Corporate Structure

Issued Shares: 1.391 billion

Issued Options: 92.6 million

Share Price: $ 0.10

Market Cap (9/12/21): A$139m

Titan Minerals Ltd (ASX:TTM) is an explorer and developer of the rich cordilleras of the Andes in Southern Ecuador.

Titan's main projects are rich in porphyry copper, gold and silver mineralisation and range from early-stage exploration to advanced pre-development status.

They include:

1. Dynasty Gold Project;
2. Copper Duke Project;
3. Linderos Project;
4. Jerusalem Project.

Board of Directors

Peter G Cook – *Non-exec Chairman*

Laurie Marsland - *Managing Director*

Matthew Carr- *Executive Director*

Nicholas Rowley- *Non-exec Director*

Barry Bourne- *Non Exec. Director*

Zane Lewis- *Company Secretary*

Key Management

Mike Skead - *Executive Vice President Exploration*

DRILLING COMMENCES AT COPPER DUKE

The Board of Titan Minerals Limited (ASX: TTM) (**Titan** or the **Company**) is pleased to advise that it has commenced an inaugural round of reconnaissance drilling at the Company's 100% held Copper Duke project.

The objective of this first program, which is squeezed in before the onset of the wet season, is to validate historic results from two diamond holes drilled in 1978 by the United Nations (**U.N.**) aimed at discovering molybdenum but intersecting gold mineralisation. Additionally, the first hole tested an interpreted magnetic target proximal to one of those historic holes.

Background work by way of geophysics, geochemistry, mapping and rock chip sampling is being completed, progressing numerous targets generated earlier this year from newly completed airborne magnetic and radiometric surveys (refer to ASX release dated 2 March 2021).

The core from the first hole, HTD001, looks visually encouraging with zones of magnetite veining within predominantly andesitic volcanics, and magnetite veining often associated with pyrite and cross cut by narrow quartz pyrite veinlets associated with pervasive alteration and localised quartz-sericite-pyrite alteration in the silicified rocks.

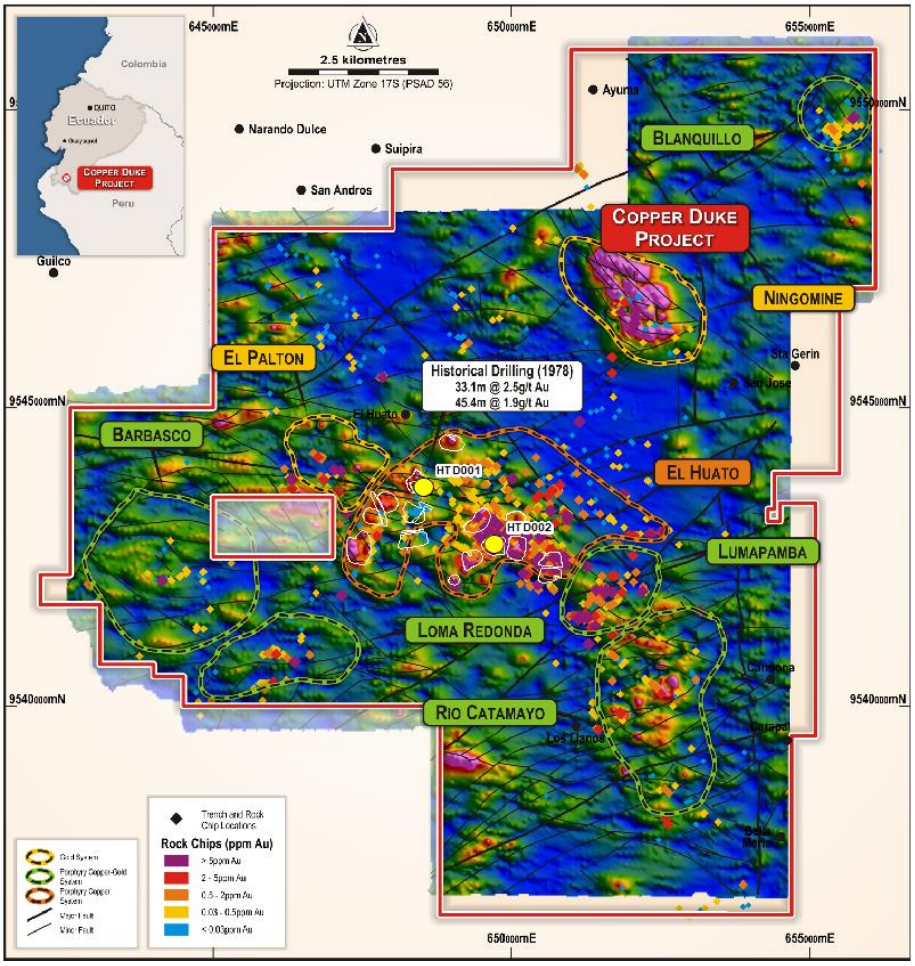

Figure 1: Drillhole location map of hole HTD001, and proposed HTD002 drill site on Analytical Signal Filter image of airborne magnetic response, with surface geochemistry results

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Titan Managing Director, Laurie Marsland commented:

"It is gratifying to finally be able to schedule two drill holes at Copper Duke before the end of this drill season.

Our objectives in this short program are modest with the objective of validating previous data and collecting core to analyse and prepare for more detailed strategy. We will also get to test a newly identified geophysical anomaly which will provide great information on geology, alteration and structures controlling the magnetic features beneath more than 1.5km by 6km corridor of gold-copper mineralisation mapped at surface."

DIAMOND DRILLING

The Company has moved to divert one of its drill rigs to Copper Duke to complete two holes for a planned 540m campaign before the wet season curtails access in this drill season.

This program has two main objectives:

1. The validation of results from an historical completed in 1978 as follow-up work to a U.N. survey to identify strategic base metal potential in the region.

   In that program drill hole SON-02 was drilled to a depth of 220m depth and only the top 62.75m was assayed for gold and silver with published results declaring an interval of 45.4m @ 1.9g/t gold from surface. The description notes poor core recovery to in the upper part of the hole. (Refer to ASX release dated 25 May 2020).

   In addition, Titan will extend the depth of its first hole HTD001 to approximately 300m to test the source of 291m of magnetic anomalism highlighted in 3D inversion modelling of the high-resolution magnetic datasets generated earlier this year.

2. A second hole is planned to be drilled 1.5km to the southeast on a sub-parallel trend of magnetic anomalies associated with relatively higher gold grades and increasing vein density noted in surface mapping and sampling to the southeast in the El Huato target.

The first core from the diamond hole, HTD001, hole looks visually encouraging intersecting zones of magnetite veining within predominantly andesitic volcanics, including magnetite veining often associated with pyrite and cross-cut by narrow quartz-pyrite veinlets (refer to Plates 1 and 2a) associated with pervasive alteration and localised quartz-sericite-pyrite alteration in the silicified rocks (refer to Plate 1c and Appendix B).

Several narrow diorite instrusions (dykes) are intersected hosting disseminated magnetite but the dykes are less altered than the surrounding volcanic sequence and do not appear to be a causitive intrusion for porphyry style mineralisation.

Table 1: Copper Duke drill hole location

HoleID	Azimuth	Dip	Depth of Hole (m)	Easting	Northing	Elevation
HTD001	317	220	291.07	648257	9543301	1,978

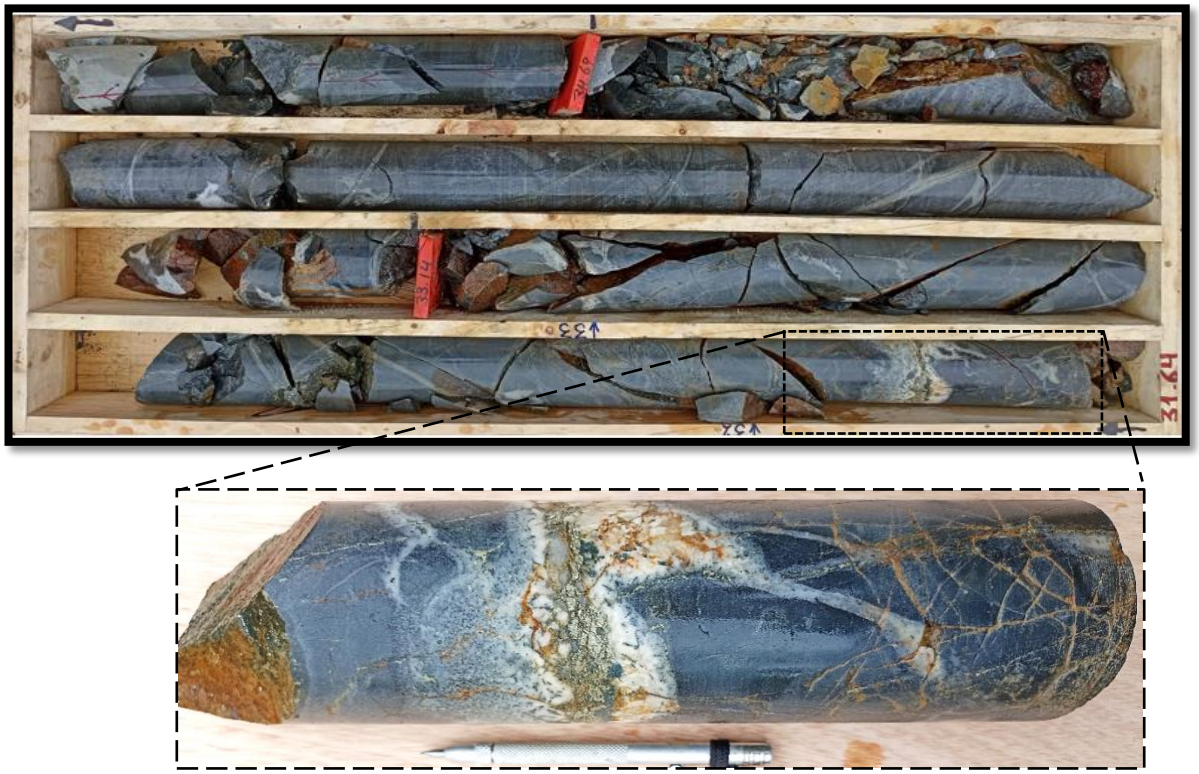

Plate 1: HTD001 core (31.64m to 35m interval), intersecting andesitic volcanic with partially oxidised quartz-pyrite stockworks and narrow quartz-pyrite-chalcopyrite veinlets

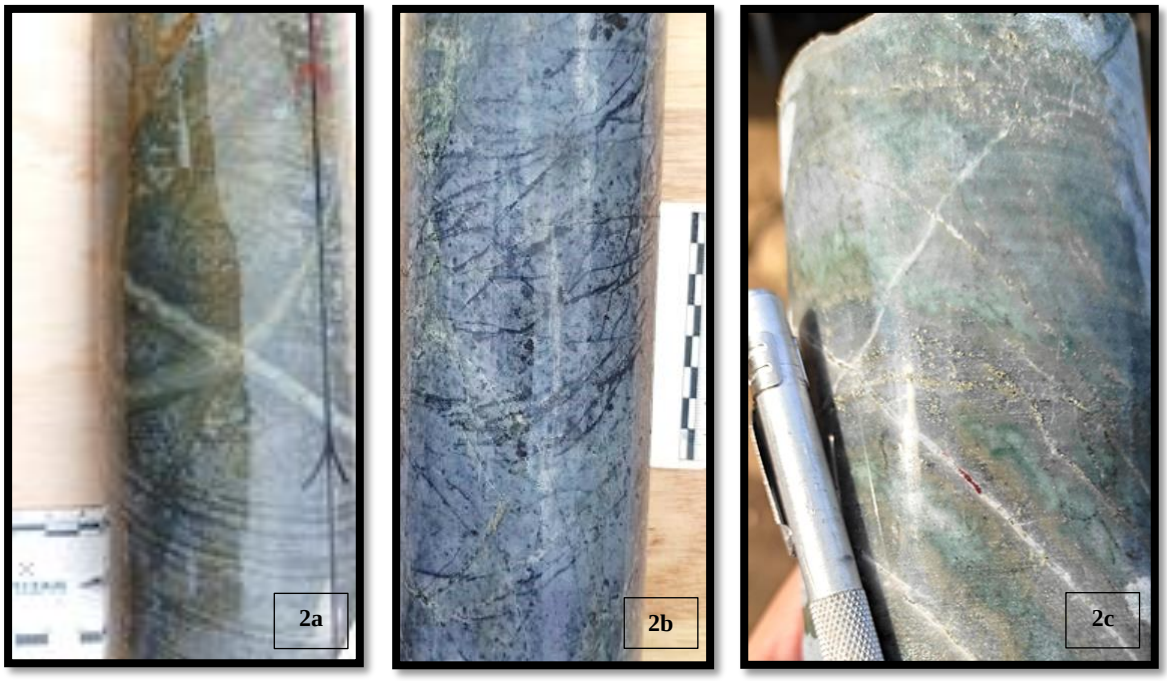

Plate 2: (2a) volcanic breccia unit hosting intense disseminated magnetite and quartz-magnetite filled fractures cross-cut by quartz-pyrite-chlorite filled fractures (from 56.4m depth) – (2b) silicified and quartz-pyrite-sericite altered andesite with magnetite-pyrite veinlets and quartz-pyrite type stockworks (from 216.9m depth), and (2c) Strongly silicified volcanics, intensely chlorite to sericite altered with quartz-pyrite veining (from 257.2m depth).

EXPLORATION UPDATE

Titan continues to progress its surface reconnaissance works at the Copper Duke Project. In the September quarter programs of systematic soil geochemistry surveys were initiated concurrent mapping and rock/channel sampling. These were focused on priority targets generated from high resolution airborne geophysics generated earlier in the year (refer to ASX releases dated 21 January and 2 March 2021).

The soil survey campaign is nearing completion with the soil geochemistry coverage for the Copper Duke Project increased by approximately 300%, and an additional 270 rock chip samples along with over 1,900m of channel sampling have been completed in the process of ground truthing the geophysical interpretations of magnetic and radiometric data. Assay results for surface geochemistry are anticipated over the coming week.

ABOUT THE COPPER DUKE PROJECT

Copper Duke is an early-stage exploration project located approximately 18km east of the Company's more advanced Dynasty Gold Project.

Comprised of thirteen concessions totalling 130km^2 in the Loja Province of southern Ecuador, Copper Duke is host to multiple porphyritic textured intrusions associated with extensive copper-gold anomalism and quartz hosted gold veining outcropping at surface.

The high resolution airborne magnetic and radiometric survey completed by Titan Minerals in late 2020 is the first significant catalyst in advancement of the Copper Duke Project since exploration activity ceased in 2007, leaving significant un-drilled potential at Copper Duke.

Following integration of historical data with airborne geophysical results to better define and rank targets for mapping and systematic geochemistry work, Titan has progressed an aggressive mapping and sampling campaign in 2021 and reconnaissance drilling is being progressed to validate historical work. Results of ongoing exploration activities will support a ranking of numerous drill ready targets planned for Q1 of 2022 ahead of maiden drill testing budgeted for mid-2022.

Figure 1:Location of Titan Minerals Projects in Southern Ecuador

- ENDS -

Released with the authority of the Board.

For further information on the company and our projects, please visit: www.titanminerals.com.au

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Competent Person's Statement

The information in this report that relates to visual Exploration Results is based on information compiled by Mr Travis Schwertfeger, who is a Member of The Australian Institute of Geoscientists. Mr Schwertfeger is the Consulting Geologist for the Company and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Schwertfeger consents to their inclusion in the report of the matters based on his information in the form and context in which it appears.

APPENDIX A – JORC Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g., submarine nodules) may warrant disclosure of detailed information.*	• Diamond drilling method was used to obtain HTW core (71.4mm diameter) for chemical analyses and reconnaissance structural information • Downhole survey and core orientation tools are used. • No Assay results received for drilling in the reported diamond drilling results. Core is currently undergoing logging and systematic photography work, and will be cut, sampled and shipped for assay analyses once completed.
Drilling techniques	• *Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., 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).*	• Drilling HTW diameter core with standard tube core barrels retrieved by wire line, reducing to NTW diameter core as required at depth • Drill core is oriented by Reflex ACT III and surveyed with True Core gyroscopic tools,
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.*	• Diamond sample recovery is recorded on a run-by-run basis during drilling with measurements of recovered material ratioed against drill advance. • Diamond core is split in weathered material, and in competent unweathered/fresh rock is cut by a diamond saw to maintain a representative sample for the length of the sample interval. • No correlation between sample recovery and grade is observed.
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 in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Diamond core samples are logged in detail, with descriptions and coded lithology for modelling purposes, with additional logging comprised of alteration, geotechnical, recovery, and structural logs including measurements based on core orientation marks generated from a Reflex ACTIII downhole survey tool. • Logging is predominantly qualitative in nature but including visual quantitative assessment of sulphide and quartz content included in text comments. • Core photographs are systematically acquired for whole core with sample intervals, orientation line prior and after the sampling in both wet and dry form. • The total lengths of all reported drill holes have been logged geologically and data is uploaded to a self-validating database. Half (½) cut and quarter (¼) cut core material will be retained from diamond drilling for re-logging and audit purposes.
Sub-sampling techniques and	• *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.*	• Reported drilling remains un-assayed at that time of reporting.

APPENDIX A – JORC Table 1

Criteria	JORC Code explanation	Commentary
sample preparation	• *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.*	• A cutline on core is systematically applied for cutting (typically at a fixed offset to the core orientation line) and the portion of core collected for analysis is systematic within each hole. • Field duplicates are inserted at a targeted 5% of sampling for surface channel sampling. Duplicate sampling from both crushed and pulverised core material forms a targeted 4% of assaying for drill sampling. No second half sampling or quarter core sampling is planned during early-stage exploration activity, and material held for third party check analysis once progressing to mineral resource estimation stage work. • Sample size studies have not been conducted but sample size used are typical of methods used for other Andean deposits of similar mineralisation styles.
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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	• Assaying and laboratory procedures reported are completed by certified independent labs and considered to be appropriate and in accordance with best practices for the type and style of mineralisation being assayed for. Gold Fire Assay technique used is considered to be a total recovery technique for gold analysis. This technique is considered an appropriate method to evaluate total gold and silver content of the samples. • No geophysical tools used in relation to the reported exploration results. • In addition to the laboratory's own quality control ("QC") procedure(s), Titan Minerals Ltd- regularly inserts its own quality assurance and QC samples, with over 15% of samples in reported results corresponding to an inserted combination of certified reference materials (standards), certified blank material, field duplicate, lab duplicates (on both fine and coarse fraction material.
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.*	• Reported intersections are logged by professional geologists in Ecuador and data validated by a senior geologist and database geologist. • The reported hole is a twin of historical drillhole SON-02 completed in 1978 but cannot be used as a twin hole for verification of grades or use in a mineral resource estimate, as the 1978 drilling was not completed to a JORC Standard, and used a sub-standard analysis method for gold and silver in its analytical work, and did not adequately report recoveries and sample quality in reporting available. • All drilling and surface data completed by Titan are stored in a self-validating Microsoft Access database • No adjustment to data is made in the reported results
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*	• Reported drill collars and channel samples are located with a hand-held GPS, with follow-up RTK GPS surveying planned. A gyroscopic survey tool is used for downhole surveys • All surveyed data is collected and stored in WGS84 datum. • Topographic control is compared against published maps and satellite datasets with 12m

APPENDIX A – JORC Table 1

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	horizontal accuracy and found to be adequate for current stage of exploration work.
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.*	• No systematic data spacing for the reported exploration results. Reconnaissance activity has not yet advanced targets to systematic drilling phase. • No minerals resource estimation is currently planned for early-stage exploration activities, but sampling and survey practices are being completed to a JORC compliant standard to be incorporated into resource estimation work at a later date. • No Sample compositing has been applied in reported exploration results.
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.*	• Reconnaissance activity reported is intended to better define key controls on mineralisation, and define optimal drilling and sampling orientation for future work. The true thickness of intercepts will be accounted for following structural analysis of oriented core and 3D modelling of results. • No bias is considered to have been introduced by the existing sampling orientation.
Sample security	• *The measures taken to ensure sample security.*	• Samples were collected by Titan Minerals geologists and held in a secured yard/camp facility prior to shipment for laboratory analysis. Samples are enclosed in polyweave sacks for delivery to the laboratory and weighed individually prior to shipment and upon arrival at the lab. Sample shipment is completed through a commercial transport company with closed stowage area for transport.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of reported data completed outside of standard checks on inserted QAQC sampling.

Section 2 - Reporting of Exploration Results

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.*	• Titan Minerals Ltd, through its indirect wholly owned Ecuadorian subsidiaries, holds a portfolio of exploration properties in the Loja Province of Ecuador. Amongst these, Titan holds a 100% interest in the following concessions comprising the Copper Duke Project:

BARBASCO	BARBASCO 4
COLANGA	LUMAPAMBA
BARBASCO 1	LUMAPAMBA 1
BARBASCO 2	GONZA 1
GLORIA	CAROL
GLORIA 1	CATACOCHA
COLANGA 2	

		• Mineral concessions in Ecuador are subject to government royalty, the amount of which varies from 3% to 8% depending on scale of operations and for large scale operations (>1,000tpd underground or >3,000tpd open pit) is subject to negotiation of a mineral/mining agreement. • Pilo 9, Zar and Zar 1 are subject to a 3% royalty payable to the Ecuador Government as part of the Small Scale Mine Licensing regime currently issued in favour of the Dynasty Goldfield Project but may be subject to change in the event economic studies subsequent to exploration indicate a need to apply for a change of regime. • Mineral concessions require the holder to (i) pay an annual conservation fee per hectare, (ii) provide an annual environmental update report for the concessions including details of the environmental protection works program to be followed for the following year. These works do not need approval; and (iii) an annual report on the previous year's exploration and production activity. Mineral Concessions are renewable by the Ecuadorian Ministry of Oil, Mining and Energy in accordance with the Mining Law on such terms and conditions as defined in the Mining Law.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Exploration completed by other parties set out in further detail in the Titan ASX release dated 25 May 2020, and summarised below: • Early 1970's a United Nations Survey was completed on the El Huato and Santa Rita Sectors with a systematic soil survey and additional rock sampling assayed for base metals. A base metal anomaly of approximately 14 km^2 in the El Huato area was defined. • 1975 to 1976 the Spanish Geological Mission completed a survey of south Ecuador, and in 1976 a geophysical study resulted with a coincident anomaly at El Huato (however geophysical results have not been located) • 1978, the Spanish government company Adaro drilled two diamond core holes at the El Huato anomaly each to 220m drill depth. Assay results for the 1978 drilling are reported for targeting purposes only, and assay data cannot be relied upon for quantifying metal content or used in a mineral resource estimation. • 2000-2001 Iamgold Corporation sampled ridgeline soils in an extensive geochemical program where it obtained 527 soil samples and 103 rock samples • 2003 to 2020 Dynasty Mining and Metals (later Core Gold Inc.) completed mapping, soil sampling, channel sampling and rock chip sampling activities.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Regionally, the Copper Duke Project lies within the Occidental Andean Cordillera volcanic terrain in Southern Ecuador. The Project area is dominated by andesitic volcanic and sedimentary lithologies of the Cretaceous Celica formation and plutonic granodiorite-diorite of the multi-phase Cretaceous Tangula batholith • At the project scale, gold-silver bearing quartz veins are hosted in the intermediate volcanics located proximal to the Cretaceous Tangula Batholith that extends north from Peru. The Tangula Batholith is a multiphase intrusive body consisting of diorites, tonalites and granodiorites. • Sporadic hornblende-plagioclase porphyries intrude both the intermediate volcanics and the Tangula batholith. A quartz-diorite intrusion is emergent near the boundary of the volcanics and the Tangula Batholith. • Copper occurs in various forms of copper oxide minerals at surface and as disseminated style chalcopyrite observed in shallow excavations at several locations within the project area.

APPENDIX A – JORC Table 1

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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *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.*
		• Tabulation of requisite information for all reported drilling results with significant intercepts validated by Titan geologists and referenced in this report are included in Appendix A of this report.
		• Total number of drill holes and trench sites included in this report and located in graphics included in the report. Refer to Table 1 for reported drill hole location
		• No assay results have been received for the reported diamond drilling. Refer to Appendix B for Estimation of sulphide content and comments on visual observations of reported drill hole.
		• Semi-quantitative estimates of the abundance of minerals present in reported samples provided in Appendix B, however mineral abundance in relation to gold mineralisation targeted cannot be relied upon to estimate auriferous content of pyrite, and no visible gold mineralisation was observed in the reported samples. The presence of sulphide mineralisation in context of the alteration and setting of the reported results is considered material by the Company given the proximity to historical U.N. drilling being twinned, which reported favourable gold results that could not be verified to a standard for inclusion in mineral resource estimation in compliance with the standards of the JORC Code. Laboratory assay results are required to quantify the grade of gold mineralisation and verify quality of historical drilling activity for tabulation of significant intercepts for drilling..

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., 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 stated.*	• No high-grade assay cut was applied to reported gold results. • No assay results have been received for the reported diamond drilling. • No metal equivalent reporting is applicable to this announcement
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 (e.g., 'down hole length, true width not known').*	• Reported intersections are measured sample lengths. Reported drill intersections are of unknown true width, further drilling and modelling of results is required to confirm the projected dip(s) of mineralised zones. • Reported intercepts are drilled thickness and should not be interpreted as true thickness unless otherwise indicated
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.*	• Included in body of report as deemed appropriate by the competent person
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.*	• All material exploration results for drilling are included in this report, and location of all results are included in Figures provided in their entirety. • No assay results have been received for the reported diamond drilling.

APPENDIX A – JORC Table 1

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.*	• No other available datasets are considered relevant to reported exploration results. Historical exploration results integrated into targeting the reported exploration activity are summarised in ASX release dated 25 May 2020. • No bulk density, metallurgical or groundwater tests have been completed on areas related to the reported exploration results.
Further work	*The nature and scale of planned further work (e.g., tests for lateral extensions or 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.*	• Detailed Logging, photography and sub-sampling work of the reported core is currently in progress, with samples anticipated to be submitted to Laboratory for analysis over the next six to ten days, and laboratory turn-around times are currently ranging 45 to 60 days for the Company. Quantitative assay results are anticipated in February 2022. • sulphide mineral abundance should never be considered a proxy or substitute for laboratory analyses where metal concentrations or grades are the factor of principal economic interest • Detailed logging, assaying and structural interpretation work is planned in follow-up to reported visual results in drilling. Further detailed mapping and surface geochemistry work is planned to rank numerous geochemical anomalies across the Copper Duke prospect and prioritise for initial drill tests across a number of targets identified at Copper Duke. • Included in body of report as deemed appropriate by the competent person

APPENDIX B – HTD001 Observations

Summary of visual results for diamond drill hole HTD001 with intervals defined by variations in lithology and/or variations observed in sulphide mineralogy content estimated by visual inspections.

From (m)	To (m)	Interval (m)	Sulphides	Comment
0.30	31.64	31.34	Py (<1%)	Internval includes oxidised structure at 12.0 - 13.0m with higher density of Qz-oxidised sulphide veins up to 0.5cm widths. - Veining of 0.5cm widths host Py- Qz-Mt with Qz-Ch halos. Intense ds Mt and Mt veins throughout interval.
31.64	56.35	24.71	Py (<1%)	Fine-grained volcanic with weak alteration propylitic and veinlets of Qz-Py. Mt disseminated in veinlets.
56.35	61.17	4.82	Py (<1%)	Andesitic composition Volcanic breccia. Veins (0.5%) Qz-Ch-Py in stockwork system with localised disseminated Py. Intensive Mt disseminated with strong magnetic response and Mt veins.
61.17	81.70	20.53	Py (1%)	Medium grained porphyritic diorite, weak propylitic altered, with veins of Py-Ch and Py-Ch-Qz 0.1mm-0.3mm thick. Intensive Mt disseminated in matrix, and weak Mt veins.
81.70	118.52	36.82	Py (2-3%)	Very fine grained textured and strongly silicified black volcanic rock. Veins of Py-Qz with thickness of 0.1mm-0.3mm. Intensive Mt disseminated throughout. Py as disseminated about 2%-3%. Calcite in veinlets and fractures
118.52	126.80	8.28	Py (1%)	Volcanic breccia with veinlets of Qz-Ch-Py 0.1mm-0.5mm and calcite in veinlets and fractures, weakly silica altered. Intensive Mt disseminated in matrix (Strong Magnetic Response)
126.80	127.98	1.18	Py (1%)	Dioritic composition intrusion interval with medium grain size texture and moderate silica alteration. Veins containing Qz-Ch-Py (0.5%) and py disseminated in stockwork system, moderate Mt disseminated.
127.98	128.24	0.26	Py (2-3%)	Very fine grained black volcanic composition rock. Veins of Py-Qz. Intensive Mt disseminated. Disseminated Py outside of veining about 2%-3%. Weak alteration silica in zone of contact.
124.24	128.68	4.44	Py (1%)	Dioritie with medium grain size texture, with moderate silica alteration. Veins 0.5 Qz-Ch-Py disseminated in stockwork system, moderate Mt disseminated.
128.68	138.63	9.95	Py (1%)	Andesite in zone of alteration adjacent to contact with diorite intrusion. Weak silica and moderate propylitic alteration. Py disseminated and moderate density of Py filled fractures and narrow (<1mm) veinlets throughout interval. Intensive Mt disseminated.
138.63	170.68	32.05	Py (1%)	very fine grained black (andesite to basalt composition?), with veinlets of Qz-Py-Ch. Calcite in fractures and veinlets (147m-150m)
170.68	170.76	0.08	Py (1%)	Diorite with 0.5% biotite, Py in veinlets. Veinlets contain Qz-Py-Ch.
170.76	171.16	0.40	Py (1%)	Andesite with veinlets of Qz-Py-Ch. Weak propylitic alteration. Moderate magnetism.
171.16	171.38	0.22	Py (1%)	Diorite with 0.5% biotite, Py in veinlets. Veinlets contain Qz-Py-Ch.
171.38	181.05	9.67	Py (1%)	Andesite with veinlets of Qz-Py-Ch. Weak propylitic alteration. Moderate magnetism. 180.11-181.05 interval a zone of moderate silica alteration is observed.
181.05	189.30	8.25	Py ~1% with trace Cpy	Andesite with strong silica alteration. Stockwork veining (15-20 veins / m) of weak Qz, Qz-Py and Qz-Mt veins. Dissemination of Py and locally very fine Cpy is observed. Sericite located in fractures. Weak magnetism. the stockwork is seen more intensely in the silica altered zone.
189.30	195.60	6.30	Py ~1% with trace Cpy	Andesite with moderate silica alteration. Py disseminated and sericite in fractures. Weak magnetism.
195.60	197.80	2.20	Py ~1% with trace Cpy	Basalt to Andesitic composition volcanic with Py-Mt-Qz veinlets. moderate magnetism.
197.80	200.30	2.50	Py ~1% with trace Cpy	Andesite with strong silica alteration. weak stockwork of Qz-Py and Qz-Mt veins. Dissemination of Py. Sericite located in fractures. Weak magnetism.
200.30	200.60	0.30	Py (<1%)	Basalt to Andesite composition rock with Py-Mt-Qz veinlets. moderate to strong magnetism.
200.60	201.55	0.95	Py ~1% with trace Cpy	Andesite with moderate silica alteration. Py disseminated and sericite in fractures. moderate magnetism.
201.55	203.75	2.20	Py (<1%)	Basalt to Andesite composition volcanic with Py-Mt-Qz veinlets. moderate to strong magnetism.

APPENDIX B – HTD001 Observations

From (m)	To (m)	Interval (m)	Sulphides	Comment
203.75	206.25	2.50	Py <1% with trace Cpy	Diorite with medium grain. Strong silic alteration and Qz-Py veins of 0.2-0.5 mm. Strong magnetism hosted only in veins of Mt.
206.25	220.85	14.60	Py 1-2% with trace Cpy	Andesite with strong silica alteration. Py and Ch disseminated to mottled (localised blebby occurrences). Mt veins on strong stockwork density, high magnetism.
220.85	223.00	2.15	Py (1%)	Basalt to Andesite composition fine grained textured volcanic with Py-Mt-Qz veinlets. moderate to strong magnetism.
223.00	237.56	14.56	Py 1-2% with trace Cpy & Galena	Silicified andesite with strong stockwork veinlets of Mt, Py, Py-Mt, Py-Qz +/- Ch on structures and/or alteration selvages and disseminated Py (1%) . Medium magnetism. Is observed localised mottled galena associated with structures and Qz veining.
237.56	239.00	1.44	Py 1%	Basalt to andesite composition volcanic with strong stockwork density of Py veinlets associated with medium to high magnetism.
239.00	245.63	6.63	Py 1-2% with trace Cpy	Silicified andesite with moderate stockwork veinlets of Py, Py-Qz, Qz-Ch, Qz-Py-chlorite and has disseminated Py (1%) - Cpy (0.1%) . Low to medium magnetism.
245.63	246.50	0.87	Py (1-2%)	Basaltic andesite with strong stockwork veinlets of Py, Qz-Mt with halos of Mt and has disseminated Py (1%) . Medium to high magnetism.
246.50	254.00	7.50	Py 3-4% with trace Cpy	Silicified andesite with strong stockwork veinlets of Py, Py-Qz-carbonate, Qz (massive), Qz-Py-chlorite, carbonate and has disseminated Py (3%). Low to medium magnetism.
254.00	257.76	3.76	Py ~1% with trace Cpy	Silicified andesite with strong stockwork veinlets of Py, Qz- Ch, carbonate, Qz-Py, Qz (massive); has epidote, Ch and disseminated Py (1%) - Cpy(0.1%) . Low to medium magnetism through interval.
257.76	259.42	1.66	Py (1%)	Basaltic andesite with moderate stockwork veinlets of Py, Qz-Py, Qz-chlorite, Qz (massive), carbonate and has disseminated Py (1%). Medium magnetism.
259.42	260.10	0.68	Py (2-3%)	Diorite with biotite (potassic?) and chlorite alteration associated with relatively weak density of stockwork Py, Qz-Py, Qz (massive), Qz chlorite veinlets occurring with disseminated Py (2%). Low to medium magnetic response.
260.10	278.90	18.80	Py (1%)	Basalt to Andesite composition with weak stockwork density of Py, Qz-Py, Qz-chlorite, Qz (massive), carbonate veinlets, and has disseminated Py (1%). Medium magnetism.
278.90	291.07	12.17	Py (<1%)	Very fine grained volcanoclastic (andesite composition?), containing weak to moderate Mt and local chlorite with <1mm veins or Py and carbonate. Interval includes narrow dikes of diorite intrusion from 282m (7cm) and from 284m (6cm). Medium to low magnetism.

Abbreviations Used: Ch = Chlorite, Cpy = Chalcopyrite, Mt = Magnetite, Py = Pyrite, Qz = Quartz, m = metre, cm = centimetre

In Relation to the disclosure of visual mineralisation, the Company cautions that visual estimates of sulphide and oxide mineral abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to quantify the grade of mineralisation that may (or may not) be associated with reported sulphide mineralisation reported in preliminary geological logging. The Company will update the market when the laboratory analytical results become available.