

February 3, 2022

Haoma Mining Shareholder Update

To all Shareholders,

This Shareholder Report updates previous Haoma Shareholder Reports and advises shareholders that the next **Haoma Mining Annual General Meeting** covering the Financial Year ended June 30, 2021 will be held at Tonic House, 386 Flinders Lane at 9.30am on Wednesday March 16, 2022. A formal Notice of Meeting will soon be sent to shareholders.

This Shareholder update includes important information on the following Haoma activities:

- 1. Haoma's Iron Ore areas in the Pilbara and Mt Webber Joint Venture with Atlas Iron,
- 2. Exploration drilling program at Haoma's Soansville tenement E45/4174,
- 3. Results from Elazac Process test work on bulk samples of Bamboo Creek Tailings and Spear Hill Tailings,
- 4. Haoma Mining-Calidus Resources new Pilbara lithium exploration Joint Venture,
- 5. Sales from Haoma's Elazac Quarry at Cookes Hill (M45/1186), and
- 6. Haoma's Top Camp Roadhouse, Ravenswood, Queensland.



Figure 1: Location map of Haoma Mining's Pilbara exploration and mining tenements

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1. <u>Haoma's Iron Ore areas in the Pilbara and Mt Webber Joint Venture with Atlas</u> <u>Iron</u>

Haoma Mining NL has a considerable number of 100% owned iron ore tenements in the East Pilbara Region (See Figure 2 below) near the Mt Webber iron ore mine on M45/1197 operated by Atlas Iron (owned by Hancock Prospecting) from which Haoma receives a royalty and owns all other metals. (See details in Haoma's <u>Shareholder Update of September 15, 2021, https://haoma.com.au/wp-content/uploads/2021/09/Haoma-Mining-NL-Shareholder-Update-September-15-2021.pdf</u>)

The royalty is based on the Excess Reserve over 24 million tonnes of the combined amount of remaining reserve and tonnes mined. The uplift payment per Excess Reserve is currently \$1.63 per tonne (\$1.38 indexed by CPI from the Sale Agreement date of March 23, 2012).



Figure 2: Haoma Mining tenements held and applied for in the East Pilbara Region that adjoin or are near the Atlas Iron Mt Webber iron ore mine on M45/1197, including:

- Mt Webber E45/2922
- Soansville/Hillside Project Tenement Group (C283/1997) E45/4174, E45/4175, E45/4176, E45/4177, E45/4178, E45/4179, E45/4181, E45/4320, E45/4419, E45/4420, E45/4473, E45/4474, E45/4475, E45/4476, E45/4477, E45/4976, M45/847 and P45/3140
- Spear Hill Tenement Group (C145/2016) M45/1286 (under application), E45/4586, E45/4587, E45/5834 (under application), E45/5835 (under application), and E45/5846 (under application).

Haoma's geological management has been re-assessing all iron ore drilling data from the Daltons tenement (now M45/1197) where the Mt Webber iron ore mine is operated by Atlas Iron.

In addition, Haoma is evaluating the large number of nearby tenements held 100% by Haoma, particularly Haoma's tenement E45/2922, E45/4474 & E45/4176 which adjoins the Daltons (Atlas Iron) mining lease M45/1197.

The Directors believe Haoma's Pilbara tenements could be of considerable value as assays from 'shallow' drilling and sampling across the tenements has shown a large number contain goethite (FeO+H2O) with LOI, 8%-11%, and low impurities (aluminum and manganese oxide/asbestos).

On October 13, 2021 Haoma Shareholders were advised (https://haoma.com.au/wpcontent/uploads/2021/10/Haoma-Mining-NL-Shareholder-Update-October-13-2021.pdf) that recent 'smelting research' showed that when 'goethite' (say 10%) was blended with say 20% 'magnetite' and 70% 'hematite' then 'just gas' and 'no coking coal' was needed to produce 'Green steel'.

"The Mt Webber tenement and Haoma's many nearby tenements (now held 100% by Haoma) contain significant quantities of 'goethite' iron ore (FeO (H2O)) which is usually of a lower iron ore grade than 'hematite' but contains fewer impurities and has a higher LOI (Loss on Ignition) of between 7% and 10% - these features of 'goethite' mean that when blended with say 20% 'magnetite' and 70% 'hematite' the 'combined' iron ore mix can be smelted by an 'induction furnace' using just gas and no coking coal – resulting in low CO2 emissions and 'Green steel'!"

Haoma recently obtained from the **WA Department of Mines and Petroleum** the <u>Atlas Iron, April</u> <u>2015 Technical Annual Report for the period ending March 29, 2015</u>, covering M45/1197 (Atlas Iron is now Hancock Prospecting owned, Haoma receives a royalty), E45/2922, E45/4474 & E45/4176 and numerous other tenements (all 100% Haoma owned) near the Mt Webber Mine (M45/1197).

Because of the above goethite information, over the last few weeks Haoma prepared a new analysis of Daltons North (M45/1197) drilling data **using an Fe 'cut off 'of >40%** instead of >50%. (See Tables 1 & 2 below). The lower cut off understandably shows **significantly more goethite iron ore** is available. (See following '*Atlas 2014 - ML 45/1197, Daltons North drilling assays using Fe cut off greater than 40%*.'. See also Figure 3 below – '*Giralia JV – Haoma Hillside E45-2922 & M45-1197 – Drilling Summary Map*.')

Hole ID	GDA Easting	GDA Northing	Total Depth (m)	Depth From (m)	Depth To (m)	Fe%	Al2O3 %	K20%	MgO %	MnO %	Na2O %	P%	S%	SiO%	TiO%	LOI%
MWRC1177	738959	7618759	118	14	30	53.4	3.1	0.0	0.1	0.2	0.0	0.2	0.0	9.5	0.2	10.2
MWRC1178	738921	7618687	118	38	106	48.8	4.1	0.0	0.0	0.1	0.0	0.1	0.0	15.6	0.2	9.5
MWRC1179	738513	7619076	76	0	18	54.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	10.4	0.1	9.1
MWRC1192	738565	7618998	52	0	14	52.4	3.8	0.1	0.1	0.0	0.0	0.0	0.0	9.9	0.3	10.4
MWRC1195	738712	7619099	40	0	10	52.9	6.4	0.0	0.1	0.1	0.0	0.1	0.0	6.1	0.4	10.7
MWRC1200	738795	7619557	90	0	38	45.1	1.2	0.0	0.1	0.6	0.0	0.6	0.0	24.8	0.0	8.5
MWRC1201	738864	7619518	82	0	22	55.3	1.3	0.0	0.1	0.4	0.0	0.4	0.0	8.8	0.0	9.9
MWRC1203	738889	7619587	76	0	10	51.1	2.5	0.1	0.1	0.9	0.0	0.9	0.0	11.7	0.1	10.7
MWRC1204	738870	7619607	70	0	30	44.9	1.8	0.0	0.1	0.2	0.0	0.2	0.0	27.4	0.1	5.9
MWRC1205	738736	7619399	70	0	10	52.6	1.8	0.1	0.1	2.2	0.0	2.2	0.0	10.4	0.1	9.7
MWRC1206	738714	7619417	46	20	34	41.9	0.6	0.0	0.0	1.0	0.0	1.0	0.0	31.0	0.0	7.0
MWRC1208	738817	7619453	46	0	22	52.5	2.1	0.0	0.0	0.2	0.0	0.2	0.0	13.3	0.1	8.8
MWRC1210	738775	7619524	58	0	14	48.6	2.1	0.1	0.0	1.8	0.0	1.8	0.0	18.2	0.0	7.9
MWRC1211	738809	7619505	46	0	44	43.0	1.1	0.0	0.0	0.5	0.0	0.5	0.0	28.5	0.0	8.0
MWRC1212	738842	7619483	52	0	42	47.7	1.7	0.0	0.1	0.5	0.0	0.5	0.0	20.2	0.1	8.8
MWRC1214	738832	7619582	60	0	22	47.8	1.7	0.1	0.1	0.4	0.0	0.4	0.0	19.6	0.1	9.3
MWRC1215	738856	7619569	58	0	20	52.6	1.4	0.0	0.0	0.5	0.0	0.5	0.0	12.2	0.0	10.2
MWRC1216	738879	7619555	70	0	24	54.4	1.4	0.0	0.1	0.4	0.0	0.4	0.0	8.7	0.0	10.6
MWRC1219	738732	7619451	70	14	36	47.2	0.8	0.0	0.0	0.1	0.0	0.1	0.0	22.7	0.0	8.6
MWRC1220	738671	7619539	64	0	24	52.0	2.1	0.1	0.3	1.5	0.1	1.5	0.0	9.1	0.2	11.3
MWRC1221	738710	7619511	76	0	26	42.0	0.8	0.0	0.0	0.6	0.0	0.6	0.0	30.7	0.0	7.4
MWRC1222	738743	7619489	82	0	40	49.8	2.2	0.0	0.0	0.5	0.0	0.5	0.0	16.1	0.1	9.6
MWRC1223	738882	7619503	88	0	18	47.4	1.3	0.0	0.0	0.1	0.0	0.1	0.0	23.1	0.1	7.2
MWRC1238	738532	7619110	64	0	32	46.6	5.3	0.0	0.1	0.1	0.0	0.1	0.0	17.4	0.3	9.3

Table 1: Atlas 2014 - ML 45/1197, Daltons North drilling assays using Fe cut off greater than 40%

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Hole ID	GDA Easting	GDA Northing	Total Depth (m)	Depth From (m)	Depth To (m)	Fe %	Al2 O3 %	K2 0%	Mg O%	Mn O%	Na2 O%	P%	S%	SiO 2%	TiO 2%	LOI %
MWRC1246	737993.4	7618488.5	98	0	66	47.7	1.2	0.0	0.1	0.3	0.0	0.0	0.0	24.8	0.1	5.1
MWRC1248	737833.5	7618446.6	88	0	10	50.3	4.1	0.0	0.2	0.0	0.1	0.1	0.0	15.7	0.1	6.0
MWRC1248	737833.5	7618446.6	88	34	68	44.0	1.1	0.0	0.0	0.1	0.0	0.1	0.0	31.3	0.0	4.5
MWRC1249	737803.8	7618321.3	84	0	74	42.0	1.3	0.0	0.1	0.5	0.0	0.0	0.1	34.3	0.1	3.5
MWRC1250	737775.7	7618339.4	64	0	14	46.6	1.8	0.0	0.2	0.0	0.0	0.1	0.0	27.0	0.1	3.7
MWRC1251	737888.2	7618549.1	82	44	54	40.5	3.6	0.1	0.1	0.6	0.0	0.0	0.1	33.2	0.2	3.0
MWRC1252	737957.3	7618508.9	94	0	68	40.9	1.6	0.0	0.1	0.1	0.0	0.0	0.0	36.3	0.1	3.1
MWRC1253	738027.7	7618469.3	102	16	90	46.5	0.9	0.0	0.1	0.6	0.0	0.0	0.0	28.2	0.0	3.4

Table 2: Haoma 2014, E45/2922 drilling assays using Fe cut off greater than 40%



<u>Figure 3:</u> Giralia JV– Haoma Hillside E45-2922 & M45-1197 – Drilling Summary Map.

While Atlas had previously provided Haoma with the 2014 Daltons North (M45/1197) shallow RC drilling data, unfortunately the information Atlas provided to Haoma **excluded the LOI results!**

Data shown in **Table 6** of the <u>Atlas Iron, April 2015 Technical Annual Report for the period</u> <u>ending March 29, 2015</u> lists for Daltons North (M45/1197) the following small **Indicated Resource** based on the shallow drilling and an Fe 'cut-off' >50%:

- 467,774t of Fe 55.05%,
- LOI average 8.12%, and
- low XRF readings for % MnO, % MgO & % Al2O3.

In addition, Haoma's management knows from test work that 'wet beneficiation' (after crushing 'goethite' to 10mm), which extracts the '<0.85 μ m' fraction, results in the % Fe grade in the remaining iron ore (about two thirds) to be about 5% higher than the initial overall % Fe grade. (See Haoma Shareholders Update, September 15, 2021)

Haoma understands there are **additional costs in using 'wet beneficiation'** to increase the % Fe grade in about two-thirds of goethite iron ore.

Test-work, using the Elazac Process, was then conducted in the Bamboo Creek Laboratory on the extracted <0.85 μ m 'fines' fraction from Mt Webber iron ore.

During the last 2 months a **29.7kg sample** was selected from the **95 tonnes of Mt Webber 'low grade iron ore' on the Bamboo Creek pad.** The 29.7kg sample was crushed to 10mm, mixed in water and the <0.85µm 'fines' fraction extracted (10.835kg, 36.38% of the 29.7kg sample).

The Bamboo Creek test-work resulted in the recovery of a **Precious Metal Concentrate** (from the **extracted <0.85µm 'fines' fraction from Mt Webber iron ore) without smelting** – analyses by XRF measured:

- 33.73% iron,
- 2.02% gold, and
- 6.59% PGM (Platinum Group Metals).

The 'back calculated' gold grade of the <0.85µm 'fines' fraction was 28.48g/t gold.

The above result is significant as **the value of the gold recovered (plus PGM) is 100% Haoma's,** and the value of gold recovered would be significantly greater than the estimated cost needed to use 'wet beneficiation' of Mt Webber 'low grade iron ore' to extract the <0.85µm 'fines' fraction. (Haoma has crushing facilities and water storage facilities at Cookes Hill, 50 km from Port Hedland, where 'wet beneficiation' of mined goethite could be conducted.)

2. <u>Soansville E45/4174 proposed drilling program – 100% Haoma</u>

In the **Soansville** area, based on the positive surface sample assays shown in Table 3 and Figure 4 below, Haoma will after the wet season undertake a drilling program to better define a shallow iron ore resource in the Soansville area. The drilling program will comprise **20 shallow holes to 20m depth**, over an area which covers up to 10km of outcrop.

Sample	ALS Assay	Haoma XRF
102 – iron, ALS Fe2O3	42.7%	50.36%
107 - iron, ALS Fe2O3	32.7%	46.31%
101 – nickel	111.5 g/t	688.0 g/t
107 – nickel	74.0 g/t	570.4 g/t
103 – rubidium	149.0 g/t	242.6 g/t
105 – rubidium	143.5 g/t	229.7g/t

Table 3: E45/4174 'surface' sample assay results



Figure 4: Soansville E45/4174 sample locations showing results for iron, nickel & rubidium



Figure 5: E45/4174 surface sampling locations

3. <u>Elazac Process test work on bulk samples of Bamboo Creek Tailings and Spear</u> <u>Hill Tailings</u>

Since October 13, 2021, similar tests as conducted on the_<0.85µm 'fines' fraction from Mt Webber 'low grade iron ore' were conducted in the Bamboo Creek Laboratory on samples of:

- 1.47kg of **Bamboo Creek Tailings**, and
- 16.8kg of **Spear Hill Tailings.** (See Haoma Mining Shareholder Report, June 15, 2021 and Update, September 15, 2021.)

Precious metal concentrates were recovered without smelting, the following XRF grades were measured in each concentrate sample recovered:

1. Bamboo Creek Tailings 'fines <0.75µm', concentrate recovered:

- 11.3% iron, 0.69% gold, and
- 9.21% PGM (Platinum Group Metals).

The 'back calculated' gold grade of the Bamboo Creek Tailings 'fines <0.75µm' was 13.86g/t gold.

2. Spear Hill Tailings, concentrate recovered:

- 43.57% iron,
- 2.89% gold,
- 6.50% PGM (Platinum Group Metals), and
- 0.58% Rubidium, and
- 10.4% Rare Earths.

The 'back calculated' gold grade of Spear Hill Tailings was 80.72g/t gold.

4. <u>Haoma Mining-Calidus Resources new Pilbara lithium exploration Joint</u> <u>Venture</u>

On January 18, 2022, Haoma shareholders were advised of the execution of a Binding Terms of Agreement with **Calidus Resources Limited** (ASX: CAI) to take a 50 per cent interest in a new Pilbara lithium exploration company.

The new entity Pirra Lithium Pty Ltd will be assigned tenements and lithium rights across the most prospective lithium ground in the Calidus and Haoma portfolios. The combined tenements and lithium rights cover 1,063km².

Negotiations with Calidus are progressing well and a formal agreement to give effect to the initial Terms of Agreement is expected to be finalised soon.

The formation of the joint venture with Calidus gives Haoma a low-cost opportunity to partner with an experienced East Pilbara based exploration company to unlock substantial value by exploring what is known to be highly prospective lithium ground in one of the world's best lithium provinces.

5. Sales from Haoma's Elazac Quarry at Cookes Hill (M45/1186)

Haoma's hard rock Elazac Quarry at Cookes Hill (M45/1186) is operated under licence by Brookdale Contracting.

In the Half Year to December 31, 2021, Haoma sold 259,337 tonnes of Elazac Quarry hard rock to Brookdale Contracting, generating revenue of \$957,197. This sales revenue is a significant increase over the previous year comparative period – \$306,515 from 83,410 tonnes.

The 'quantity' of rock sales from the Elazac Quarry is expected to be maintained as significant upgrades to Port Hedland Port facilities have been announced, and ongoing infrastructure work being undertaken in the East Pilbara Region is expected to be maintained at current level.

Revenues for the previous two years and for the current year to date (July to December 2021) are shown in Table 4 below.

<u>Table 4:</u> Sales from Haoma's Elazac Quarry.

			2022
	2020	2021	(6 months)
Ballast	-	\$110,532	\$339,489
Rock Armour	\$349,948	\$195,983	\$617,708
July – December Total	\$349,948	\$306,515	\$957,197
January – June Total	\$422,444	\$337,121	
Full Year Total	\$772,392	\$643,636	

6. <u>Haoma's Top Camp Roadhouse, Ravenswood, Queensland</u>

Refurbishment and upgrade work at the **Top Camp Roadhouse**, **Ravenswood** is continuing.

During the Quarter the retail shop area, product shelving and customer access was expanded. In addition, product lines in the shop were increased, and operating hours extended to facilitate catering for the local community and contractors, some of whom use the Top Camp facilities for accommodation.

The **Top Camp 'park amenities'** have been repaired and refurbished and new facilities added for the benefit of residents. It is expected that these modifications will support an increase in tourist visitation to the area.

A **back-up generator** has been connected to ensure power is always available to the Top Camp 'shop', accommodation and 'camp' facilities.

Access roads into and around Top Camp were recently re-surfaced, and new 'fuel bowsers' added to service visiting vehicles.

The above upgrades and major contributions by Top Camp Managers', Cathy Mew and Mark Farris, have since September 2021 increased Top Camp revenue from **increased retail sales** and **accommodation bookings.**

New accommodation (subject to Council approval) is expected to be added in the next six months plus a swimming pool for the benefit of patrons.

Haoma shareholders travelling through the 'district' are welcome to call in at Top Camp and stay at a 50% discounted 'cabin' rate. To book, **please call Cathy Mew on (07) 4770 2168.**



Figure 6: Aerial view of Haoma's Top Camp, Ravenswood, Queensland.

Yours sincerely

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Gary C. Morgan Chairman