venus immediately south of Hacks, plus the small Billy's Charm EW striking pit east of Oroya, as shown in Figure 21a, which agrees with **the GSWA Bulletin 62's plan of 1914** shown in Figure 21b. Such plans were usually easily drawn because any surface wood was either burnt for fuel or used as support underground leaving any outcropping lodes/mineralisation visibly clear on surface.

The Bell Shapes and Depth

As shown in Figures 1a, 1b & 24a, the Sandstone Goldfield has a classic "bell shape" due to being sandwiched between two converging structures – similar to the Mt Magnet Goldfield to the West and Agnew Goldfield to the East, ***bell shapes are often renowned for endowment***, so how did Sandstone acquire a "difficult" reputation and remain barely explored after being rated 2nd to Kalgoorlie in annual gold production in the early 1900s?. An independent academic study by 3 groups resulted in a possible Sandstone Goldfield endowment of: 4.2MozAu (non-geoscience); 3.5-5.6MozAu (conservative geoscience); & 5.3-13.5Moz (optimistic), ***ie at least 2moz higher than the historical ~1.2Moz mined to date.***

As shown in Figure 24a, there are numerous targets in the 3 categories of : Historical Mine (open-cut or underground), Emerging Deposit, and Undertested / Underexplored targets - and it becomes a case of prioritising them.

It can easily be seen why Alto Metals Ltd (AME) is rated as a BUY with an ERA achievable target of >20c or a >\$90M MC.

(Alto could quite possibly be a case of holding a tiger by its tail).

Regards

Keith



(Keith Goode : 7 Oct 2021)

Gold : Alto Metals Limited (AME)

LN Granodiorite Appears to Have a Number of Similarities to RED5's KOTH

\$AME (at A\$0.086) with a Mkt Cap of ~\$39m & est ~\$5m Cash : **Rated as a BUY (Target > \$0.20)**

This is an update report since our last report on Alto Metals Ltd (\$AME) at 4.6c in July 2018, based on historical visits, available info and recent ASX announcements (*as a site visit is not possible due to Covid19, & ERA based in NSW*). In ERA's opinion \$AME appears to be showing **significant upside potential based on** :

- 1. Recent intersections inferring the Lord Nelson granodiorite appears to have a number of **similarities with RED5's KOTH** granodiorite.
- 2. The V-shaped Alpha Domain showing encouraging intersections with **visible gold at Vanguard** through to the deeply weathered **Indomitable**.
- 3. A number of **significant large historical** mines that have **not been mined by open-cut**, and
- 4. Other Prospects : Possibly **underexplored East-West** striking mineralisation, and Bulchina etc.

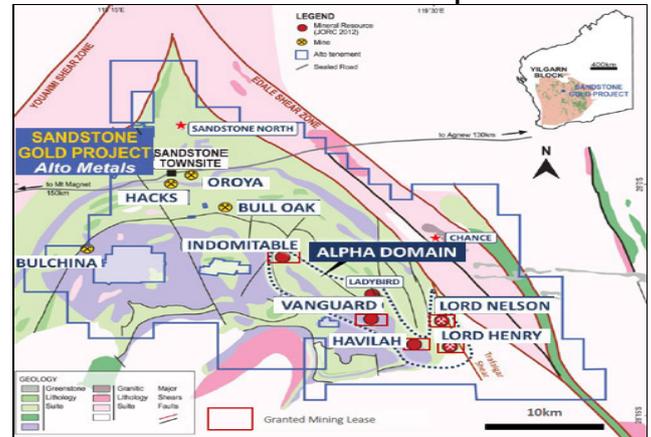
Alto Metals has suffered from trying to prioritise its numerous targets in a ~35km x 35km goldfield that *has established/existing road links to numerous operating regional plants*, while preventing predators trying to take them over for ~\$10M to \$20M, or offering unfavourable JVs.

Figure 1. Plans of AME's Sandstone Gold Project, its Main Prospects and the Alpha Domain outline

a. Location Plan of AME's Sandstone Gold Project



b. Plan of AME's Main Sandstone Prospects



Corporate Summary

Since our last report on Alto Metals Limited (\$AME) at 4.6c in July 2018 with a MC of \$9m and a SPEC BUY rating of >10c, \$AME rose to 12c in Sept 2020 and May 2021, and is currently ~8.6c. In Aug 2018, Alto raised \$450k @ 4.7c for 185.5M shares in issue. Then there was an almost continuous failed takeover period of ~2years from Feb 2019 by 3 sequential <\$20M offers from MDI, Goldsea and Habrok, resulting in a fairly tight register and WGX holding 37M shares in Alto in March 2021, which they increased to a 13.8% holding / 67M shares in June 2021. Following a \$5.5M placement in September 2020 and later exercise of options, AME's now has **450.3M fpo shares on issue**, 12M performance rights and 7.5m options.

The monies raised have enabled Alto to undergo a significant RC and diamond exploration programme (only hampered by assay-time turnaround) over its 3 key areas of the Lords, Vanguard and Indomitable, and rebuild an info database after being denied access to historical records, RC and diamond drillcore since acquisition in May 2016.

This report focuses on ERA's perceived 4 areas of upside potential in Alto. Most granodiorites ERA has encountered have average grades ~0.8g/t to 1.2g/t, **except for RED5's KOTH granodiorite with an ultramafic contact at ~1.9g/t**, eg p5 of ERAs RED5 July 2019 report [*which resulted in the trial Lemonwood stope (32kt@3.4g/t), followed in November 2018 by the same hole reporting 330m @ 1.7g/t, plus 234m @ 2.0g/t (D0098) & 127m @ 1.9g/t (D0101)*]. Historically, TRY mined ~0.5Moz in 3 granodiorite/ultramafic contact pits (*now held by AME*), being **Lord Nelson (1.4Mt @ 4.6g/t** for ~207koz [49% higher grade reconciliation]), **Lord Henry (0.4kt @ 3.6g/t** for ~48koz [43% higher grade]), & **Bulchina (2.0Mt @ 3.4g/t** [47% higher grade] for 219koz).

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1. Lord Nelson (LN) Granodiorite Appears to Have Some Similarities with RED5's KOTH
 Examples of KOTH's 1.8-2.0g/t are : Mt Edon Gold mined KOTH as Tarmoola in 1991, mining 1.1Mt @ **1.8g/t** and treating 670kt @ 2.9g/t with a SR of 2 x and cash costs of A\$200/oz. In 1996, \$MEG had higher grade KOTH resources of 17Mt @ 2g/t plus low grade 5.6Mt @ 0.6g/t. REDs KOTH resource was quoted in June 2021 as **90.7Mt @ 1.4g/t for 4.1Moz** of which u/ground was 12.1Mt @ 2.1g/t, historic production at KOTH having been ~ **32Mt @ 1.9g/t** for ~2Moz as shown in Table 1 (ie a total KOTH resource of ~6Moz):

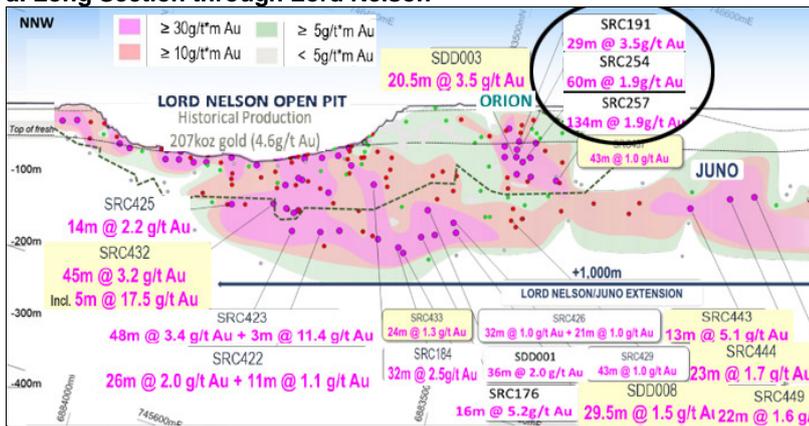
Table 1. KOTH Production Stats for 1897 to 2017 (Total of 31.7Mt @ 1.9g/t for 1.95Moz at a 95% recovery)

Year	1897-1914	1985 - 1989	1990 - 1996	1997 - 2001	2002 - 2004	2011 - 2016	2016-2017	1985 - 2004	2011 - 2017	1897 - 2017
Company	Koth Pit Area	Kulim / SGW	Mt Edon Gold	Pacmin	Sons of Gwalia	St Barbara	Saracen	Open-cut	Underground	Total
ASX Code :										
Mine Name :	U/ground ?	O/Cut	O/Cut	O/Cut	O/Cut	U/ground	U/ground	O/Cut	U/ground	
Tons Treated (kt)	Mostly Koth	Koth	Tarmoola	Tarmoola	Tarmoola	Koth	Koth	29713	1949	31685
Grade (g/t)	23	409	6478	12849	9978	1864	86	1.75	4.19	1.91
Gold produced (koz)	20.15	4.38	1.85	1.97	1.30	4.21	3.80	1668	262	1946
Recovery %	14.8	54.6	384.5	813.1	416.2	252.0	10.5	95.0%	95.0%	95.0%
Cash Cost (A\$/oz)		96.0%	93.0%	95.5%		95.0%				
			348	336	437	910				

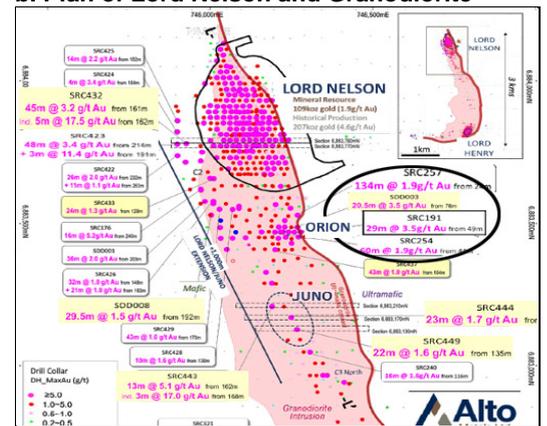
The granodiorite at Lord Nelson similarly has some thick intersections of ~1.9g/t, such as **134m @ 1.9g/t in the Orion Lode** as shown in Figures 2a and 2b, **while Juno extends the LN mineralisation to ~1km.**

Figure 2. Long Section and Plan of Lord Nelson and the Granodiorite

a. Long Section through Lord Nelson



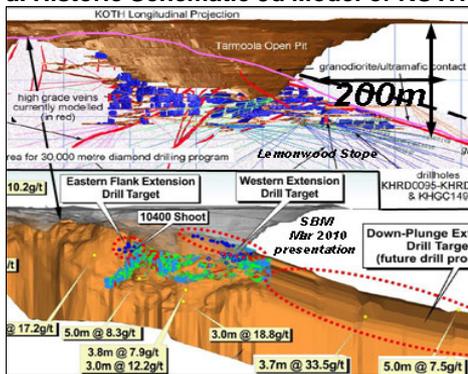
b. Plan of Lord Nelson and Granodiorite



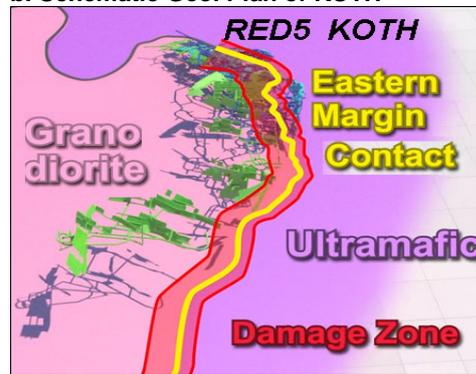
At KOTH, grades are *enhanced on along the contact zone* between the granodiorite and ultramafic (cooked by the granodiorite and hence harder than the usually weak ultramafic). RED5 calls it the **damaged zone due to the fracturing** that occurs of the granodiorite **resulting in higher grade veins** in Figures 3a & 3b.

Figure 3. Schematic 3d KOTH Model, and Schematic Geological Plans of KOTH and LN

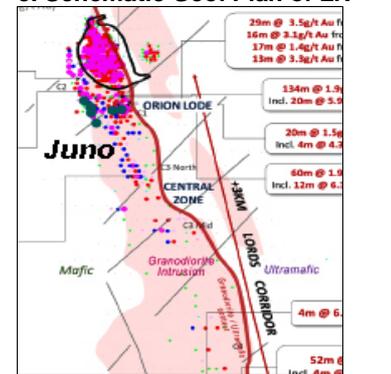
a. Historic Schematic 3d Model of KOTH



b. Schematic Geol Plan of KOTH



c. Schematic Geol Plan of LN



AME's LN granodiorite exhibits ~8 similarities to RED's KOTH granodiorite & an enhancement :

- Granodiorite contact that has cooked the ultramafic harder and become more competent.
- A fractured zone in the granodiorite in the (ultramafic) contact area, injected with mineralisation.
- Higher grades at undulations/ indentations in the granodiorite/ ultramafic contact (Figs 3b, 3c & 4a).
- Average long intersections and resources of ~1.9g/t.
- Higher grade ore shoots within the granodiorite.
- Higher grade lengths of ~ 3.5g/t, inferring the possibility of lower cost bulk stopes (**48m @ 3.4g/t in SRC423 and [5 Oct] 45m @ 3.2g/t in SRC432 at Lord Nelson** compared to KOTH Lemonwood 32kt @ 3.4g/t), and the possibility of over-reconciliation (KOTH ~11% to 14%, LN >40%).
- High recoveries of ~95% (eg Table 1 {KOTH} vs Table 4 {Sandstone}).
- Thickness of the mineable granodiorite resulting in low open-cut SRs (Strip ratios).

AME's Sandstone granodiorites appear to be enhanced by internal higher grade stacked lodes - per page 4: **\$AME appears to be significantly undervalued at a MC of only ~\$39M vs \$RED's ~\$500M MC.**

It can be seen that AME's Orion lode occurs at the granodiorite/ultramafic contact in an undulation of the granodiorite, which appears similar to the higher grade lodes found to occur in undulations of the KOTH granodiorite as shown in Figure 4a, in a similar granodiorite/ultramafic setting. It can also be seen in Figure 3c, there is **another undulation** in the LN contact, **south of the new Juno**, in the **Central Zone**.

Figure 4. Schematic KOTH Mineralisation Associated with Undulations, & Fractured High Grades at LN
a. Schematic KOTH Mineralisation Assoc with Undulations **b. Higher Grades in LN Fractured Contact Zone (SDD001)**

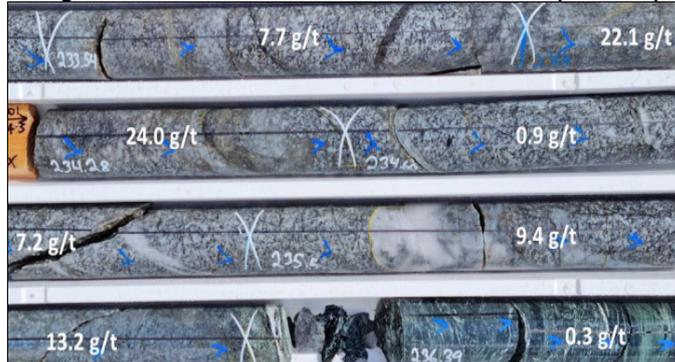
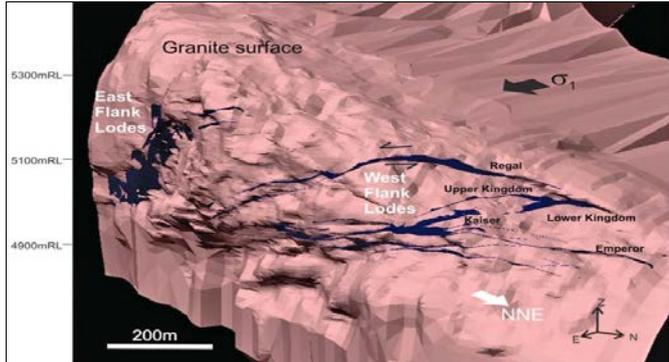
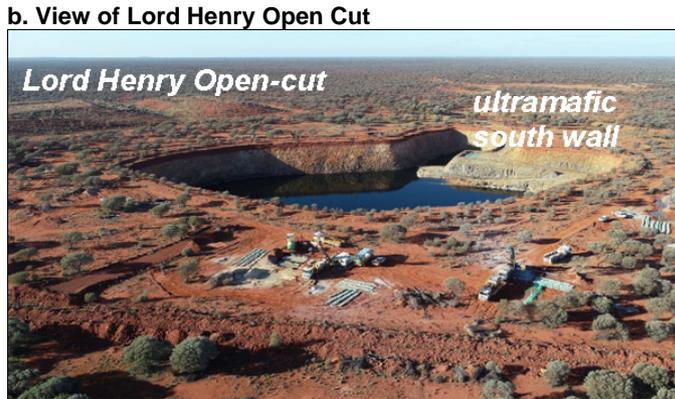


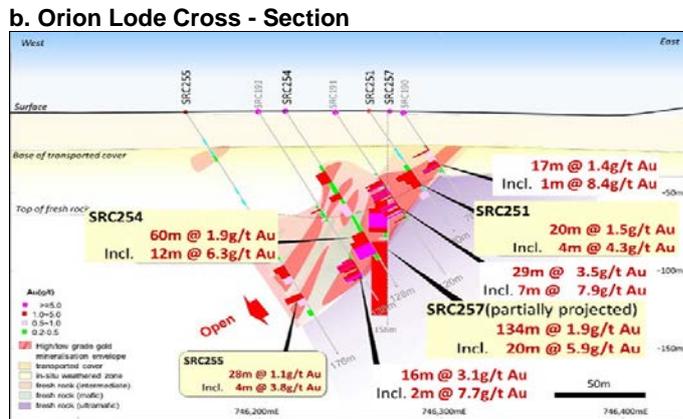
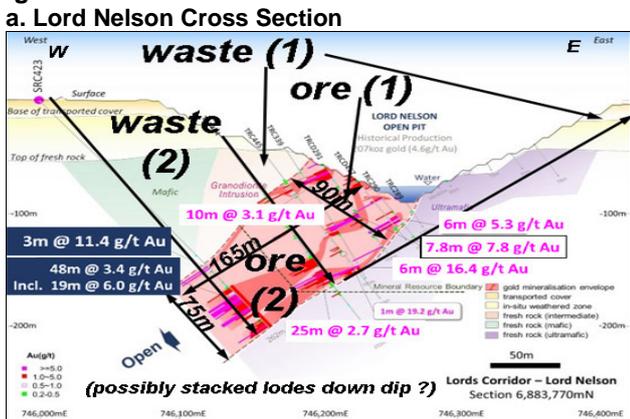
Figure 4b shows higher grades in AME's first drillhole crossing the 4-phases of fracturing of the granodiorite/ultramafic boundary at Lord Nelson, while Figure 5a shows the relative competency of the ultramafic eastern wall in the Lord Nelson open-cut, and southern wall of the Lord Henry o/cut.

Figure 5. Views of Lord Nelson and Lord Henry Open-cuts



The August 2021 intersections show higher grade ore shoots plunging to the south and down dip to the west at Lord Nelson in Figure 6a, with both Lord Nelson, the Orion Lode and now Juno all showing higher grades on the granodiorite/ultramafic boundary in Figures 6a and 6b.

Figure 6. Lord Nelson and Orion Lode Cross-Sections



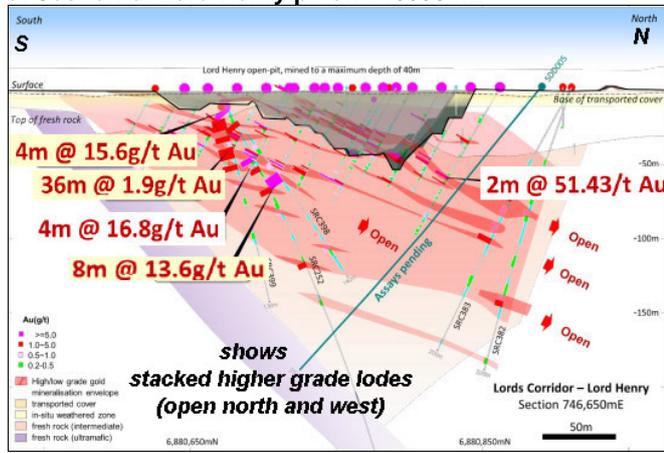
The significance of possibly having average grades of 1.9g/t, is illustrated in Table 2. As 1.9g/t is actually an underground grade for KCGM & Thunderbox, high open-cut grades are ~1.5g/t, & LN could possibly be even more attractive if its **SRs are low** - possibly only ~ 2 to 4 as inferred in Fig 6a. Plus **recoveries were high at ~94% to 96%** (as shown in Table 4 on page 8) compared to other mine recoveries in Table 2.

Table 2. Comparison of Typical Open-cut grades >0.9g/t and Underground Grades >1.8g/t for June Qtr 2021

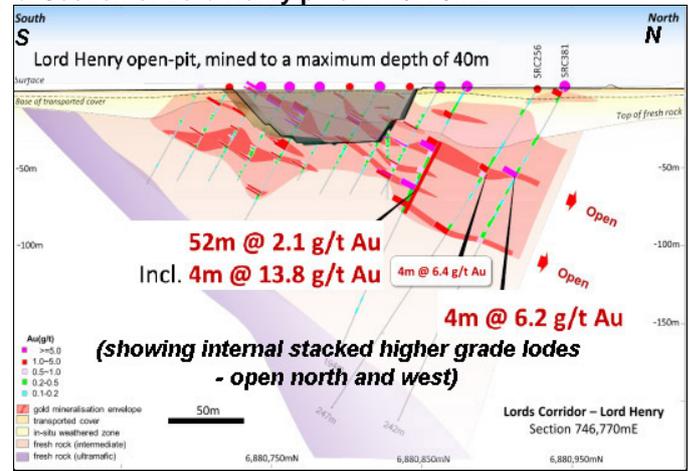
June Qtr 21	Open-cut (>0.9g/t)										Underground (to 2.6g/t)					
	RMS	WGX	NST	NST	RMS	RRL	NST	RRL	EVN	WGX	NST	NST	WGX	EVN	WGX	WGX
Mine	Mt Mag	Murch	Carosue	Th'box	Edna M	Tropic	KCGM	Gard W	Mungari	Cue	KCGM	Th'box	Fortnum	Mungari	Cue	Murch
000t	283	102	439	194	629	1430	2170	1020	506	57	357	305	185	115	221	231
g/t	0.90	1.00	1.02	1.10	1.28	1.39	1.50	1.52	1.52	1.53	1.80	1.91	2.27	2.51	2.53	2.55
Recovery	96%	87%	93%	93%	93%	90%	84%	91%	92%	87%	84%	93%	95%	92%	87%	87%

Figure 7. Sections of Lord Henry Pit at 6650mE and 6770mE (showing stacked lodes open to the north and west)

a. Section of Lord Henry pit on 746650mE



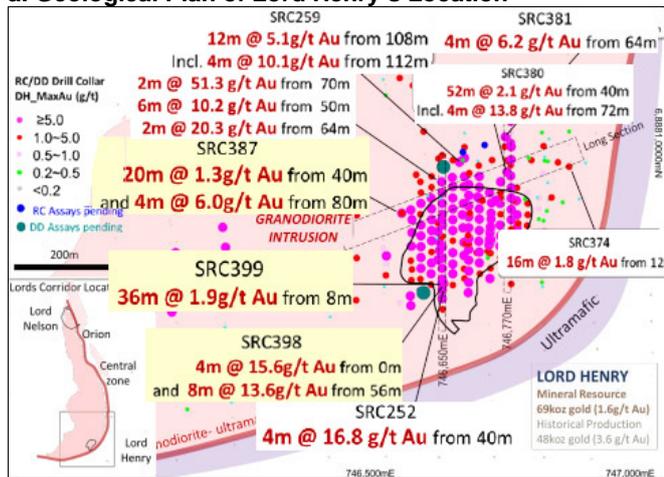
b. Section of Lord Henry pit on 746770mE



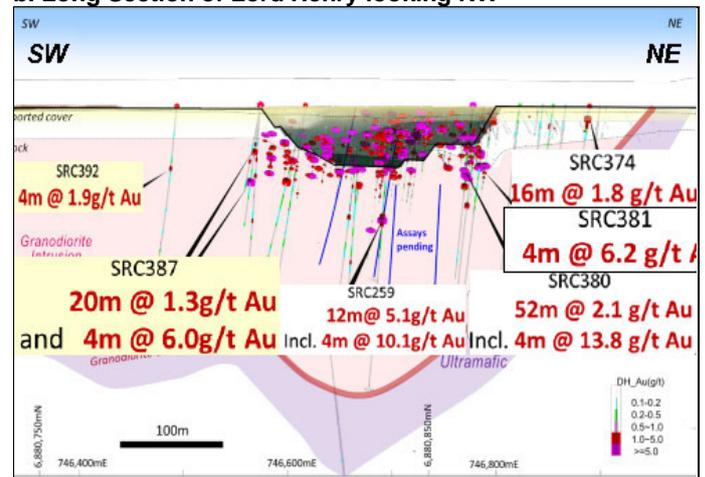
Drilling at Lord Henry has also had high grade intercepts showing stacked lode mineralisation that appears to be open to the north and west as shown in Figures 7a and 7b, while the contact zone between the granodiorite and ultramafic may only have been partly tested, as shown in Figures 8a and 8b.

Figure 8. Geological Plan of Lord Henry's Location, and Long Section of Lord Henry looking NW

a. Geological Plan of Lord Henry's Location



b. Long Section of Lord Henry looking NW



All this recent drilling has yet to be included in an updated resource. Alto's **last published resource on Lord Nelson was in May 2020** being 1.82Mt @ 1.9g/t (inferred), while Lord Henry was mostly 1.2Mt @ 1.6g/t (indicated) in May 2017 as shown in Figure 9a. Whether the ~45% over-reconciliation shown in Figure 9b achieved when the Lords were mined by \$TRY can be replicated, remains to be seen. Alto had planned to produce updated resources but has been delayed, *waiting for extensive drillholes to be assayed (10 diamond and >100 RC as reported by Alto on 5 October 2021, for an updated resource ~DQ21/MQ22).*

Figure 9. Alto's Mineral Resources at Different Dates, and Historic Reconciliation of the Lords' Pits

a. Alto's Mineral Resources at Different Dates

Deposit	Last update	Category	Cut-off (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Contained gold (oz)
Lord Henry ^(a)	May 2017	Indicated	0.8	1,200	1.6	65,000
TOTAL INDICATED				1,200	1.6	65,000
Lord Henry ^(b)	May 2017	Inferred	0.8	110	1.3	4,000
Lord Nelson ^(c)	May 2020	Inferred	0.8	1,820	1.9	109,000
Indomitable & Vanguard Camp ^(d)	Sep 2018	Inferred	0.3-0.5	2,580	1.5	124,000
Havilah & Ladybird ^(e)	June 2019	Inferred	0.5	510	1.8	29,000
TOTAL INFERRRED				5,020	1.7	266,000
TOTAL INDICATED AND INFERRRED				6,220	1.7	331,000

b. Historic Reconciliation of the Lords Pits

	Lord Henry		
	kt	g/t	koz
Prob Reserves (2005)	510	2.5	41.5
Indicated Resources	1650	2.0	106.6
Mined (2007)	413	3.6	47.9
Mined to Reserves	-19%	43%	16%
Lord Nelson (Stage1)			
	kt	g/t	koz
Prob Reserves (2005)	1480	3.3	158.5
Indicated Resources	2330	3.1	233.7
Mined (2007)	1114	5.0	177.6
Mined to Reserves	-25%	49%	12%

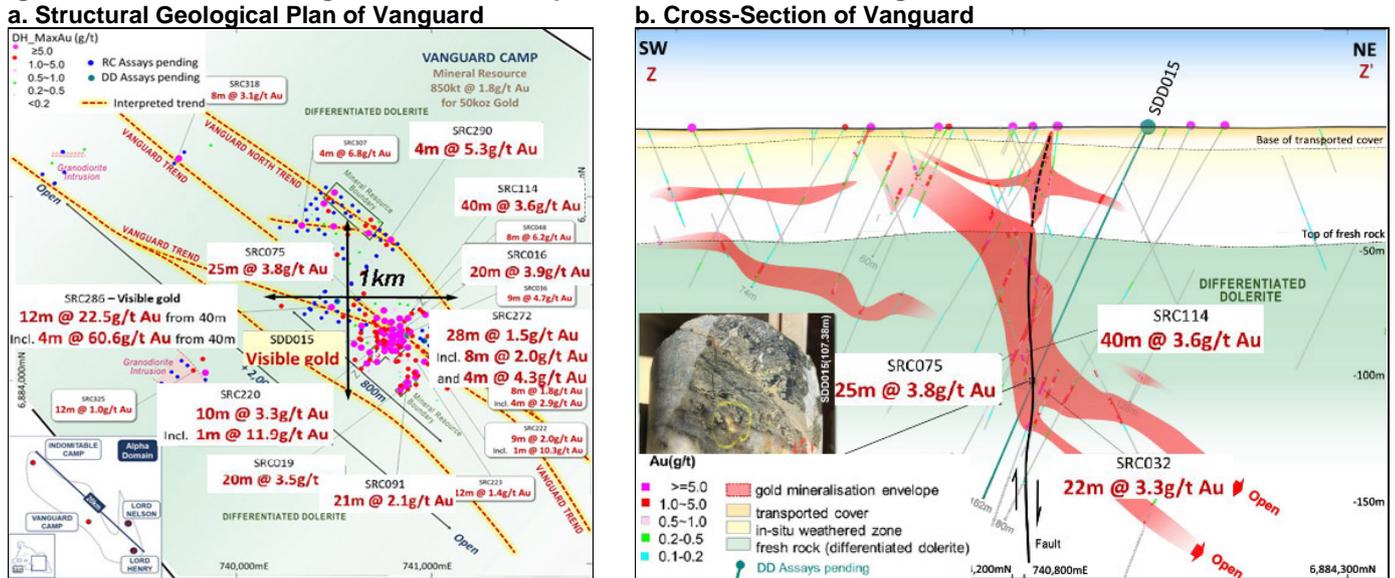
Theoretically (ERA view) ~1km long x 75m thick x 165m down dip in Figure 6 = 33.4Mt (at an SG of 2.7) which conservatively assuming ~70% mineralised on strike and ~70% mineralised in width = ~16.4Mt, which at 95% recoveries of 1.5g/t = ~750koz or at 1.9g/t possibly ~950koz (~1moz in situ).

Accepting that it is "early days" in the possibility of LN resembling KOTH's granodiorite, however, if Alto's LN granodiorite has any similarity to even a portion of Red5's KOTH granodiorite, with \$RED's MC at ~\$500M, \$AME appears to be significantly undervalued at a MC of only ~\$39M.

2. The V-shaped Alpha Domain's Western Limb of Vanguard and Indomitable.

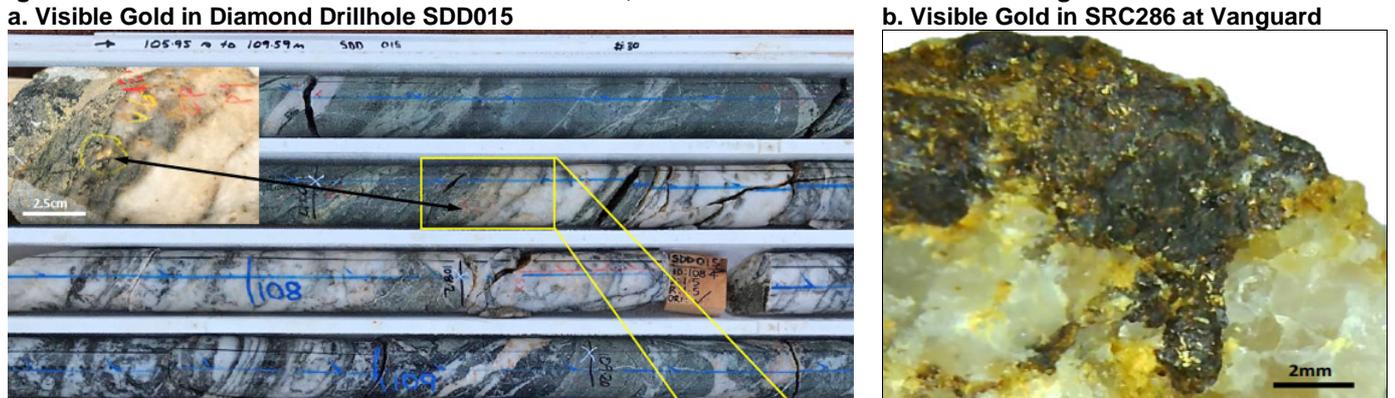
Alto has established that the Vanguard Camp shown in Figure 10a appears to consist of a number of NW/SE striking structures and has intersected visible gold in RC and diamond drilling in laminated quartz veins within a differentiated dolerite (often regarded as the cream of mineralised dolerites). There are many encouraging intersections shown in Figure 10a such as *4m @ 60.6g/t in SRC286*, however, none of these new intersections are in the current inferred resource of 850kt @ 1.8g/t because Vanguard was last reported in September 2018.

Figure 10. Structural Geological Plan and Interpreted Cross-section of Vanguard



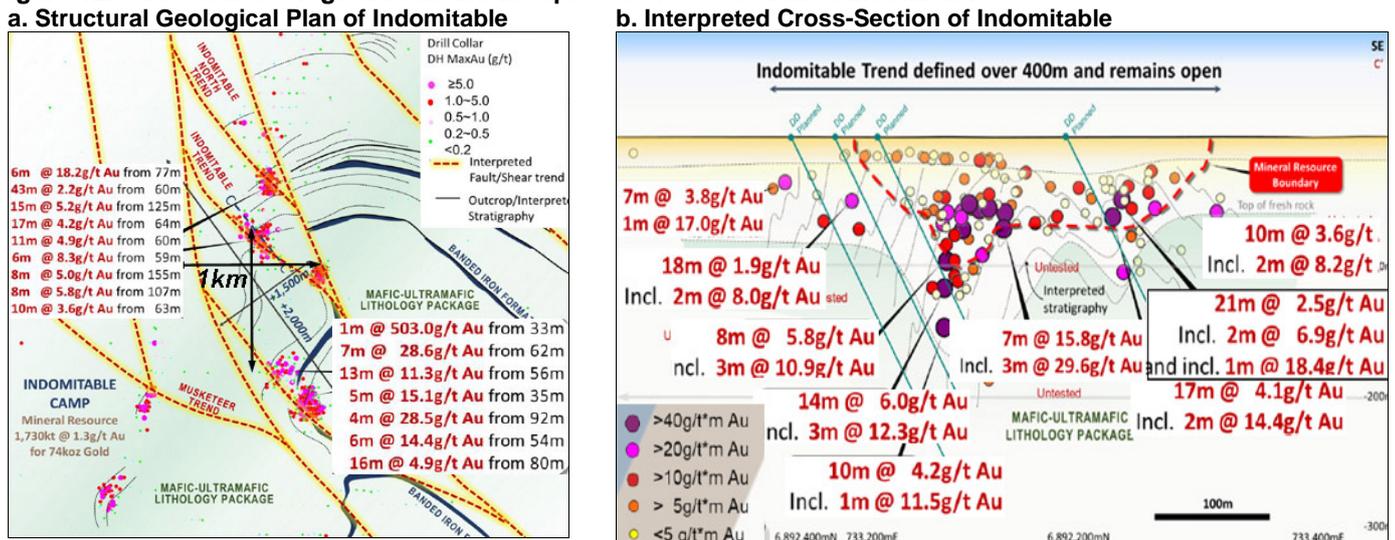
The laminated quartz veins are clearly shown in Figure 11a, with the RC visible gold specimen from SRC286 in Figure 11b. The visible gold results from SDD015 were still being assayed.

Figure 11. Visible Gold in Diamond Drillhole SDD015, and Visible Gold in SRC286 at Vanguard



The Indomitable prospect is notable for its extreme *depth of weathering to between ~80m to 150m* below surface as shown in Figure 12b, along with its recent structural interpretation in Figure 12a, both of which were shown in August 2021 at Diggers, including *many double-digit grades*.

Figure 12. Structural Geological Plan and Interpreted Cross-section of Indomitable

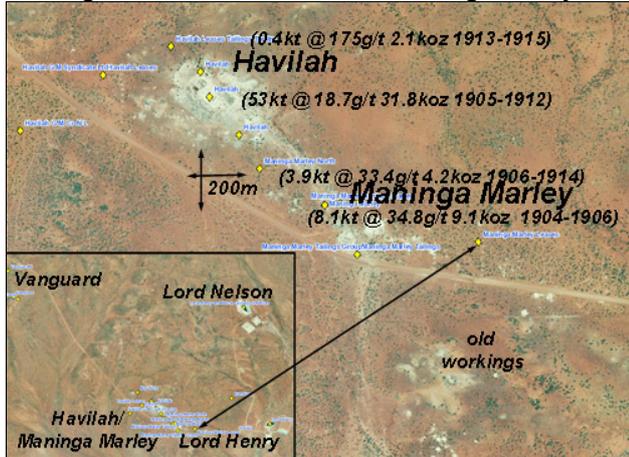


3. Significant Large Historical Gold Mines that have not been Open-cut

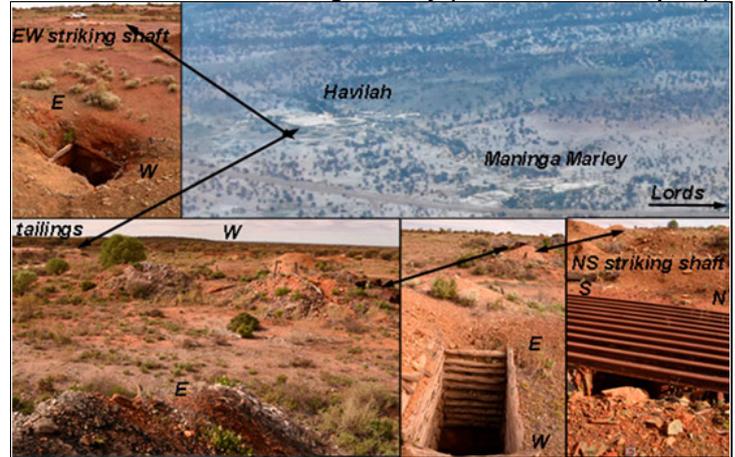
The Sandstone Goldfield would have to be *one of the very few WA goldfields not to have open-cuts over its significant historical gold mines*. At the “V” junction of the Alpha Domain between the eastern Lords limb, and western Indomitable to Vanguard limb, lies the historical mines of **Havilah** and **Maninga Marley** as shown in Figures 13a and 13b – on which there are no open-cuts (because the plant was an oxide plant that used contract crushers to feed the ore through a grizzly into the plant – ie it couldn’t treat hard rock).

Figure 13. Google Earth Plan and Views of Havilah and Maninga Marley

a. Google Earth Plan of Havilah & Maninga Marley



b. Views of Havilah & Maninga Marley (from ERA 2016 report)



To put the apparent lowish production figures in Figure 13a into context, you have to remember that most of the mining up to ~1918 was by **hammer and tap** (ie to drill a hole : strike the back of the drill steel with a hammer, rotate, next hammer hit etc) – ie an advance in hard ground could sometimes take almost 1 year to advance 30m / 100ft (especially if shaft sinking). A comparison with some other historical mines that have been open-cut in WA is shown in Table 3.

Table 3. Comparison of Some Historical (1897 to 1943) Gold Mines that have been open-cut incl Sandstone's

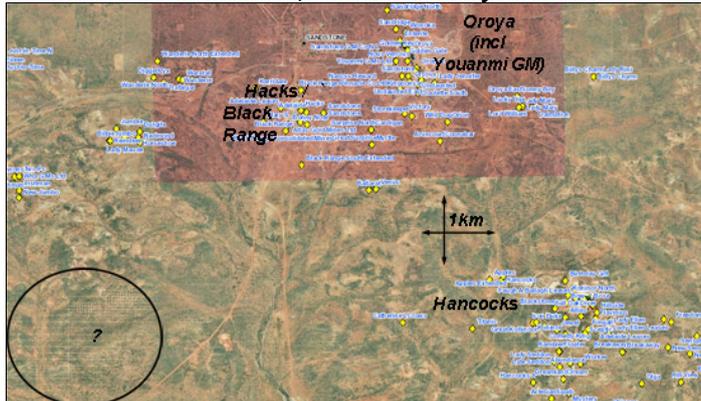
Open-cuts	Y		No		Y			Part		No		Y		Y		Y		
	AME	RMS	AME	BGL	RMS	RMS	AME	AME	WGX	AME	RED	BDC	BDC	GFI				
Coy	Oroya	Edna May	Hacks	Bellevue	Morn Star	Vivien	Hancocks	Havilah	Nannine	M Marley	Koth	Zoroastr	Excelsior	St Ives				
Mine	Sandstone	Westonia	Sandstone	Sir Samuel	Mt Magnet	Lawlers	Sandstone	Sandstone	Murch	Sandstone	Diorite	Bardoc	Bardoc	St Ives				
Historical	1904-1925	1911-1922	1903-1921	1897-1912	1898-1915	1901-1941	1904-1943	1905-1915	1897-1925	1904-1914	1897-1918	1897-1943	1897-1910	1920-1932				
kt	814.5	419.0	254.7	248.4	161.3	214.5	36.5	53.6	24.0	12.0	17.9	13.6	6.5	5.7				
g/t	14.8	22.0	19.9	16.2	17.4	11.6	33.5	19.7	32.9	34.3	19.7	21.1	20.1	19.1				
koz	388.2	296.7	162.8	129.7	90.2	80.2	39.3	34.0	25.4	13.2	11.4	9.2	4.2	3.5				

Note : Oroya's oxide was only partly mined. At Hancocks there is a small open-cut over Bull Oak and the laterite above the Adelaide Leases have been mined

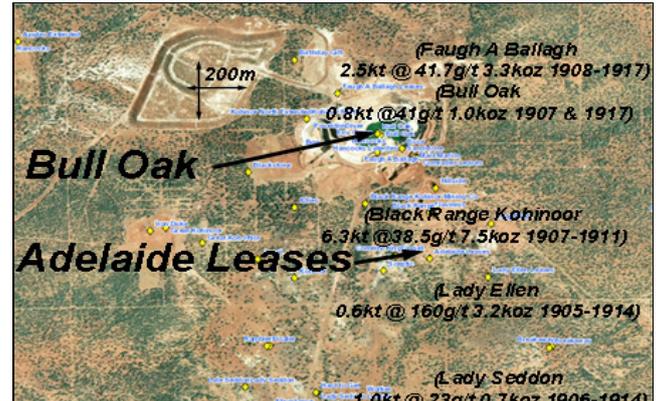
In Table 3, it appears that most companies would **probably have had an open-cut** over Havilah and Maninga Marley – but as Troy's plant could only treat oxide ore, they were not mined. In fact apart from part of Oroya, Troy / \$TRY didn't mine the historical mines, it focused on new discoveries. In a similar production category is **Hancocks** which consisted of numerous small mines for its **39.3koz** total. Its location along with the major mine areas of Oroya & Hacks is shown in Fig 14a. The *mega mine open-cut of Kalgoorlie* consisted of *100s of small mines* (largest Bonnie Lass 24.6kt / 18.5koz 1902-1922), & Coolgardie similarly – largest New Australasian ~4kt / 10.6koz 1897-1910). In gold production, Sandstone was annually rated similar to Kalgoorlie (which may have included the regional large mines at Kanowna & Boorara).

Figure 14. Locations of Hancocks, Hacks and Oroya Areas, and Locations of Hancocks Historical mines

a. Locations of Hancocks, Hacks and Oroya Areas



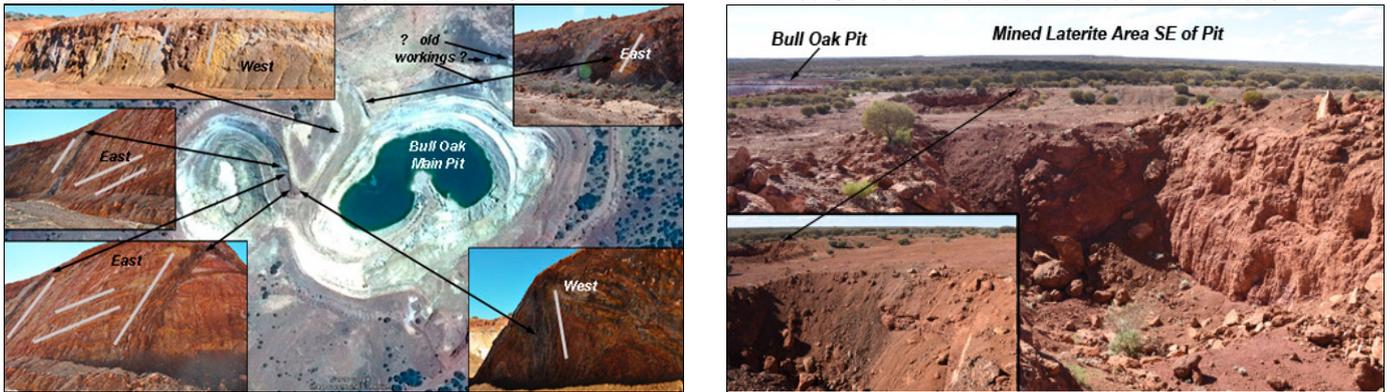
b. Locations of Hancocks Historical Mines



The locations of a number of Hancock's ~48 historic mines that were contained in ~82 separate leases are shown in Figure 14b, together with some of their grades ranging from 23g/t at Lady Seddon to a clump of 3 individual mines at ~41g/t and a high of ~160g/t at Lady Ellen.

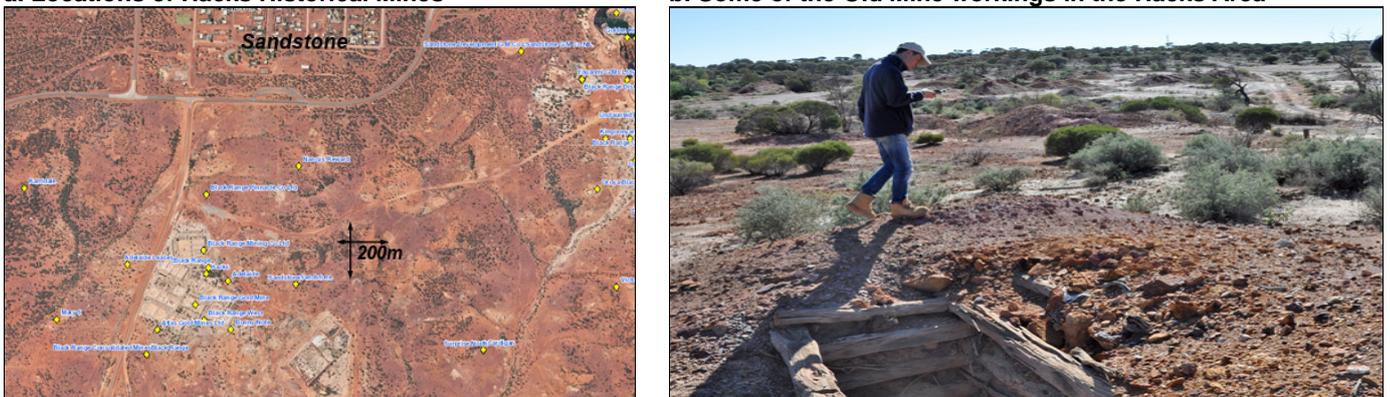
Some views of the Hancocks area including Bull Oak are shown in Figure 15a from page 7 of ERA's July 2017 report on Alto, and of the partly surface mined Adelaide Leases laterite in Figure 15b from page 4 of ERA's July 2018 AME report.

Figure 15. Views of the BIFs in the Walls of the Bull Oak Pit, and Mined Surface Laterite of the Adelaide Leases
a. Views of the BIFs in the Walls of the Bull Oak Pit **b. Mined Surface Laterite of the Adelaide Leases**



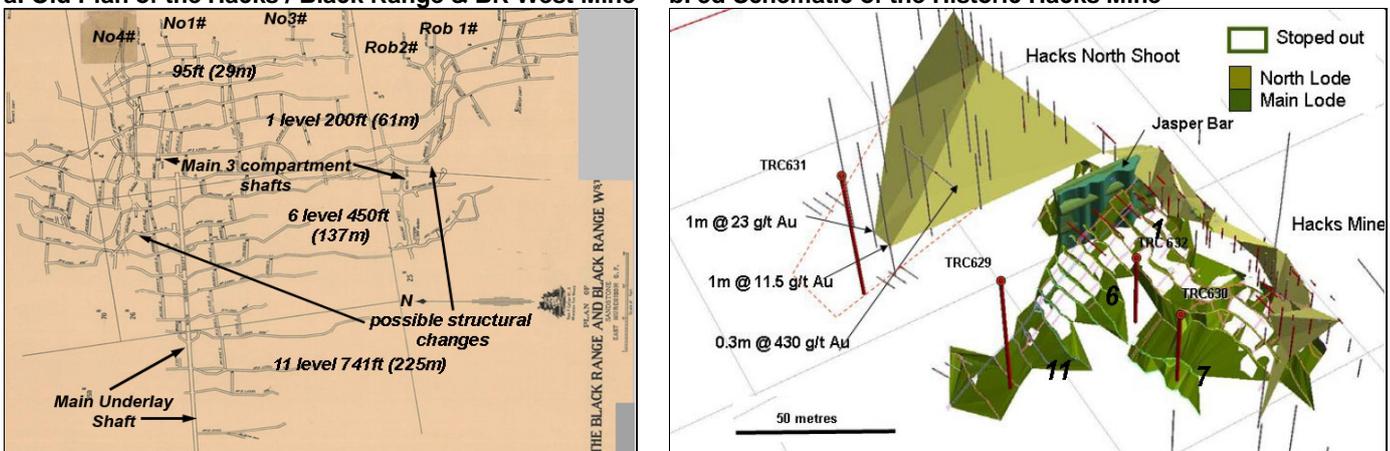
However, the really sizeable historical mines in the Sandstone Goldfield were **Hacks and Oroya** as shown in Table 3, of which **Hacks** actually produced **more gold than the historic Bellevue** being **~163koz** mostly between 1903 and 1921 at a **higher average grade of almost 20g/t**.

Figure 16. Locations of Hacks Historical prospects, and Some of the Old Mine Workings in the Hacks Area
a. Locations of Hacks Historical Mines **b. Some of the Old Mine workings in the Hacks Area**



As can be seen in Figure 16a and 16b, Hacks was unfortunately later covered with tailings and surprisingly the tails were not treated (ERA view – unless a new tails dam issue) in Troy's oxide plant. Similarly, as can be seen by old stopes and old workings next to the tailings, there was very little cover, *ie hard rock close to surface which couldn't go through the oxide plant, and perhaps that's why it has remained underexplored.*

Figure 17. Old Plan of The Hacks/Black Range/Black Range West Mine & 3d Schematic of the Historic Hacks Mine
a. Old Plan of the Hacks / Black Range & BR West Mine **b. 3d Schematic of the Historic Hacks Mine**



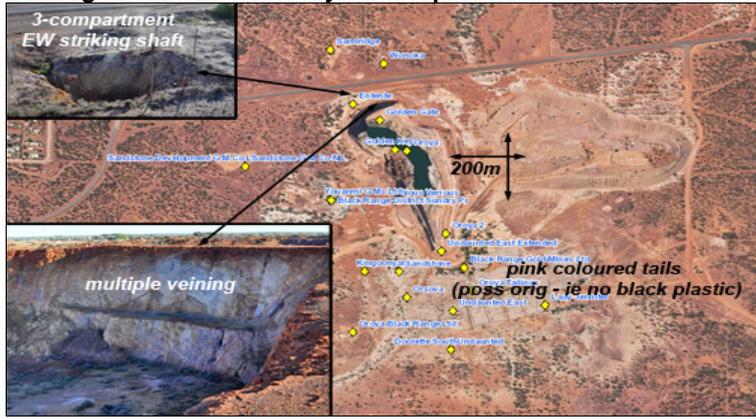
Both the Hacks and Oroya mines were referred to as **Black Range** being the historical term for BIFs. The Jasper Bar in Figure 17b is another typical historical BIF reference. The plan in Figure 17a infers how many shafts there were plus an underlay or inclined haulage to lower levels, and at least two lodes in the 3d schematic in Figure 17b. It appears that a North Shoot may have been identified when WMC (who were generally anti-air-leg mining) owned the Sandstone Mining area between 1979 and 1989, and undertook drilling of the Hacks mine with a number of vertical RC drillholes despite the lodes clearly dipping west.

The Hacks mineralisation remains open at depth & north & south on strike with stoping having stopped at ~200m below surface – and like Oroya awaits being drilled (& both have no resources).

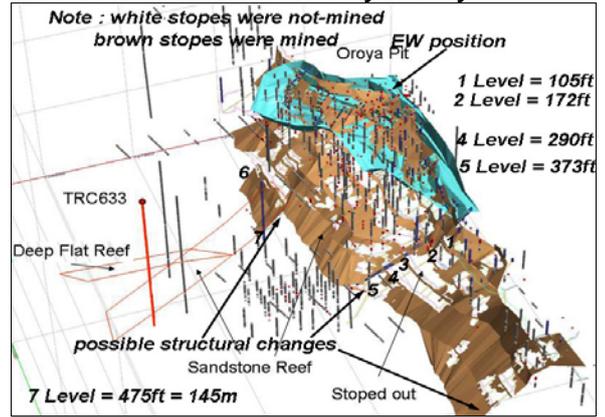
Although **Oroya** was clearly a significant mine as shown in Figures 18a and 18b, it was **only mined to ~145m** below surface, & although some oxide was mined, the inference in 3d is that the pit could easily be cut back especially with the old sand filled stopes (stained jarosite green) plus flats and veins in the walls.

Figure 18. Plan of Oroya's Prospects and Some Views, and 3d Schematic and Pit Overlay of Oroya

a. Google Earth View of Oroya's Prospects and Some Views



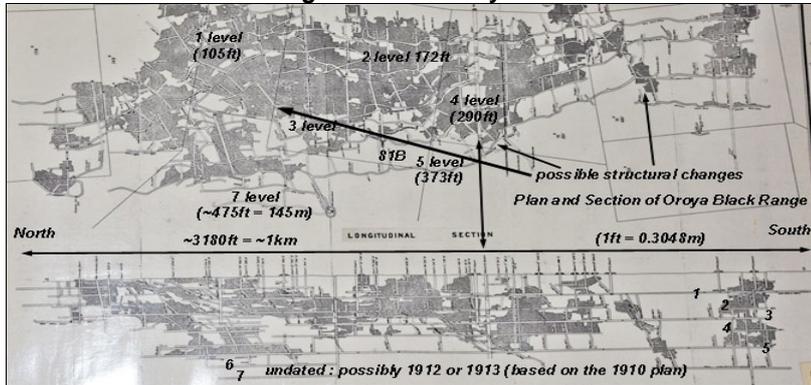
b. 3d Schematic and Pit Overlay of Oroya



At 388koz and an average grade of ~15g/t, Oroya was possibly the largest mine of its early 1900s era, although it was still a compilation of a number of mines and leases, as shown in Figures 19a and 19b. Oroya was one of the few historic Sandstone mines in which most of its oxide appeared to have been mined by open-cut, possibly limited by the thin tailings (ERA view >1g/t because no black plastic and pink coloured) at the southern end of the pit (there are a number of old workings immediately south of the tailings).

Figure 19. Historical Plan and Long Section of Oroya in 1912 or 1913, and Aerial View (North) of the Oroya Pit

a. Historical Plan and Long Section of Oroya in 1912 or 1913



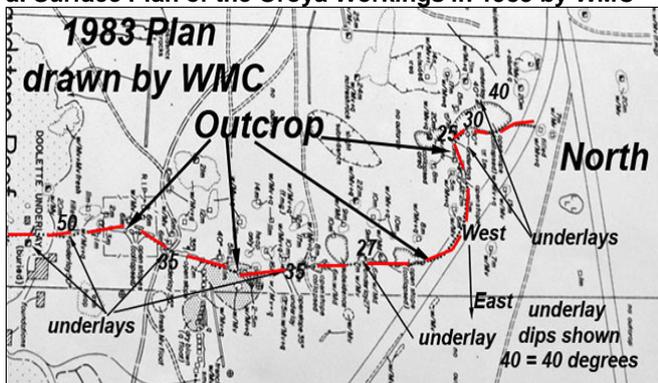
b. Aerial View North of the Oroya Pit



Looking at the pit walls, the old sand filled stopes are clearly visible – along with untouched, near surface, multiple veining in Figures 18a and 20b. The design of the open-cut followed the outcrop delineated by WMC as shown in Figure 20a, while Figure 20b shows some of the old workings left in the open-cut walls of the Oroya pit, after mining mostly by Herald, followed by the initial Troy / \$TRY as shown in Table 4.

Figure 20. Surface Plan of the Oroya Workings in 1983 by WMC, and View (South) of the Oroya Pit

a. Surface Plan of the Oroya Workings in 1983 by WMC



b. View (South) of the Oroya Pit



Table 4. Gold Mine Production at Sandstone (1994 to 2010) (Source: Herald and Troy quarterly reports)

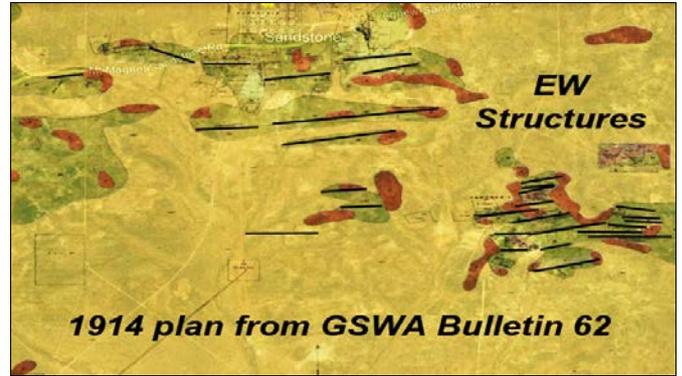
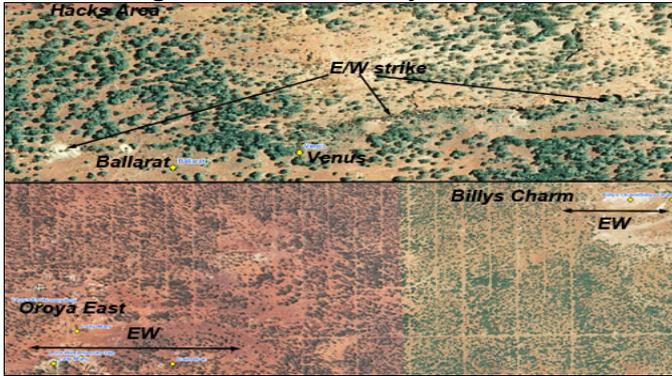
Year	1994	1995	1996	1997	1998	JH99	94/99	DH99	2000	2001
	Herald					Herald		Troy		
Tons Milled (kt)	200	517	493	462	381	174	2226	117	378	437
Recovered Grade (g/t)	1.2	1.4	1.4	2.0	2.4	1.3	1.8	4.4	5.0	3.8
Production (koz)	8.0	28.9	22.8	29.9	29.4	7.0	126.1	16.5	60.2	53.3
Recovery (%)					95.2%	93.0%	94.1%	93.9%	96.2%	96.0%
Cash Cost (A\$/oz)	451	373	452	396	299	394	382	174	143	174
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	94/10
	Troy									Total
Tons Milled (kt)	430	422	444	513	531	478	487	511	317	7291
Recovered Grade (g/t)	3.2	3.0	1.7	3.0	4.3	4.0	2.2	1.9	1.8	2.7
Production (koz)	44.2	41.2	24.6	50.2	73.6	61.6	34.3	31.2	18.2	635.2
Recovery (%)	96.1%	95.9%	95.5%	94.4%	94.1%	93.3%	90.6%	92.4%	94.0%	94.3%
Cash Cost (A\$/oz)	236	304	459	239	303	433	736	752	1017	364

4. Other Prospects including Possible EW mineralisation, Bulchina & Bell Shapes.

Possible EW Mineralisation

There are 3 compartment shafts at Oroya that **strike EW**, and there are clear EW structures such as Ballarat & Venus immediately south of Hacks, plus the small Billy's Charm EW striking pit east of Oroya, as shown in Figure 21a, which agrees with the GSWA Bulletin 62's plan of 1914 shown in Figure 21b. Such plans were usually easily drawn because any surface wood was either burnt for fuel or used as support underground leaving any outcropping lodes/mineralisation visibly clear on surface.

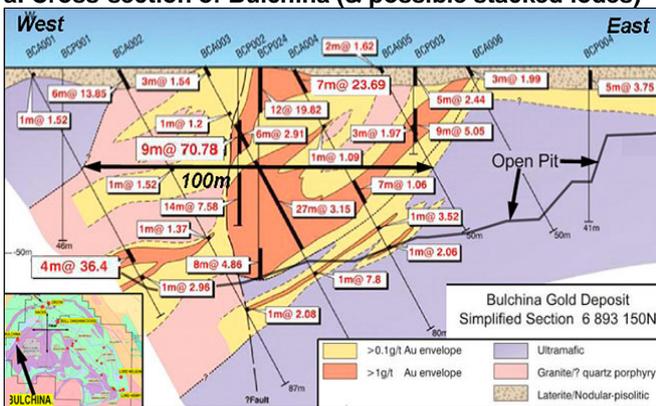
Figure 21. EW Striking Mineralisation at Billys Charm & Venus, and GSWA Bulletin 62 Plan of EW Mineralisation
 a. EW Striking Mineralisation at Billys Charm & Venus
 b. GSWA Bulletin 62 Plan of EW Mineralisation in 1914



Bulchina

Bulchina is located on the western side of the Sandstone goldfield as shown in Fig 1b, and its mineralisation has been described as being in thin quartz-carbonate & pyrite veins hosted in a mixed granodiorite / quartz porphyry on an ultramafic footwall (*ie potentially similar to Lord Nelson*, and with the granodiorite also dipping west as shown in Figures 22a and 22b). Bulchina had spectacular grades of 381g/t & 600g/t (as shown inset Fig23 - & no focus appears to have been made on the granodiorite/ultramafic contact. Like LN the ultramafic appears to be competent – based on the visibly competent state of the wall of the open-cut.

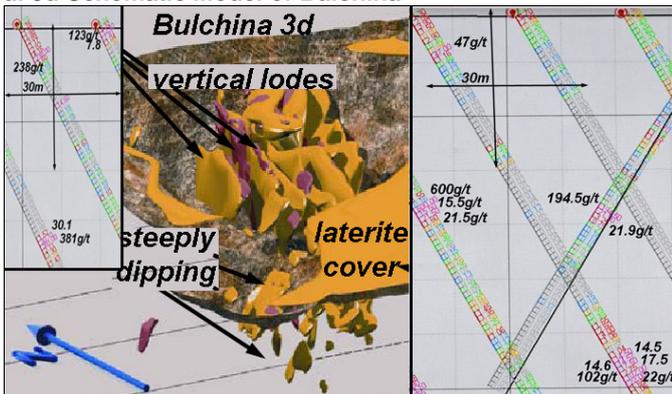
Figure 22. Cross-section of Bulchina (& possible stacked lodes), and Aerial View (looking SW) of the Bulchina Pit
 a. Cross-section of Bulchina (& possible stacked lodes)
 b. Aerial View (looking SW) of the Bulchina Pit



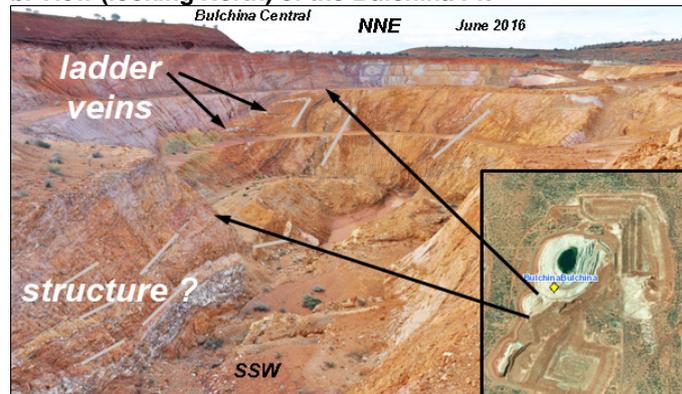
Bulchina also had an **over-reconciliation of its grade by 47%** from 2.1g/t to 3.4g/t in addition to much higher (74%) tonnage of 1979kt (vs 1140kt reserves) for **155% more gold** than expected at 219koz (vs 86koz expected - probably because of those triple digit (>100g/t) grade intersections). *Bulchina was not drilled down dip because the ore could not have been treated in the oxide plant, & has no ore resource.*

Figure 23. 3d Schematic Model of Bulchina, and View (Looking North) of Bulchina

a. 3d Schematic Model of Bulchina



b. View (looking North) of the Bulchina Pit



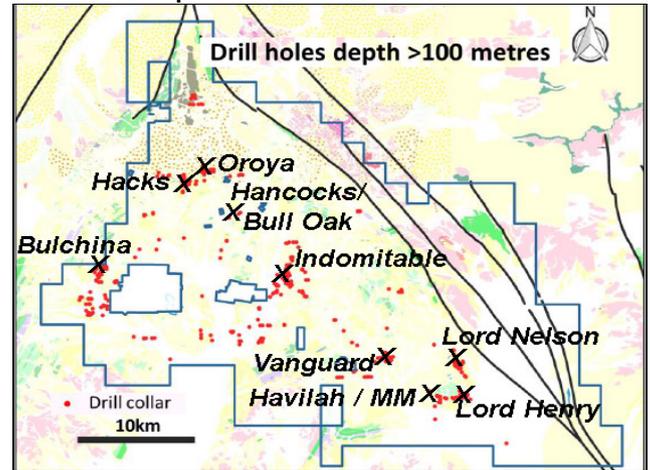
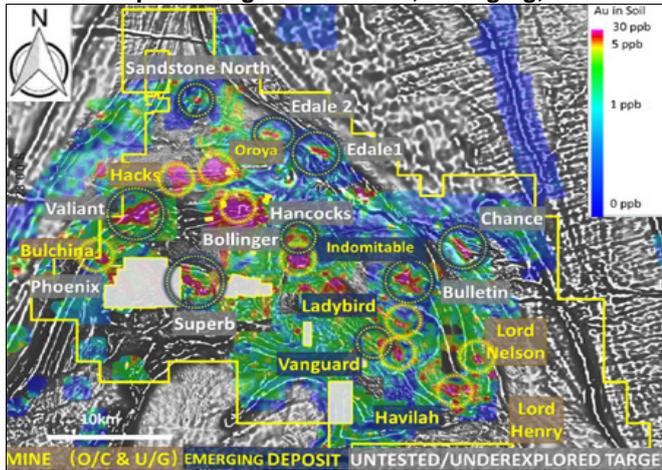
There does appear to be a structural change on the western side of the pit as shown in TRY's 3d model in Figure 23a, linking of the 3 pits and in Figure 23b.

The Bell Shapes and Depth

As shown in Figures 1a, 1b & 24a, the Sandstone Goldfield has a classic “bell shape” due to being sandwiched between two converging structures – similar to the Mt Magnet Goldfield to the West and Agnew Goldfield to the East, **bell shapes are often renowned for endowment**, so how did Sandstone acquire a “difficult” reputation and remain barely explored after being rated 2nd to Kalgoorlie in annual gold production in the early 1900s?. An independent academic study by 3 groups resulted in a possible Sandstone Goldfield endowment of: 4.2MozAu (non-geoscience); 3.5-5.6MozAu (conservative geoscience); & 5.3-13.5Moz (optimistic), **ie at least 2moz higher than the historical ~1.2Moz mined to date**.

The tarnished reputation came from WMC exploring for ~10 years, and then walking away because they were looking for nickel; Herald used Sandstone & Coolgardie as a stepping stones to mine in Iran (and hence minimal expense, treating through a 1980s 200ktpa plant); Troy also spent minimal (apart from increasing the plant to 500ktpa – but never installed a basic crushing circuit, so the plant could only treat **oxide ore** [plus contract crushing]), because they used Sandstone to explore the world – ending up in Brazil.

Figure 24. Alto’s Exploration Targets: Hist Mine, Emerging, Undertested, and Drillhole depths >100m at Sandstone
a. Alto’s Explorn Targets: Hist Mine, Emerging, Undertested **b. Drillhole Depths >100m at Sandstone**

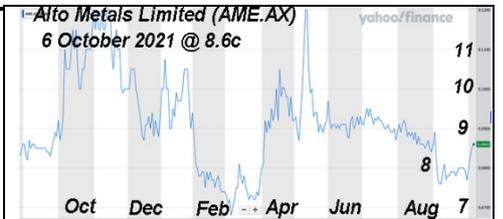


As shown in Figure 24a, there are numerous targets in the 3 categories of : Historical Mine (open-cut or underground), Emerging Deposit, and Undertested / Underexplored targets - and it becomes a case of prioritising them. This ERA report has focused on what it considers to be the main target areas being the Hist Mine and Emerging Deposit categories. A number of Troy’s targets stopped early because of hardness limiting the ability of the mineralisation being treated. Most of the drilling was shallow RC or RAB to ~40m below surface (common at that time) with only a **few holes >100m** in Figure 24b (and even the historical workings are shallow: Oroya to 145m & Hacks ~200m). Alto’s current **programme averages 187m** deep.

Financial Considerations

As reported in its June Qtrly 2021, Alto had \$5.1M cash and no debt. Its exploration expenditure in JQ2021 was ~\$2M, for a total for FY Jun 2021 of \$3.84M. The 7.5M options @ 7c fall due on 29 November 2023.

Board	Non-Exec Chairman : Richard Monti	Mgt	Chief Geologist : Changshun Jia
	Managing Director : Matthew Bowles		Company Secretary & CFO : Graeme Smith
	Non-Exec Director : Terry Wheeler		
	Non-Exec Director : Jingbin Wang	Net Cash (30 Jun 2021)	\$5.1M
Mkt Cap	A\$39m (at \$0.086)	Website : www.altometals.com.au	+61 (0) 8 9381 2808



Disclosure

Alto Metals Limited commissioned Keith Goode (who is a Financial Services Representative with State One Stockbroking Ltd ACN 092 989 083 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 1.71M shares issued by Alto Metals Limited. At the date of this report, State One Stockbroking Limited or their associates within the meaning of the Corporations Act, may hold interests in shares issued by Alto Metals Limited.

Disclaimer

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