TITAN MINERALS LTD

ASX ANNOUNCEMENT

14 September 2023

EPITHERMAL FOOTPRINT EXPANDED AT CERRO VERDE, DYNASTY GOLD PROJECT

Key Highlights

- **Drilling of expanded epithermal footprint set to commence at the Dynasty Gold Project in the coming week, Kluane Drilling Ltd engaged and all logistics and permits in place**
- **The Cerro Verde epithermal vein footprint has been expanded well beyond currently defined resources, following extensive reconnaissance mapping and surface geochemical sampling**
- **Large-scale open-ended gold-silver anomalism in soil and rock chip sampling has confirmed Cerro Verde to host a much larger epithermal vein system, with peak rock chip values returned from newly identified epithermal veins including:**
  - **14.95 g/t Au and 40.4 g/t Ag in rock chip TM06908**
  - **13.65 g/t Au and 136 g/t Ag in rock chip TM06906**
  - **11.35 g/t Au and 14.75 g/t Ag in rock chip TM06919**
- **Several significant intersections recorded in previous drilling at Cerro Verde are located outside the current resource and remain open. Some of these intercepts include:**
  - **4.70m @ 5.11 g/t Au, 32.78 g/t Ag from 37.72m in CVD061 &**
  - **4.44m @ 4.05 g/t Au, 163.35 g/t Ag from 76.76m in CVD061.**
  - **8.39m @ 3.45 g/t Au, 7.61 g/t Ag from 278.6m in CVD057.**
  - **4.49m @ 4.43 g/t Au, 15.54 g/t Ag from 4.39m in CVD090.**
  - **1.83m @ 7.88 g/t Au, 2.30 g/t Ag from 107.3m in CVD086.**

Titan's CEO Melanie Leighton commented:

"Following extensive reconnaissance works including geophysics, soil geochemistry, mapping and rock chip sampling, the Cerro Verde epithermal veining footprint has been expanded well beyond the current defined resource at the Dynasty Gold Project.

"This represents an exciting opportunity for growth at Cerro Verde, with existing resources already being 28.8Mt @ 2.08 g/t Au, 13 g/t Ag for a contained 1.92 Moz gold and 12.04 Moz silver in this part of the project.

*"There are also several significant intersections that are located outside the resource, representing immediate growth targets, with significant drill results including **4.70m @ 5.11 g/t Au, 32.78 g/t Ag** from 32.78m and **4.44m @ 4.05 g/t Au, 163.55 g/t Ag** from 76.76m in CVD061 remaining open.*

"We are excited to be commencing drilling at Dynasty in the coming week, with a steady flow of results from Cerro Verde and Papayal expected in our resource growth drilling."

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Dynasty Exploration Activities Update

Titan Minerals Limited (**Titan** or the **Company**) (**ASX:TTM**) is pleased to provide an update on exploration activities at the Cerro Verde prospect, at the Company's 100% held Dynasty Gold Project (**Dynasty**) in southern Ecuador, where Titan geologists have been undertaking mapping and surface geochemical sampling ahead of planned resource growth drilling which is set to commence in the coming week.

The Dynasty Gold Project has strong potential for bulk and high-grade gold resource growth with the maiden JORC Compliant Mineral Resource Estimate (MRE) published in July 2023, reporting Mineral Resources of:

- **Cerro Verde:** 28.8Mt @ 2.08 g/t Au, 13.00 g/t Ag for 1.92 Moz gold, 12.04 Moz silver
- **Iguana:** 10.9Mt @ 2.02 g/t Au, 13.68 g/t Ag for 0.71 Moz gold, 4.81 Moz silver
- **Papayal**: 0.9Mt @ 4.54 g/t Au, 50.85 g/t Ag for 0.13 Moz gold and 1.43 Moz silver
- **Trapichillo**: 2.9Mt @ 3.80 g/t Au, 39.31 g/t Ag for 0.36 Moz gold 3.71 Moz silver

The Company is well on its way to demonstrating that the currently defined Mineral Resources at the Dynasty Gold Project have significant potential to grow- with substantial lateral and depth extensions identified. There are large areas along the Dynasty 9 kilometre epithermal vein system that are underexplored and have seen no, or very limited drill testing to date.

Over the past six months the Company has conducted surface mapping, rock chip and systematic soil geochemical sampling programs over the Cerro Verde, Papayal and Trapichillo prosects. Exploration activities have been aimed at expanding existing resources by defining extensions to the known epithermal vein system and by identifying new areas of epithermal veining at Dynasty.

Pleasingly, Titan's exploration activities and geochemical results have been successful in expanding the footprint of epithermal gold mineralisation well beyond the currently defined resource, with several compelling resource growth targets now defined and ready to be drill tested.

Multi-element soil geochemical results have highlighted new target areas which exhibit large-scale coincident gold-silver-arsenic-antimony, with strong antimony anomalism highlighting areas of potential depth extensions as its presence indicates a higher level in the epithermal system.

Soil samples were taken on a 200m x 100m grid spacing, and in high priority areas infill soil sampling was completed on a 200m x 50m spacing to define new targets for exploration and resource growth. Pleasingly, several resource extensions and new exploration target areas have been highlighted by recent mapping and soil and rock chip geochemistry.

Rock chip sampling completed in conjunction with surface mapping has also returned several new high-grade gold and silver results in extensional and newly identified areas of epithermal veining which sit outside of previously defined resources.

Peak values returned from recent rock chip sampling at Cerro Verde include:

- 14.95 g/t Au and 40.4 g/t Ag in rock chip TM06908
- 13.65 g/t Au and 136 g/t Ag in rock chip TM06906
- 11.35 g/t Au and 14.75 g/t Ag in rock chip TM06919

Substantial depth extensions to the epithermal gold-silver vein system were confirmed by Titan's drilling at the Brecha-Comanche vein system at Dynasty earlier this year. This drilling was successful in defining the epithermal vein system to a depth of 350 metres below surface, with the system remaining open at depth. This has now confirmed the presence of the epithermal gold-silver vein

system at depth, highlighting the potential to add substantial resources through targeting and delineating depth extensions across the 9 kilometre vein system.

Several significant drill intercepts at Cerro Verde were excluded from the resource due to uncertainty in geological interpretation. Minimal drilling is proposed to improve geological understanding and potentially grow the resource in these areas. Some of the significant intercepts from previous drilling that are located outside the currently defined resource include:

- **4.70m @ 5.11 g/t Au, 32.78 g/t Ag** from 37.72m in CVD061 &
- **4.44m @ 4.05 g/t Au, 163.35 g/t Ag** from 76.76m in CVD061.
- **4.34m @ 2.47 g/t Au, 364 g/t Ag** from 76.58m in CVD067.
- **4.49m @ 4.43 g/t Au, 15.54 g/t Ag** from 4.39m in CVD090.
- **1.83m @ 7.88 g/t Au, 2.30 g/t Ag** from 107.3m in CVD086.
- **8.39m @ 3.45 g/t Au, 7.61 g/t Ag** from 278.6m in CVD057.

Resource growth drilling is planned to commence over new targets areas at the Dynasty Gold Project in the coming week, and the Company looks forward to providing further updates as results are received.

About the Cerro Verde prospect

The Cerro Verde prospect is characterized by a package of outcropping andesitic flows with thin intercalations of volcanoclastic rocks, belonging to the Celica formation. The andesitic package has been intruded by narrow dykes and small stocks of diorite and quartz diorite, which mainly follow the trend of primary structures, being oriented both northwest and northeast.

The area is structurally complex, with one set of small faults preferentially dipping sub-vertically to the northwest. Another group of faults dips moderate to steeply to the southeast and are oriented to the northeast. The other group of structures correspond to quartz veins, which can also be grouped into two main trends, one group are subvertical with an almost north-south orientation, and another group also subvertical or steeply dipping to the north and oriented northeast to east-west.

Most veins are composed of quartz multi-phase events, with three quartz vein phases identified:

1. The initial phase corresponds to white milky quartz veins, with only traces of pyrite and iron oxide mineralisation, in some areas there are replacement textures as can be observed in Plate 1.
2. A transparent, slightly grey phase of quartz, which exhibits strong pyrite, some sphalerite, and traces of arsenopyrite mineralisation.
3. In some areas a weak mineralisation event of more transparent quartz is observed, which exhibits traces of pyrite with sphalerite.

It is likely that there are more mineralisation events, which will continue to be reviewed by Titan's geologists as part of their surface and downhole geological mapping.

In the mapping and interpretation to date, the veins that are observed to show the best developed widths are oriented east-west. This is the case for veins located in the Brecha-Comanche and Foto target areas and is also observed in other areas.

An interesting feature noted in veins mapped at surface is that the veins are predominantly thin but appear to thicken when intersected at depth by drilling, particularly where these veins coalesce or intersect faults (Plate 2).

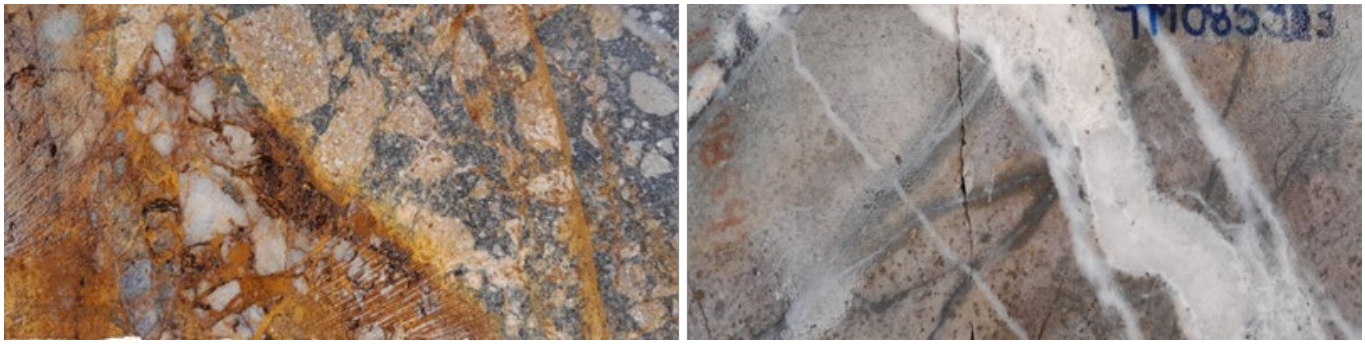

Plate 1. Resbolosa Vein Target. Left: CVDD23-106. Brecciated quartz vein with oxide filling between the clasts, cutting the tourmaline breccia, there is also a second phase of transparent quartz veinlets with trace mineralisation of pyrite, sphalerite Right: CVD008. Greyish quartz veinlets with mineralisation of pyrite, galena, sphalerite, traces of arsenopyrite, cut by a veinlet of white quartz with traces of pyrite.

Plate 2. Quartz vein development showing the interplay of a low angle normal fault.

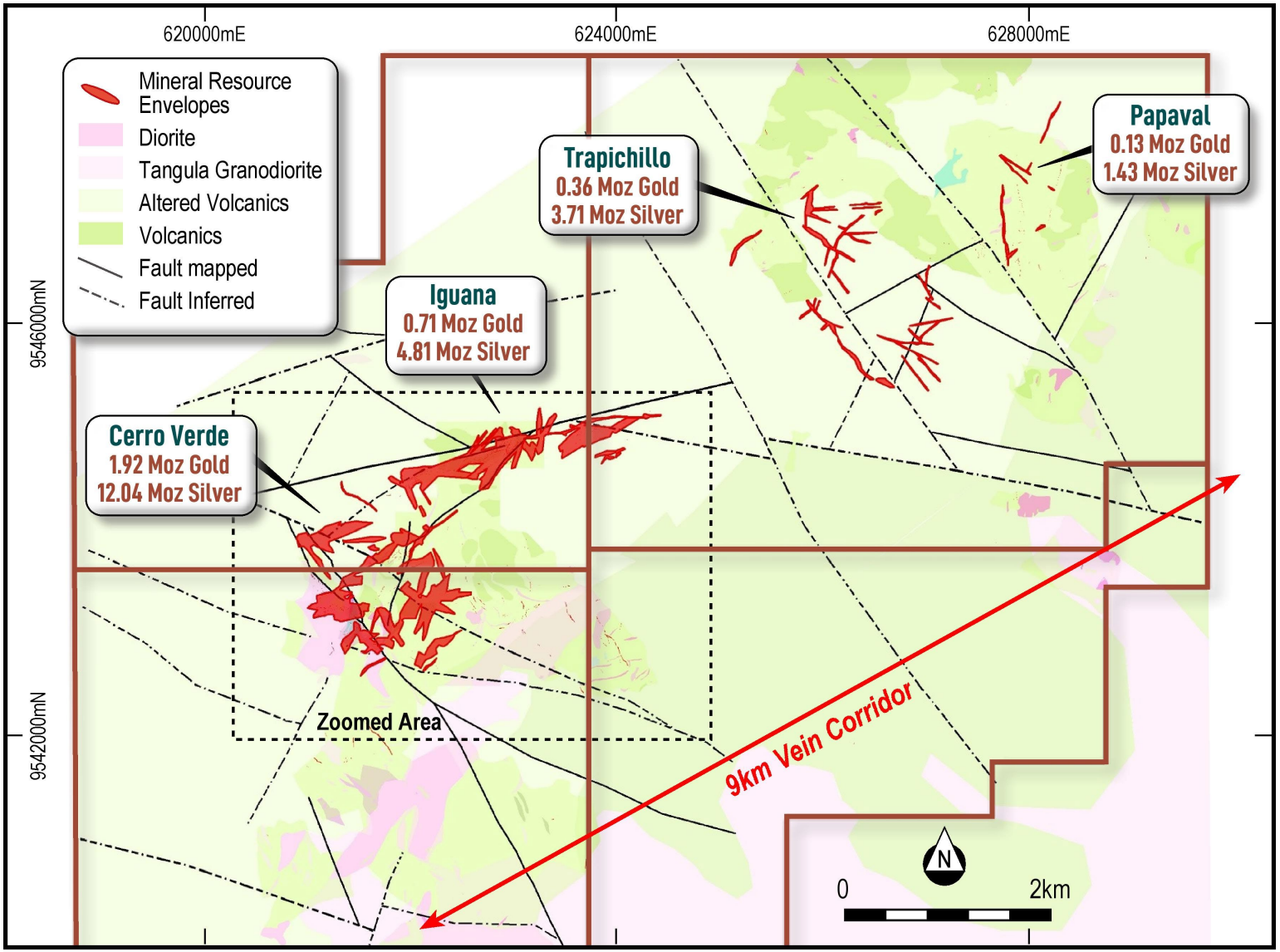

Figure 1. Dynasty Gold Project displaying simplified geology, prospect locations and Mineral Resources

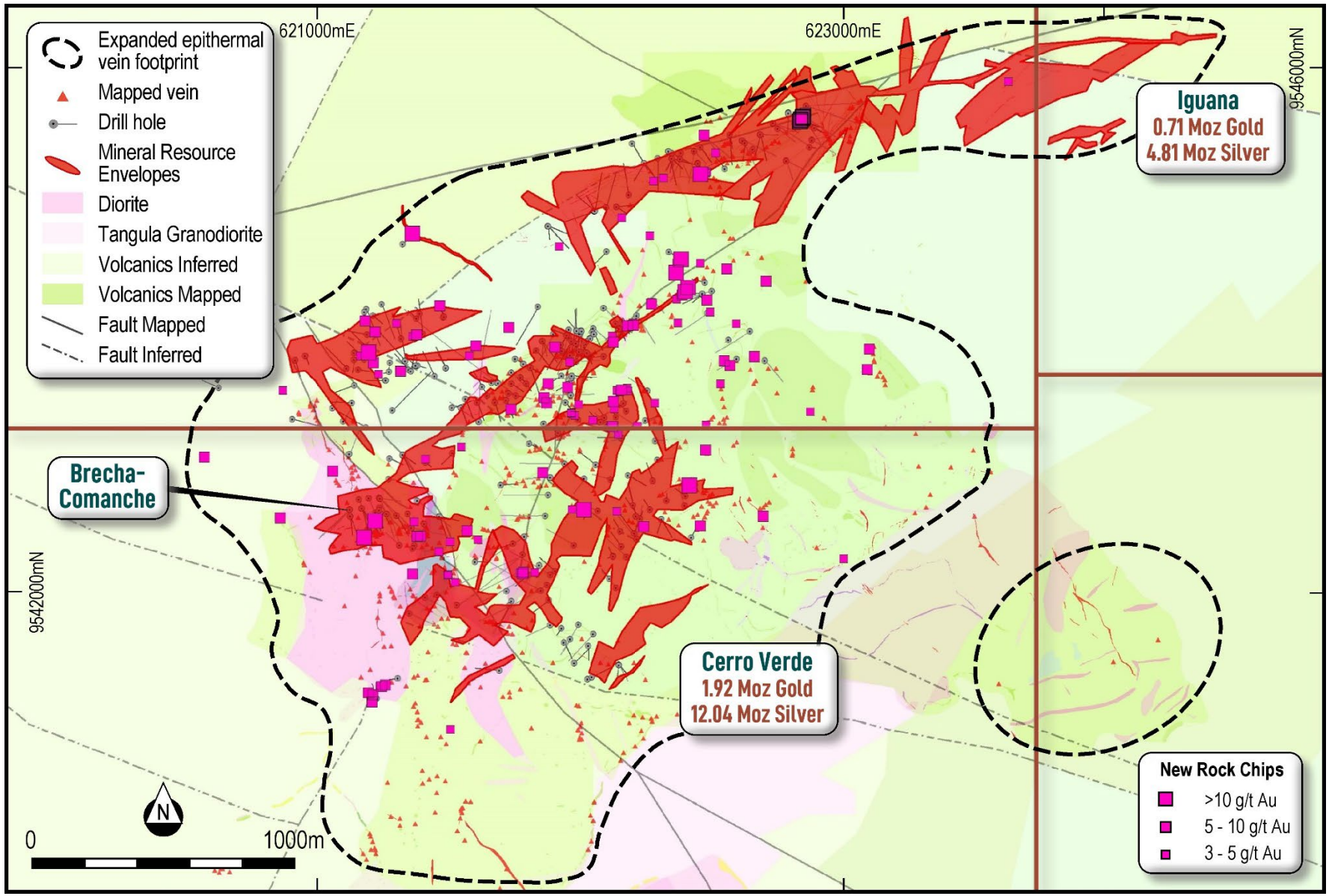

Figure 2. Cerro Verde mapping, rock chip results, Mineral Resources and expanded epithermal vein footprint

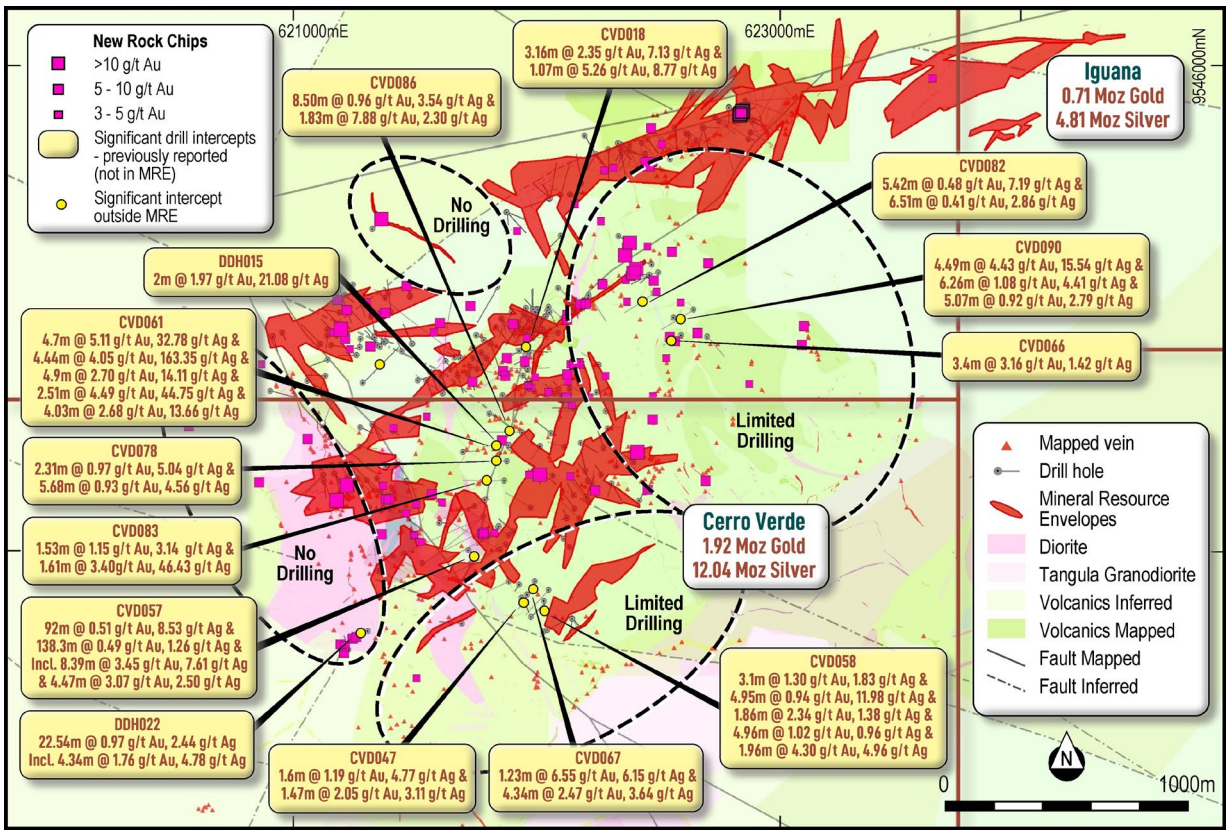

Figure 3. Cerro Verde mapping, rock chip results and significant drilling intersections located outside Mineral Resources

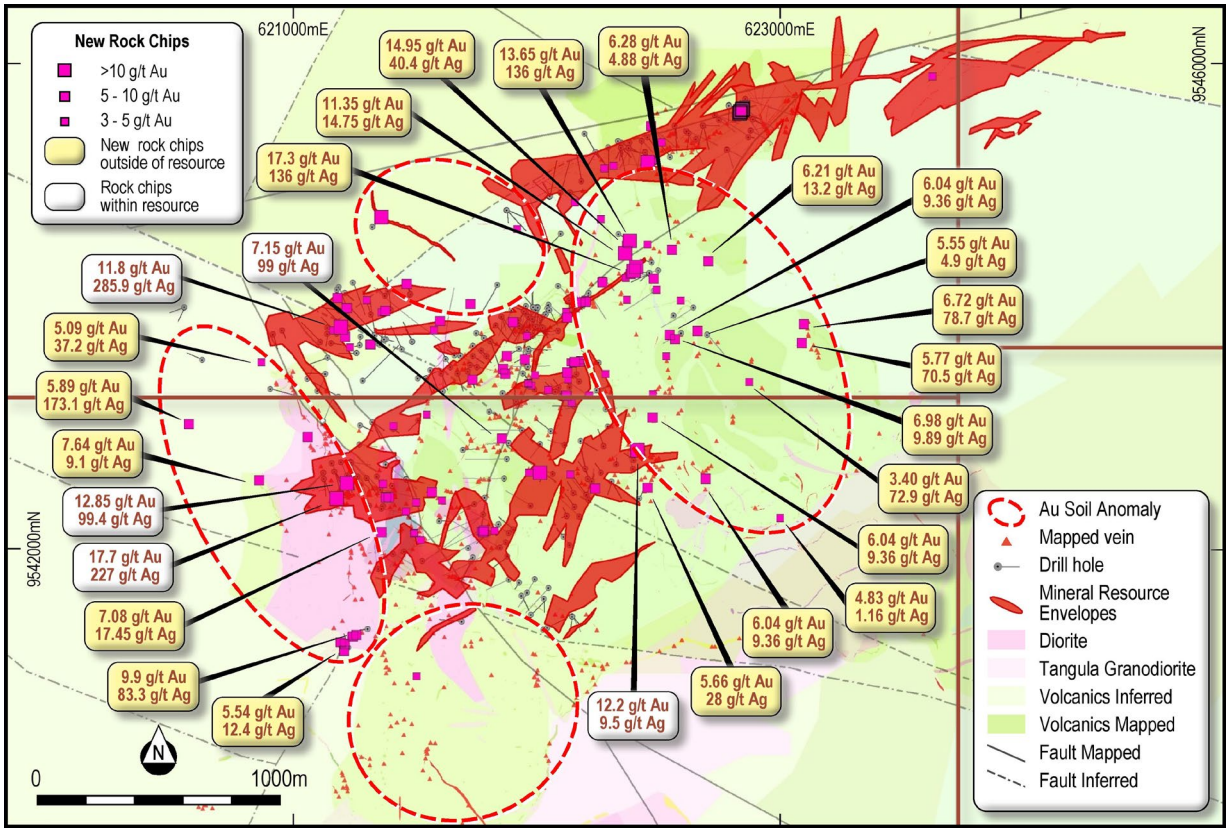

Figure 4. Plan view displaying Cerro Verde surface mapping and new rock chip results in relation to Mineral Resources

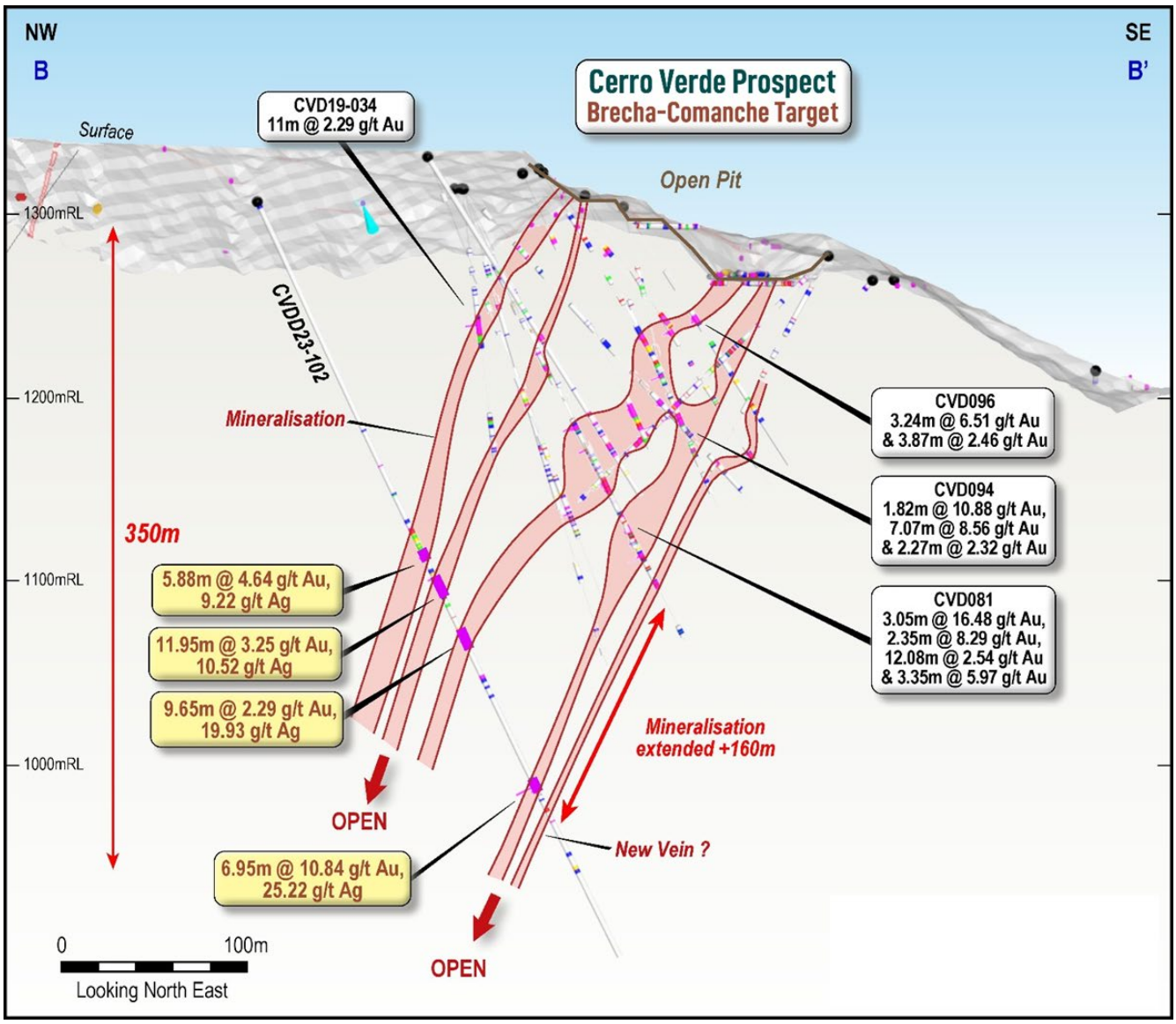

Figure 5. Brecha-Comanche Type Section demonstrating mineralisation depth extent, epithermal vein system width and tenor and previously recorded significant drill intersections

About the Dynasty Gold Project

The Dynasty Gold Project is an advanced stage exploration project comprising five contiguous concessions and is 139km2 in area. Three of these concessions received Environmental Authorisation in 2016 and are fully permitted for all exploration activities.

Located in a major flexure of the Andean Terrane, the Dynasty Gold Project is situated within a corridor of mineralisation extending from Peru through northern Ecuador that is associated with early to late Miocene aged intrusions. The majority of porphyry copper and epithermal gold deposits in southern Ecuador are associated with magmatism in this age range, with a number of these younger intrusions located along the margin of the extensive Cretaceous aged Tangula Batholith forming a favourable structural and metallogenic corridor for intrusion activity where Titan minerals holds a significant land position in southern Ecuador.

Exploration works at the Dynasty Gold Project have outlined an extensive zone of epithermal veining over a nine kilometres strike and over one kilometre in width. There is also considerable potential for porphyry gold, silver and copper mineralisation as identified by surface mapping, trenching and drilling at the Kaliman Porphyry prospect.

Titan published a JORC Compliant Mineral Resource Estimate (MRE) for the Dynasty Project on 6 July 2023. The 3.12 million ounce gold and 21.98 million ounce silver resource is hosted within a 9 kilometre long by 2 kilometre wide corridor of epithermal gold and silver vein hosted mineralisation, of intermediate sulphidation type.

Interpretation and estimation of the Mineral Resource was based on data from 394 diamond drill holes (63,342.54 metres), 85 channels (2,089.02 metres) and 1,599 trenches (6,743.54 metres). Drilling and trenching campaigns were completed by Titan Minerals Ltd in 2021 and 2023 and in several phases of drilling by previous project operators from 2007 to 2019.

The Dynasty MRE includes the Cerro Verde, Iguana, Papayal and Trapichillo prospects (refer to Figure 1), with clear potential for the resource to grow significantly, with the majority of resource remaining open, and in many areas only sparsely drilled. The epithermal gold-silver system remains largely untested below a depth of approximately 200 metres.

Completion of the MRE represents a fantastic milestone for the Company and a significant derisking for the Dynasty project, with preliminary optimisation studies indicating robust economics, and the resource having potential to underpin an open pit followed by underground mining scenario.

The MRE provides a solid foundation for future resource growth and feasibility studies, in what Titan believes is a natural progression for the Dynasty Project, which has considerable exploration upside that remains to be tested.

Approximately 84% of Indicated and 64% of Inferred Mineral Resources reported ≥0.5 g/t Au are within 160m from surface. The Cerro Verde prospect contains the bulk of the resource, and also has the highest component of Indicated resources. The larger resource and higher classification at Cerro Verde are largely due to Titan's resource development work programs dedicated to this part of the project, including infill and validation drilling, surface mapping, relogging of historical drill core and QAQC workstreams.

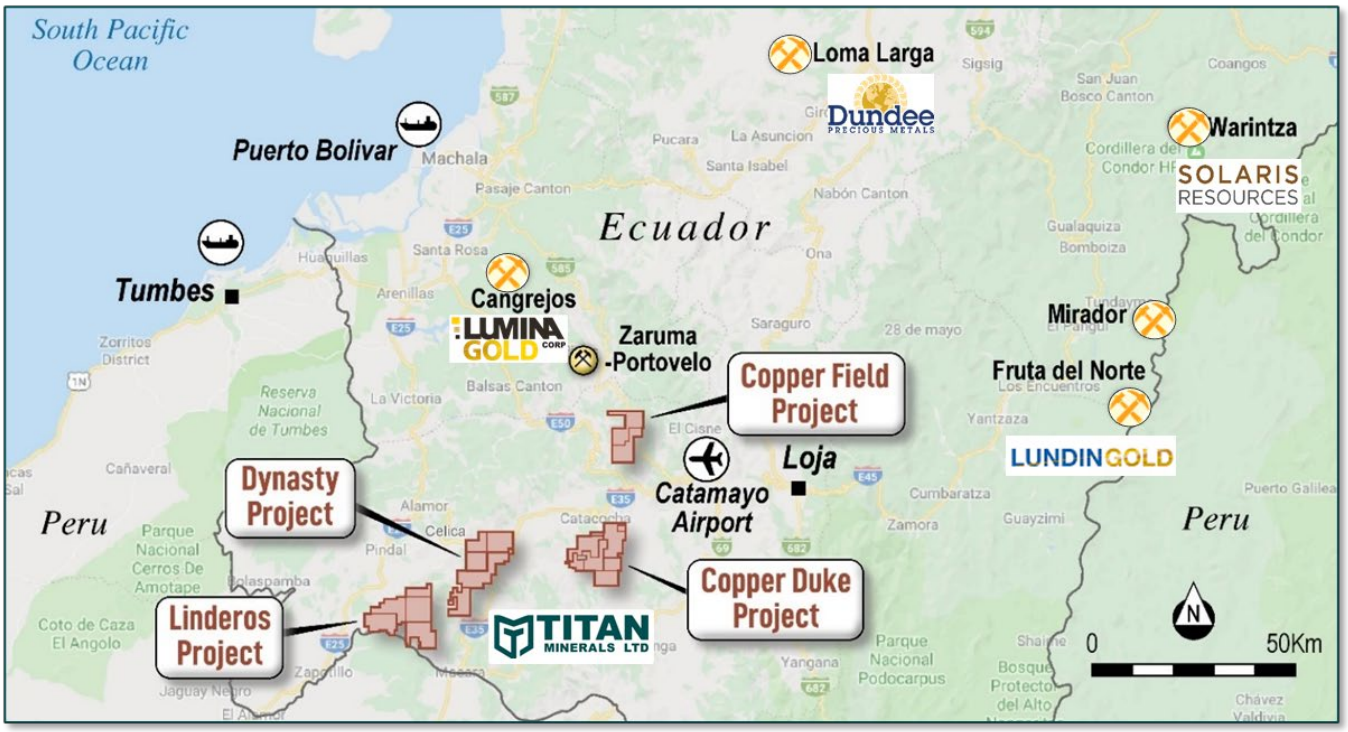

Figure 6. Titan Minerals southern Ecuador Projects, peer deposits and surrounding infrastructure

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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 Statements

The information in this report that relates to Exploration Results is based on and fairly represents information compiled by Ms Melanie Leighton, who is an experienced geologist and a Member of The Australian Institute of Geoscientists. Ms Leighton is a full-time employee at Titan Minerals and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which she 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'. Ms Leighton consents to their inclusion in the report of the matters based on this information in the form and context in which it appears.

With respect to estimates of Mineral Resources, announced on 6 July 2023, (MRE Announcement) the Company confirms that it is not aware of any new information or data that materially effects the information in the MRE Announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Forward-looking Statements

This announcement may contain "forward-looking statements" and "forward-looking information", including statements and forecasts. Often, but not always, forward-looking information can be identified by the use of words such as "plans", "expects", "is expected", "is expecting", "budget", 'outlook", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes", or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might", or "will" be taken, occur or be achieved. Such information is based on assumptions and judgments of Titan's directors and management regarding future events and results.

The purpose of forward-looking information is to provide the audience with information about Titan's expectations and plans. Readers are cautioned that forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Titan and/or its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Forward-looking information and statements are based on the reasonable assumptions, estimates, analysis and opinions of Titan directors and management made in light of their experience and their perception of trends, current conditions and expected developments, as well as other factors that Titan directors and management believe to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. Titan believes that the assumptions and expectations reflected in such forward-looking statements and information are reasonable.

Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. Titan does not undertake to update any forward-looking information or statements, except in accordance with applicable securities law.

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APPENDIX A

Table 1. Cerro Verde & La Zanja Rock Chip Results

Target	Rock Chip Sample ID	Northing (m)	Easting (m)	Elevation (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
Cerro Verde	TM07236	621182	9543209	1321	17.7	227	0.06	0.60	0.07
	TM06916	622416	9544162	1092	17.3	136	0.02	0.10	0.01
	TM06908	622390	9544269	1046	14.95	40.4	0.01	0.03	0.01
	TM06906	622372	9544218	1071	13.65	136	0.01	0.35	0.01
	TM07231	621225	9543271	1321	12.85	99.4	0.02	0.13	0.01
	TM07309	622464	9544592	997	11.8	38.6	0.01	0.13	0.06
	TM06919	622405	9544146	1100	11.35	14.75	0.01	0.09	0.05
	TM07248	622246	9543251	1364	9.97	16.6	0.00	0.13	0.01
	TM07251	621263	9542648	1129	9.9	83.3	0.19	1.00	0.44
	TM050903	621957	9543781	1330	9.69	16.35	0.00	0.01	0.00
	TM06855	622132	9543954	1260	8.52	13.85	0.02	0.09	0.04
	TM07958	621877	9543722	1363	8.35	112	0.02	0.26	0.05
	TM050917	621575	9543235	1185	7.44	145	0.02	0.34	0.02
	TM050915	621862	9543455	1329	7.15	99	0.04	0.20	0.04
	TM06843	621367	9543069	1207	7.08	17.45	0.02	0.09	0.04
	TM07130	622553	9543883	1170	6.98	9.89	0.00	0.02	0.05
	TM06853	622185	9544017	1215	6.74	66.8	0.06	0.57	0.06
	TM07145	623107	9543927	965	6.72	19.3	0.01	0.01	0.02
	TM06852	622207	9544018	1206	6.51	156	0.03	0.24	0.06
	TM07244	621788	9543078	1230	6.42	66.9	0.03	0.19	0.00
	TM07134	623994	9539914	875	6.38	8.41	0.01	0.02	0.01
	TM06929	622564	9544231	1023	6.28	4.88	0.00	0.01	0.01
	TM07207	622129	9543632	1314	5.98	14.8	0.01	0.03	0.04
	TM06847	621383	9543214	1254	5.95	65.5	0.02	0.06	0.01
	TM06904	622276	9544098	1148	5.83	24.3	0.01	0.05	0.02
	TM07142	623099	9543849	955	5.77	70.5	0.04	0.34	0.06
	TM050901	621867	9543743	1348	5.71	17	0.08	0.02	0.01
	TM06844	621396	9543215	1245	5.57	38.5	0.01	0.06	0.00
	TM07306	622477	9544742	1041	5.39	115	0.01	0.17	0.01
	TM07129	622575	9543865	1180	5.2	31.6	0.01	0.02	0.02
	TM06832	622487	9544113	1034	5.09	29.8	0.01	0.01	0.02
	TM07206	622128	9543633	1314	5.02	49.6	0.01	0.05	0.01
	TM06851	622206	9544027	1204	4.95	75.6	0.02	0.07	0.04
	TM06930	622270	9544360	1090	4.88	53.2	0.01	0.14	0.02
	TM07247	621975	9543315	1326	4.86	41.9	0.01	0.07	0.01
	TM06924	622599	9544025	1089	4.69	7.82	0.01	0.02	0.01
	TM06909	622381	9544272	1043	4.47	47.6	0.01	0.28	0.01

	TM06914	622378	9544027	1092	4.23	15	0.00	0.01	0.04
	TM07239	621502	9543069	1196	4.18	14.85	0.03	0.02	0.00
	TM07217	622285	9544568	1008	4.17	3.71	0.01	0.01	0.02
	TM07235	621372	9543269	1251	4.16	33.8	0.02	0.07	0.02
	TM07962	622135	9543700	1262	4.06	67.2	0.07	0.01	0.00
	TM07133	622484	9543638	1285	4.06	15.45	0.02	0.04	0.01
	TM07238	621501	9543066	1198	3.87	17.6	0.01	0.04	0.00
	TM07215	622223	9543634	1297	3.79	10.6	0.01	0.02	0.01
	TM07131	622539	9543795	1220	3.79	30.8	0.01	0.07	0.02
	TM07305	622520	9544675	1030	3.75	18	0.00	0.03	0.03
	TM06845	621396	9543218	1245	3.74	7.17	0.01	0.00	0.00
	TM06913	622277	9544106	1143	3.71	113	0.03	0.32	0.03
	TM07502	621242	9542641	1130	3.69	35.8	0.03	0.11	0.30
	TM07307	622487	9544602	1004	3.68	30.6	0.01	0.03	0.01
	TM07201	622053	9543656	1321	3.67	13.25	0.00	0.02	0.02
	TM050919	621616	9543201	1178	3.66	53.4	0.02	0.15	0.07
	TM06926	622499	9544068	1021	3.54	1.44	0.01	0.01	0.02
	TM06854	622187	9544012	1215	3.52	24.2	0.01	0.08	0.03
	TM07140	622882	9543689	1075	3.4	248	0.02	0.12	0.04
	TM06856	622127	9543977	1256	3.36	4.12	0.01	0.00	0.01
	TM07245	621832	9543077	1231	3.06	16.35	0.00	0.01	0.00
	TM07308	622484	9544598	1001	3.03	92.1	0.03	0.11	0.09
	TM07222	622197	9544478	1040	3.00	22.5	0.01	0.03	0.01
	TM07384	622702	9543291	1225	6.04	9.36	0.00	0.06	0.05
	TM07382	622463	9543254	1250	5.66	28	0.01	0.22	0.04
	TM07101	623009	9543129	1025	4.83	1.16	0.00	0.02	0.00
La Zanja Porphyry	TM07336	622069	9541197	1318	3.45	112	0.06	0.10	0.01
	TM07323	621512	9542478	1213	3.42	8.77	0.01	0.00	0.01

Coordinates in WGS84 Zone 17S

Table 2. Previously Reported Significant Drill Intersections, Cerro Verde prospect

Hole ID	East (m)	North (m)	Elevation (m)	Hole Depth (m)	Dip (°)	Azimuth (°)	Depth from (m)	Depth to (m)	Width (m)	Au (g/t)	Ag (g/t)
CVD018	621974	9543817	1318	140.93	-60	269	25.74	28.9	3.16	2.35	7.13
							94.2	95.27	1.07	5.26	8.77
CVD047	622003	9542878	1211	303.36	-64	210	68.3	71.32	3.02	1.55	8.77
							169.86	171.46	1.60	1.19	4.77
							173.99	175.46	1.47	2.05	3.11
							219.52	253.74	34.22	0.35	2.05
CVD057	621743	9542970	1182	422.05	-70	206	0	92	92	0.51	8.53
							148.67	287	138.33	0.49	1.27

Hole ID	East (m)	North (m)	Elevation (m)	Hole Depth (m)	Dip (°)	Azimuth (°)	Depth from (m)	Depth to (m)	Width (m)	Au (g/t)	Ag (g/t)
						including	***278.61***	***287***	***8.39***	***3.45***	***7.61***
							389.52	393.99	4.47	3.07	2.50
CVD058	622056	9542842	1205	211.03	-48	224	39.37	42.47	3.10	1.30	1.83
							65.64	70.59	4.95	0.94	11.98
							98.31	100.17	1.86	2.34	1.38
							110.41	115.37	4.96	1.02	0.96
							127.49	129.45	1.96	4.30	4.96
CVD061	621892	9543438	1339	200.18	-62	270	3.91	11.23	7.32	0.37	1.05
							37.72	42.42	4.70	5.11	32.78
							51.25	53.5	2.25	2.29	9.71
							76.76	81.2	4.44	4.05	163.35
							86.9	91.8	4.9	2.70	14.11
							111.0	113.51	2.51	4.49	44.75
							147.19	151.22	4.03	2.68	13.66
CVD066	622600	9543889	1154	128.07	-46	242	91.44	94.84	3.40	3.16	1.42
CVD067	621970	9542825	1178	209.8	-75	207	67.77	69	1.23	6.55	6.15
							76.58	80.92	4.34	2.47	3.64
						including	***78.4***	***80.49***	***2.09***	***4.32***	***5.05***
CVD078	621885	9543372	1300	275.14	-52	270	167.88	170.19	2.31	0.97	5.04
							235.24	240.92	5.68	0.93	4.56
CVD082	622490	9544064	1019	204.31	-45	235	27.35	32.77	5.42	0.48	7.19
							69.09	75.6	6.51	0.41	2.86
CVD083	621873	9543292	1257	261.69	-50	270	92.15	96.79	4.64	0.36	1.49
							123.75	125.28	1.53	1.15	3.14
							204.42	206.03	1.61	3.40	46.43
CVD086	621944	9543493	1389	240.22	-45	270	78.05	86.55	8.50	0.96	3.54
						including	***78.05***	***80.02***	***1.97***	***2.36***	***3.02***
							107.32	109.15	1.83	7.88	2.30
CVD090	622652	9543996	1101	230.09	-47	235	4.39	8.88	4.49	4.43	15.54
							17.29	23.55	6.26	1.08	4.41
							80.5	85.57	5.07	0.92	2.79
DDH015	621291	9543695	1382	307.5	-48	045	223.75	225.75	2.00	1.97	21.08
DDH022	621311	9542674	1127	81.45	-45	262	49.76	72.3	22.54	0.97	2.44
						including	***49.76***	***54.1***	***4.34***	***1.76***	***4.78***

APPENDIX B

Dynasty Project - 2012 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 (e.g., '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 and NTW core (71.4/56.23 mm diameter respectively) for density and chemical analyses. ½ or ¼ core was submitted for analysis. • Downhole survey and core orientation tools are used, Diamond core is halved with a diamond saw to ensure a representative sample. • **Channel sampling** is completed as representative cut samples across measured intervals cut with hammer or hammer and chisel techniques. • Diamond Core Samples were crushed to better than 70% passing a 2mm mesh and split to produce a 250g charge pulverised to 200 mesh to form a pulp sample. • Titan (50g) or Historical (30g) charges were split from each pulp for fire assay for Au with an atomic absorption (AA) finish and samples exceeding 10g/t Au (upper limit) have a separate 30g charge split and analysed by fire assay with a gravimetric finish. Samples returning >10ppm Au from the AA finish technique are re-analysed by 30g fire assay for Au with a gravimetric finish. • An additional charge is split from sample for four acid digests with ICP-MS reporting a 48-element suite. Within the 48 elements suite, overlimit analyses of a 5-element suite are performed with an ore grade technique (ICP-AES) if any one element for Ag, Pb, Zn, Cu, Mo exceeds detection limits in the ICP-MS method. • **Rock chip samples** were dried at a temperature < 60°C, crushed to better than 70% passing a 2mm mesh and split to produce a 250g charge pulverised to 200 mesh to form a pulp sample. • 50g charges were split from each pulp for fire assay for Au with an atomic absorption (AA) finish. Samples returning >10ppm Au from the AA finish technique are re-analysed by 50g fire assay for Au with a gravimetric finish. • An additional charge is split from sample for four acid digests with ICP-MS reporting a 48-element suite. Within the 48 elements suite, overlimit analyses of a 5-element suite are performed with an ore grade technique (ICP-AES) if any one element for Ag, Pb, Zn, Cu, Mo exceeds detection limits in the ICP-MS method. • **Soil samples** were dried at a temperature < 60°C, sieve sample to 180 microns (80 mesh), and pulverized up to 250g of the sample to achieve 85% passing through 75 microns mesh to form a pulp sample. • 50g charges were split from each pulp for super trace gold and multielement in soils

Criteria	JORC Code explanation	Commentary
		analysis. • Au was analysed by Aqua regia extraction with ICP-MS finish. An additional charge is split from sample for four acid digests with ICP-MS reporting a 48-element suite.
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 True Core 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. • Geological observations have been routinely recorded for rock chip samples as part of detailed surface geological mapping.
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. • Geological observations have been routinely recorded for rock chip samples as part of detailed surface geological mapping.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all cores 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.*	• Diamond core is split or cut in weathered profile depending on hardness and competency of the core and cut with a diamond saw in fresh rock. Weathered, faulted, and fractured diamond core, prior to cutting, are docked, and covered with packing tape to ensure a representative half sample is taken. • A cutline on core is systematically applied for cutting and portion of core collected for analysis is systematic within each hole. Diamond core sample recovery are reported as being completed in accordance with best practices for the time of acquisition and considered to be appropriate and of good quality. • Sample size studies have not been conducted but sample size used are typical of methods used for other Andean deposits of similar mineralisation styles. • Rock chip samples were submitted in their entirety for analysis, no subsampling was completed. • Soil sample preparation involved: ○ A 0.40 x 0.40 m hole is dug until it reaches the horizon to be sampled.

Criteria	JORC Code explanation	Commentary
		○ Once Horizon B or C is reached the sampling begins. ○ The material is extracted and passed through a 2 mm sieve, one kilo is taken from the sample that passes through the sieve (fine fraction sample), and the same procedure is performed with the material that remains in the sieve (coarse fraction sample), a complete sample of this material. ○ Once sampling is completed the hole is refilled.
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 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 or other instruments were 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 Australia and data validated by a senior geologist in Ecuador. • Twin holes have not been used in the reported exploration results. The use of twinned holes is anticipated in follow-up drilling. • Original laboratory data files in CSV and locked PDF formats are stored together with the merged data. • All drilling, and surface data are stored in a self-validating MX Deposit geological 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* • *Quality and adequacy of topographic control.*	• Reported drill collars and channel samples are located with an RTK GPS survey unit with sub-centimetre reporting for the purpose of improved confidence in resource estimation work. A gyroscopic survey tool is used for downhole surveys. • All surveyed data is collected and stored in WGS84 datum. • Topographic control is ground survey quality and reconciled against Drone platform survey data with 1m pixel resolution. Assessed to be adequate for the purpose of resource estimation
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.*	• Data spacing for reported diamond drilling varies by prospect, targeting a nominal 80m lateral spacing and 80m vertical spacing for data acquisition. • Reported Channel sampling is collected on 10m to 20m spacing depending on resolution of structural information deemed necessary by the geology team. • Data spacing is anticipated to support mineral resource estimation for the indicated and inferred categories, with data spacing and distribution for higher confidence resource

Criteria	JORC Code explanation	Commentary
		estimation categories to be defined with further modelling and geostatistical analysis work. • No Sample compositing has been applied in reported exploration results. • Data spacing for reported soil sampling geochemical results was on a 200m x 50m spacing and in some areas a 200m x 50m spacing. • Data spacing for reported rock chip samples was on an irregular/ ad hoc basis, with samples taken at the geologists' discretion as part of their surface mapping activities. • 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.*	• The orientation of diamond drilling and trenching is perpendicular to mapped orientation of primary vein and porphyry target observed in outcrop where possible. Drilling is often completed on multiple azimuths as fan drilling with multiple holes collared from a single drill site to minimise surface disturbance, which will result in some oblique intercepts to vein orientations. The true thickness of intercepts will be accounted for following structural analysis of oriented core and 3D modelling of veins. All results in relation to this report are drilled thickness and should not be interpreted as true thickness at this time. • No bias is considered to have been introduced by the existing sampling orientation. • Rock chip samples may have been taken along the length of mineralised vein structures, so bias may be introduced. However, rock chip sample results are used for exploration targeting purposes, and will not be considered for resource estimation purposes. • No bias is considered to have been introduced by the soil sampling orientation, as the soil samples were taken on a systematic grid spacing, considered to be perpendicular to, and appropriate for, the style of mineralisation.
Sample security	• *The measures taken to ensure sample security.*	• Samples were collected by Titan Minerals field technicians and geologists and held in a secure yard prior to shipment for laboratory analysis. Samples are enclosed in polyweave sacks for delivery to the lab 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 Pilo 9, Zar, Zar 1, Zar 3A and Cecilia 1 concessions forming the Dynasty Project and totalling an area of 13,909 hectares. • Mineral concessions in Ecuador are subject to government royalty, the amount of which varies from 3% to 4% 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 after exploration indicate a need to apply for a change of regime. • Concessions, Zar 3A and Cecilia 1 have not yet completed the environmental permitting process and require the grant of an Environmental Authorisation. • 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.*	Dynasty Gold Project Exploration done by other parties set out in further detail in the Titan ASX release dated 19 May 2020, and summarised below: • 1977, the Spanish-Ecuadorian joint venture company, Enadimsa, claimed 1,350ha in the La Zanja (Cerro Verde) area for exploration - no results included in reporting. • During the 1970s the United Nations explored the "Curiplaya" area, 2 km east of the Dynasty Project. Copper and gold were detected in small quantities, data not included in reporting. • 1991–92, BHP Exploration Ltd. covered the general area with concessions, but the tenements eventually lapsed after minimal work. • 2001 to 2003, a private prospecting company, Ecuasaxon, undertook investigations in the general area and discovered anomalous gold and silver in quartz-sulphide veins in what is now the concession area. • 2003 until 2007 Dynasty Mining and Metals (later Core Gold) completed mapping, limited ground geophysical surveys and exploration sampling activity including 201 drill holes totalling 26,733.5m and 2,033 rock channel samples were taken from 1,161 surface trenches at Cerro Verde, Iguana Este, Trapichillo and Papayal in support of a maiden resource estimation. • 2008 to 2009, the Ecuadorian Government introduced an exploration moratorium, where on April 18, 2008, Ecuador's Constitutional Assembly passed a Constituent Mandate resolution (the "Mining Mandate"), which provided, among other provisions, for the suspension of mineral exploration activities for 180 days, or until a new Mining Act was approved. The Mining Act was published in late January 2009. The mining regulations to supplement and

Criteria	JORC Code explanation	Commentary
		provide rules which govern the Mining Act were issued in November 2009, after which time the Mining Act and Regulations (collectively, the "Mining Law") were enacted. • 2017 to 2020 Core Gold Inc. (formerly Dynasty Mining and Metals) commenced small scale mining on a small portion of the Dynasty Project. Operations exposed a number of veins of the Canadian NI 43-101 compliant resource estimate, and operations discovered several veins of varying orientations not previously identified in drill and trench exploration activities requiring further exploration activity to quantify.
Geology	• *Deposit type, geological setting, and style of mineralisation.*	• Regionally, the Dynasty gold project lies within the compressional Inter-Andean Graben that is bounded by regional scale faults. The graben is composed of thick Oligocene to Miocene aged volcano- sedimentary sequences that cover the Chaucha, Amotape and Guamote terrains. This structural zone hosts several significant epithermal, porphyry, mesothermal, S-type granitoid, VHMS and ultramafic/ophiolite precious metal and base metal mineral deposits. • At the project scale, the intermediate volcanic hosted mineralised veins mainly occur along a faulted zone near and sub-parallel to the contact with the Cretaceous aged Tangula Batholith that extends north from Peru and is found outcropping in the east and south of the concessions. • Porphyry intrusion style mineralisation hosting gold, silver and copper mineralisation has also been mapped and intersected by drilling by at the Kaliman porphyry within the Dynasty Project area. • Gold occurs in its native form along with sulphides, including pyrite, sphalerite, galena, arsenopyrite, marcasite, chalcopyrite and bornite.
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 rock chip results with significant values validated by Titan geologists and referenced in this report are included in Appendix A of this report. • Only significant rock chip samples considered as significant ie. results > 4.0 g/t Au have been reported. • Rock chip samples have been tabulated containing significant values with gold grades exceeding 4.0g/t Au and are included in Appendix A of this report. Rock chips with values < 4.0 g/t Au are excluded from maps or graphics in the report.
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*	• No high-grade assay cut was applied to reported gold results. In the case of silver, the initial upper detection limit of the four-acid digest used is 100ppm, and an overlimit analysis method with an upper detection limit of 1,500 ppm is used. • Lower cut-off for reported significant values is 4.0 g/t Au • Significant Intercepts in Appendix A are reported for aggregate intercepts of sample intervals

Criteria	JORC Code explanation	Commentary
	shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	that are weight averaged by length of sample for results above a 0.1g/t gold cut-off. • 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. • Reported rock chip values are point data, and do not represent true widths of mineralisation. • Additional trenching, drilling and modelling of results is required to confirm the true width and orientation of mineralised zones. •
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 avoiding 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. • All results above a 0.1g/t Au lower cut-off are included in this report when reporting bulk low grade intersections, and results above 0.5g/t Au are included when reporting high grade vein hosted gold mineralisation. No upper cut-off has been applied. • All material exploration results for surface geochemistry are included in this report, and location of all results are included in Figures provided in their entirety.
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 include orientation studies for ground magnetics, IP Geophysics, and soil sampling grids, however each of these surveys are limited in scale relative to the project and are not considered material to assess potential of the larger project area.
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.*	• Additional mapping, trenching and drilling is planned to better define structural controls on mineralisation and assess open ended mineralisation on multiple mineralised corridors within the project area. Further mapping and sampling are to be conducted along strike of reported work to refine and prioritise targets for drill testing. • Included in body of report as deemed appropriate by the competent person