

A.B.N 12 008 676 177

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December 1, 2017

Haoma Mining NL resubmits the following Exploration Reports and 2017 Annual Report:

- 1. October 16, 2017 Haoma Mining recovers 'flat watermelon seed-like' nuggets from conglomerates at the Comet Mine near Marble Bar
- 2. October 18, 2017 Haoma Mining recovers 'flat watermelon seed-like' nuggets from conglomerates at the Comet Mine near Marble Bar
- 3. October 31, 2017 Activities Report for the Quarter Ended September 30, 2017
- 4. November 2, 2017 2017 Annual Report to Shareholders
- 5. November 13, 2017 Initial coarse crushing of one tonne bulk sample of Comet Mine conglomerate material produces 2.2g of gold
- 6. November 30, 2017 Haoma Mining recovers 'flat watermelon seed-like' nuggets from conglomerates at the Just in Time Prospect near Marble Bar
- 7. November 30, 2017 Chairman's Address to 2017 Haoma Mining NL Annual General Meeting

## Exploration data and results included within these reports have been compiled by the following Competent Persons:

#### Mr. Peter Cole

Data in relation to the method of metal detection and collection of 'flat' gold nuggets is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of sampling mineral outcrops. Mr. Cole has worked in the mining industry for over 30 years and has been associated with Haoma for more than 20 years.

Information as it relates to Metallurgical Results is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of metallurgical test work. The results relate to testing the effectiveness of a new method of assaying for gold and other mineral content (the Refined Elazac *Assay* Method) and a new method for extraction of gold and other minerals from the ore (the Refined Elazac *Extraction* Method). These methods are together referred to as the Elazac Process. The information reported relates solely to ongoing test work in relation to bringing the Elazac Process to commercial realisation. Mr. Cole has worked in the mining industry for over 30 years and has been associated with the development of the Elazac Process over a long period (approximately 15 years). Mr. Cole is one of only a few people with sufficient relevant knowledge and experience to report results in relation to test work on the Refined Elazac *Assay* Method and Refined Elazac *Extraction* Method. Mr. Cole has consented to the inclusion in this report of the information and data in the form and context in which it appears.

#### **Prof. Peter Scales**

Information & data as it relates to determining the likely origins of nuggets from the Comet and Bamboo Creek Conglomerates formations using microprobe and other specialised techniques is prepared by Professor Peter Scales, Department of Chemical Engineering, University of Melbourne. Professor Peter Scales has worked with and been associated with Haoma Mining and Elazac Mining for more than 20 years.

#### Mr. David Mellor

Information that relates to conglomerate formations was compiled by David Mellor who was at the time a full-time employee of Haoma Mining and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). David Mellor has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Mellor consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

#### Mr. Ron Furnell

Information in this report that relates to Exploration Results is based on information compiled by Ronald Furnell who is a full-time employee of Haoma Mining NL and is a Member of the Australian Institute of Geoscientists (AIG). Ronald Furnell has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ronald Furnell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### Elazac Process Intellectual Property owned by Elazac Mining Pty Ltd

Some information in these reports is based on work conducted in accordance with the **Elazac Process** and relies on Intellectual Property owned by Elazac Mining Pty Ltd. Assay and processing methods used in the **Elazac Process** will not be disclosed.



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October 31, 2017

Company Announcements Office Australian Stock Exchange Level 4, North Tower, Rialto 525 Collins Street MELBOURNE, VIC 3000

Dear Sir,

#### **ACTIVITIES REPORT FOR THE QUARTER ENDED SEPTEMBER 30, 2017 – HIGHLIGHTS**

#### • Group Consolidated Financial Result:

Haoma Mining's unaudited consolidated financial result for the three months ended September 30, 2017 was a before tax loss of \$1.50 million after interest of \$0.47 million, depreciation and amortisation of \$0.05 million, and development and test work expenditure of \$0.62 million.

#### • 'Flat – watermelon seed-like' nuggets recovered from conglomerates near Comet Mine:

On October 16, 2017(Reference B) Haoma advised shareholders that a large number of 'flat' gold nuggets (Figure 11) and 'fine' gold (Figure 12) were collected from the conglomerate outcrop area 'C2' located at the Just in Time Prospect 1.8kms to the South West of the Comet Mine near Marble Bar (at 21deg.15.10S, 119deg.43.15E) (Figures 8 to 10).

At area 'C2' a large number of 'flat' gold nuggets (Figure 11) were metal detected and collected over a 150 metre section (approximately 20 metre wide) in a sedimentary formation that was then believed to be approximately 3 kilometres long. The nuggets were collected just below the surface of the conglomerate using a hammer and/or pick.

Other gold nuggets (Figure 16) were metal detected and collected from conglomerate outcrop 'C3' located at the Tassie Queen Prospect in hills to the North West of the Comet Mine (at 21deg 13.916S, 119deg 42.513 East, elevation 283m) (Figures 13 to 15).

Haoma believes it has now discovered at Comet Mine area 'C2' a significant 'gold bearing conglomerate' which had previously not been identified.



100 110 120 130 140 150 160 170 180 190 200 210 220 230

<u>Figure 11:</u> Nuggets collected from area C2 – Conglomerates to the South West of the Comet Mine, total weight of nuggets 33.167 grams



**Figure 12:** Fine gold collected in area C2 – Conglomerates to the South West of the Comet Mine, total sample weight 0.183 grams

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#### 1. GROUP CONSOLIDATED RESULT TO SEPTEMBER 30, 2017

Haoma Mining NL Consolidated Profit & Loss	2016/17 1st Qtr (\$m)	2016/17 Full Year (\$m)	2017/18 1st Qtr (\$m)	2017/18 YTD (\$m)
Operating Revenue: Gold & Silver Sales	-	-	-	-
Royalties Retail Sales & Misc.	0.03	0.08	- 0.04	0.04
Test work Other Income	0.10 0.25	0.10 0.29	-	
Operating Revenue	0.38	0.59	0.04	0.04
Operating profit (loss) before interest, depreciation, amortisation,				
exploration & development costs:	0.12 (0.46)	(0.56) (1.80)	(0.36) (0.47)	(0.36) (0.47)
Depreciation & amortization	(0.40) $(0.05)$	(0.19)	(0.05)	(0.05)
Exploration, development & test work Operating (loss) before tax	(0.72) (1.11)	(2.14) (4.69)	(0.62)	(0.62) (1.50)

#### 1.1 Haoma's Group Consolidated Result

Haoma Mining's unaudited consolidated financial result for the three months ended September 30, 2017 was a before tax loss of \$1.50 million after interest of \$0.47 million, depreciation and amortisation of \$0.05 million, and development and test work expenditure of \$0.62 million.

#### 1.2 **Funding of Operations**

Funding for Haoma's operations is presently being provided by The Roy Morgan Research Centre Pty Ltd, a company owned and controlled by Haoma's Chairman, Gary Morgan. Interest on debt to Roy Morgan Research Centre accrues at the 30 day commercial bill rate plus a facility margin of 1%.

At September 30, 2017 the principal debt to The Roy Morgan Research Centre Pty Ltd was \$40.28 million. Interest accrued for the 3 months to September 30, 2017 was \$458,412. Total interest accrued and unpaid to September 30, 2017 is \$30.45 million.

The Roy Morgan Research Centre Pty Ltd has advised that that no net debt repayment will be required until Haoma's annualised EDITDA exceeds \$15 million per annum and that debt repayments will not exceed 50% of Haoma's EBITDA in any year.

#### 2.0 OPERATIONS AT BAMBOO CREEK, WESTERN AUSTRALIA



**<u>Figure 1:</u>** Location map of Haoma Mining NL Pilbara mining tenements. (Yellow areas show Haoma joint venture tenements with Atlas Iron.)

#### 2. <u>EXPLORATION ACTIVITIES IN WESTERN AUSTRALIA<sup>1</sup></u>

#### 2.1 <u>Haoma Mining recovers 'flat – watermelon seed-like' nuggets from Conglomerate Formations</u> <u>at the Comet Mine near Marble Bar</u>

Recent 'flat' gold nugget (also known as 'watermelon seed-like') discoveries by Artemis Resources (ASX: ARV) and Novo Resources (TSX-V: NVO) at 'Comet Well' and 'Purdy's Reward', and by De Grey Mining (ASX: DEG) at 'Louden's Patch' and on yesterday at Jarret Well' & 'Steel Well' have resulted in an increase in gold exploration throughout the Pilbara Region in known areas of outcropping conglomerates containing Fortescue Group rock types – a thick pile of sedimentary and volcanic rocks overlying the older Archean basement rocks (Warrawoona Group) of the Pilbara region.

On October 5, 2017 Haoma shareholders were advised tenements held at Bamboo Creek (Figure 1 & 2-4) and Comet Mine, near Marble Bar, (Figure 1 & 5-7) contained conglomerate materials in the Hardey Sandstone Formations, within the Fortescue Group.



**<u>Figure 2:</u>** Haoma Mining, Google earth – Bamboo Creek Tenements and Fortescue Group contact.

<sup>1</sup> Competent Person Statement and JORC Code Table 1 Information

The information in this report that relates to Exploration Results is based on information compiled by Ronald Furnell who is a full-time employee of the Haoma Mining NL and is a Member of the Australian Institute of Geoscientists (AIG). Ronald Furnell has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ronald Furnell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Table 1 (JORC Code, 2012 Edition) detailing Exploration Sampling Techniques and Exploration Data (Section 1) and Reporting of Exploration Results (Section 2) is included as 'Annexure 4' to this report.



Figure 3: Haoma Mining, Earth geology – Bamboo Creek tenements.



**Figure 4**: Haoma Mining, Google earth – Bamboo Creek tenements showing Conglomerate Formations and Fortescue Group contact.



**Figure 5:** Haoma Mining, Google earth – Comet Mine near Marble Bar tenements and Fortescue Group contact.



Figure 6: Haoma Mining, Earth geology – Comet Mine near Marble Bar tenements.



**<u>Figure 7:</u>** Haoma Mining, Google earth – Comet Mine near Marble Bar tenements that contain Conglomerate Materials in the Hardey Sandstone Formations.

While the estimated age of the Conglomerate Formations has not been determined, due to the complex structural history of the Pilbara region, on October 5, 2017(Reference A) shareholders were advised the Conglomerate Formations occur near the basal contact zones of the "Lower Proterozoic Fortescue Group" which are shown on Earth geology (Figure 3, 6 & 18). The Fortescue Group are known to overlie the ca 3300 to 3500Ma old Archaean basement unconformity which is evidently highly prospective for gold.

On October 11, 2017 Haoma personnel with metal detectors commenced surface sampling of Fortescue Group type rocks at 4 locations at Bamboo Creek and 3 locations at the Comet Mine near Marble Bar. Bulk samples of approximately 50kg were collected from the seven conglomerate outcrop areas (C1 to C7). Those samples are now being processed and analysed at Haoma's Bamboo Creek laboratory.

On October 16, 2017(Reference B) Haoma advised shareholders that a large number of 'flat' gold nuggets (Figure 11) and 'fine' gold (Figure 12) were collected from the conglomerate outcrop area 'C2' located at the Just in Time Prospect 1.8kms to the South West of the Comet Mine near Marble Bar (at 21deg.15.10S, 119deg.43.15E) (Figures 8 to 10).

At area 'C2' a large number of 'flat' gold nuggets (Figure 11) were metal detected and collected over a 150 metre section (approximately 20 metre wide) in a sedimentary formation that was then believed to be approximately 3 kilometres long.

The nuggets were collected just below the surface of the conglomerate outcrop on a bulldozed bench prepared for the sampling. The bulk sampling was conducted along a 3.5m trench cut along the strike of the conglomerate and consequently is probably not indicative of the conglomerate bed gold content. 'Pink' spray paint evident in Figures 8, 9 & 10 below show the locations where gold nuggets were detected and subsequently collected.

Preliminary results indicate the conglomerates are auriferous and represent a highly prospective target for ongoing exploration. Metal detecting on the conglomerate surface has demonstrated the

erratic nature of the gold nuggets near surface, dictating a need for further bulk sampling and investigation.

Other gold nuggets (Figure 16) were metal detected and collected from conglomerate outcrop 'C3' located at the Tassie Queen Prospect in hills to the North West of the Comet Mine (at 21deg 13.916S, 119deg 42.513 East, elevation 283m)<sup>2</sup> (Figures 13 to 15).

University of Melbourne SEM and Laser Ablation ICP-MS analysis of the **nuggets from Comet Mine areas 'C2' and 'C3' show they were near 100% pure gold with only small amounts of silver**. This make-up of the nuggets is different from basement-hosted lode gold deposits from the Pilbara region and is indicative of in-situ formation (Reference C).

On October 18, 2017 Haoma Directors advised the ASX they would not divulge the location of the Comet Mine areas 'C1', 'C2' and 'C3' as follows:

"Haoma will not release co-ordinates or other details that would define the exact locations as this would expose Haoma to significant tenement security issues. It is also not possible to provide a JORC statement simply around gold nuggets. We have limited the scope of the announcement to a report advising that we have found many nuggets at two locations and we will investigate further.

We have provided photographic evidence of the nuggets and of the locations where they were collected."

During the current Quarter bulk samples from both areas 'C2' and 'C3' will be recovered and initial processing on site at the Comet Mine. Some bulk samples will then be sent to Bamboo Creek for further processing.



Figure 8: Conglomerates in area C2 – South West of the Comet Mine.

<sup>&</sup>lt;sup>2</sup> Updated location information supplied January 8, 2018



Figure 9: Conglomerates in area C2, looking to the South West of the Comet Mine.



**Figure 10:** Conglomerates in area C2 – South West of the Comet Mine showing conglomerate extensions looking north.



**Figure 11:** Nuggets collected from area C2 – conglomerates to the South West of the Comet Mine, total weight of nuggets 33.167 grams.



**Figure 12:** Fine gold collected in area C2 – conglomerates to the South West of the Comet Mine, total sample weight 0.183 grams.



Figure 13: Conglomerates in area C3 – North West of the Comet Mine.



Figure 14: Conglomerates to the North West of the Comet Mine.



Figure 15: Close up view of the conglomerates to the North West of the Comet Mine.



**Figure 16:** Nuggets collected from area C3 conglomerates to the North West of the Comet Mine, total sample weight 0.639 grams.



Figure 17 : Comet Mine sample of Pyritic conglomerate material, Marble Bar, WA.



Figure 18: Earth geology – Haoma Mining, Soansville tenements.



**Figure 19(a):** Haoma Mining, Google earth – Soansville tenements showing conglomerates and Fortescue Group contact.

Van Kranendonk et al.



In 2006 geological work was undertaken by Van Kranendonk et al., in the Soansville region. The generalised lithostratigraphic column for the region (on the left) indicates that conglomerates are well developed in the 3.2 Ga, Corboy Formation and overlying De Grey Supergroup. See Figure 19(b).

Further exploration on Haoma's Soansville tenements is consequently warranted.

Figure 19(b): Soansville Region lithostratigraphic column

et al., 2006)

on left shows the time span of depositional events (after Van Kranendonk

The conglomerates near the Comet Mine had previously been explored by both the Stubbs Family (previous owners of the Comet Mine, see SH&MT Stubbs 1992/93 & 1993/94 Exploration Reports: WAMEX, Mines Department Index, M8113–A39484 & 42569) and BHP Minerals on behalf of Haoma. Both reported only a small number of nuggets without finding "*a gold bearing conglomerate*".

Haoma believes it has now discovered at Comet Mine (area C2) a significant 'gold bearing conglomerate' which had previously not been identified.

Ground exploration activities conducted near the Comet Mine in 1992-1994 identified alluvial gold in the area near outcropping conglomerates. In areas of outcropping conglomerate, the presence of alluvial gold will provide a 'marker' or 'pathfinder' for identification of gold bearing conglomerate.

Exploration Reports for the 1992-94 exploration programs (EL45/1059) submitted to the Department of Mines ('DMP') noted that "Pan sampling of creeks in this area was carried out in areas with outcrops of decomposed conglomerates, looking for alluvial free gold, which may lead us to a gold bearing conglomerate. We were unable to find any trace of free gold." Copies of the reports obtained from the DMP were attached to Haoma's September 2017 Quarter Activities Report as Appendices 1A and 1B.

Details on Pilbara geology and conglomerate locations are documented in detail by Arthur H Hickman in "*Geology of the Pilbara Block and its Environs*", Bulletin 127, Geological Survey of Western Australia (1983).

In addition Novo Resources Corp's has recently released details on their exploration results at their Purdy's Reward **gold project near Karratha in the Western Pilbara** – <u>October 17, 2017 release by</u> Toronto Stock Exchange – Venture Exchange (TSX-V) listed entity Novo Resources Corp.

(http://www.novoresources.com/\_resources/news/2017-10-17.pdf)

Novo's release provides the following information on their Karratha Gold Project:

Gold mineralization at Karratha is hosted by a sequence of conglomerate beds, fossil gravel horizons, ranging from a few meters to approximately 20 meters thick comprising the base of a much thicker package of sedimentary and volcanic rocks called the Fortescue Group. Rocks of the Fortescue Group were deposited between 2.78 and 2.63 years ago upon 3.0-3.7 billion year old igneous and metamorphic rocks that make up the Pilbara craton, an ancient piece of Earth's crust.

Over the past year, local metal detectorists have excavated gold nuggets originating from weathered conglomerate along an eight-kilometer, southwest-trending corridor between the Purdy's Reward prospect (please refer to the Company's news releases dated May 26 and August 15, 2017) and Comet Well (please refer to the Company's news releases dated April 11, June 26, and August 3, 2017). These gold-bearing conglomerates dip gently southeastward under cover at angles of between 2 and 20 degrees. The Company secured 100% control over approximately 7,000 sq km in areas along strike and down dip from Purdy's Reward and Comet Well through aggressive staking earlier this year. Novo believes that these gold-bearing conglomerates may underlie significant areas within the greater Fortescue basin.

In the Company's news release dated July 12, 2017, Novo discussed discovery of gold nuggets in a bulk sample collected from a trench at the Purdy's Reward prospect. Metallurgical test work conducted on this sample was discussed in the Company's news release issued August 8, 2017. The weighted average grade of two splits of this bulk sample was 67.08 g/t Au. Approximately 82% of the gold in this sample was determined to be coarse, mainly nuggets displaying several interesting characteristics. These are commonly flattened with rounded edges giving them an appearance similar to watermelon seeds.

Most are coarse, +2 mm and are not attached to quartz or other minerals. Gold is of high purity, +96%, much higher than the gold content of nuggets derived from basement-hosted lode gold deposits from the Pilbara region that commonly display purities of 70-90%. Nuggets display crenulated surfaces thought derived from burial and compaction within a sandy matrix.

In addition to coarse gold, this metallurgical test confirmed a significant fine-grained gold component is present in these conglomerates. Such fine gold, if it is indeed disseminated throughout the conglomerates, could prove important to help evaluate grade and continuity of this deposit.

Dr. Quinton Hennigh, the Company's, President and Chairman and a Qualified Person as defined by National Instrument 43-101, has approved the technical contents of this news release.

#### **Relevance to Haoma Shareholders:**

Many Haoma shareholders and ASX investors would be aware of the recent announcements and press publicity regarding the new discoveries of significant numbers of gold nuggets in Conglomerate Formations located in the **Western Pilbara Region** of Western Australia. Following Haoma's October 5, 2017 announcement, shareholders would be aware that the major discoveries were potentially of relevance to Haoma and them as shareholders, but without further information they have no way of understanding why those **Western Pilbara Region** announcements are of significance to Haoma and other mineral exploration companies who hold **Eastern Pilbara tenements which contain Conglomerate Formations**.

Since the weekend some investors may have a better understanding since reading The Weekend Australian (October 28, 2017) article *"The Pilbara is a goldmine for some"* and comments by Cliff Lawrenson, CEO, Atlas Iron regarding their **Eastern Pilbara Region** tenements – some of Atlas Iron tenements are jointly held with Haoma, see Figure 1.

The **Eastern Pilbara Region** is significantly upgraded with Haoma's latest discovery of a large number of 'flat' gold nuggets (Figure 11) and 'fine' gold (Figure 12) collected from the conglomerate outcrop area 'C2' (Figure 8 to 10) located in Comet Mine tenements near Marble Bar.

Haoma is being advised by Professor Peter Scales, Department of Chemical Engineering, University of Melbourne. (Reference C)

Haoma is awaiting a formal report form Professor Peter Scales and others who are currently determining the likely origins of nuggets from the Comet and Bamboo Creek Conglomerates formations using microprobe and other specialised techniques.

The August 1996 BHP Mineral SEM analysis (See Appendix 2) of gold nuggets from Comet Mine Conglomerate Formation area 'C1' (See Table 1 below); and recent University of Melbourne SEM analysis of nuggets and 'fine' gold from area 'C2' (See Table 1 below and Figure 11 & 12) suggest there are two different populations of nuggets within the Comet Mine Conglomerates.

In August 1996 two different nugget populations was referred to by Robert Skrzeczynski, Exploration Manager Operations, BHP Minerals, Australia in his report to Haoma – see Appendix 2.

## Table 1: SEM analysis of gold nuggets and 'fine' gold from Comet Mine Conglomerate Foundations – in August 1996 and October 2017

1) BHP Minerals Report, August 1996 – Table1, SEM silver bearing gold composition:

#### **Gold from Comet Mine area 'C1'**

Sample 1 – gold 91.12%, silver 8.88%

Sample 2 – gold 100%

Sample 3 – (i) gold 89.51%, silver 10.49%, (ii) gold 88.70%, silver 11.30%

Sample 4 – gold 92.69%, silver 7.31%

Sample 5 – gold 90.92%, silver 9.08%

2) Haoma Mining, October 2017 – SEM silver bearing gold composition:

#### Nuggets from Comet Mine area 'C2'

Sample 1 – gold 98.92%, silver 1.08%

Sample 2 – gold 99.94%, silver 0.06%

#### 'Fine' gold from Comet Mine area 'C2'

Sample 1 – gold 100%

Sample 2 - gold 94.16%, silver 5.84%, (ii) gold 98.10%, silver 1.90%

Sample 3 – gold 100%

The above SEM analysis of gold nuggets and 'fine' gold from Comet Mine Conglomerate Formations shows the Comet Mine tenements contains highly prospective gold targets for ongoing exploration.

During the Quarter additional metal detecting and sampling will be conducted at other Haoma tenements that contain Conglomerate Formations, namely at:

- Soansville (about 100 km south-west from the Comet Mine see Figure 1 and 18 & 19),
- Bamboo Creek see Figure 1,
- Marble Bar– see Figure 1, and
- Blue Bar see Figure 1.

The nature, character, lateral extent and thickness of the Conglomerate Formations located in the above areas will be assessed to determine future exploration activity.

#### 2.2 Haoma Mining Elazac Process Test Results (Reference D)

Shareholders were advised in the Haoma July 2017 Quarterly Report (see Appendix 3) test work using the Elazac Process measured significant quantities of precious metals in concentrates recovered after processing Bamboo Creek Tailings and Mt Webber iron ore fines.

During the Quarter test work concentrated on determining the most cost efficient Bamboo Creek Plant configuration to continuously process Bamboo Creek Tailings. The Bamboo Creek Plant configuration is now designed so Haoma can continuously process Bamboo Creek Tailings on a commercial basis.

In addition to being able to recover commercial quantities of gold from Bamboo Creek Tailings recent Elazac test work showed additional 'concentrate' of precious metals consisting mainly of PGM can also be recovered with gold and silver. It is anticipated this 'PGM concentrate' will need to be sent to Europe or South Africa for refining.

Modifications to the Bamboo Creek Plant will take place once bulk ore samples from Bamboo Creek and the Comet Mine Conglomerate Formations have been processed through the Bamboo Creek Plant. The Directors anticipate conglomerate ore test work using the Bamboo Creek Plant will be completed during the current Quarter.



**<u>Figure 20:</u>** Bamboo Creek Processing Plant looking north, Conglomerate Formations behind range.

#### 3. <u>EXPLORATION ACTIVITIES IN THE RAVENSWOOD DISTRICT, QUEENSLAND</u>

#### 3.1 Proposed Sale of Ravenswood Tenements

## (Mining Leases 1325, 1330, 1415, 1483, 1529, 10315, Exploration Lease 8771 and Mining Claims 2205 & 2206)

Haoma's Directors are negotiating with Resolute Mining Limited for the sale of seven mining and exploration leases and two mining claims at Ravenswood, North Queensland. (Tenements are owned by Haoma's wholly owned subsidiary, Kitchener Mining NL.) Details on Haoma's Queensland tenements were included as Appendix 3 to <u>Haoma Mining's Activities Report for the Quarter Ended September 30, 2016</u>.

Haoma will retain Mining Leases ML1326 and ML10275 located near to Ravenswood and the Ravenswood Top Camp Motel facility.

The retention of the two mining leases provides Haoma with flexibility to establish its own base for reprocessing concentrates recovered under the **Sub-lease Agreement**.

Figure 21 below shows the location of each of Haoma's Ravenswood tenements including those which are proposed to be sold to Resolute if an Agreement is completed.



Figure 21: Haoma Mining Ravenswood tenements

- ML 1325 Eight Mile, Budgerie
- ML 1326 Old Man
- ML 1415 Wellington Springs ML 1483 – Wellington Springs No 2
- ML 1529 Waterloo ML 10315 – Podosky's EPM 8771 – Barrabas MC 2205 – Totley North No 1 MC 2206 – Totley North No 2

ML 1330 – Copper Knob ML 10275 – Elphinstone One EPM 14038 – Robe Range EPM 17832 – Robe Range East

#### 4. <u>HAOMA'S OTHER ACTIVITIES</u>

### 4.1 <u>Update on Haoma Agreement with Calidus Resources - 'Right to Mine' Klondyke and</u> Warrawoona Group Tenements with 'Option to Purchase' (M45/521, M45/672, M45/679, M45/682, M45/240/ M45/671, M45/547)

Haoma has previously advised shareholders that Calidus Resources Limited is conducting an extensive exploration program at its Warrawoona Gold Project in the East Pilbara. This work program includes in-fill drilling at Haoma's Warrawoona and Klondyke leases. Calidus has an 'Option to Purchase' the Haoma Mining Leases. Details below and other details were released in Haoma's <u>Quarterly Activities Report to March 31, 2017</u>.

As a result of recent Calidus announcements detailing assay results from their in-fill drilling program at Haoma's Warrawoona and Klondyke leases, Haoma expects Calidus to soon exercise their 'Option to Purchase' Haoma's Warrawoona and Klondyke leases.

If Calidus exercises their 'Option to Purchase' the consideration received by Haoma will be:

- \$500,000, and
- 37,500,000 Calidus Resources shares or payment of \$750,000 at the election of Haoma Mining.

The last sale price of Calidus Resources shares on October 31, 2017 was 4.4 cents.

In addition to the above, the Agreement grants Haoma "*a full free and exclusive licence to treat any Alluvial or Scree Resources and the tailings and waste dumps arising from the Mining undertaken on the Klondyke Project Tenements*". The Klondyke Project Tenements include the Tenements subject to the Agreement and all other tenements of Calidus is the registered holder that are located within 25 kilometres of any of the Tenements.

#### 4.2 <u>Update on Haoma Agreement with DeGrey Mining Ltd – 'Right to Explore and Mine'</u> (E45/2983)

On October 27, 2016 Haoma shareholders were advised that an Agreement had been signed with DeGrey Mining Ltd in respect to a portion of Haoma's Exploration Lease at Cookes Hill (E45/2983) to grant DeGrey an exclusive five year right to enter the Tenement for the purposes of mineral exploration and to mine and process all Minerals with the exception of Alluvial or Scree Resources and Pegmatic Minerals on the specified area of the lease.

The consideration given by DeGrey for the Right to Explore and Mine included the issue of 5 million DeGrey Mining share options with an exercise price of \$0.058 per share and an expiry date of 9 months from the date of issue. The share options were issued on December 7, 2016 with an expiry date of September 6, 2017.

On September 5, 2017 Haoma Mining exercised a share option, for the total exercise price of \$290,000, for De Grey Mining NL to issue 5 million De Grey Mining Ltd shares to Haoma Mining. The last sale of De Grey shares on October 31, 2017 was 25 cents.

#### 4.3 <u>Cookes Hill (E45/2983, Including BGC Tribute Agreement to Mine Dolerite from Haoma's</u> <u>Cookes Hill Quarry (M45/1005)</u>

Haoma's Elazac Quarry at Cookes Hill for the last 10 years has been operated by BGC Contracting Pty Ltd to supply hard rock for Pilbara infrastructure construction including new railway lines and roads. In February 2015 BGC Contracting put the Elazac Quarry on 'care and maintenance'. The BGC contract with Haoma expired this year and BGC did not renew their contract to operate the Elazac Quarry.

Haoma has resumed control of the Elazac Quarry and commenced negotiations with a number of potential customers for the supply of hard rock material.

#### 4.4 Trading at Haoma's Top Camp Facility, Ravenswood, Queensland

Haoma's 'Activities Report for the Quarter Ended March 31, 2017' advised shareholders that major refurbishment works to the 'Top Camp' accommodation facility located at Ravenswood, Queensland had been completed.

'Top Camp' is now running at a higher occupancy rate resulting in a corresponding increase in revenue. The Directors wish to acknowledge and thank Sue Kennedy and her support team at Top Camp for the revitalisation of Top Camp which is now a valuable Haoma asset.

#### 4.5 Annual General Meeting

The 2017 Annual General Meeting of Haoma Mining NL will be held at Tonic House, 386 Flinders Lane Melbourne on Thursday November 30, 2017 commencing at 10.00am.

All shareholders are encouraged to attend. Further information may be obtained from the Company Secretary, Jim Wallace on 03 92245142 or by email to <u>haoma@roymorgan.com</u>.

Yours sincerely,

Many Moregon

Gary C Morgan, B Comm. – Economics & Pure Mathematics/Statistics, University of Melbourne Chairman

Mille Rie

## Michele Levine, BSc. Master Environmental Studies, University of Melbourne Director

#### **References:**

**A** Information in Section2.1 of this report that relates to conglomerate formations was compiled by David Mellor who was at the time a full-time employee of Haoma and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). David Mellor has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Mellor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**B** Information & data in Section 2.1 of this report as it relates to a large number of 'flat' gold nuggets (Figure 11) were metal detected and collected over a 150 metre section in area 'C2' is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of sampling mineral outcrops . Mr. Cole has worked in the mining industry for over 30 years and has been associated with Haoma for more than 20 years.

**C** Information & data in Section 2.1 of this report as it relates to determining the likely origins of nuggets from the Comet and Bamboo Creek Conglomerates formations using microprobe and other specialised techniques is prepared by Professor Peter Scales, Department of Chemical Engineering, University of Melbourne. Professor Peter Scales has worked with and been associated with Haoma Mining and Elazac Mining for more than 20 years.

**D** Information & data in Section 2.2 of this report as it relates to Metallurgical Results is based on information compiled by Mr. Peter Cole who is an expert in regard to this type of metallurgical test work. The results relate to testing the effectiveness of a new method of assaying for gold and other mineral content (the Refined Elazac *Assay* Method) and a new method for extraction of gold and other minerals from the ore (the Refined Elazac *Extraction* Method). These methods are together referred to as the Elazac Process. The information reported relates solely to ongoing test work in relation to bringing the Elazac Process to commercial realisation. Mr. Cole has worked in the mining industry for over 30 years and has been associated with the development of the Elazac Process over a long period (approximately 15 years). Mr. Cole is one of only a few people with sufficient relevant knowledge and experience to report results in relation to test work on the Refined Elazac *Assay* Method and Refined Elazac *Extraction* Method. Mr. Cole has consented to the inclusion in this report of the information and data in the form and context in which it appears.

Appendix 1A:

SH&MT Stubbs 1992/93 Exploration Reports: WAMEX, Mines Department Index, M8113–A39484)



A 39484



#### EXPLORATION REPORT

#### 17/09/92 TO 16/09/93

### EXPLORATION LICENCE 45/1059

### MARBLE BAR DISTRICT, WESTERN AUSTRALIA

in 1

REF. NO. M8113

S.H. & M.T. STUBBS

COMET GOLD MINE

P.O. BOX 10, MARBLE BAR, 6760

WESTERN AUSTRALIA

PHONE: (091) 761 015

FACSIMILE: (091) 761 129

A39484 M8113

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PART OF NATIONAL TOPOGRAPHICAL MAP SERIES SHEET NO: 2855 MARBLE BAR

#### S.H. & M.T. STUBBS

#### EXPLORATION LICENCE 45/1059

PILBARA GOLD FIELDS, W.A.

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#### S.H. & M.T. STUBBS

#### EXPLORATION LICENCE 45./1059

PILBARA GOLD FIELDS, W.A.

PART OF MINES DEPT TENEMENT PLAN - MARBLE BAR (GLEN HERRING

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#### S.H. & M.T. STUBBS

#### **REPORT FOR EXPLORATION LICENCE 45/1059**

#### 17/09/92 TO 16/09/93

FURTHER TO THE INITIAL REPORT IN THE YEAR ENDING 16/09/92, EXTENSIVE GROUND PROSPECTING WAS CARRIED OUT INSIDE THE AREA

21° 09' 30" TO 21° 11' S AND 119° 36' TO 119° 38' E

WITH VERY DISAPPOINTING RESULTS. NO FURTHER GOLD VALUES FOUND. SEE MAP "AREA A" FOR DETAILS OF GEOLOGY.

TURTHER GROUND PROSPECTING WAS ALSO CONTINUED IN AREA

1° 11' TO 21° 12' S ND 19° 40' TO 119° 41' Ε

A CONGLOMERATE AREA WITH GOLD VALUES HAS BEEN INDENTIFIED AND FURTHER GEOLOGICAL WORK IS CONTINUING. SEE MAP "AREA B" FOR ASSAY RESULTS.

ASSAY METHOD:

2 KG CHIP ROCK SAMPLES WERE COLLECTED IN FIELD. TOTAL SAMPLE WAS CRUSHED IN LABORATORY - JAW CRUSHER, THEN SPLIT USING STANDARD LABORATORY SPLITTER. A SAMPLE OF 500 GRM WAS RETAINED THEN GROUND IN ROTARY CRUSHER TO REDUCE SIZE TO 100% = 3 MM. AFTER MIXING, A 30 GRM SAMPLE WAS FINELY CRUSHED IN VIBRATING CRUSHER TO DUST.

8 GRM SAMPLES WERE ASSAYED USING AQUA REGIA DIGESTION, AND GOLD CONTENT MEASURED USING A ATOMIC ABSORPTION SPECTROPHOTOMETER. DETECTION AVAILABLE DOWN TO 0.05 GRM/T.

#### MAPPING:

GEOLOGICAL SKETCHES AND MAPPING CARRIED OUT WERE ROUGH FOR FIELD WORK ONLY. WE HAVE ENDEAVOURED TO PUT THESE INTO A FORMAT THAT CAN BE USEFUL.

EXTENSIVE GROUND PROSPECTING ON FOOT, WAS NECESSARY DUE TO THE TERRAIN. THIS WAS NOT ONLY TIME CONSUMING, BUT LIMITED THE AREA WE COULD COVER IN A CONCENTRATED SURVEY.

FEW ASSAYS WERE ACTUALLY TAKEN FOR THE GROUND COVERAGE DUE TO THE VERY LITTLE SURFACES FREE OF JASPER AND BASALT LAVA FLOWS.

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Appendix 1B:

SH&MT Stubbs 1993/94 Exploration Reports: WAMEX, Mines Department Index, M8113–A42569)

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#### EXPLORATION REPORT

<u>17/09/93</u> TO 16/09/94

#### EXPLORATION LICENCE 45/1059

#### MARBLE BAR DISTRICT, WESTERN AUSTRALIA

REF. NO. M8113

S.H. & M.T. STUBBS

COMET GOLD MINE

P.O. BOX 10, MARBLE BAR, 6760

WESTERN AUSTRALIA

: }

PHONE: (091) 761 015 FACSIMILE: (091) 761 129



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7.

1.	LOCATION MAP
2.	TOPOGRAPHIC MAP
3.	GEOLOGICAL MAP
4.	TENEMENT MAP
5.	REPORT
6.	MAP

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PART OF NATIONAL TOPOGRAPHICAL MAP SERIES SHEET NO .: 2855 MARBLE BAR

S.H. & M.T. STUBBS

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#### PILBARA GOLD FIELDS

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# MOUNT ROE BASALT

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#### S.H. & M.T. STUBBS

#### **REPORT FOR EXPLORATION LICENCE 45/1059**

#### 17/09/93 TO 16/09/94

AREA, BLOCK B - In reference to 1992-93 report.

Further sampling and surface inspection failed to reveal any significant extensions to the zone containing gold. The enrichment would appear to be on a fault line running east-west, across the conglomerate.

To further evaluate this zone, drilling would be required, and to this end further field work is being planned, with possible drilling in 1995.

#### BLOCK C

Further sampling and mapping was carried out in this area refer Table 1. Drawing 2 & 3.

Gold values were encountered in the conglomerates, but due to the overlay of basalt, drilling would be necessary to further evaluate this location. To this end, further field work will be necessary.

Numerous alluvial samples were taken in creeks and scree, without success.

Location C

Table 1.

Assays

2392	1.5 gm
2391	0.5 gm
2390	16.0 gm
2389	3.5 gm

#### BLOCK D

Pan sampling of creeks in this area was carried out in areas with outcrops of decomposed conglomerates, looking for alluvial free gold, which may lead us to a gold bearing conglomerate. We were unable to find any trace of free gold. The conglomerates are mostly flat lying, except when lifted or distorted by the basalt flows. We were unable to prospect to the east of Area D, owing to very rough basalt flows.

#### BLOCK E

A further area near the Coongan River was prospected, looking for outcrops of conglomerate, but this area mainly consisted of basalt lava flows, which covered all other rock types.



S.H. & M.T. STUBBS

1.1



17/09/93 TO 16/09/94









<u>B - B</u>



Appendix 2:

# **BHP Minerals Report**



Exploration BHP Minerals

8 August 1996

Mr Gary Morgan Elazac Mining Pty Ltd GPO Box 2282U MELBOURNE VIC 3001

Dear Gary,

## <u>RE: INTERNAL COMPOSITION OF GOLD NUGGETS FROM THE</u> <u>COMET CONGLOMERATE</u>

Please find attached your copy of the findings from further SEM analysis of sectioned gold nuggets from the Comet Conglomerate.

The results are quite interesting in that they show that <u>all</u> the nuggets are of hydrothermal origin. The earlier work was misleading in that the supergene (later weathering) rims were masking the true origin of the nuggets in some cases.

This, to us, means that the gold in the conglomerate (or at least some of the gold) is probably related to cross structures (as it is at Just-in-Time) and not of original detrital origin. This may restrict the lateral continuity of the gold content of the conglomerate.

Yours sincerely,

R SKRZECZYNSKI Exploration Manager Operations - Australia



# **Exploration Department**

The Exploration Department is a part of the New Business Development Division of BHP Minerals which is a Business Group of The Broken Hill Proprietary Company Limited A.C.N. 004 028 077



Exploration Petrology Section BHP Research

Memorandum

26 July, 1996

TO: R Skrzeczynski, Exploration, Brisbane

cc: L. Ellingford, TIS Brisbane, then circulate to: G. Murphy, D. Hedger

FROM: D Gilbert, Exploration Melbourne

OUR REF: CM7424;DJG:NC; EPM 96/284 (GSZ)

## INCLUSION MINERALOGY, GANGUE MINERALOGY AND INTERNAL COMPOSITION OF ELUVIAL GOLD NUGGETS, COMET CONGLOMERATE, BAMBOO CREEK AREA, PILBARA, W.A.

### SUMMARY and CONCLUSIONS

[see Figures 1 to 50, Table 1 and Plates 1 to 3, MRL25546 (i) & (ii)].

- 1. These sectioned gold nuggets show internal compositional variations and inclusions which were not evident in the earlier SEM qualitative analysis of the surficial features (see CM7416). Consequently their genesis has been revised, where they now all appear to be of hydrothermal origin, sometimes with a narrow discontinuous rim of pure supergene gold.
- 2. The silver content of these eluvial gold nuggets is variable, ranging from zero (grain 2) to 11.30% (grain 3). The average silver content of the silver-bearing gold nuggets is 9.41%. Deleterious elements such as mercury are absent.
- 3. Most of these hydrothermal gold nuggets contain minute sulphide inclusions such as chalcopyrite (most common), galena, pyrite and cobaltite (rare), where the latter occurs as an euhedral orthorhombic crystal in the nugget of pure gold (grain 2).
- Associated gangue minerals include quartz, <u>kaolinitic clay</u> (some with fine pure supergene gold inclusions), iron-stained calcium aluminium silicate phase (? altered epidote or plagioclase)epidote, calcite (minute inclusions in quartz), goethite, leucoxene and chrome spinel (detrital grain adjacent to gold nugget no.
   Minute inclusions of a sodium magnesium aluminium <u>silicate</u> phase occur in the chrome spinel, where these may represent dravidic tourmalines, though confirmatory boron could not be determined by SEM.

5. Minute inclusions of a copper-tin phase (61.31% Cu, 38.69% Sn) occur in the silver-bearing gold comprising grain 3. This copper-tin phase is of uncertain origin, where it may possibly represent contamination. However it does not have the composition of commercial bronze (90% Cu, 10% Sn), which suggests a possible natural occurrence.

During the fire assaying process it is known that certain impurities such as copper can carry gold into the cupel, which could explain some gold loss (Gasparrini, 1993). However this particular copper-tin phase, if natural, is in fact very rare and it would therefore be difficult to explain significant loss of gold.

6. Two generations of gold are evident in nugget no 3, comprising an earlier interpreted subrounded porous detrital grain (10.49% Ag) surrounded by second generation whiter higher silver gold (11.30% Ag) of hydrothermal origin. This may have some exploration significance for Rand-style gold mineralisation in the lower Proterozoic Comet Conglomerate.

### REFERENCES

Gasparrini, C (1993), Gold and other precious metals from ore to market. Springer-Verlag.

Gilbert, D J (1996), Morphology and qualitative SEM analysis of eluvial gold nuggets collected near the Lower Proterozoic Comet Conglomerate, Pilbara Region, W.A. (CM7416).

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D J Gilbert Senior Project Petrologist

# TABLE 1 SEM QUALITATIVE/QUANTITATIVE ANALYSIS OF SECTIONED GOLD NUGGETS, COMET CONGLOMERATE, BAMBOO CREEK AREA, PILBARA, W.A.

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Sample No. Gold nugget or grain no.	SEM qualitative/quantitative analysis of gold in sectioned nuggets.	SEM qualitative/quantitative analysis of inclusions within gold nuggets and associated gangue coatings.	Revised genetic implications and comments.
MRL25546 (i) (polished section) Grain 1 (See Plate 1a)	This nugget shows a discontinuous rim of pure orange-coloured gold (see Figure 1), surrounding a core of whiter silver-bearing gold (see Figures 2, 6, 9). According to EDS normalised quantitative analysis, the silver bearing gold comprises 91.12% Au, 8.88% Ag. Reference to Plate 1a, shows an inclusion of kaolinitic clay with finely intergrown pure gold, both of supergene origin (see Figures 7 & 8).	<ul> <li>This gold nugget contains the inclusions listed below:</li> <li>(i) kaolinite (see Figures 3 and 7)</li> <li>(ii) galena (see Figure 4)</li> <li>(iii) goethite of supergene origin (see Figure 5)</li> </ul>	This nugget comprises a core of silver-bearing gold (8.88% Ag), surrounded by a narrow discontinuous rim of pure supergene gold. The silver-bearing gold contains rare galena inclusions (2 microns), substantiating hydrothermal origin. The original diagnosis is not quite correct (see CM7416), where the surface analysis was obviously taken within the rim of pure supergene gold. However other supergene minerals are present including goethite and kaolinitic clay, where fine grained pure gold is intergrown with the latter.
MRL25546 (i) (polished section) Grain 2 (see Plate 1b, 1c, 1d)	Silver was not detected in several point analyses taken inside this gold nugget (see Figures 14, 15, 20, 23).	<ul> <li>This gold nugget contains the inclusions listed below:</li> <li>(i) chalcopyrite (see Figures 10, 16)</li> <li>(ii) quartz (see Figures 11, 18, 19)</li> <li>(iii) cobaltite (euhedral crystal; see Figure 17). Reference to Figure 19, shows that traces of Mg, Al are present in the quartz suggesting that it replaced an earlier phyllosilicate (?chlorite).</li> <li>This particular gold nugget is partly surrounded by quartz (see Figures 13, 21), containing minute inclusions of epidote (see Figure 12) and calcite (see Figure 22). Traces of leucoxene also appear to be present.</li> </ul>	Internally, this nugget comprises <u>pure</u> gold, which was originally thought to indicate supergene origin (see CM7416). However the presence of minute inclusions of chalcopyrite and euhedral cobaltite prove hydrothermal origin. This gold nugget is partly surrounded by ? hydrothermal quartz which contains minute inclusions of calcite and suspected epidote (propylitic assemblage).

Sample No. Gold nugget or grain no.	SEM qualitative/quantitative analysis of gold in sectioned nuggets.	SEM qualitative/quantitative analysis of inclusions within gold nuggets and associated gangue coatings.	Revised genetic implications and comments.
MRL25546 (ii) (polished section) Grain 5 (see Plate 3)	This nugget comprises whiter silver-bearing gold (see Figures 47, 50), sometimes with a discontinuous rim of orange-coloured pure supergene gold (see Figure 49). A normalised quantitative EDS analysis of the whiter silver-bearing gold core material gives: 90.92% Au, 9.08% Ag.	<ul> <li>Minute sulphide inclusions in this gold nugget include:</li> <li>(i) chalcopyrite (see Figure 46, Plate 3a)</li> <li>(ii) pyrite (see Figure 48, Plate 3b).</li> </ul>	This gold nugget comprises a core of hydrothermal silver-bearing gold (9.08% Ag), surrounded by a discontinuous rim of pure supergene gold. Hydrothermal origin for this nugget is substantiated by the presence of minute chalcopyrite and pyrite inclusions in the silver-bearing gold. The original gold analysis was obviously taken in the supergene rim (see CM7416), leading to the incorrect conclusion that the <u>whole</u> gold nugget was of supergene origin. In actual fact, silver-bearing gold of hydrothermal origin is partly rimmed with pure supergene gold.





Fig 2













25546 (i)C3 grain 1ph1b Au inc in clay 15KV 35° 12:04 13-Jun-1996





25546 (i)C1 grain 2ph1 15KV 35° 13:19 13-Jun-1996









Fig 14











25546 (i)C4 grain 2ph3 15KV 35° 13:44 13-Jun-1996





25546 (i)C5 grain 2ph3 15KV 35° 14:39 13-Jun-1996








25546 (i)C1 grain 3ph2 15KV 35° 15:53 13-Jun-1996







25546 (i)C2 grain 3ph1b(inc in spinel) 15KV 35° 16:01 13-Jun-1996



25546 (ii)C2 grain 3ph2 15KV 35° 16:05 13-Jun-1996



Fig 30



25546 (i)C2 grain 3ph3b(Au inc) 15KV 35° 16:12 13-Jun-1996









Fig 35















Fig 42

















## Plate 1

## SEM photomicrographs of inclusions within sectioned gold nuggets, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

#### [MRL25546 (i)]

Bar scales shown in microns; individual photomicrographs arranged left to right:

- a Minute inclusions of supergene pure gold (white) within kaolinitic clay (grey). This intergrowth is located within a nugget of silver-bearing gold. Grain 1, C3, phases 1, 1b.
- b Inclusion of chalcopyrite (centre, medium grey) within pure gold (light grey) Grain 2, C1, phase 1.
- c Inclusion of chalcopyrite (medium grey) in pure gold (light grey). Grain 2, C3, phase 2.
- d Euhedral orthorhombic crystal of cobaltite (Co As S) within pure gold. Grain 2, C4, phase 1.







## Plate 2

SEM photomicrographs of inclusions and associated gangue minerals, sectioned gold nuggets, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

## [MRL25546 (ii)]

Bar scales shown in microns; individual photomicrographs arranged left to right:

- a Detrital grain of chrome spinel (see arrow) with two minute inclusions of a sodium magnesium aluminium silicate phase (? dravite) adjacent to silverbearing gold (white). Grain 3, C2, phase 1, 1b.
- b Inclusions of a copper-tin phase of uncertain origin (medium grey) within silverbearing gold (light grey). Grain 3, C3, phase 1.
- c Subrounded inclusion of chalcopyrite (dark grey) in silver-bearing gold (lightgrey). Grain 4, C1, phase 1.
- d Inclusion of galena (medium grey) in silver-bearing gold (light grey). Grain 4, C3, phase 1.







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## Plate 3

# SEM photomicrographs of inclusions within a sectioned gold nugget, Comet Conglomerate, Bamboo Creek Area, Pilbara, W.A.

## [MRL25546 (ii)]

Bar scales shown in microns.

- a Inclusion of chalcopyrite (darker grey) within silver-bearing gold (lighter grey). Grain 5, C1, phase 1.
- b Inclusion of pyrite (darker grey) in silver-bearing gold (lighter grey). Grain 5, C2, phase 1.



## Appendix 3: (Reported in Haoma's July 2017 Quarterly Report

## 1. <u>Results from Test Work Trials on Bamboo Creek Tailings</u>

Haoma shareholders were advised in Haoma's June 30, 2017 Haoma Quarterly Bamboo Creek Tailings tests produced **polymetallic dore** which contained significant gold (Au) and platinum (Pt) grades when measured by XRF. The average gold and platinum grades **calculated back to the five Bamboo Creek Tailings samples tested** were **319g/t gold and 35g/t platinum**.

In addition to the above five tests, two additional tests were conducted on a 4 kg sample of Bamboo Creek Tailings using a **'modified' Elazac Process**.

The two 300g sub-samples produced **polymetallic dore** with the grades of gold and platinum (Pt) measured by XRF. The average gold and platinum grades **calculated back to the two Bamboo Creek Tailings samples tested** were **147g/t gold and 131g/t platinum**.

## 2. <u>Current Test Work Trials on Bamboo Creak Tailings</u>

A two tonne bulk sample of Bamboo Creek Tailings has now being processed using the Elazac Process.

Sub-samples of 20kg (a commercial quantity) are now being processed using different **combinations of ore concentrations, acids, heat and smelting fluxes.** The tests are not yet completed; shareholders will be advised of the results when available.

## 3. <u>Results from Test Work Trials on Mt Webber Iron Ore 'Slimes fraction'</u>

Haoma shareholders advised that during July 2017 a 12 kg sample of low grade Mt Webber iron ore  $(54.85\% \text{ Fe})^1$  was beneficiated using a 'water wash' process. (See Appendix 2 for previous Haoma results when a 'water wash' process was used to beneficiate low grade Mt Webber iron ore (54.85% Fe).)

In addition to the upgraded 'iron ore fraction', a 2.4kg 'slimes fraction' was recovered representing 19.85% of the Mt Webber low grade iron ore.

Four 300g sub-samples were taken from the 2.4 kg 'slimes fraction' and assayed by the Elazac Process used to assay the Bamboo Creek Tailing Samples 1-5 above.

The tests produced **polymetallic dore** with the percentage of gold and platinum in the **polymetallic dore** measured by XRF.

The average precious metal grades measured over the four samples calculated back to the Mt Webber Iron Ore 'Slimes fraction' were 117g/t gold and 151g/t platinum.

Additional tests were conducted on two of the four Mt Webber samples using a 'modified' Elazac Process. Table 3 below shows the precious metal grades calculated back to the Mt Webber Iron Ore 'Slimes fraction'.

<sup>&</sup>lt;sup>1</sup> The sample was provided to Haoma Mining by Atlas Iron from Atlas' M45/1209 lease where Atlas is now mining at Mt Webber. M45/1209 is adjacent to M45/1197 where Haoma has a **royalty entitlement** and **a right to access and explore**. (See Appendix 3).

Table 3:				
Average grades (Released July 13, 2017)	Gold grade	Platinum grade		
Four samples	117g/t	151g/t		
Two samples <b>re-treated</b> using a 'modified' Elazac Process	95.4	110.4		
	85g/t	110g/t		
Two samples NOT re-treated	148g/t	195g/t		

The polymetallic dore produced from the two **re-treated** samples (using a 'modified' Elazac Process) measured **3% gold and 3% platinum** by XRF. **The dore grade of 6% gold and platinum** is at a level that would be accepted by a precious metal refiner.

The latest results shows a significant up-grade in the quantity of gold and platinum measured in the dore recovered.

The average gold and platinum grades calculated back to the Mt Webber Iron Ore 'Slimes fraction' were 888g/t gold and 946g/t platinum.

#### Table 4:

#### Mt Webber 'slimes fraction'

	Initial test results		Results after re-treating using 'modified' Elazac Process	
	Gold grade	Platinum grade	Re-treated Gold grade	Re-treated Platinum grade
Average precious metal grades of two samples re-treated using a 'modified' Elazac Process	85g/t	110g/t	888g/t	946g/t

The above Haoma results were achieved using traditional plant processing equipment which recovered precious metal dore from concentrates produced at Bamboo Creek.

## JORC Code, 2012 Edition - Table 1

Section 1 – Exploration	Sampling Technic	ques and Exploration <b>E</b>	)ata
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Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> </ul>	<ul> <li>Exploration results are based on industry best practice including sampling, assay methods and appropriate quality assurance quality control (QAQC) measures.</li> <li>Rock samples are collected by Haoma employees who have photographed the sample sites and recorded the sample locations using hand held GPS. The samples are of a preliminary nature and aim to establish if the host conglomerates are auriferous as a guide to future exploration activity and planning.</li> <li>A sub-horizontal bench was cut along the strike of the conglomerate that dips approximately 30degrees towards the west.</li> <li>The bulk sample was collected by a mini excavator that cut a 3.5m (strike parallel) trench, approximately 300cm x 300cm to yield a bulk sample of 1400kgs which was transported to Bamboo Creek for in house processing.</li> <li>The sampling is preliminary in nature as part of field reconnaissance.</li> <li>Duplicates, blanks and standards are routinely submitted to ensure results are representative and to negate the influence of nugget effect.</li> <li>Mineralisation is estimated in the field by visual inspection and by locating nuggets within the conglomerate given the nugget effect, are currently under consideration by geological consultants to Haoma.</li> </ul>
Drilling Techniques	• Drill type and details	• Not applicable, no drilling completed.
Drill sample recovery	• Methods, etc.	• Not applicable, no drilling completed
Logging	• Core and chip geological and geotechnical logging, etc.	• Not applicable, no drilling completed
Sub-sampling techniques and sample preparation	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <li>Rock chip sampling and grab samples. Sample preparation follows industry best practice standards and is conducted at the fully equipped laboratory at the Bamboo Creek Plant.</li> <li>Samples are oven dried when required, jaw crushed then pulverised to -75µm (95%).</li> <li>Samples to 5kg are spear sampled. Samples larger than 5kg are spilt with a riffle splitter.</li> <li>Statistical comparison of field duplicates and repeats identify any need for re-sampling.</li> </ul>
Criteria	JORC Code explanation	Commentary
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Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>Analytical procedure referred to as Aqua Regia (AR) digestion with AAS finish was performed at the Bamboo Creek Assay Laboratory utilising industry standard procedures.</li> <li>Analytical procedure referred to as bulk cyanidation using LeachWell with AAS finish was performed at the Bamboo Creek Assay Laboratory utilising industry standard procedures.</li> <li>Gravity separation of bulk samples was carried out at the Bamboo Creek Laboratory utilising a Gemini table and following industry standards.</li> <li>Analysis of gold nuggets was carried out by Melbourne University utilising LA-ICP-MS (Laser Ablation Inductively Coupled Plasma Mass Spectrometry) utilising industry standard</li> </ul>
Verification of sampling and assaying	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All field data is manually collected, compiled as a spreadsheet, reviewed and validated if required for entry into the database.</li> <li>Hard copies are stored in the Bamboo Creek office and all electronic data is routinely backed up.</li> <li>Adjustment to assay data has not been necessary.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The bulk sample location on the historical, Just in Time Mine site is recorded as 21deg 15.10S, 119deg 43.15 East, elevation 253m by handheld GPS.</li> <li>Neither drill hole data nor a Mineral Resource estimation are included in this report.</li> <li>Datum is GDA 1994, Projection is MGA Zone 50.</li> <li>Topographic data is by hand held GPS and can be surveyed at a later date when necessary.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Not applicable due to the preliminary nature of the bulk sampling of conglomerate on the Just in Time Mine Site.</li> <li>Sampling is not considered adequate to establish the vertical or lateral extent of the conglomerate beds due to past mining disturbances.</li> <li>The effects of weathering and gold grade distribution patterns, within the conglomerate are yet to be assessed.</li> </ul>

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The bulk sample was collected along a 3.5m strike parallel trench within the conglomerate. The base of the conglomerate bed does not appear to be adequately sampled, and historical records indicate that higher gold concentrations reported form the basal contact. Future bulk sampling should be conducted across the strike in order to more accurately assess the true width and gold grades within the conglomerate. No mapping of the conglomerate has been undertaken to date so more work is required to establish lateral continuity.</li> <li>Due to the preliminary nature of the sampling program interpretation is limited to zone of outcrop occurrence without presumption of mineral concentration or extent.</li> <li>No orientation based sampling has been conducted but needs further consideration.</li> </ul>
Sample security	• The measures taken to ensure sample security.	<ul> <li>Chain of custody is maintained from sample collection to completion of pre-analysis preparation. Conducted by Haoma Mining staff. The competent person was not present on site during the sampling and does not assume responsibility for the validity of the results which should be regarded as preliminary in nature.</li> <li>Samples submitted for 4-acid ICP-MS and FA were delivered to ALS in person by Haoma staff.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• None completed.

Section	2 –	Repor	ting o	of Exp	loration	Results
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Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Mining Lease 45/76 covering an area of 51.86HA lies approximately 9km south of Marble Bar, in the Eastern Pilbara District covers the Just in Time area. Elazac Mining Pty Ltd (Elazac) is the lease holder. Elazac is a wholly owned subsidiary of Haoma Mining NL (Haoma). The tenement is maintained in good standing, expiration date is 6<sup>th</sup> September 2026. The adjacent tenements are also controlled by Haoma Mining NL and Elazac Mining Pty Ltd</li> </ul>
Exploration done by other parties	• Acknowledgement and appraisal of exploration done by other parties.	Reports of exploration completed prior to current tenure are available for public download via the DMP WAMEX system.
Geology		• The geology of the Just In Time area has been examined and confirmed the presence of conglomerates overlying the greenstone basement with apparent unconformity. Historical records clearly demonstrate the conglomerate is auriferous and this has been confirmed by visual inspection. The conglomerate contained boulder clasts locally together with rounded ferruginous clasts, likely derived from weathering of pyrite nodules. The conglomerate is relatively immature and is associated with dark feldspathic sandstone with matrix supported pebble bands. Further work is required to assess the paleo-current direction and form of the conglomerate.
Drill hole information	• A summary of drill hole data, etc.	• Not applicable, no drilling completed.
Data aggregation methods	<ul><li>Grade truncations</li><li>Aggregated grade intercepts</li></ul>	• Not applicable
Relationship between mineralisation widths and intercept lengths	• Mineralisation geometry down hole, etc.	• No drilling.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• No plans have been supplied due to preliminary nature of work to date.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• High nugget effects are characteristic of this style of deposit and single samples are seldom representative. Adjacent samples also display poor reproducibility.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>All pertinent exploration data has been included.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the</li> </ul>	• Further bulk sampling will be undertaken and tested at Bamboo Creek.
	areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	