13 January 2021

PYX Resources Limited Agrees to Acquire Tisma Development (HK) Limited, a World-Class, Fully Licensed Mineral Sands Deposit

HIGHLIGHTS

- **PYX has entered into a Share Purchase Agreement to acquire the entire capital of Tisma Development (HK) Limited, a world-class, fully licensed mineral sands deposit**
- **The Transaction will result in an important change of scale in the activities of the Company, converting PYX into the 2nd largest producing mining company in terms of JORC compliant zircon resource base on a world-wide basis**
- **Post-acquisition the Company will have rights to 263 MM tonnes of JORC compliant resources, with 10.5MM tonnes of contained zircon**
- **The Tisma Project has a zircon grade of 3.27%, making it a clear outlier together with the Mandiri Project (zircon grade of 4.76%) in terms of zircon content**
- **Large potential to increase extraction and production of zircon to supply fast growing zircon demand around the globe during the post-COVID-19 economic recovery**
- **The Transaction is subject to shareholders' approval**

PYX Resources Limited (PYX or the **Company) (NSX: PYX)** is pleased to announce that it has entered into a Share Purchase Agreement with the shareholders of **Tisma Development (HK) Ltd.** (**Tisma** or **Target**) to acquire 100% of the shares of Tisma, the operator of a world-class mineral sands asset consisting of a concession area of 1,500 hectares located in Central Kalimantan Province, Indonesia (**Tisma Project**).

To effect the acquisition of Tisma (**Transaction**), PYX will seek shareholders' approval for the:

- acquisition of the entire share capital of Tisma (the **Target Shares**) via the issue of 147,277,370 Shares in PYX (**Transaction Shares**) to the shareholders of the Target (collectively **Vendors**); and
- change in the scale of the existing activities of PYX in accordance with NSX Listing Rule 6.41.

Subject to the relevant approvals being received the Transaction will result in a change of scale in the Company's activities, an excellent strategic addition to the Company's resource base and a milestone in the consolidation of the Indonesian Mineral Sands mining business converting PYX into the 2nd largest zircon producing project in the world in terms of JORC compliant zircon resources. Tisma is fully licensed with an IUP-OP permit allowing the mining, production and export of zircon.

The Company has sought confirmation from NSX as to the applicability of Listing Rule 6.41 and the NSX has confirmed that the Transaction is one to which Listing Rule 6.41(ii) applies meaning that PYX needs to seek the approval of its Shareholders to approve the Transaction. The NSX has confirmed that Listing Rule 6.41(iii) does not apply to the Transaction.

The issue of the Transaction Shares will also require approval under Listing Rule 6.25. In the event that Shareholder approval is not obtained then the Transaction will not be able to be completed and will not proceed.

PYX's Chairman and Chief Executive Officer, Oliver Hasler, said: *"The completion of the acquisition of Tisma will mark another key milestone for PYX's stated strategy to significantly expand our asset base and sends a clear message that we are moving forward on that high-value growth path. The Transaction will allow PYX to significantly grow our premium zircon business serving blue chip customers around the globe."*

Tisma Development (HK) Ltd.

Overview

Tisma operates the Tisma Project, a mineral sands asset in Indonesia, a world-class mineral asset consisting of a concession area of 1,500 hectares located in Central Kalimantan Province, Indonesia. It has 137 million tonnes of JORC complaint inferred resources with 4% heavy mineral, containing approximately 4.5 million tonnes of zircon in combination with valuable by-products including gold and titanium minerals (rutile and ilmenite).

The Target is fully-licensed for zircon exploration and premium grade zircon production and export. The concession is owned by PT. TISMA GLOBAL NUSANTARA (PTTGN) under mining permit Izin Usaha Pertambangan – Operasi Produksi (IUP-OP) No. 545/244/KPTS/VIII/2012 issued on 1st August 2012. PTTGN has exclusive rights to perform exploration and mining works in the tenement area.

Tisma has access to well-developed infrastructure such as a paved road to the area, and is in close proximity to Palangkaraya, provincial Capital of Central Kalimantan.

The Tisma concessions are located in two sub-districts, namely Katingan Hilir sub-district and Payawan Task Force. Both are based in the Katingan district of Central Kalimantan Province, Indonesia.

Mineral Resources Estimate

Based on an independent technical assessment carried out by Western Australia based Continental Resources Management Pty Ltd, the Tisma project has a thickness of mineralization alluvium of between 3.5 and 7.7 meters, with density of 1.75 t/m^3. Current drilling program covers 87% of the total tenement area. The November 2020 resource estimation confirmed approximately 5.5 million tonnes of heavy mineral (HM) containing JORC compliant Inferred Resources of 4.5 million tonnes of zircon (3.27%). It also contains 0.08% rutile, 0.34% ilmenite and 1-7g/t of gold.

Mineral Resources above 2% HM lower block cut-off grade (unrounded)

Tonnes	HM%	Zircon%	Slimes (%)	OS (%)
137,248,439	3.99	3.27	14.75	24.90

Source: Continental Resource Management, Technical Assessment Report, November 2020

The JORC compliant report (including Table 1 of the JORC Code) is attached in Appendix 1.

Conditions Precedent

Completion of the Transaction is subject to and conditional upon satisfaction of the following conditions by 31 March 2021 (or such other dates as agreed between PYX and the Vendors):

1. completion of due diligence investigations by both the Target and PYX;
2. the parties obtaining all relevant approvals including shareholders' approval and any approvals required by the Corporations Act 2001 (Cth), NSX Listing Rules, board approval, and any third-party consents necessary to implement the Transaction; and
3. no government or regulatory intervention that would prevent completion of the Transaction.

Shareholder Meeting

To implement the Transaction, PYX will prepare a notice of meeting seeking shareholder approval for, among other things, the acquisition of the Target in accordance with Listing Rules 6.25 and 6.41 (**Notice of Meeting**).

The Company will dispatch the Notice of Meeting setting out applicable resolutions and further information relating to the Transaction. A detailed explanatory statement will accompany the Notice of Meeting and will be distributed to all shareholders prior to the meeting in accordance with the Corporations Act and the NSX Listing Rules.

The Company expects to dispatch the Notice of Meeting to shareholders shortly.

NSX has advised the Company that the following information will need to be included in the Notice at a minimum:

- A statement from the directors outlining why the Transaction is in the best interests of the Company and the commercial substance of the Transaction;
- Audited accounts of the Target in the Notice of Meeting and proforma financial statements showing the impact of the Transaction to the Company;
- Disclosure regarding the current business activities including mining and exploration of the Target and the estimated resources that the Company needs to operate the Target's mining activities and its funding sources (for example, whether fund raising is needed, if yes, the proposed timeframe of future fund raising);
- Future cost projections associated with the Target's acquisition;
- Key terms of the Target's mining permit including its duration, expiry date and the possibility of renewal;
- Clarify whether the execution of a share purchase agreement will take place after the approval of the Company's shareholders at the Meeting convened by the Notice of Meeting;
- Disclosure confirming that the Transaction and share purchase agreement are conditional upon the approval of the Company's shareholders at the Meeting convened by the Notice of Meeting;
- A table reflecting the dilutionary effect of the Transaction on the existing shares on issue;
- Confirmation whether the Target and the Company have any common shareholders including Vendors.

Indicative Capital Structure

The table below details the Company's current capital structure and its proposed indicative capital structure after the completion of the Transaction:

	Number of Shares	Percentage of Ownership (*)
Total Shares Currently on issue	267,777,037	100%
PYX Ownership Post Transaction		
Current PYX Shareholders	267,777,037	64.5%
Tisma (HK) Limited	51,638,685	12.4%
TGN Holdings (HK) Limited	51,638,685	12.4%
Jura Ventures Limited	17,673,285	4.3%
Zurich Capital Partners Limited	13,254,964	3.2%
Edelweiss Partners Limited	13,071,751	3.1%
Total Shares on issue Post Transaction	**415,054,407**	**100.00%**

** Subject to rounding of individual holders*

Advantages of the Transaction

The Transaction fits the strategy of PYX in adding additional resources in the same region. The Directors are of the view that the Transaction will deliver value to existing and new shareholders. In particular:

i) by completing the Transaction, the Company will add substantially to its Mineral Resource base, ranking PYX second globally in terms of Zircon content JORC compliant resources amongst mineral sands companies in production, after market leader Iluka Resources;

ii) Post-Transaction the Company will have 263 million metric (MM) tonnes of JORC compliant resources, with 10.5MM tonnes of contained zircon, an increase of 75% in the Company contained zircon resources over its current disclosed resources;

iii) Tisma has a zircon grade of 3.27%, making it a clear outlier in terms of Zircon content globally, in line with the Company's existing mineral sands deposit at Mandiri;

iv) The Transaction offers large potential to increase extraction and production synergies given the proximity of the Tisma and Mandiri licences and the ability of the Company to optimize resources.

Risks of the Transaction

As set out above the Transaction will result in significant dilution to existing shareholders and while the Directors are of the view that the Transaction will be beneficial, a mineral sands project, just like any other mining project, has inherent risks which cannot be avoided.

Detailed statements on the risks associated with the Transaction will be provided in the Notice of Meeting.

Indicative Timetable

The indicative timetable for the Transaction is as follows. The Company is aiming to complete the Transaction prior to the end of March 2021.

Dispatch of Notice of Meeting for Shareholder Approval	14 January 2021
General Meeting to approve the Transaction	15 February 2021
Transaction Completion	16 February 2021

The Board of PYX will continue to provide shareholders with updates regarding the Transaction in accordance with the Listing Rules.

*** **ENDS** ***

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This announcement is authorised for release by Oliver B. Hasler, Chairman and Chief Executive Officer.

About PYX Resources

PYX Resources Limited (NSX: PYX) is a global producer of premium zircon listed on the National Stock Exchange of Australia. The Company's flagship asset is the Mandiri mineral sands deposit, located in the alluvium sediment rich region of Central Kalimantan, Indonesia. Boasting the world's 5th largest producing deposit of zircon, Mandiri is a large-scale, near-surface open pit operation in production since 2015 and with exploration to date validating the presence of additional Valuable Heavy Minerals such as rutile, ilmenite among others within its mineral sands.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This NSX Announcement contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of this NSX Announcement.

This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities.

Wherever possible, words such as “anticipate”, “believe”, “expect”, “intend”, “may” and similar expressions have been used to identify such forward-looking information.

Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Indonesia and Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company’s actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

Although the forward-looking information contained in this NSX Announcement is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this NSX Announcement.

Compliance Statement

The Mandiri mineral sands deposit hosts a 6 Mt Inferred JORC Resource of zircon. The Company originally announced this resource in its Prospectus released on 20 February 2020 and confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus. All material assumptions and technical parameters disclosed in the Prospectus that underpin the estimates continue to apply and have not materially changed.

Competent Person Statement

The information in this report that relates to geology, Exploration Results, Mineral Resources or Ore Reserves is based on, and fairly represents, information and supporting documentation compiled by Dr John Chisholm, a Competent Person who is a Member of AusIMM. Dr. Chisholm is a Principal Geologist of Continental Resources Management Pty Ltd, a geological consultancy company that has been engaged by PYX and has sufficient experience that is relevant to the style of mineralisation and type of deposit 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. Dr. Chisholm consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Attached Appendix 1 – JORC REPORT

INDEPENDENT TECHNICAL ASSESSMENT REPORT
MINERAL RESOURCE ESTIMATION
TISMA PROJECT
CENTRAL KALIMANTAN
REPUBLIC OF INDONESIA

Prepared for

Tisma Development (Hong Kong) Limited

CRM Report No WA20/027

AUTHOR: Dr J.M. Chisholm

DATE: Updated 24 November 2020

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1 EXECUTIVE SUMMARY

Continental Resource Management Pty Ltd (CRM) was requested by Tisma Development (Hong Kong) Ltd (TDL) to prepare a Mineral Resource Estimation report in accordance with the Australian JORC Code for the Tisma Heavy Mineral Sands (HMS) Project located in Central Kalimantan, Indonesia. A site visit to the Tisma tenement area was conducted by Dr John Chisholm on the 16 March accompanied by representatives of TDL.

The Tisma Project is comprised of a single tenement (N0. 545/244/KPTS/VIII/2012) granted on 1st August 2012 to PT Tisma Global Nusantara. The tenement covers an area of 1,500 ha and is issued for the exploitation, production and export of zircon only.

The Tisma tenement is located in Central Kalimantan approximately 50 km northwest from the regional capital Palangkaraya and approximately 75 km by bitumen road. Access to the tenement is good but access within the tenement is difficult due to the boggy conditions.

The defined Inferred Mineral Resources of the Tisma tenement stand at 137 Mt containing 4% HM including an estimated zircon content of 3%. Slimes and oversize are 14% and 25% respectively. The resources are at a 2% HM lower cut-off.

The unrounded total Mineral Resources are given in Table 1-1 and includes the estimated zircon content. The zircon content was estimated based on the zirconium analyses by the UPTD Laboratory of Energy and Mineral Resources (UPTD).

Table 1-1 Mineral Resources above 2% HM lower block cut-off grade (unrounded)

Tonnes	HM%	Zircon%	Slime%	OS%
137,248,439	3.99	3.27	14.75	24.90

The HM assemblage appears to be simple with the predominant mineral being zircon. Based on chemical analyses the calculated content of rutile and ilmenite are low with mean values of 0.08% & 0.34% respectively. Assay values for Fe, Cr & Th are also low indicating that the chromite, monazite and other iron rich minerals will be in trace quantities.

The rutile and ilmenite contents have not been reported as part of the estimation as the confidence level is not considered to be sufficiently high. As both minerals contain titanium the relative proportions of each mineral in the concentrate needs to be known before the quantity of each can be estimated on the basis of the chemical formulae of both minerals. The field estimate of 30:70 ratio of rutile to ilmenite is not considered to be precise enough to report the contained tonnages of these minerals.

While there may well be mineralised material below the current drilling depth this has not been shown to date and therefore it is not prudent to assign an **Exploration Target for additional HM mineralisation**. Some deeper holes should be drilled at the start of the next round of drilling to test for deeper mineralisation. It is understood that floating dredges are capable of recovering mineral sands to depths greater than 30 m.

Visible gold flakes were identified in ten of the holes during the core logging and the UPTD laboratory analyses reported gold (4.25 to 9.76 g/t) in in the HM concentrate in ten of the holes. The gold resources were not estimated as there are insufficient gold analyses available. Only three of the holes where visible gold was reported during logging recorded gold values in the samples sent for laboratory analysis. This is not surprising as the distribution of gold in the HM concentrate is very irregular and the lower limit of detection of gold by XRF is around 5 g/t whereas gold values of 1-2 g/t can often be seen in pan concentrates. The gold however represents a potentially significant valuable component to the valuable heavy mineral (VHM) assemblage.

The Exploration Target for gold is best determined by estimating the gold grade in the HM content of the Tisma deposit rather than the grade of the HM bearing sand. Assuming that the visible gold with no complementary assay result has a grade in the order of 1-2 g/t and the average grade of the holes for which assay data is available is 7 g/t then the grade of the HM content of the deposit would be in the order of 1-7 g/t. The quantity of HM is that of the Inferred Mineral Resource which is 4% of 137 Mt (5.5 Mt of HM).

In the case of the Tisma tenement the Exploration Target for gold within the Tisma tenement is in the order of 5-6 Mt of HM concentrate containing 1-7 g/t gold. Mineralisation expressed as Exploration Targets are in addition to Mineral Resources.

A drilling programme has been completed involving a total of 36 holes. The original proposal was to drill holes at 400 m spacing along east-west lines 800 m apart to determine the lateral extent of the HM mineralisation. Subsequent drilling was to be at a closer spacing based on the results of the first phase of drilling but probably in the order of 400 m x 200 m.

Very difficult drilling conditions were encountered due to the boggy conditions which made for very slow progress and the programme was widened to drilling on 800 m spacing to get drill data from most of the tenement in order to assess the situation. Closer spaced drilling at 400 m centres was completed along easting 765766. Based on the drill logs and descriptions and the portable XRF analyses it became apparent that the mineralised horizon was quite uniform in HM content and that it would most likely be possible to estimate the resource at the Inferred level once the laboratory results were available. The UPTD laboratory results confirmed the portable XRF results within an acceptable level and confirmed the narrow range of HM present in the sands. The HM content ranged from 1.53% to 7.18% with a mean value of 3.80% for the individual analyses but when the two statistical outliers were removed the range was much smaller at 2.4% to 5.2%. The grade range for the composited sections used in the resource estimation was smaller again. Based on this information the estimation of the Tisma HM deposit was completed

The drilling was completed using a trailer mounted DP-180YY Drilling Rig manufactured by Shanghai Hardrock Drills Co Ltd that was man-handled between drill sites. Drill samples were geologically logged and panned onsite with composited samples submitted for heavy mineral separation to determine the HM content, oversize (OS) and slimes present in each sample. Onsite visual estimation of HM content was made followed by portable XRF analysis.

Sample documentation and QA/QC procedures are according to a protocol designed to meet the standards of the JORC Code.

2 INTRODUCTION

2.1 Compliance with the JORC and VALMIN Codes and ASIC Regulatory Guides

This Mineral Estimation Report has been prepared in accordance with the 2012 JORC Code and the 2015 VALMIN Code. Both industry codes are binding for all members of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. These codes are also requirements under Australian Securities and Investment Commission (ASIC) rules and guidelines and the listing rules of the Australian Securities Exchange (ASX).

2.2 Principal Sources of Information and Reliance on Experts

The statements and opinions contained in this report are given in good faith. This report is based on information provided by TDL, along with technical information prepared by independent laboratories, contractors and consultants, and other relevant published and unpublished information. TDL provided CRM with details of the tenement, relevant technical reports, maps, GIS data and drilling database. CRM has endeavoured, by making all reasonable enquires, to confirm the authenticity, accuracy, and completeness of the data and information. CRM has no reason to doubt the authenticity or substance of the information provided.

2.3 Site Inspection

A site visit to the Tisma tenement area was conducted by Dr John Chisholm on the 16 March accompanied by representatives of TDL.

2.4 Location and Access

The Tisma tenement is located in Central Kalimantan approximately 50 km northwest from the regional capital Palangkaraya and approximately 75 km by bitumen road (Figure 2-1).

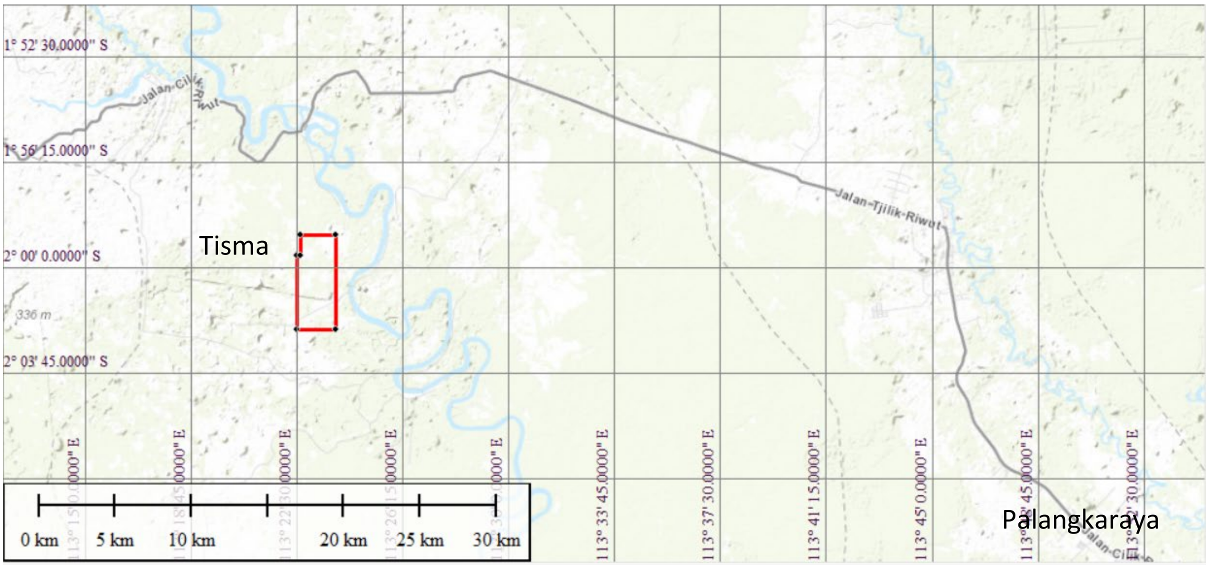


Figure 2-1 Location of the Tisma tenement

Access to the tenement is via a good bitumen road from Palangkaraya. There in only a single dirt road that crosses the lower part of the tenement.

Access within the tenement is extremely difficult due to thick vegetation and boggy conditions and flooding from the river.

Figure 2-2 Access for drilling was difficult due to thick vegetation and boggy ground conditions

2.5 Coordinate System

The coordinate system used is the Universal Transverse Mercator (UTM) Zone 49 (49M) south coordinate system under WGS 1984 spheroid

2.6 Tisma Tenement and Ownership

The Tisma Project is comprised of a single tenement (N0. 545/244/KPTS/VIII/2012) held by PT Tisma Global Nusantara (Figure 2-3).

- Date granted 1 August 2012
- Area 1,500 ha
- Minerals included in the grant – zircon

The coordinates defining the tenement are shown in Figure 2-4 reproduced from the licence document.

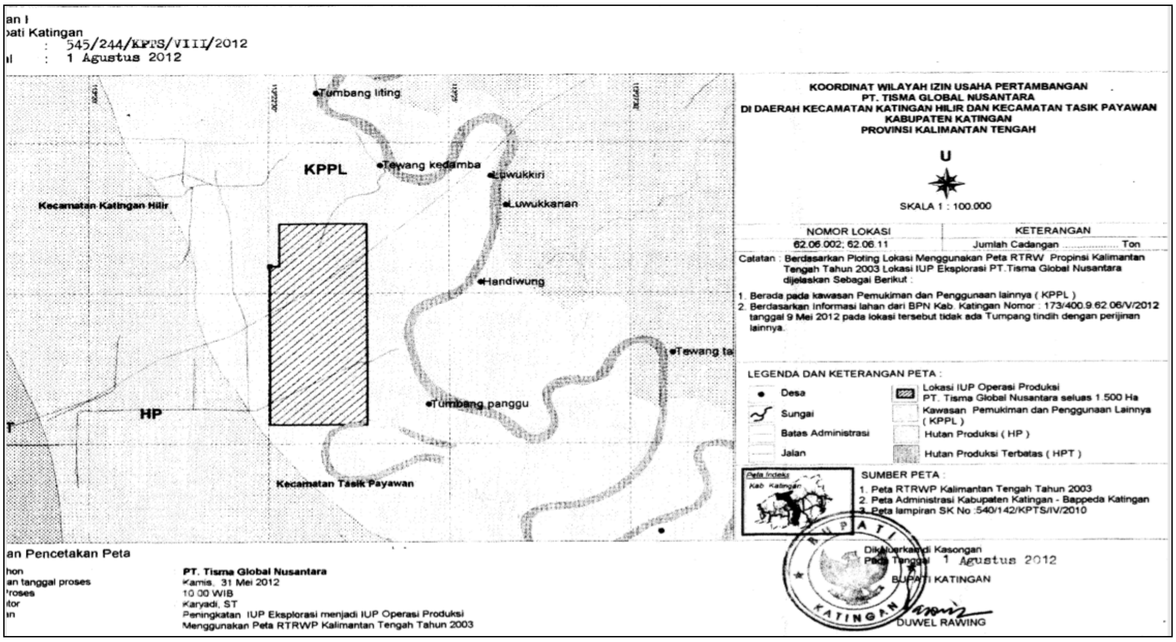


Figure 2-3 Tenement location diagram reproduced from the licence document

LAMPIRAN II : KEPUTUSAN BUPATI KATINGAN
Nomor : 545/244/KPTS/VIII/2012
Tanggal : 1 Agustus 2012
Tentang : **PEMBERIAN IZIN USAHA PERTAMBANGAN OPERASI PRODUKSI KEPADA PT. TISMA GLOBAL NUSANTARA**

PETA DAN KOORDINAT WILAYAH IZIN USAHA PERTAMBANGAN
PT. TISMA GLOBAL NUSANTARA

LOKASI

- **PROVINSI** : KALIMANTAN TENGAH
- **KABUPATEN** : KATINGAN
- **KOMODITAS** : Mineral bukan logam " Zirkon ".
- **LUAS WILAYAH** : 1.500 Ha

No	BUJUR TIMUR				LINTANG SELATAN			
	°	'	"	BT	°	'	"	LS
1.	113	22	31	BT	1	59	33	LS
2.	113	22	39	BT	1	59	33	LS
3.	113	22	39	BT	1	58	51	LS
4.	113	23	51,5	BT	1	58	51	LS
5.	113	23	51,5	BT	2	2	10,6	LS
6.	113	22	31	BT	2	2	10,6	LS

BUPATI KATINGAN

BUPATI
KATINGAN

DUWEL RAWING

Figure 2-4 Defined geographic coordinates for the Tisma tenement

2.7 Environment, Social and Culture Factors

TDL has advised CRM that it is currently not facing any environmental or social litigation and has commenced exploration activities.

The Tisma tenement is over designated State Forest Area (hutan produksi konversi) that is reserved for use for transmigration, settlement, agriculture and plantation development (Figure 2-5).

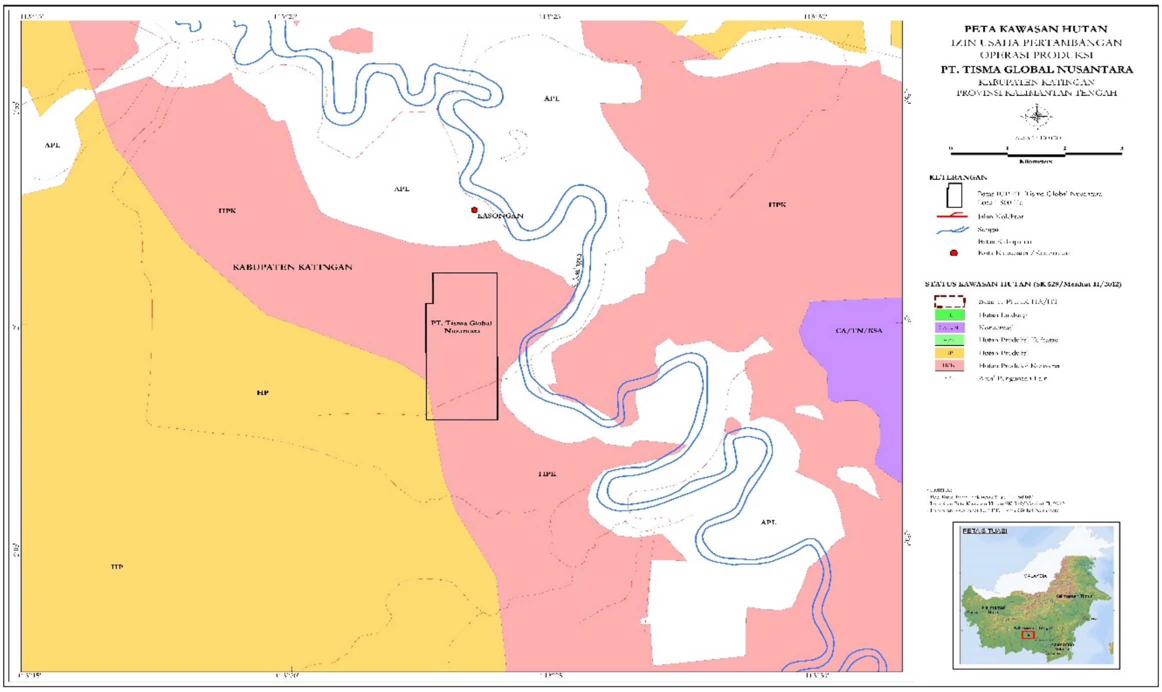
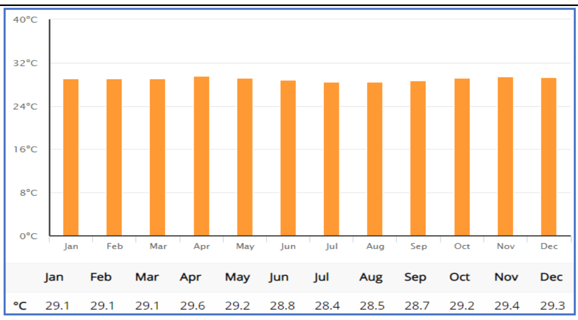


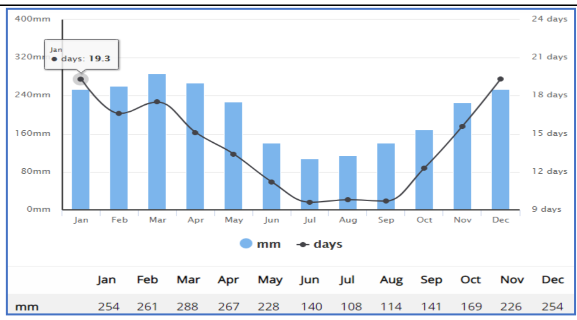
Figure 2-5 Land use map of the Tisma Project area

2.8 Climate

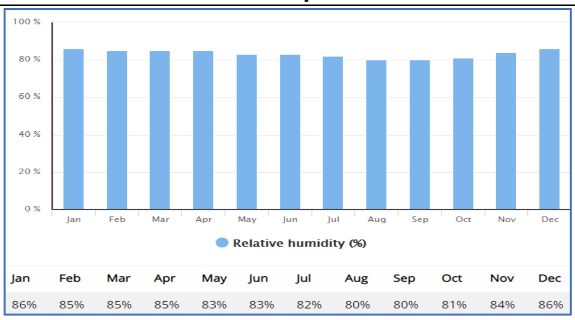
The closest meteorological recording station to the project area is at Palangkaraya[1] is located 50 km south of the project area. Palangkaraya has an average annual temperature of 26 to 32.5° C. The wind speeds are between 7 and 8 km/hour and humidity ranges from 75 to 79%. Rainfall is mainly concentrated during the wet season from October to April (>200mm).



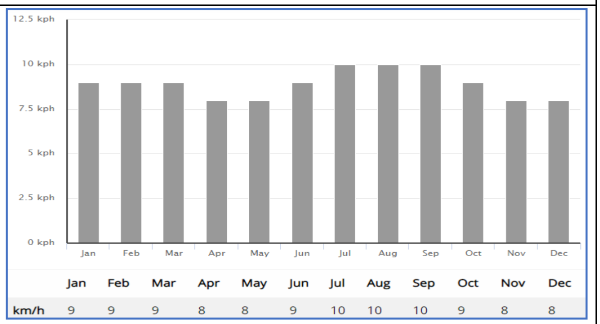
Annual temperature



Annual rainfall



Annual humidity



Annual wind

Figure 2-6 Climatic data for Palangkaraya

[1] Data source:https://www.weather2visit.com/asia/indonesia/palangkaraya.htm

2.9 Topography

In addition to the satellite imagery there is Shuttle Radar Topography Mission (SRTM) data available from the USGS at 30 m spacing. This data is extremely useful in planning drilling campaigns.

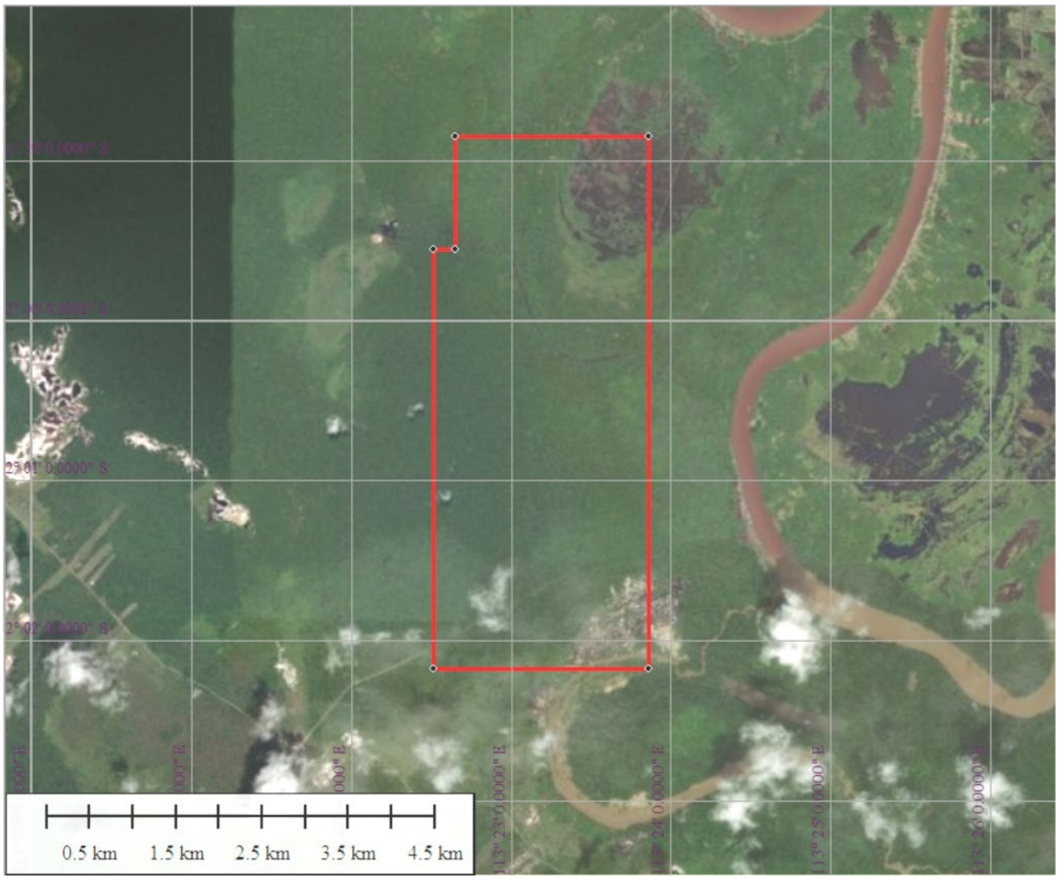


Figure 2-7 Satellite imagery of the Tisma tenement

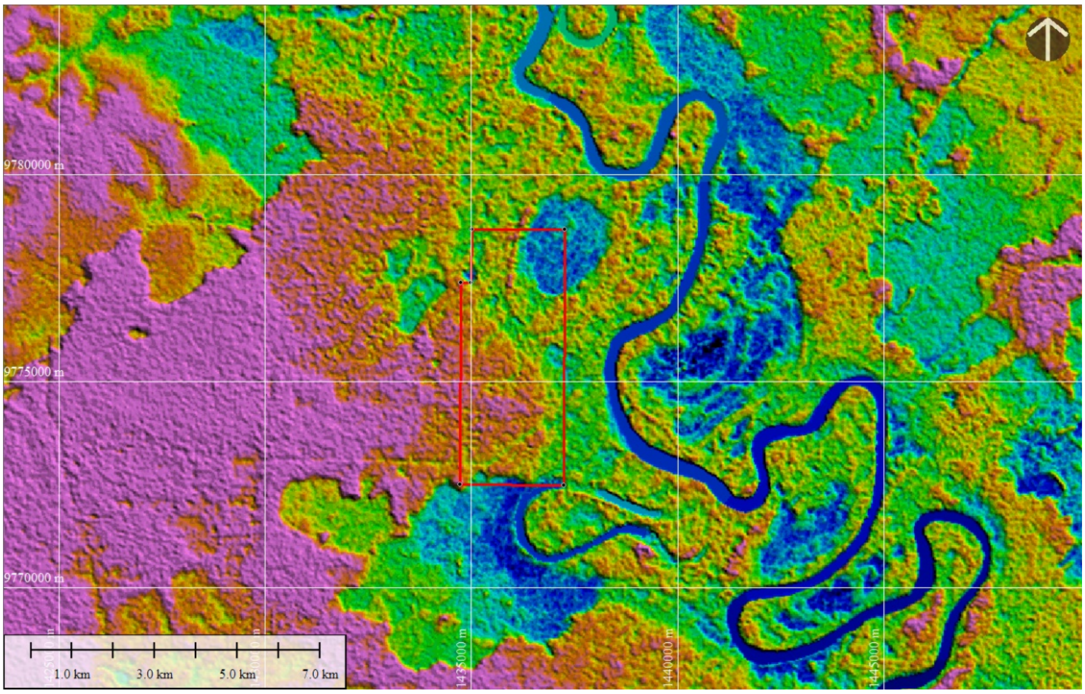


Figure 2-8 SRTM 30 m topographic data plan

2.10 Regional Mineralisation

Historically, the sedimentary basins of Central and Western Kalimantan have been mined for alluvial gold and in some areas also for diamonds. More recently, it has been recognised that the alluvium hosting the gold is also prospective for HMS.

In 2017 Indonesia was ranked 4th in world zircon production with production of 120,000 metric tonnes.

2.11 Regional Geology

The Tisma tenement is situated on the anticlinorium complex within Barito Basin with a pull apart sedimentary basin, occurring in Paleogene age, in Central Kalimantan. The syncline startigraphy consists of Tertiary sedimentary rocks sequences, Middle Miocene to Holocene age.

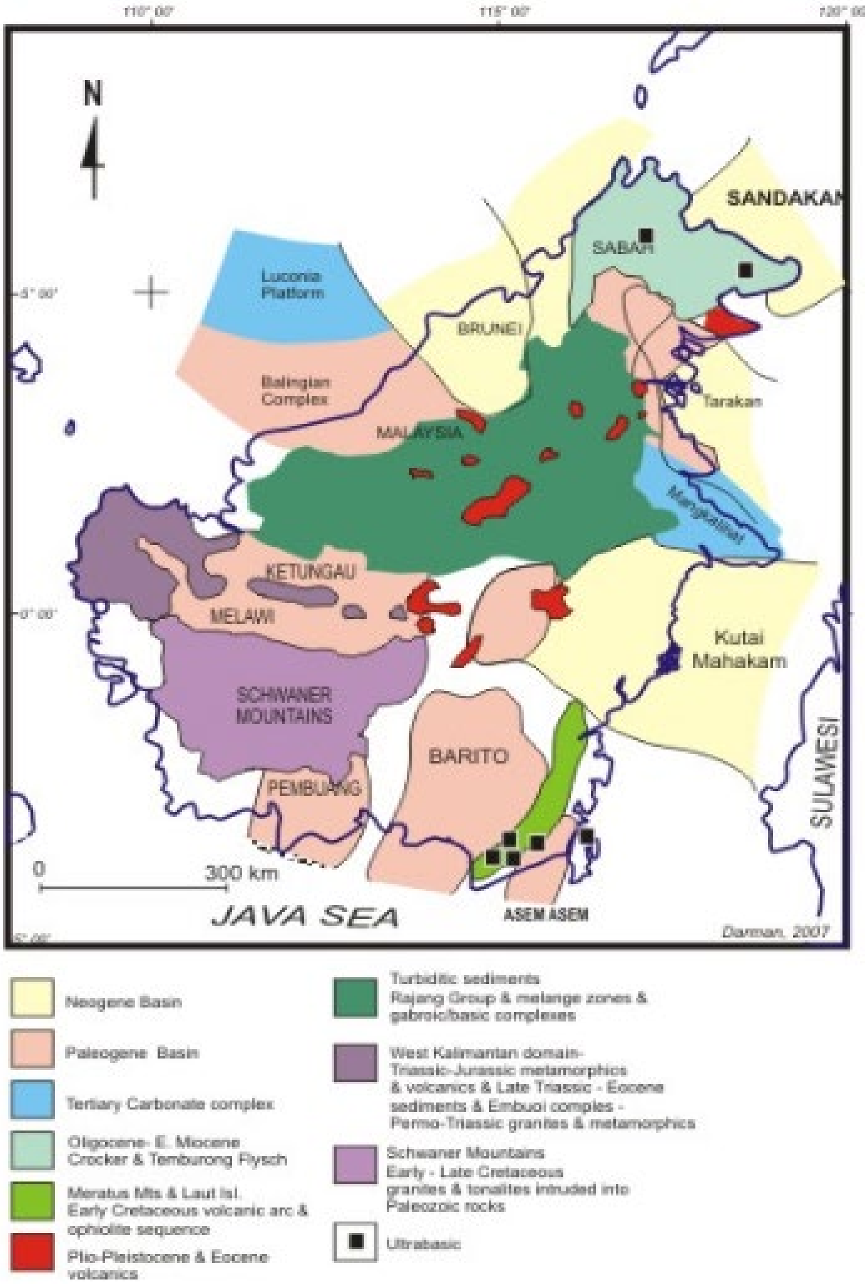


Figure 2-9 Simplified geological plan of Kalimantan Island

3 TISMA HMS PROJECT

3.1 Exploration History

There is no record of any systematic exploration having been conducted over the Tisma tenement area. There are some small artisanal workings located close to the south-eastern corner of the tenements where mining for gold was being conducted by dredging during the site visit in March 2020.

To the west of the tenement there is an extensive area of previous workings but there is no documentation available regarding the commodity mined or production records.(Figure 3-1).

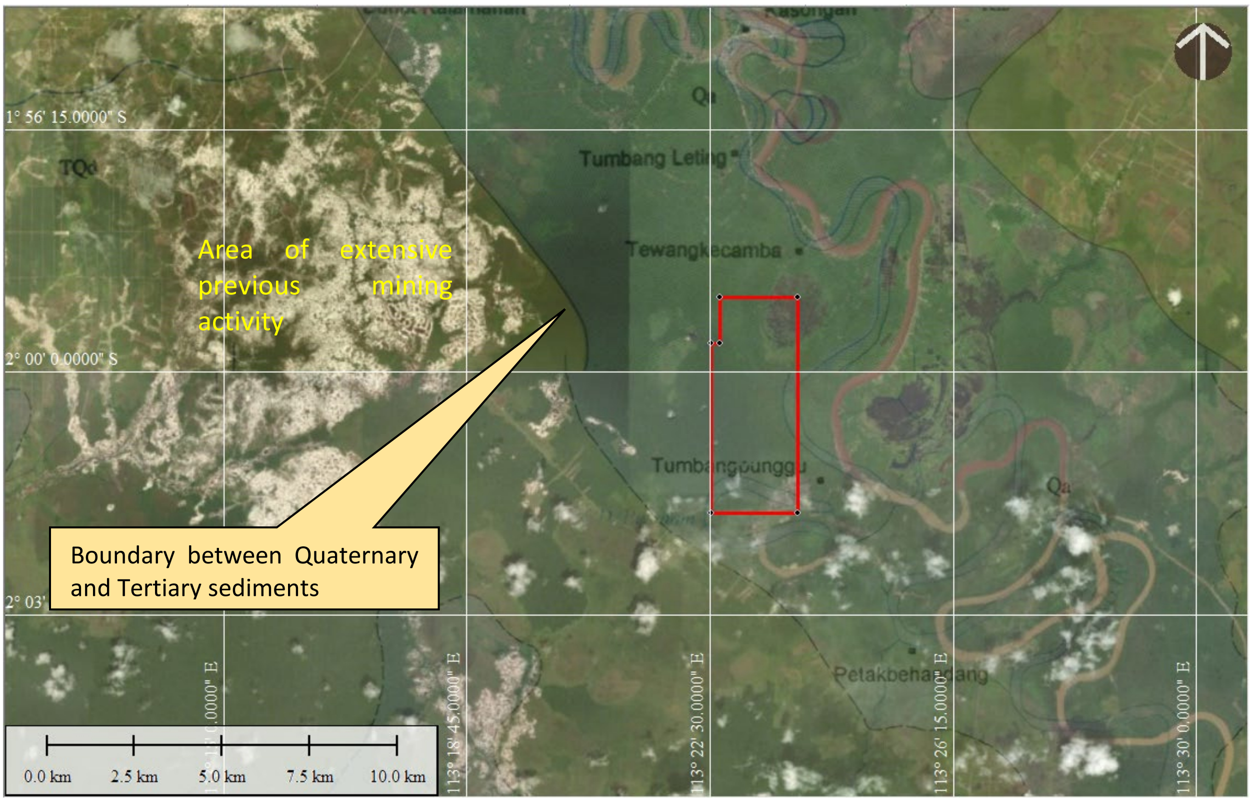


Figure 3-1 Geological plan superimposed over the satellite image showing the extensive workings located to the west

3.2 Geology

The HMS bearing strata of the Tisma deposit is ancient Kahayan alluvium, which was deposited during the Holocene age. In general, alluvium has varying thickness of between 2 m and 10 m. The lithology consists of loose quartz, medium grained intercalated grey mudstone containing carbonaceous, shale and bed load stream product, coarse grain sand layer.

The following description of the alluvium and Werukin Formation is reproduced from Nila, Rustandi and Heryanto (1995)[2]

<u>Alluvium,</u> Holocene age, pale black to dark brown peat (paludal deposit); loose sands, yellowish color, fine to coarse grained, unbedded (ancient Kahayan alluvium deposit); clay grey to brownish color, very

[2] E S Nila, E Rustandi, R Heryanto - Pusat Penelitian dan Pengembangan Geologi, 1995

soft, locally containing plant remains (tidal area); kaolinite clay. The thickness of this unit ranges from 50 to 100 m.

Werukin Formation (Tmw), middle Miocene to Pliestocene, this formation comprises brownish black conglomerate, compact, clast consists of quartzite and basalt fragments, diametere 1 – 3 cm, open fabric with matrix of sand. Alternating with yellowish sandstone, medium to coarse grained, locally exhibit crossbedding. Intercallated grey mudstone, rather soft, carbonaceous, contain sub-bituminus coal seam partly, appear as interbedded within sandstone bed with the thickness of 20 – 60 cm. The Werukin Formation has 300 m in thickness. Werukin Formation is deposited in a paralic environment. Werukin Formation is one of the main coal bearing formations in the Barito Basin.

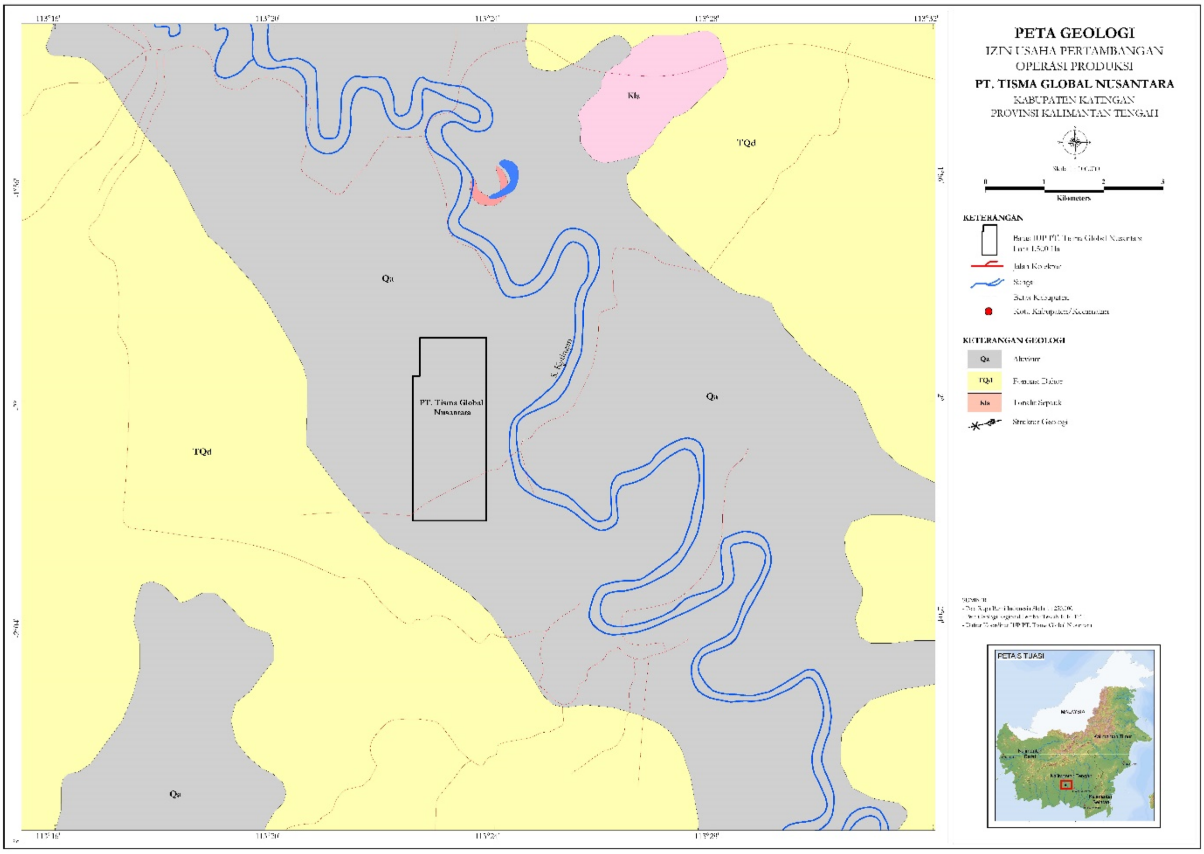


Figure 3-2 Geological plan of the Tisma Project area

3.3 Database

There is no previous technical data available for the project. All of the technical information used in this report is the result of work completed by TDL during 2020. Thirty-six drill holes, geological logging, laboratory XRF analyses, portable XRF analyses, HM content, slimes content and oversize content determinations.

3.4 Mineralisation

Geologically the HMS deposit at Tisma is a placer deposit formed in a flood plain environment by concentration of heavy minerals, mostly zircon ($ZrSiO_4$) with very minor rutile (TiO_2), and ilmenite ($FeTiO_3$). Zircon is the most valuable component followed by rutile and ilmenite in terms of value given to the mineralisation. Gold has also been identified in the samples with visual observation in nine of the panned concentrates plus a small number of analyses (8) by XRF. The heavy minerals within the source sediments attain an economic concentration by accumulation within low-energy environments within streams and most usually on beaches. In alluvial placer deposits the medium to high energy zones on the stream are the meandering, bars and channel zone. In these zones, the HM grains accumulate because they are denser than the quartz grains they occur with and become stranded. The deposits are found in unconsolidated sand strata.

3.5 Geometry of the Mineralisation

The mineralisation occurs as a tabular body within alluvium as a layer of between 3.5 to 8.3 m thick. The overburden varies from 6 to 10 m in thickness.

During the logging of the samples visual estimates were made of the HM, zircon, rutile and ilmenite contents. The ratio of rutile to ilmenite is estimated to be 30:70.

3.6 Drilling Methods

Drilling was carried out by PT Tisma Global Nusantara (PT. TGN) personnel, using a single drilling rig during July to October 2020. The work commenced by using a 3” core barrel (76 mm diameter) but the recovery was very low and the system was modified to drill in short lengths of 50 – 100 cm, after which the rods were withdrawn and the core recovered directly from the drill pipe. This method of sample recovery is very slow and inefficient and would have been significantly better if the drilling company representatives had been able to travel to site to provide instruction to the local driller. Unfortunately, covid-19 related travel restrictions between China and Indonesia precluded this happening.

The drill rig used was a DP-180YY manufactured by the Shanghai Hardrock drill Co. Ltd (Figure 3-3). To date, a total of 36 vertical holes (Table 3-1).

Figure 3-3 DP-180YY Drilling rig used for the resource drilling

Table 3-1 Tisma drilling summary

Hole-ID	Short name	Easting	Northing	RL	Depth (m)
TGN400-008	TGN-008	764968	9780284	31	14
TGN400-010	TGN-010	765767	9780286	20	12
TGN400-012	TGN-012	766565	9780288	18	13
TGN400-016	TGN-016	765768	9779885	31	12.2
TGN400-020	TGN-020	764968	9779483	27	11.7
TGN400-022	TGN-022	765766	9779485	30	12.5
TGN400-024	TGN-024	766566	9779487	18	13.3
TGN400-028	TGN-028	765767	9779086	32	12.8
TGN400-031	TGN-031	764568	9778690	31	13.6
TGN400-032	TGN-032	764966	9778685	30	11.8
TGN400-034	TGN-034	765768	9778686	33	13.2
TGN400-036	TGN-036	766572	9778680	30	13.1
TGN400-040	TGN-040	765769	9778248	33	12
TGN400-043	TGN-043	764568	9777888	32	14.5
TGN400-045	TGN-045	765368	9777886	33	14
TGN400-046	TGN-046	765769	9777883	30	12.3
TGN400-048	TGN-048	766567	9777883	23	11.5
TGN400-052	TGN-052	765769	9777484	33	15
TGN400-055	TGN-055	764570	9777083	35	15
TGN400-056	TGN-056	764965	9777086	33	13.5
TGN400-057	TGN-057	765368	9777086	33	12
TGN400-058	TGN-058	765768	9777083	34	13
TGN400-060	TGN-060	766562	9777090	27	11.3
TGN400-064	TGN-064	765766	9776685	35	16.5
TGN400-066	TGN-066	766564	9776686	29	11.4
TGN400-070	TGN-070	765768	9776288	30	12
TGN400-076	TGN-076	765767	9775882	31	13.7
TGN400-087	TGN-087	765370	9775080	30	12.8
TGN400-088	TGN-088	765770	9775083	34	14.8
TGN400-089	TGN-089	766165	9775075	31	13.1
TGN400-062	TGN-062	764966	9776686	39	14.9
TGN400-071	TGN-071	766165	9776284	30	14.2
TGN400-074	TGN-074	764966	9775886	35	14.4
TGN400-081	TGN-081	765366	9775487	31	13.6
TGN400-085	TGN-085	764567	9775087	25	13.3
TGN400-078	TGN-078	766570	9775886	29	14.8

(coordinates in UTM WGS84 Zone 49 south)

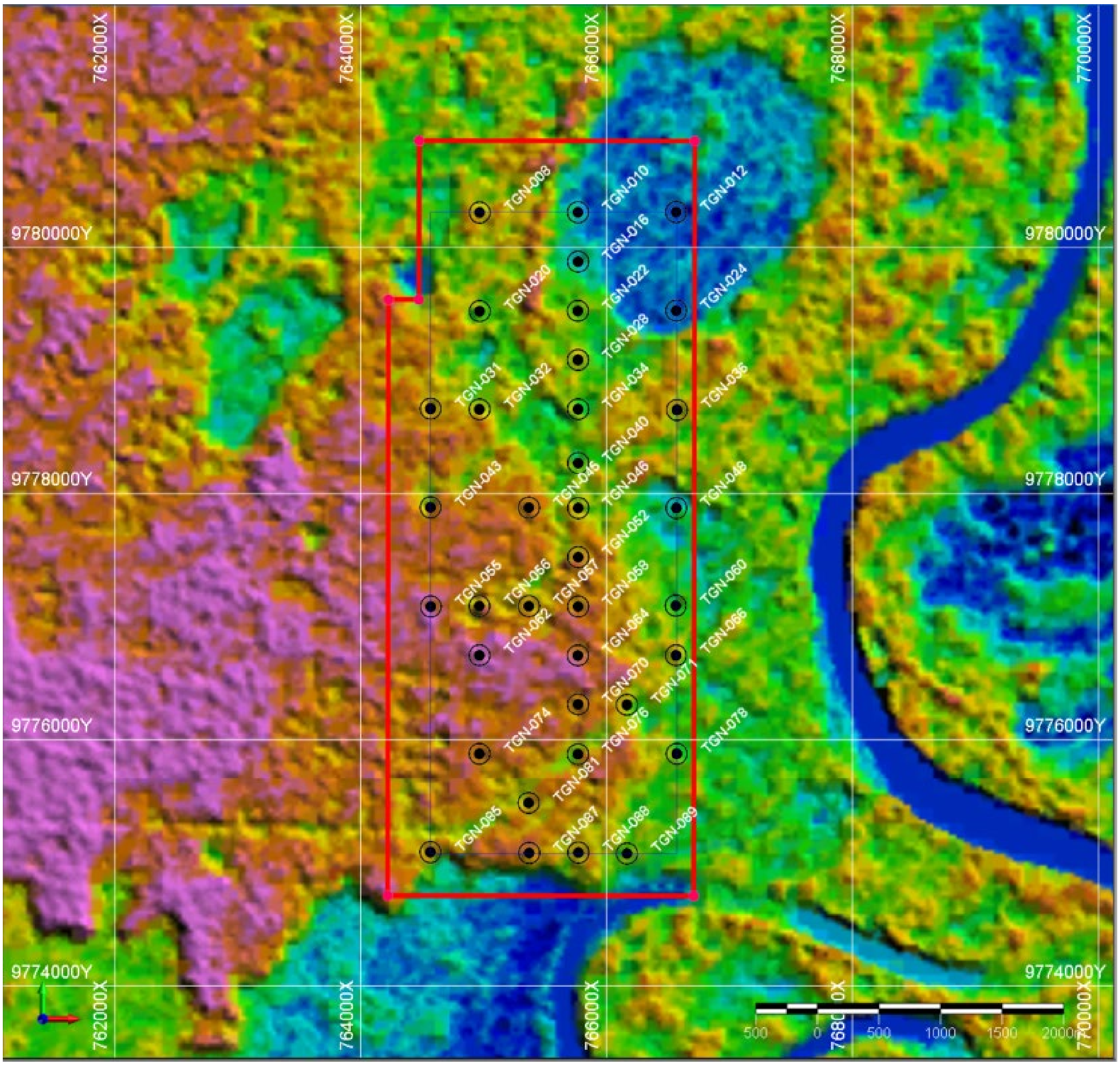


Figure 3-4 Tisma Project drill hole location plan on SRTM image

Thirty-six holes were completed ranging in depth from 11.3 to 16.5 m with an average depth of 13.0 m. The holes were drilled until either compacted lithology was intersected, or the hole collapsed masking further advance very difficult.

Hole positions were prepared by PT. TGN geologists by locating the planned collar coordinates with a GPS unit or occassionally by tape measure from a nearby drillhole or targeted hole.

Figure 3-5 Typical set-up for the drilling

3.6.1 Geological Logging and Core Recovery

The individual HMS core run was placed in open PVC trays and sampled by 1 m sample spacing and photographed. Each core tray contained 5 x 1 m intervals of core. The drill hole number, box number and depth interval were marked with a marker on a board, then photographed as part of the drill core documentation protocol.

PT. TGN geologists record drill core in detail using standard handheld computer logging sheets for: lithology, intensity and structural information as a database.

Figure 3-6 Photographic records of the recovered core

3.6.2 Panning Samples

Simultaneously with the sampling and core logging, a panning test was carried out to determine the minerals and approximate percentage present in the HMS concentrate.

A 250 g drilling sample was panned to determine the minerals present. Gold flakes were recorded in ten holes (Figure 3-7 Small gold grain noted during the logging).

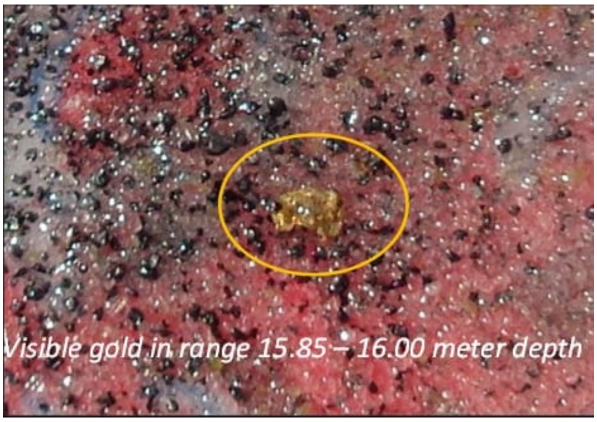


Figure 3-7 Small gold grain noted during the logging

Figure 3-8 Samples prepared in the field

3.6.3 Sampling

Samples were collected by PT. TGN staff, placed into pre-numbered plastic bags along with a waterproof sample number label indicating the sample depth interval and sample number corresponding to the label. The plastic sample bag and label were then covered with a tamper-resistant plastic strap embossed with the sample number.

Some of the sample bags were then placed into a larger poly-woven plastic bag, marked with a drill hole number, then transported and placed in a dry and safe place in PT TGN's warehouse approximately 12 km from the drilling location.

Sampling Methodology

1. Clean the core from the other materials,
2. Record the range depth of the sample accurately,
3. Visually estimate the type of slimes and percentage,
4. Determine the type of Tertiary sediment and its boundary
5. Ensure the Heavy Mineral Sand is free from contamination material (organic or inorganic),
6. Heavy Mineral Sand more than 1 m in thickness sampled based on 1 m sample interval.
7. Individual sample is dried under the sun, and mixing it is homogeneous.
8. The dried sample has manual homogenization and quartering process, until it is estimated that a sample weight of 2 kg is obtained.
9. Final quartering, Pack sample weight 2 kg in the 2 plastic bag (1 kg per sample), used 2 kg
10. plastic bags and complete it with a unique sample number and sent to Palangkaraya office

3.6.4 Sample Preparation

The sub-sampling method for obtaining representative samples for laboratory analysis and duplicates was by cone and quartering.

After quartering the sample to obtain a sample weight of 2 kg, mixing was carried out again until it became homogeneous and the last quartering was completed yielding two samples each of 1 kg which were place in plastic bags labelled with a unique sample number. One sample was sent to the independent UPTD laboratory and the other sample was stored in a secure storage area.

Figure 3-9 Drying and pulverising the samples

Figure 3-10 Example of cone and quartering

Figure 3-11 Prepared duplicate samples

3.6.5 Portable XRF Analyses

Inhouse analysis using an Olympus X-ray (PXRF) was completed on the samples to provide analytical data while waiting for the UPTD laboratory analyses. The samples were analysed for Zr, Ti, Th & Fe.

The samples were crushed and homogenised before analysis. Each sample was analysed three times with the same procedure and the average was taken. After every three samples were analysed the PXRF was checked against a set of certified reference samples (CRMs).

A set of six standards were purchased to test the accuracy of the PXRF unit. The results of the calibration tests are summarised in tables Table 3-5 & Table 3-6.

3.6.6 Sample Security

The samples were under the direct control of company personnel at all stages of the sample collection, preparation and despatch to the UPTD laboratory.

Samples from the field were transported to a warehouse near the Tisma concession where sample preparation (sun drying, crushing, quartering) wass carried out after which 2 kg samples were transported by personnel to the Palangkaraya office.

One sample was despatched to the UPTD laboratory with the duplicate stored in a locked storage facility in the company office in Palangkaraya.

Figure 3-12 Sample storage at the Palangkaraya office

3.7 Survey Control

All drill hole locations were recorded using a Garmin 60cs handheld GPS unit. The estimated error is in the order of ±15 m. RLs were not recorded as the tenement area is relatively flat.

3.8 Density

A density factor was estimated for each mineralised intersection based on the SG calculated for each ore block on the basis of its interpolated HM content according to the accepted industry standard formula SG = 1.686 + (0.0108 x HM%); The average density for the deposit is 1.75.

3.9 Analyses – UPTD laboratory

Samples were sent to the UPTD Laboratory of Energy and Mineral Resources (UPTD) which is part of the Department of Energy and Mineral Resources of the Provincial Government of South Kalimantan for standard heavy liquid separation tests providing HM, Slime and Oversize contents. XRF analysis was performed for the major oxide components plus loss on ignition (LOI) and in some cases hafnium and gold.

Table 3-2 Basic statistics for the HM, slime, oversize and mineralised intervals

Item	Minimum	Maximum	Mean
HM (%)	2.67	5.33	4.11
Calculated zircon content	1.51	4.61	3.41
Slimes (%)	6.22	21.06	14.53
Oversize (%)	15.80	34.71	25.14
Interval (m)	3.5	8.7	5.58
Overburden (m)	6	10	7.6

Table 3-3 Basic statistics for mineralised intervals for the UPTD laboratory analyses

Item	Minimum	Maximum	Mean
ZrO_2 (%)	1.02	3.10	2.29
TiO_2 (%)	0.17	0.42	0.24
Fe_2O_3 (%)	0.53	1.23	0.79
Zircon (%) - calculated	1.51	4.61	3.41
Rutile (%) - calculated	0.05	0.13	0.07
Ilmenite (%) - calculated	0.23	0.56	0.31
HM (%) - calculated	2.44	5.04	4.10

Note: zircon, ilmenite and rutile content was calculated from elemental Zr,& Ti. The ratio of rutile to ilmenite was based on visual estimates during the geological logging.

The distribution of the analyses for HM, slimes, estimated zircon content and oversize in percent and mineralised interval in metres are shown in the figures below.

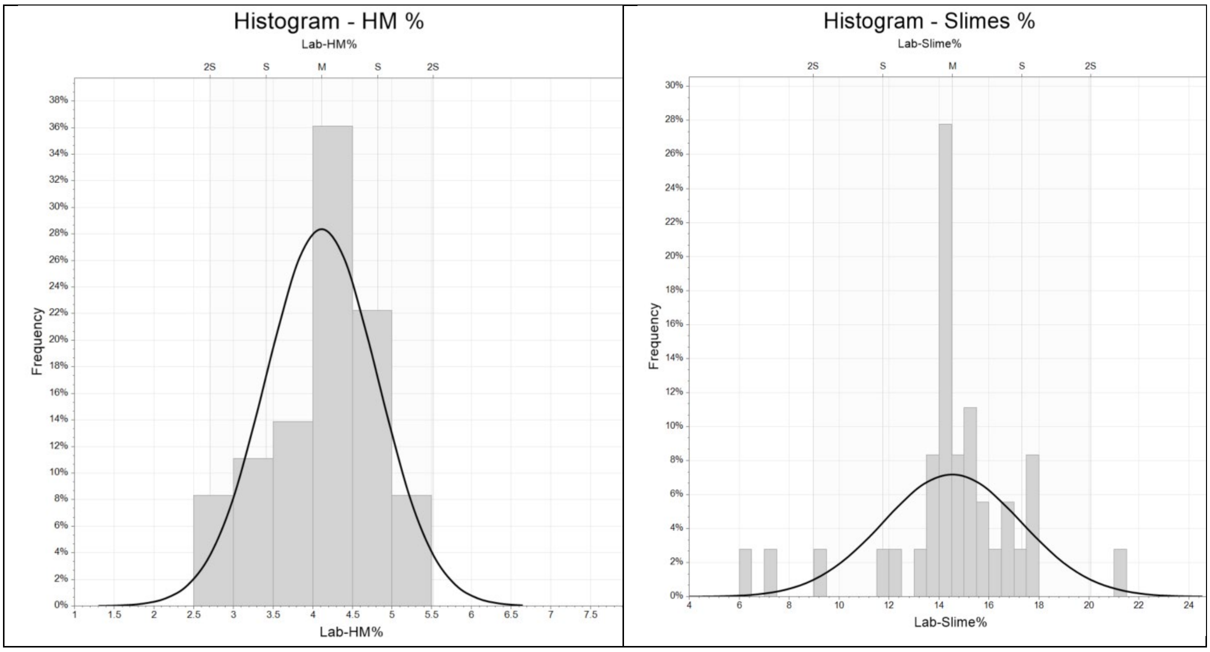


Figure 3-13 Histograms of the distribution of HM%, Slimes%

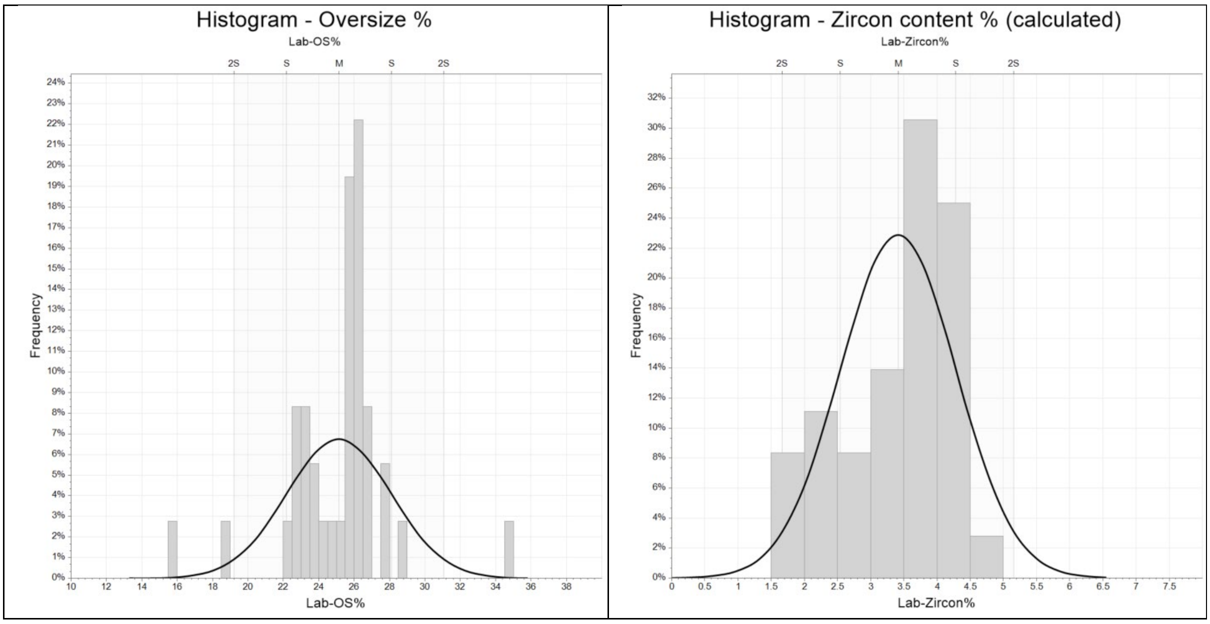


Figure 3-14 Histograms of the distribution of Oversize% & Calculated zircon%

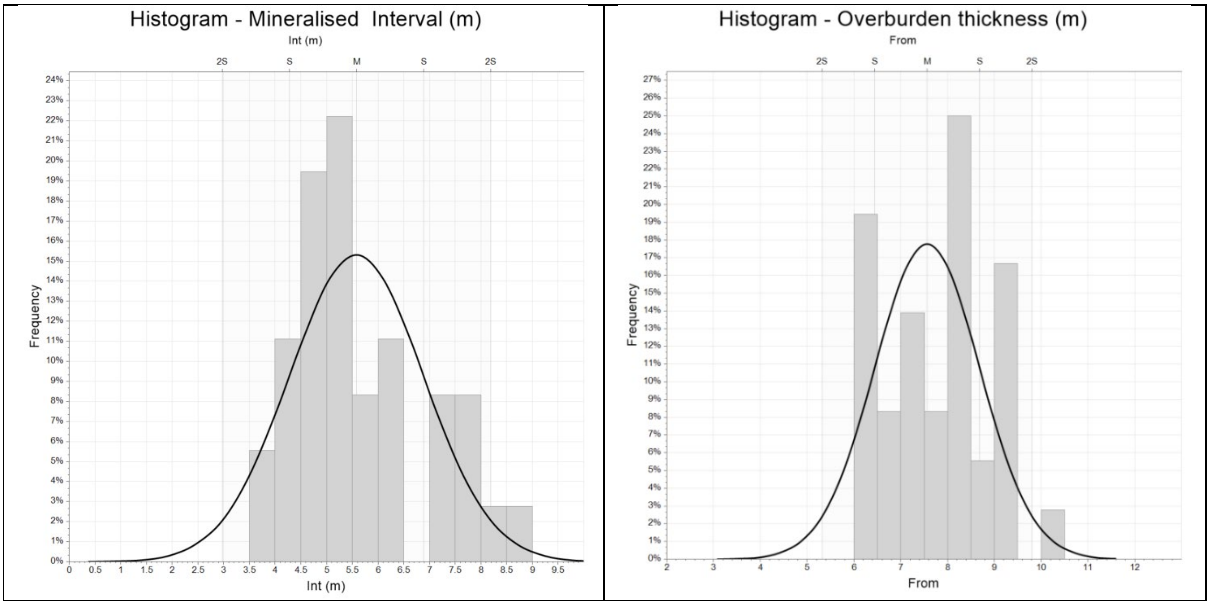


Figure 3-15 Histograms of mineralised interval (m) and overburden thickness (m)

Visual examination of the panned concentrates during the logging identified zircon with minor rutile, ilmenite and gold. This simple HM assemblage is supported by the analytical data and the close correlation between the laboratory HM content and the HM content calculated as the sum of the theoretical contents of ilmenite, rutile and zircon (Figure 3-16).

The predominant valuable mineral in the assemblage is zircon and its content can be quite accurately calculated from the zirconium analyses using zircon's formulae of ZrSiO4. The UBPT laboratory analyses were used to calculate the zircon content in the resource estimate. The correlation betwwen the UPTD Laboratory zirconium assays and the corresponding PXRF zirconium results are considered to be sufficiently robust (Figure 3-17) for the PXRF results to be used in the resource estimation considering that it is at the Inferred level.

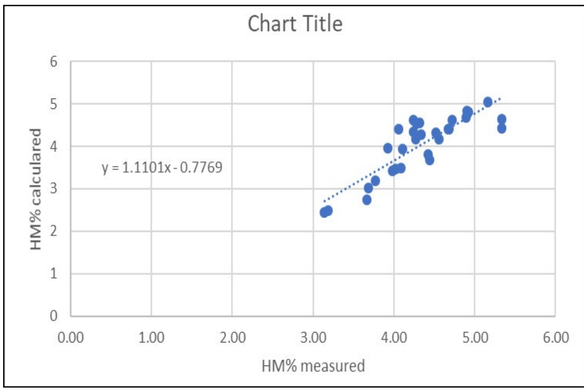


Figure 3-16 Plot of measured HM% Vs calculated from elemental analysis

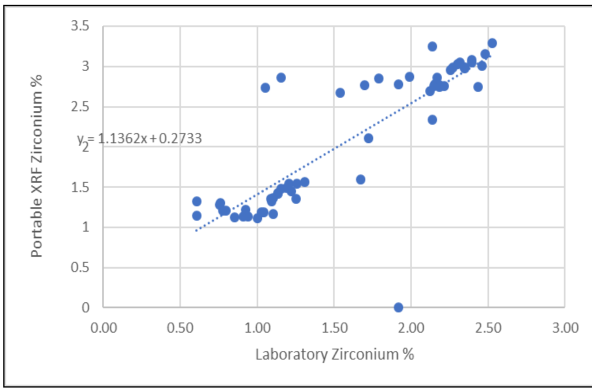


Figure 3-17 Plot of UPTD Zr Vs PXRF Zr

3.10 QA/QC

Some basic QA/QC work was carried out to confirm the accuracy and precision of the sampling work. This included analysis of Certified Reference Material and duplicate sample analyses.

3.10.1 Duplicates

Nine duplicate samples were submitted to the UPTD laboratory for duplicate analysis. The results are presented in table and figures.

Table 3-4 Results of duplicate sampling

Sample	HM%		Slimes%		Oversize%		Zr2O3		TiO2	
	1st	Dup	1st	Dup	1st	Dup	1st	Dup	1st	Dup
TGN400-031 A	2.81	2.82	14.32	14.30	26.13	26.17	0.82	0.97	0.25	0.24
TGN400-012 A	2.97	2.96	19.21	19.45	20.36	20.12	1.05	1.08	0.27	0.25
TGN400-040 A	3.26	3.07	14.21	14.72	26.44	26.33	1.23	1.13	0.22	0.20
TGN400-028 A	3.29	3.08	14.11	14.35	25.26	25.05	1.27	1.07	0.24	0.22
TGN400-008 B	3.98	3.62	18.11	17.94	26.41	26.03	2.08	1.78	0.24	0.23
TGN400-045 B	4.22	4.04	14.15	14.06	27.77	27.45	2.42	2.22	0.27	0.27
TGN400-057 B	5.55	4.35	15.31	15.50	27.24	27.15	2.33	2.12	0.35	0.37
TGN400-088 C	5.02	4.47	4.77	4.87	25.39	25.19	3.32	3.12	0.26	0.26
TGN400-070 B	7.18	5.91	8.79	8.81	40.15	39.17	3.23	3.03	0.55	0.53

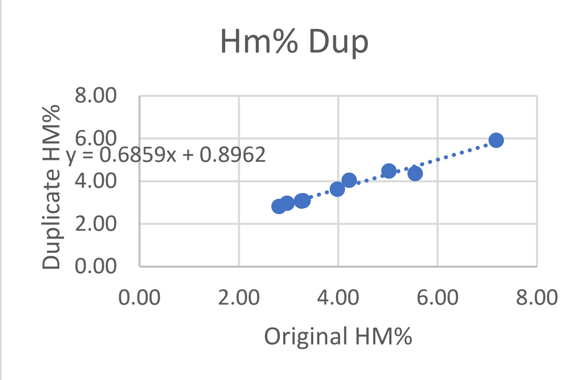


Figure 3-18 Plot of HM% original Vs duplicate

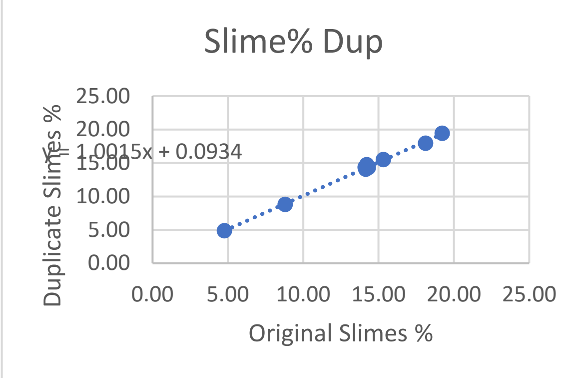


Figure 3-19 Plot of Slimes% original Vs duplicate

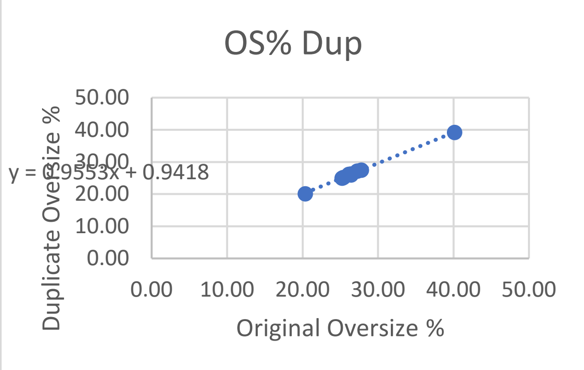


Figure 3-20 Plot of OS% original Vs duplicate

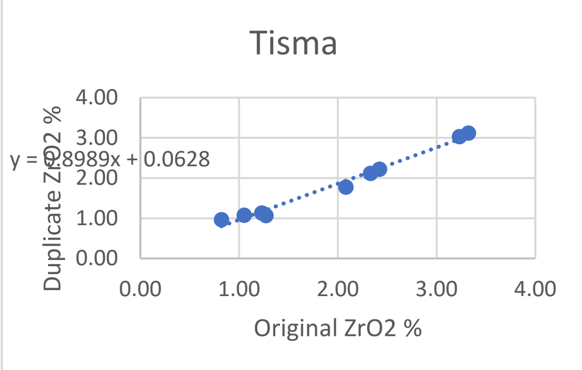


Figure 3-21 Plot of ZrO_2% original Vs duplicate

3.10.2 Standards

Table 3-5 PXRF calibration test results for Zirconium

Standard	Certified Value	Average	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5
		Zr	Zr	Zr	Zr	Zr	Zr
OREAS 461	603	642	658	674	655	631	632
OREAS 465	1,879	1,708	1,644	1,695	1,717	1,648	1,663

AMIS 0304	1,002	1,135	1,121	1,152	1,142	1,127	1,133
OREAS 98	212	192	192	198	189	194	187
OREAS 045e	242	355	338	351	341	363	382

Table 3-6 PXRF calibration test results for Titanium

Standard	Certified Value	Average	Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5
		Ti	Ti	Ti	Ti	Ti	Ti
OREAS 461	2.75%	3.72%	2.69%	2.80%	5.63%	5.81%	2.64%
OREAS 465	9.74%	>9.80%	9.78%	>10 %	>10 %	9.96%	9.67%
AMIS 0304	1.39%	1.37%	1.37%	1.38%	1.34%	1.33%	1.42%
OREAS 98	2,863	2,602	2749	2,708	2,497	2,569	2,488
OREAS 045e	8,645	8,691	8,677	8,683	8,582	8,821	8,691

4 MINERAL RESOURCE ESTIMATION METHODOLOGY

4.1 Estimate Procedure

CRM carried out this resource estimate for Tisma Heavy Mineral Deposit. The estimate was made by Dr John Chisholm, Principal Geologist. It is reported in accordance with the 2012 Edition of the JORC Code. The estimate employed Inverse Distance modelling method to produce an ore block model (OBM) of the mineralisation within the deposit. Micromine Version 18.0.846.3 software was used for the production of the OBM.

4.2 Upper Cuts

Based on the distribution of the analytical results no upper cuts were applied.

4.3 Lower Cut-off

A lower cut-off of 2% was used as this is the most commonly used value in the HM sand industry. It is noted that there are no resources within the 2-3% HM grade range. When further drilling is completed it will be necessary to evaluate the matter of the mining method that will ultimately be used to exploit the deposit as it may be necessary to increase the lower cut-off grade to meet the cost of removal of the overburden.

4.4 Previous Mineral Resource Estimates

CRM is not aware of any previous mineral resource estimates for the Tisma Project.

4.5 Ore Reserves

There are no Ore Reserves current for the Tisma Project.

4.6 Mineral Resource Estimation Parameters

4.6.1 Input Data

Each hole was logged, and the interval of alluvium recorded (Int). A composite sample was prepared for the interval and analysed by the UPTD laboratory. HM, slimes and oversize and a suite of up to 12 elements were analysed plus loss on ignition (LOI). The elements analysed included ZrO_2, TiO_2 & Fe_3O_4. Based on mineral formulae and the ratio of rutile to ilmenite present in the mineral assemblage, zircon, rutile and ilmenite contents were estimated.

Where analyses for multiple adjacent intervals were available the weighted average for each variable was calculated for use in the block modelling.

4.6.2 Search Dimensions

The search criteria were optimised for the primary target, the heavy minerals. CRM is, however, of the opinion that the criteria would also adequate for the estimation of the slimes and oversize content of the blocks once that information is received.

A spherical search distance of 550 m was used with an inverse distance squared interpolation for the grade, density and mineralised interval.

4.6.3 Block Dimensions

OBM block dimensions for the Tisma deposit were 200 m EW, 200 m NS, and the mineralised composite interval for the vertical dimension. Discretisation was not employed

Table 4-1 OBM block definitions

Area	Dimension	Min Centre	Block Size	Max Centre	Blocks
Tisma	East	764400	200 m	766600	12
	North	9774800	200 m	9781000	32
	Z	0	100 m	100	1

Note: for the resource reporting the 1 m Z value was replaced with the interpolated interval thickness for each block.

Table 4-2 Input data - Composited Heavy Liquid separation results for each drill hole

Hole-ID	From	To	Int (m)	HM%	Slime%	OS%
TGN400-008	9.00	14.00	5.00	3.77	17.91	26.01
TGN400-010	8.00	12.00	4.00	4.09	14.14	26.15
TGN400-012	7.00	13.00	6.00	4.02	15.22	26.08
TGN400-016	8.50	12.00	3.50	4.06	14.24	26.17
TGN400-020	7.50	11.70	4.20	3.92	14.23	26.08
TGN400-022	8.00	12.40	4.40	4.68	14.30	24.99
TGN400-024	7.00	13.00	6.00	4.91	14.56	25.81
TGN400-028	6.50	12.80	6.30	5.16	14.06	25.86
TGN400-031	8.00	13.40	5.40	3.18	13.55	27.92
TGN400-032	8.00	11.80	3.80	3.14	14.32	26.54
TGN400-034	8.00	13.00	5.00	4.67	14.23	26.24
TGN400-036	6.00	13.00	7.00	4.52	15.45	25.54
TGN400-040	7.00	12.00	5.00	4.56	14.13	25.72
TGN400-043	9.00	14.30	5.30	4.18	13.64	27.71
TGN400-045	9.00	13.80	4.80	3.67	15.46	25.83
TGN400-046	7.50	12.30	4.80	4.34	13.42	28.65
TGN400-048	6.00	11.50	5.50	4.10	16.78	23.23
TGN400-052	8.00	15.00	7.00	4.00	15.46	26.01
TGN400-055	10.00	15.00	5.00	4.89	15.96	26.72
TGN400-056	9.00	13.50	4.50	4.92	14.26	26.04
TGN400-057	7.60	12.00	4.40	5.33	14.52	26.94
TGN400-058	8.00	13.00	5.00	4.72	14.61	25.64
TGN400-060	6.50	11.30	4.80	3.82	15.86	22.31
TGN400-062	9.00	14.70	5.70	2.67	17.25	23.05
TGN400-064	9.00	16.30	7.30	4.24	7.38	15.80
TGN400-066	6.00	11.40	5.40	4.42	14.49	24.28
TGN400-070	6.00	11.90	5.90	5.33	9.43	34.71
TGN400-071	6.50	14.00	7.50	2.92	16.82	22.91
TGN400-074	6.00	14.30	8.30	2.78	16.49	22.94
TGN400-076	6.00	13.70	7.70	4.24	11.58	25.83
TGN400-078	6.00	14.70	8.70	3.23	21.06	18.62
TGN400-081	8.50	13.30	4.80	3.73	17.94	23.55
TGN400-085	8.20	13.00	4.80	3.01	17.94	22.54
TGN400-087	8.00	12.50	4.50	4.27	13.70	25.47
TGN400-088	7.00	14.60	7.60	4.32	6.22	23.65
TGN400-089	7.00	13.00	6.00	4.28	12.30	23.44

Table 4-3 Input data - Composite UPTD analyses and calculated mineral content for drill holes

Hole-ID	Lab-HM%	Lab-ZrO2%	Lab-Zircon%	Lab-TiO2%	Lab-Rutile%	Lab-Ilmenite%

TGN400-008	3.77	1.88	2.80	0.24	0.07	0.32
TGN400-010	4.09	2.07	3.08	0.25	0.07	0.33
TGN400-012	4.02	2.06	3.06	0.25	0.07	0.33
TGN400-016	4.06	2.69	4.00	0.24	0.07	0.32
TGN400-020	3.92	2.40	3.57	0.24	0.07	0.33
TGN400-022	4.68	2.68	3.99	0.26	0.08	0.35
TGN400-024	4.91	2.97	4.41	0.25	0.08	0.33
TGN400-028	5.16	3.10	4.61	0.26	0.08	0.35
TGN400-031	3.18	1.42	2.12	0.23	0.07	0.30
TGN400-032	3.14	1.36	2.02	0.26	0.08	0.35
TGN400-034	4.67	2.67	3.97	0.27	0.08	0.36
TGN400-036	4.52	2.59	3.85	0.29	0.09	0.39
TGN400-040	4.56	2.57	3.83	0.20	0.06	0.27
TGN400-043	4.18	2.38	3.54	0.22	0.07	0.29
TGN400-045	3.67	1.84	2.74		0.00	0.00
TGN400-046	4.34	2.57	3.83	0.27	0.08	0.36
TGN400-048	4.10	2.27	3.38	0.34	0.10	0.45
TGN400-052	4.00	2.64	3.93	0.24	0.07	0.31
TGN400-055	4.89	2.83	4.21	0.29	0.09	0.38
TGN400-056	4.92	2.95	4.38	0.27	0.08	0.35
TGN400-057	5.33	2.73	4.06	0.35	0.11	0.47
TGN400-058	4.72	2.89	4.30	0.20	0.06	0.27
TGN400-060	3.82	2.02	3.00	0.19	0.06	0.25
TGN400-062	2.67	1.05	1.56	0.20	0.06	0.27
TGN400-064	4.24	2.91	4.33	0.17	0.05	0.23
TGN400-066	4.42	2.24	3.33	0.20	0.06	0.26
TGN400-070	5.33	2.52	3.74	0.42	0.13	0.56
TGN400-071	2.92	1.67	2.48	0.17	0.05	0.23
TGN400-074	2.78	1.02	1.51	0.21	0.06	0.28
TGN400-076	4.24	2.67	3.97	0.22	0.07	0.30
TGN400-078	3.23	1.47	2.18	0.20	0.06	0.27
TGN400-081	3.73	2.01	2.99	0.21	0.06	0.28
TGN400-085	3.01	1.25	1.86	0.20	0.06	0.26
TGN400-087	4.27	2.54	3.78	0.24	0.07	0.32
TGN400-088	4.32	2.87	4.27	0.18	0.05	0.24
TGN400-089	4.28	2.80	4.17	0.23	0.07	0.30

4.6.4 Ore Block Models

A simple OBM was produced as a single layer. The use of the composited single interval for the mineralisation meant that a wireframe was unnecessary in order to constrain the volume and grade of the deposit.

The area within which the mineral resource was estimated represents most of the area of the tenement and was limited to the area of currently available drilling. It is likely that HMS is present outside of the current resource area, but it cannot be quantified. Mineralisation outside of the OBM area has been included within the Exploration Target.

The distribution of HM, slimes and oversize content shows very little variation which is probably a function of the depositional environment wherein the deposit was formed. HMS deposits formed in an alluvial plain environment would show considerably less variability in grade than one formed as strandlines in a marine environment.

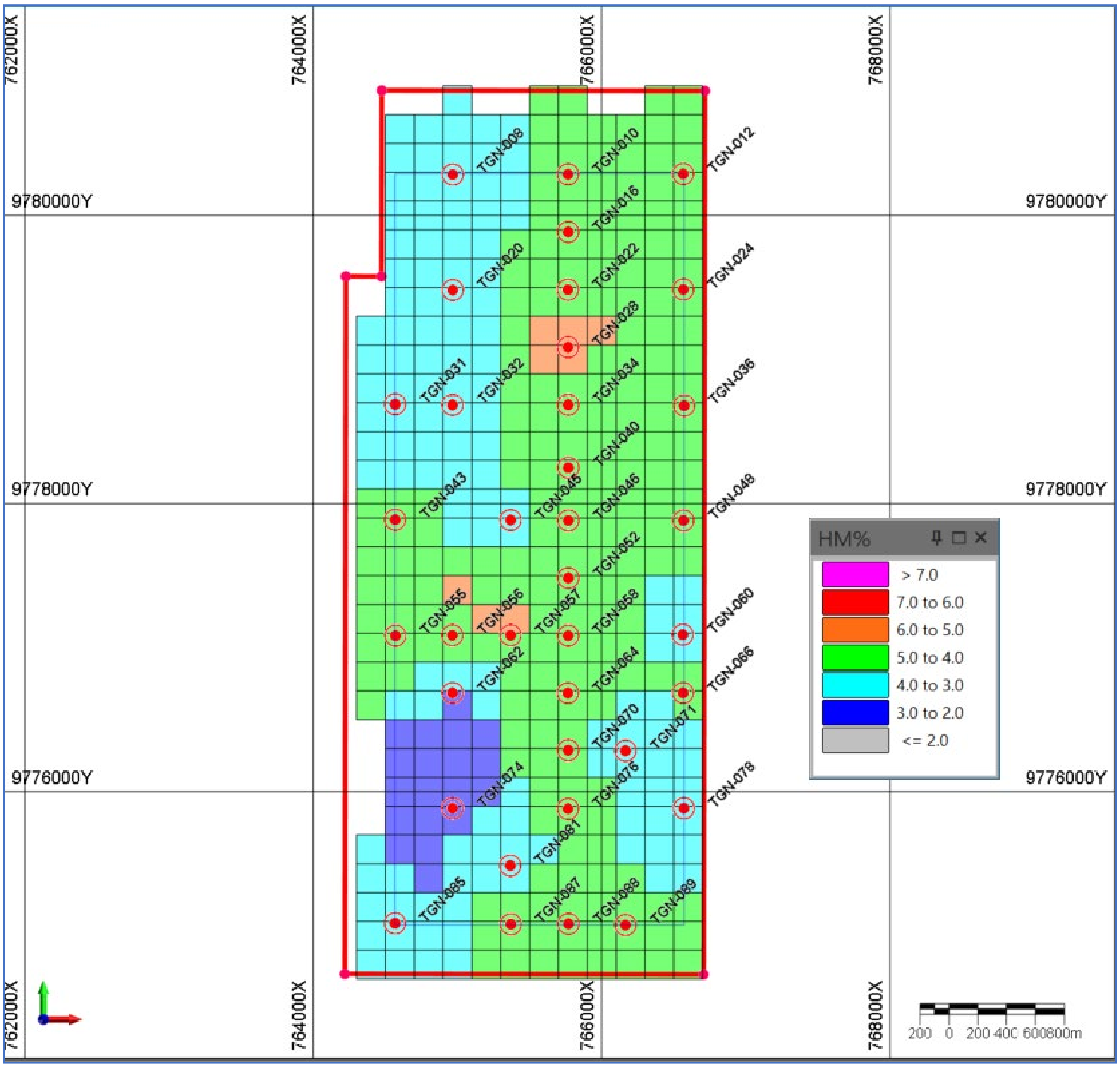


Figure 4-1 Tisma deposit – Locations of HM grade % relative to drill holes

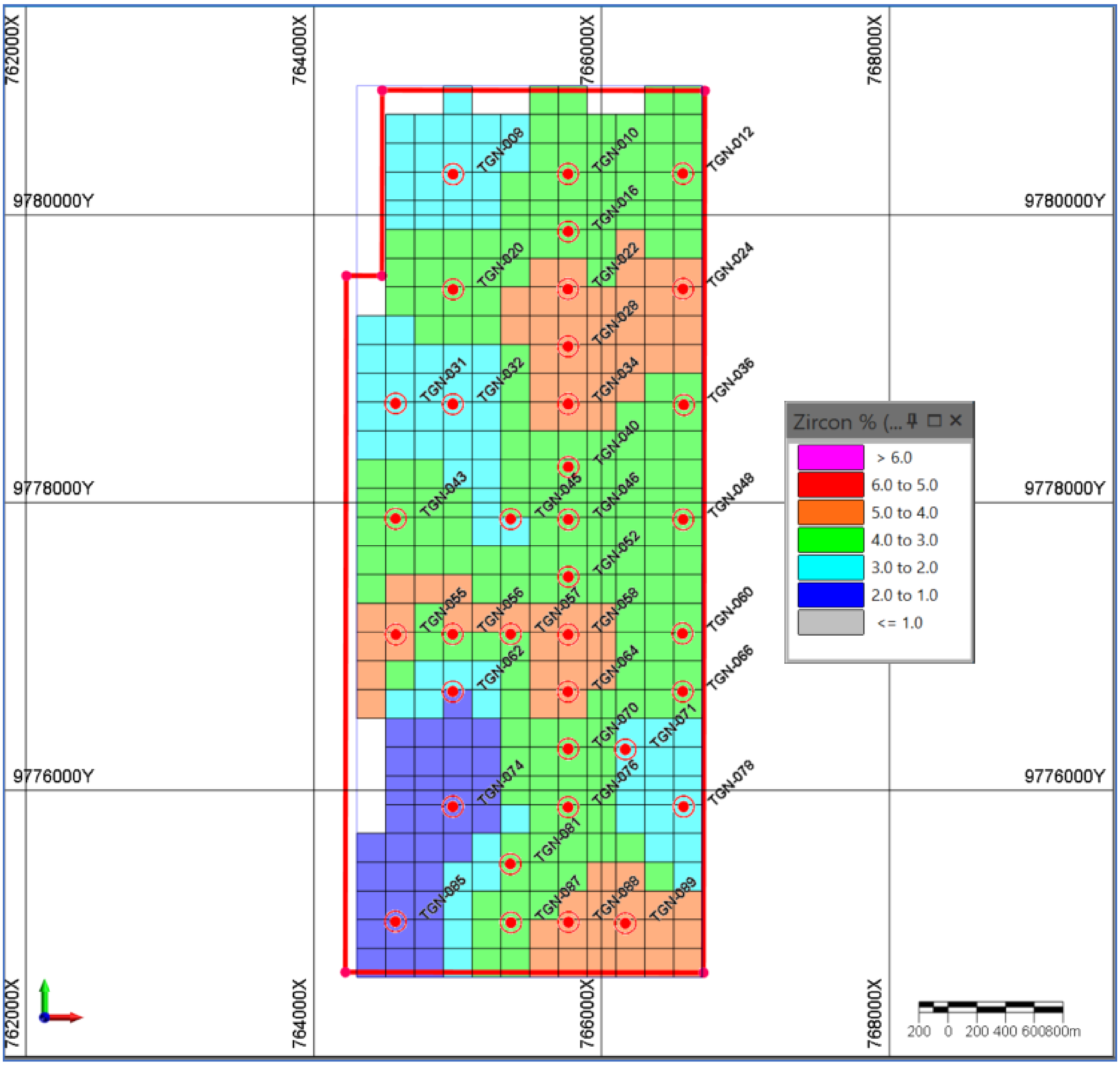


Figure 4-2 Tisma deposit – Locations of Zircon grade % relative to drill holes

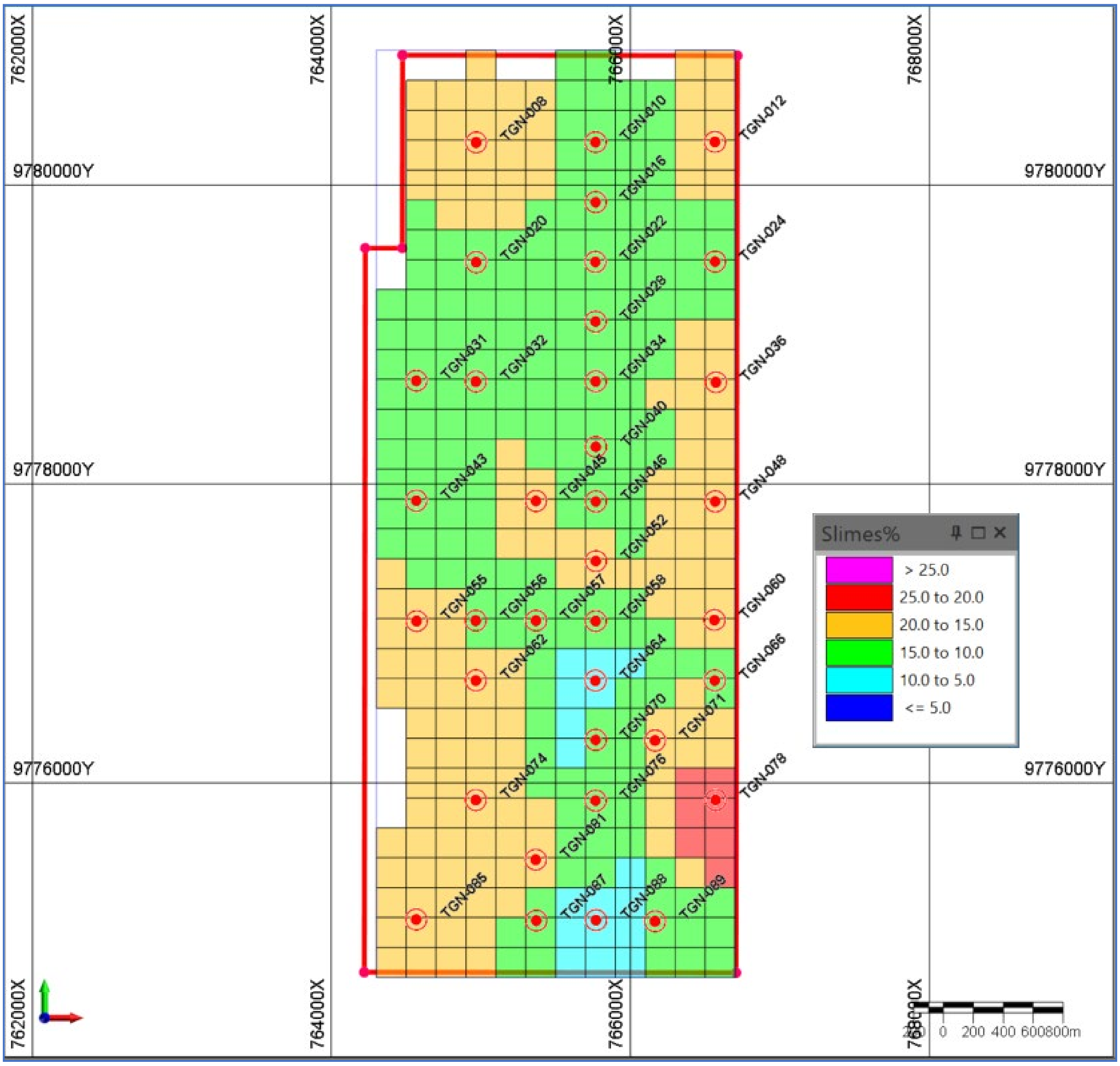


Figure 4-3 Tisma deposit – Slimes % relative to drill holes

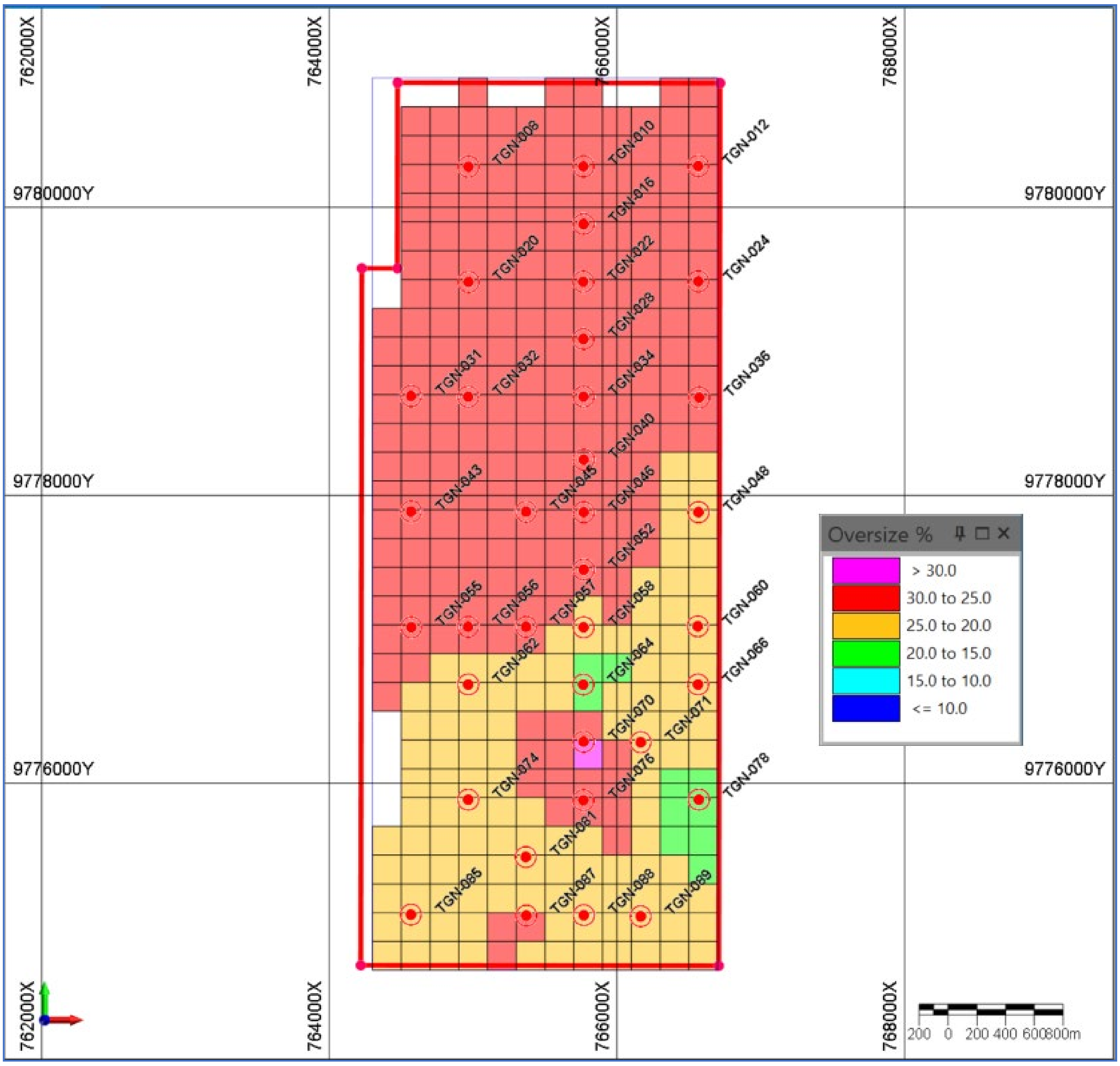


Figure 4-4 Tisma deposit – Oversize % relative to drill holes

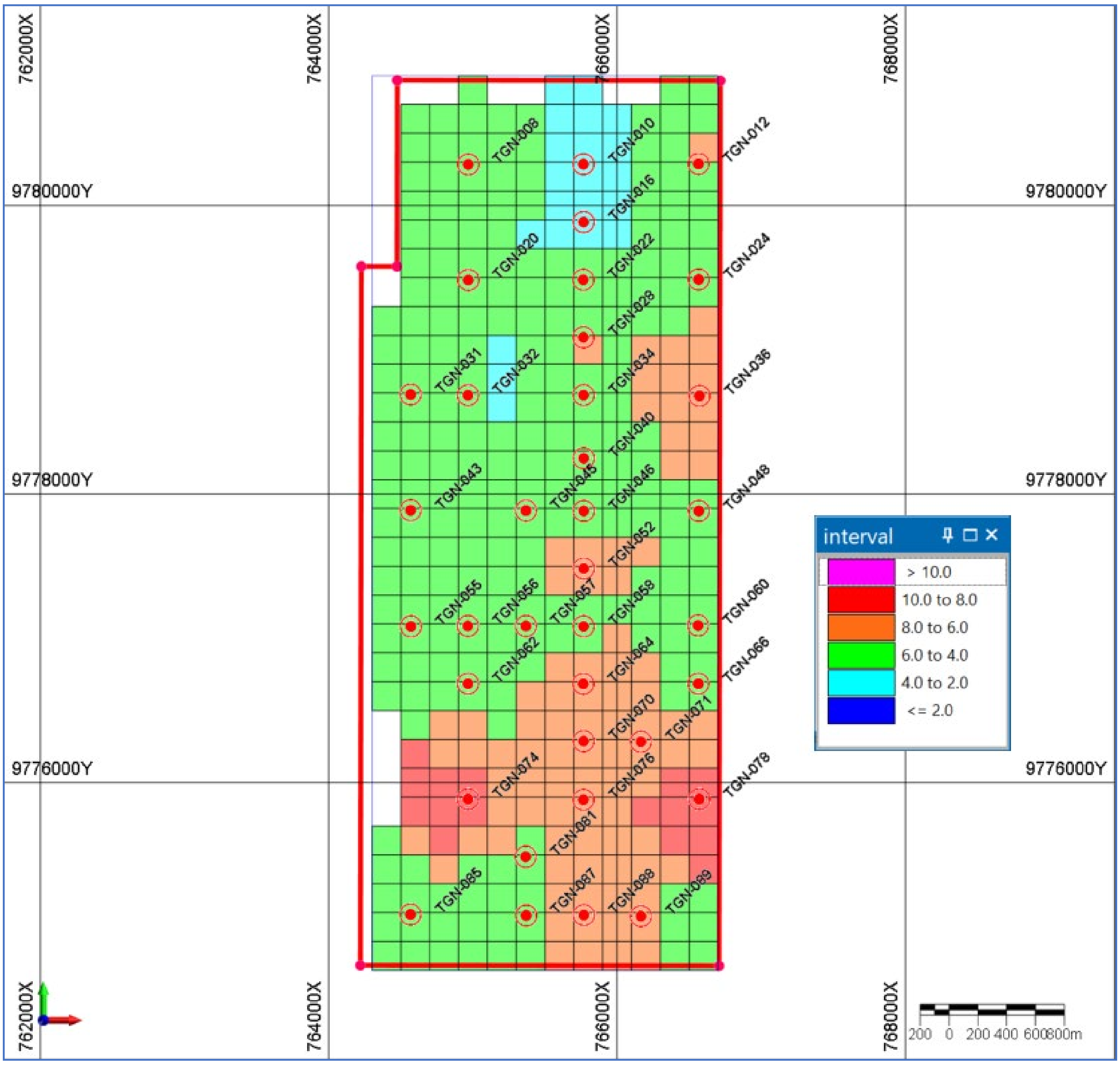


Figure 4-5 Tisma deposit – Alluvium thickness (m) relative to drill holes

5 MINERAL RESOURCE STATEMENT

Resources are reported only for those portions of the OBMs that are within the Tisma tenement. Resources were estimated and reported for HM and zircon. The reliability of the available data was insufficient to report resource for rutile, ilmenite or gold.

5.1 Resource Classification

As both the geological host units and the mineralisation are continuous throughout the modelled area it is the Competent Person's opinion that these resources meet the criteria for classification as Inferred Mineral Resources. (*An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.*).

5.2 Resource Tables

The total Mineral Resources (unrounded) for the Tisma Heavy Mineral Deposit within tenement N0. 545/244/KPTS/VIII/2012 are set out in Table 5-1. The resources are reported at a lower block cut-off grade of 2% HM. The predominant valuable is zircon as the rutile and ilmenite content is very low.

The HM assemblage appears to be simple with the predominant mineral being zircon. Based on chemical analyses the calculated content of rutile and ilmenite are low with mean values of 0.08% & 0.34% respectively. Assay values for Fe, Cr & Th are also low indicating that the chromite, monazite and iron rich minerals will be in trace quantities.

The rutile and ilmenite contents have not been reported as part of the estimation as the confidence level is not considered to be sufficiently high. As both minerals contain titanium the relative proportions of each mineral in the concentrate needs to be known before the quantity of each can be estimated based on the chemical formulae of both minerals. The field estimate of 30:70 ratio of rutile to ilmenite is not considered to be precise enough to report the contained tonnages of these minerals.

The defined Inferred Mineral Resources of the Tisma tenement stand at 137 Mt containing 4% HM including an estimated zircon content of 3%. Slimes and oversize are 14% and 25% respectively. The resources are at a 2% HM lower cut-off.

The unrounded total Mineral Resources are given in Table 5-1 and includes the estimated zircon% content. The zircon content was estimated based on the zirconium analyses by the UPTD Laboratory of Energy and Mineral Resources (UPTD).

Table 5-1 Mineral Resources above 2% HM lower block cut-off grade (unrounded)

Grade interval %		Tonnes	Cuml. Tonnes	HM%	Zircon%	Slime%	OS%
From	To						
5	6	2,989,618	2,989,618	5.05	4.36	14.27	26.00
4	5	77,311,687	80,301,305	4.41	3.84	13.63	25.42
3	4	47,193,449	127,494,754	4.09	3.40	14.60	25.05
2	3	9,753,685	137,248,439	3.99	3.27	14.75	24.90
Total			137,248,439	3.99	3.27	14.75	24.90

Gold flakes were identified during the core logging in nine holes and the UPTD laboratory analyses reported gold in ten of the holes. The gold resources were not estimated as the tenement is for zircon only and there is insufficient data for any meaningful estimate to be made.

5.3 Resource Validation

Comparisons between mean input analyses and estimated OBM grades are given in Table 5-2 for the global resource.

Table 5-2 Comparison of Input and Output Grades

Model	Assay Input HM %	OBM Estimate HM %
Tisma	4.11	4 (rounded)

There is good agreement between input and output grades.

5.4 Previous Estimate Comparison

There are no known previous mineral resource estimates.

5.5 Exploration Potential

The drilling to date has covered most of the tenement leaving little possibility of additional mineralisation outside of the drilled area.

5.5.1 Heavy Mineral Sand Potential

The main area for potential mineralisation is below the water table where the drilling was terminated due to core loss. It is most likely that in the 12 holes affected by the early termination due to core loss that the HMS sand would have continued.

An Exploration Target which is an estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade, relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource. While there may well be mineralised material below the current drilling depth this has not been shown to date and therefore it is not prudent to assign an Exploration Target for additional HM mineralisation. Some deeper holes should be drilled at the start of the next round of drilling to test for deeper mineralisation.

5.5.2 Gold and Precious Metal Potential

Visible gold flakes were identified in ten of the holes during the core logging and the UPTD laboratory analyses reported gold (4.25 to 9.76 g/t) in in the HM concentrate in ten of the holes (Figure 5-1). The gold resources were not estimated as there are insufficient gold analyses available. Only four of the holes where visible gold was reported during logging recorded gold values in the samples sent for laboratory analysis. This is not surprising as the distribution of gold in the HM concentrate is very irregular and the lower limit of detection of gold by XRF is around 5 g/t whereas gold values of 1-2 g/t can often be seen in pan concentrates. The gold represents a potentially significant valuable component to the valuable heavy mineral (VHM) assemblage.

The Exploration Target for gold is best determined by estimating the gold grade in the HM content of the Tisma deposit rather than the grade of the HM bearing sand. Assuming that the visible gold with no complementary assay result has a grade in the order of 1-2 g/t and the average grade of the holes for which assay data is available is 7 g/t then the grade of the HM content of the deposit would be in the order of 1-7 g/t. The quantity of HM is that of the Inferred Mineral Resource which is 4% of 137 Mt (5.5 Mt of HM).

In the case of the Tisma tenement the Exploration Target for gold within the Tisma tenement is in the order of 5-6 Mt of HM concentrate containing 1-7 g/t gold. Mineralisation expressed as Exploration Targets are in addition to Mineral Resources.

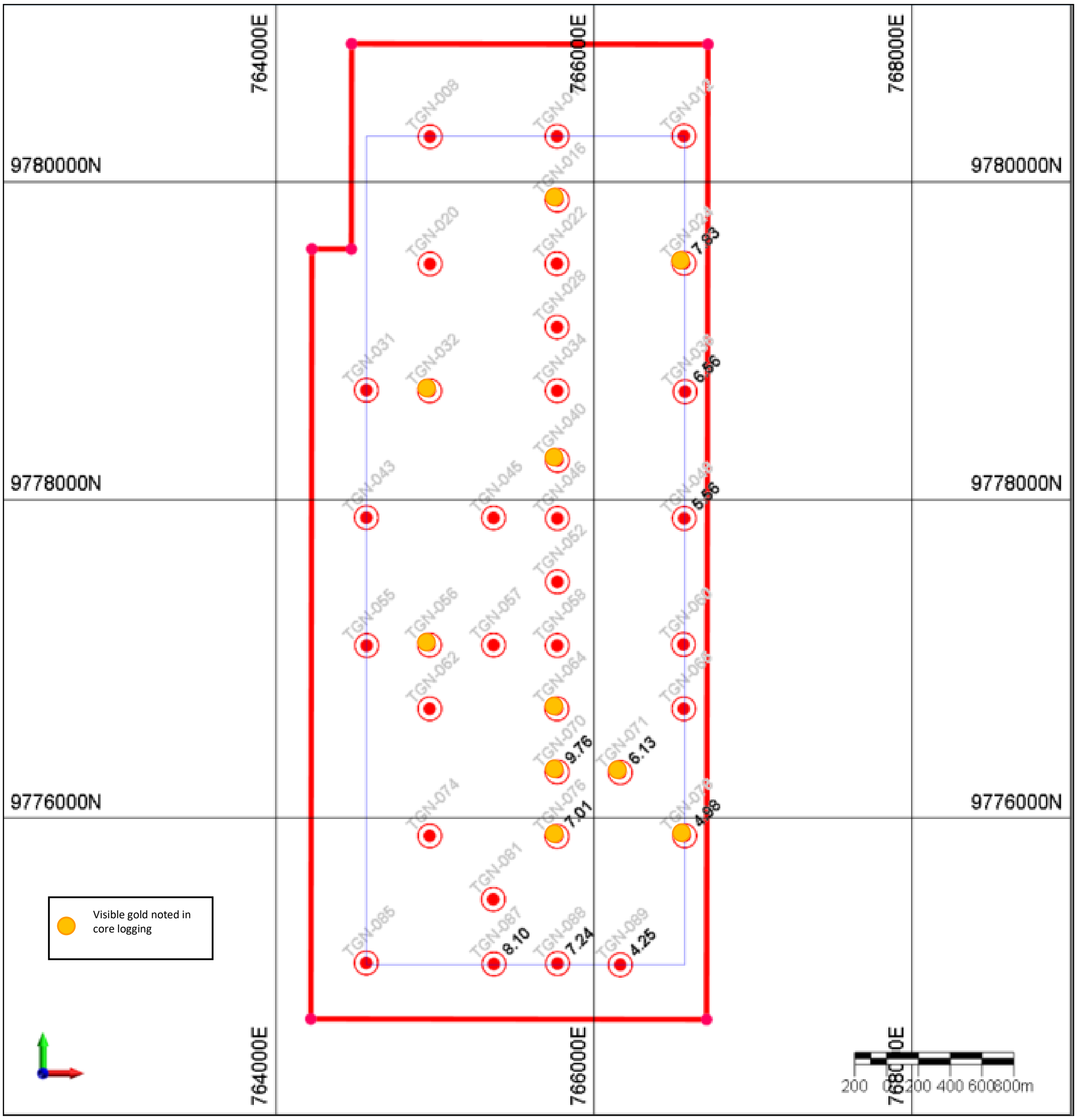


Figure 5-1 Plan of the Tisma drilling showing holes containing gold (g/t)

5.6 Recommendations for future exploration

The original proposal was to drill holes at 400 m spacing along east-west lines 800 m apart to determine the lateral extent of the HM mineralisation. It is recommended that this programme be completed as originally proposed.

The first few holes should be drilled at least 5 m below the last visual observation of HM in case there is another layer below. Holes should never be stopped in mineralisation at less than 30 m depth.

Subsequent drilling will be at a closer spacing based on the results of the first phase of drilling but probably in the order of 400 m x 200 m.

A small number of composite samples of the sediments above the HMS layers should be submitted for heavy liquid analysis to check to see if they contain low quantities of HM as very low levels of HM can be recovered during dredging operations which can offset the cost of removing overburden.

In the case of gold, the distribution is not clear apart from being concentrated in the lower levels of the mineralised horizon. A number of holes shown to contain gold from the recent drilling should be tested with two lines of closely spaced (50 m) holes to test the continuity of the gold mineralisation between adjacent holes. The two lines of holes can be in the form of a cross and rotated accordingly (+ or x) based on the interpreted trend of the gold mineralisation. The distribution of gold is often extremely erratic, and it will probably be confined to channels within the fluvial system. Careful logging of the drill chips will be useful for this work as it should be possible to identify channel material relative to bank and terrace material.

6 COMPLIANCE AND INDEPENDENCE STATEMENTS

6.1 Compliance with the JORC and VALMIN Codes and ASIC Regulatory Guides

This ITAR has been prepared in accordance with the 2012 JORC Code and the 2015 VALMIN Code. Both industry codes are binding for all members of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. These codes are also requirements under Australian Securities and Investment Commission (ASIC) rules and guidelines and the listing rules of the Australian Securities Exchange (ASX).

6.2 Statement of Independence

No member or employee of CRM is, or is intended to be, a director, officer or other direct employee of the Company. No member or employee of CRM has, or has had, any share-holding, or the right (whether enforceable or not) to subscribe for securities, or the right (whether legally enforceable or not) to nominate persons to subscribe for securities in the Company. There is no agreement or understanding between CRM and the Company as to CRM performing further work for the Company. Fees for the preparation of this report are being charged at a commercial rate, the payment of which are not contingent upon the conclusions of the report. They total about $11,000.

6.3 Competent Persons Declaration and Qualifications

The information in relation to geology, exploration results and mineral resources is based on, and fairly represents, information and supporting documentation that has been compiled and reported by Dr John Chisholm, BSc Hons, PhD (Geol.), a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Dr Chisholm is a Principal Geologist of Continental Resource Management Pty Ltd, a geological consultancy, which was engaged by TDL to an exploration programme to explore the Tisma tenement for HMS and subsequently to estimate the Mineral Resources of HMS within the Tisma Project. Dr Chisholm has sufficient experience, which is relevant to the style of mineralisation, geology and type of deposit under consideration and to the activity being undertaken to qualify as a competent person under the 2012 JORC Code. Dr Chisholm consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The field work was carried out under the supervision of PT. TGN senior geologist Djatmiko Prihartomo whose assistance is greatly appreciated.

7 GLOSSARY OF TECHNICAL TERMS AND ABBREVIATIONS

Air-core drilling	A rotary drilling technique that uses compressed air to cut a core sample and return fragments to the surface inside drill rods.
Auger	A method of drilling by which a sample of unconsolidated material is brought to the surface up the inclined flights of an auger.
Basement	The oldest layer of igneous and metamorphic rocks in the earth's crust, covered by layers of more recent, usually unconformably overlain sedimentary rocks.
Clastic	A sedimentary rock composed of grains or fragments derived at a different locality.
Clay	A rock or mineral fragment or a detrital particle of any composition with a diameter <4 microns.
Composite	A number of discrete samples collected from a body of material into a single homogenized sample for the purpose of analysis.
Concentrate	Heavy mineral concentrates are usually prepared by tabling or wet sieving a very large sample of till or stream sediments (up to 20 kg may be routine). The heavy mineral concentrate collected at this stage is then further processed with heavy liquids using methylene iodide (SG = 3.3). The resultant concentrate then is separated into magnetic and non-magnetic fractions and it is the non-magnetic fraction which is usually analyzed.
Cut-off grade	The lowest grade of mineralised material that qualifies as ore or resource in a given deposit.
De-slimed	Clay-sized particles have been removed from crushed rock.
Digital terrain model (DTM)	A digital terrain model (DTM) provides a bare earth representation of terrain or surface topography and can be described as a three – dimensional representation of a terrain surface consisting of X, Y, Z coordinates stored in digital form. It includes not only heights and elevations but other geographical elements and natural features such as rivers, ridge lines, etc.
Exploration Target	An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource (JORC Code clause 17).

GIS	Geographic information system. It is a system designed to capture, store, manipulate, analyse, manage, and present spatial or geographic data.
Grade	Expression of relative quality of mineralisation (e.g. high-grade) or of numerical quality (e.g. 1.2% Ni).
Granitic	Descriptive term used for igneous rocks with a holocrystalline texture and anhedral constituents of a similar grainsize, composed chiefly of orthoclase and albite feldspars and of quartz, usually with lesser amounts of one or more other minerals, as mica, hornblende, or augite.
Heavy mineral (HM)	An accessory detrital mineral of a sedimentary rock, of high specific gravity (> 2.9 t/m^3), e.g., magnetite, ilmenite, zircon, rutile.
Heavy mineral assemblage	The suite of heavy minerals contained in a deposit.
Ilmenite	A titanium-iron oxide mineral ($FeTiO_3$).
Indicated Mineral Resource	That part of a Mineral Resource for quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
Inferred Mineral Resource	That part of a Mineral Resource for which tonnage, grade, and mineral content can be estimated with a low level of confidence.
JORC Code	The Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition). Prepared by The Joint Ore Reserves Committee. A compliance standard for professional and public reporting of Ore Reserves and Mineral Resources.
Kg	Kilogram
Leucoxene	A titanium oxide-rich heavy mineral formed by the alteration of ilmenite.
Logging	The practice of making a detailed record (a log) of the geological formations penetrated by a borehole.

Measured Mineral Resource	That part of a Mineral Resource for quantity, grade (or quality), densities, shape and physical characteristics are estimated with with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.
Metamorphic	Descriptive of rock that has been altered by physical and chemical processes involving heat, pressure and/or fluids.
Mineral assemblage	Group of minerals commonly associated with another.
Mineral Asset	All property including (but not limited to) tangible property, intellectual property, mining and exploration Tenure and other rights held or acquired in connection with the exploration, development of and production from those Tenures. This may include the plant, equipment and infrastructure owned or acquired for the development, extraction and processing of Minerals in connection with that Tenure.
Mineral Resource	In-situ mineral occurrence for which there are reasonable prospects for eventual economic extraction. The location, quality, quantity, grade, geological characteristics, and continuity are known, estimated, or interpreted from specific geological evidence and knowledge. A 'Mineral Resource' is a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction.
Mineralisation	The concentration of metals and their minerals within a body of rock.
Mineralogical	Connected with the scientific study of minerals.
Miocene	The epoch of geological time within the Cenozoic Era between about 5 and 23 million years ago.
Monazite	A rare phosphate mineral with a chemical composition of (Ce,La,Nd,Th)(PO4,SiO4). It usually occurs in small isolated grains, as an accessory mineral in igneous and metamorphic rocks such as granite, pegmatite, schist, and gneiss.
(Ore) block model	An (ore) block model is created using geostatistics and the geological data gathered through drilling of the prospective ore zone. The block model is essentially a set of specifically sized "blocks" in the shape of the mineralized orebody. Although the blocks all have the same size, the characteristics of each block differ. Once the block model has been developed and analyzed,

	it is used to determine the ore resources and reserves (with project economics considerations) of the mineralised orebody.
Ore Reserve	The economically minable part of a Measured and/or Indicated Mineral Resource.
Oversize	Sand material greater than 1 mm in diameter.
Paludal	Sediments that accumulated in a marsh environment.
Paralic	Sediments laid down on the landward side of a coast, in shallow fresh water subject to marine invasions.
Pegmatite	Very coarse-grained igneous intrusive body, usually granitic and in dyke or sill form; may contain economically important minerals.
Precambrian	That portion of geological time older than about 545 million years ago.
Pre-feasibility stage	A project at a stage where a pre-feasibility study has been undertaken or is about to be commenced. A pre-feasibility study of a project is a precursor to a feasibility study. Its purpose is to examine the size, cost and value of the main components of the project in sufficient detail to ensure there is a solid basis for proceeding to the more costly and rigorous feasibility study.
Probable Reserve	A measured and/or indicated mineral resource which is not yet proven, but where technical economic studies show that extraction is justifiable at the time of the determination and under specific economic conditions.
Proven Reserve	A measured mineral resource, where technical economic studies show that extraction is justifiable at the time of the determination and under specific economic conditions.
QA/QC	QA/QC is the combination of quality assurance, the process or set of processes used to measure and assure the quality of a product, and quality control, the process of ensuring products and services meet consumer expectations.
Quaternary	The period of geological time from about 2.6 million years ago to the present.
Quartzite	A granular metamorphic rock composed predominantly of quartz; derived from quartz sandstone.
Resource category	Category of a mineral resource, such as Inferred, Indicated, Measured, Proven or Probable.

Resource modelling	Creating a model of a mineral resource through assessment of the quantity and quality of the data available including database management and verification, the creation of 2D and/or 3D geological and mineralisation models for the deposit, statistical and geostatistical analyses of the data and the determination of the most appropriate grade and density interpolation methods.
Rutile	A mineral containing titanium dioxide (TiO_2).
Sandstone	A sedimentary rock composed primarily of sand sized grains.
Slimes	Clay material less than 45 microns (,45µ).
Specific gravity	The term specific gravity refers to the ratio of the density of a solid or liquid to the density of water at 4 degrees Celsius.
Tetrabromoethane (TBE)	A halogenated hydrocarbon, chemical formula $C_2H_2Br_4$.
THM	Total heavy minerals (concentrate). Components are typically rutile ilmenite, zircon and leucoxene.
Thorium	A chemical element with symbol Th. Thorium metal is silvery and tarnishes black when exposed to air, forming a dioxide.
Twin (Twinned holes)	A pair of parallel holes drilled close together.
Unconformably	The attribute of a series of younger strata that do not succeed the underlying older rocks in age or in parallel position, as a result of a long period of erosion or non-deposition.
Uranium	A chemical element with symbol U. It is a silvery-white metal in the actinide series of the periodic table.
VALMIN Code	Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets (2015 Edition). Prepared by The VALMIN Committee. A compliance standard for professional and public reporting of Mineral Asset valuations.
Valuable heavy minerals (VHM)	Heavy minerals with economic value. The principal valuable heavy minerals are ilmenite, leucoxene, rutile, and zircon.
µ or µm	Micron; a millionth of a metre.

XRF	An X-ray fluorescence (XRF) spectrometer is an x-ray instrument used for routine, relatively non-destructive chemical analyses of rocks, minerals, sediments and fluids. It works on wavelength-dispersive spectroscopic principles that are similar to an electron microprobe. It is typically used for bulk analyses of larger fractions of geological materials. The relative ease and low cost of sample preparation, and the stability and ease of use of x-ray spectrometers make this one of the most widely used methods for analysis of major and trace elements in rocks, minerals, and sediment.
Zircon	A mineral belonging to the group of nesosilicates. Its chemical name is zirconium silicate and its corresponding chemical formula is $ZrSiO_4$.

8 JORC TABLE 1 – FOR RESOURCE ESTIMATION

8.1 Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Core samples were collected over 1m intervals and cone and quartered, bagged and dispatched to the laboratory • Continuous core was collected • Samples were panned onsite to identify the presence of HMS, zircon, rutile, ilmenite & gold • Standard core sampling was used
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Core drilling was undertaken using 55 mm blade barrel
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• The HMS core samples were recovered and placed in open PVC trays and sampled by 1 m sample spacing • The work proceeded slowly in order to maximise recovery. • No relationship was noted.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative*	• All core samples were geologically logged in sufficient detail, recording all significant properties. • All core logged and photographed.

Criteria	JORC Code explanation	Commentary
	in nature. Core (or costean, channel, etc) photography. • *The total length and percentage of the relevant intersections logged.*	• All of the core was logged in entirety. .
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Core samples were placed in sample bags in 1 m intervals then later cone and quartered. • The sample process was most appropriate for the sample type. • No Duplicate holes were drilled
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.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Analyses were recorded on each sample interval using a Olympus portable XRF unit. The cone and quarter samples were submitted to a laboratory for analysis. • Laboratory determination of HM%, slimes% and oversize%. • Certified reference material was used as were duplicate samples .
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• None • None • All core logged and entered into a database. • Assays were not adjusted.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Collars located by handheld GPS • UTM WGS84 Zone49M • Adequate for Inferred Resources.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Average drill hole spacing is highly variable, ranging from 800m x 800m to 800m x 400m. • Drill spacing is appropriate for Inferred Resources for HM deposit • All samples composited for alluvial sand interval.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Not appropriate for HMS deposit
Sample security	• *The measures taken to ensure sample security.*	• All samples were in the care of company personnel at all times.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal company audit and review only.

Section 2 Reporting of Exploration Results
(Criteria listed in section 1 also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The tenement is currently held under tenement (N0. 545/244/KPTS/VIII/2012) held by PT Tisma Global Nusantara • The Tisma tenement is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There is no previous exploration data available
Geology	• *Deposit type, geological setting and style of mineralisation.*	• HMS deposit formed in a continental environment.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  o *easting and northing of the drill hole collar*
	  o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  o *dip and azimuth of the hole*
	  o *down hole length and interception depth*
	  o *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• The drilling data includes 36 core holes. All holes were drilled vertically to a maximum of 11.5 m. The average hole depth was 5.48 m.
		• Collar coordinates and depth were recorded. RL was not recorded as the project area is flat.
		• All holes vertical
		• As stated, the project area is flat and the mineralization occurs as a flat lying body with the land surface forming the top boundary of the mineralization.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly*	• Composite samples were prepared and analysed by the laboratory. Field XRF results were made on individual samples and a weighted average calculated. • Not applicable. • Not applicable.

Criteria	JORC Code explanation	Commentary
	stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Core holes were vertical and the target HMD was horizontal. • Flat lying horizontal alluvial body with the land surface as the top boundary. • Geometry is well known.
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.*	• Appropriate maps and sections are available in the body of this report
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.*	• Reporting of results in this report is considered balanced.
Other substantive exploration data	• *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.*	• Not applicable
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions, depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further work will include air-core drilling to sample below the water table and holes will be at a closer spacing. • Not included

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• Standard validation techniques have been applied to the data. • The current database was complied and validated in Micromine 2018.

Criteria	JORC Code explanation	Commentary
	• *Data validation procedures used.*	
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A single site visit was conducted by Dr Chisholm on 16 March 2020.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Interpretation of the lithological boundaries and the proposal of a conceptual model for the mineralisation are supported by a sufficient amount of drilling. • Geological continuity is based upon a coherent and predictable model relevant to HMS deposits. • Further drilling and/or mapping is expected to refine the geological model in the future. .
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Tisma HMS deposit occurs over an area of 1,500 ha. • Dips are flat • The width of mineralised zones varies from 3.5 m to 7.7 m with an average of 5.37 m.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation*	• The resource estimations were generated using inverse distance cubed, using Micromine 2018.1 software. • No upper cut was applied. • Parent cell block sizes were 100 m x 100 m x intersection width. • Block model validation has been carried out by the Competent Person using input and output correlation. • All validation methods have produced acceptable results. • Current processing indicates that all VHM recovered. • No deleterious element or minerals present. • Block size is appropriate for HMS deposits. • None • None • The body is known to be flat lying and continuous. No structural dislocations are known. • No grade cutting used as distribution of mineralisation grade is relatively uniform.

Criteria	JORC Code explanation	Commentary
	data if available.	
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• All Mineral Resources have been reported at series of lower cut-offs. .
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It has been assumed that the Tisma deposit will be mined by dredging. • No dilution has been built into the resource model.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Based on chemical analyses it is assumed that all Zr is in the form of Zircon. All Ti is in the form of rutile and ilmenite in the proportion of 30% and 70%.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• There are considered to be no significant environmental issues.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately*	• A density factor was estimated for each mineralised intersection based on the SG calculated for each ore block on the basis of its interpolated HN content according to the standard formula SG = 1.686 + (0.0108 x HM%); The average density for the deposit is 1.73 which was used as a global

Criteria	JORC Code explanation	Commentary
	account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	density factor.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified in the Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been considered in determining this classification including: o Geological and grade continuity o Data quality. o Drill hole spacing. • The Competent Person is in agreement with this classification of the resource.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The resource estimate has not been externally been audited.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the various resource estimates is reflected in the JORC resource categories. • Inferred Resources are considered global in nature. • The resource estimation results cannot be related to production records as there has been no significant previous mining