

# UPDATED ANNOUNCEMENT 40% INCREASE IN MINERAL RESOURCE AT DULCIE FAR NORTH

Zenith Minerals Limited ("Zenith" or the "Company") advises that the recent announcement by Zenith Minerals dated 12<sup>th</sup> December 2024 titled "40% Increase in Mineral Resource - Dulcie Far North (DFN)", we referred the reader to the previous release of 28<sup>th</sup> November 2024 titled "Highly Encouraging Results Returned from Drilling at Dulcie Far North (DFN)" that contained all the of the exploration results related to the MRE upgrade reported in the 12<sup>th</sup> December 2024 announcement.

As per ASX listing rule 5.8 in relation to a "material change" in the Mineral Resource Estimate, we now have added figures 9 and 10 and tables 5 and 6 to this announcement, repeated from figures 4 and 5 and tables 1 and 2 from the 28<sup>th</sup> November 2024 announcement.

This ASX announcement has been authorised by the Board of Zenith Minerals Limited.

For further information, please contact:

**Zenith Minerals Limited** 

Andrew Smith Managing Director P: +61 8 9226 1110

E: info@zenithminerals.com.au



### **40% INCREASE IN MINERAL RESOURCE**

Dulcie Far North (DFN)

#### **Investment highlights**

- Zenith Minerals Limited ("Zenith" or "the Company") is pleased to announce an updated Mineral Resource estimate for its 100% owned Dulcie Far North (DFN) project following the successful completion of 17 Reverse Circulation (RC) drill holes in October 2024.
- The updated Inferred Mineral Resource estimate for Dulcie Far North at a 0.5 g/t Au cut-off is:

# 5.1 million tonnes at 1.3 g/t Au for 210,000 ounces of contained gold.1

- This update represents a +40% increase in contained metal compared to the Maiden Resource announced in July 2023, driven by both extension and infill drilling of previously defined lodes, as well as the identification of new footwall lodes.
- Dulcie Far North now comprises six stacked, shallow-to-moderately dipping gold-bearing lodes, with scope for further expansion through targeted drilling in the footwall domains.
- Zenith acquired the granted Dulcie Far North Mining Lease (M77/1292) in January 2023, securing 100% of gold rights below 6 metres and all other mineral rights, including lithium, from the surface.

#### **Next Steps**

Zenith Minerals is planning additional drilling to further test extensions and to define the extent of newly discovered gold-bearing footwall lodes, aiming to enhance the Inferred Mineral Resource at Dulcie Far North.

Subsequently, the Company intends to undertake tighter infill drilling to support an upgrade to **Indicated classification**.

#### **Managing Director Andrew Smith said:**

"This Mineral Resource update at Dulcie Far North, a 100% owned Zenith asset, highlights the consistent progress we are making in unlocking the potential of this strategic project. The substantial increase in gold ounces, achieved through both extension and infill drilling, underscores the quality of our geological understanding and the broader prospectivity of Dulcie Far North. With clear opportunities to further grow and optimise the Resource, we are excited about the next phase of development as we advance Dulcie Far North towards becoming a major contributor to Zenith's gold portfolio."

<sup>&</sup>lt;sup>1</sup> The Mineral Resource estimate was prepared and reported in accordance with the guidelines of the (JORC 2012 edition) as of 8<sup>th</sup> December 2024 with John Horton acting as competent person.

# **Split Rocks Gold Project - Dulcie Far North**

The Split Rocks Gold Project is situated 400 km east of Perth and approximately 80 km south of Southern Cross, within the Western Australian Yilgarn Craton (Figure 1).

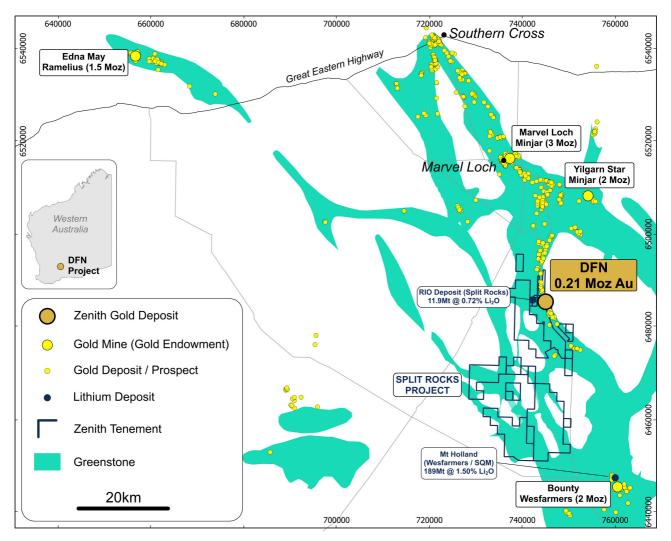


Figure 1: Split Rocks Gold Project and Dulcie Far North regional location and geology

Zenith acquired the title and 100% of all the minerals rights to the Dulcie Far North tenement (M77/1292) from a private syndicate in January 2023. The syndicate retains a 2% NSR Royalty on any gold or lithium mined from the tenement below 6m and a third party holds a 0.125% Net Profit Royalty on any gold mined below 6 m from surface.

#### **Geology**

The geology at Dulcie Far North is dominated by a deeply weathered (30-40 m below surface) preserved Tertiary lateritic profile overprinting Archaean bedrock, including tholeitic metabasalts (amphibolites) and a series of narrow (<10 m thick) interflow sedimentary banded iron formation (BIF) units. The stratigraphy dips consistently 30° to the west and strikes between 330°-345° north-westwards (Figure 2).

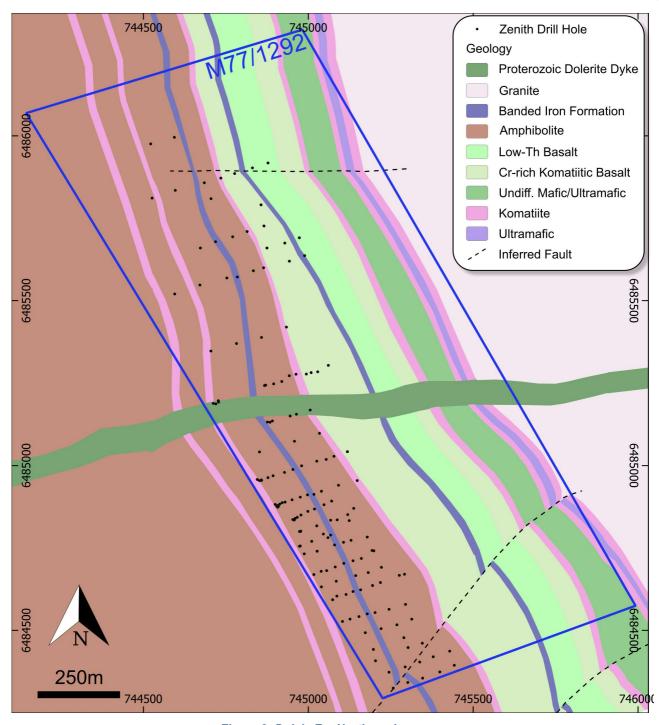


Figure 2: Dulcie Far North geology map

A late-stage, undeformed, east-west trending gabbroic Proterozoic dyke intrudes the central portion of the tenement. Finer grained doleritic chilled margins are noted in contact with the amphibolites. The stratigraphy is also stopped by a series of late-stage pegmatite sills, running parallel to the foliation. Intrusive and faulted contacts are mapped within the pegmatites.

Structurally, Dulcie Far North lies along the regionally extensive (7 km strike) Dulcie Gold Trend. The shear zone, where drilled, is at least 100 m wide and the foliation parallels the 30° west dip of the stratigraphic sequence. Multiple stacked lodes are recorded within the shear zone. The shear zone is ductile and exhibits extensive boudinaging of the host amphibolites and BIF units.

Hydrothermal alteration including replacement of magnetite by pyrrhotite sees banded to wispy and massive pyrrhotite occupying the boudin necks and vein fractures in the amphibolites and BIF respectively as well as being more pervasively distributed on or near the amphibolite-BIF contacts. Extensive calc-silicate alteration is noted, with calcic green hornblende plus red almandine (garnet) dominating.

Feldspar-phyric porphyries show rotation of the (plagioclase) porphyroblasts displaying consistent sinistral displacements, indicating (normal) top block west movement.

Limited late-stage vertical sinistral faulting and broader carbonate healed breccia fault zones are occasionally noted but they are not dominant in the otherwise extremely competent (100% core recovery) west-dipping host rocks.

## **Exploration Drilling**

Previous drilling and sampling at Dulcie Far North included several phases of drilling as summarised in Table 1. The historical drilling was restricted to three cross sections. Historic holes on two cross sections have been superseded by new Zenith drilling because of location accuracy concerns of the older generation of holes. Due to these concerns, the historical drilling is excluded from the Mineral Resource estimate, although the previous work provides an excellent exploration guide.

Company	Year (circa)	Drill Type	Drill Names	Holes	Total Depth m	Au Assays	
		AC	DAC001 - DAC019	19	773	158	
Aztec	1991	RAB	DL096 - DL250	24	696	175	
		RC	DLP004 - DLP006	3	226	46	
Sons of Gwalia	1996	RAB	PDS1055 - PDA1056, PSR70 - PSR094	14	608	208	
		AC	PSA008 - PSA099	44	1863	700	
Gascoyne Gold Mines	1998	RC	P7SRC1 - P7SRC8	8	716	359	
Total				112	4882	1646	

Table 1: Dulcie Far North historical drilling summary - not used for the Mineral Resource

Zenith commenced exploration along the 7 km striking Dulcie Gold Trend after signing a Mineral Rights Option to Purchase Agreement with the vendors in March 2019. Exploration extended to the Dulcie Far North tenement in 2020 with an initial RC program. The results indicated mineralising structures similar to those encountered further south but cast doubts on the accuracy of the historical drilling (described above). Follow-up drilling in 2021 used shallower Aircore drilling to assess the orientation of the mineralisation structures. Subsequent RC drilling in 2022 and RC-diamond drilling in 2023 and 2024 were used to follow the moderately dipping mineralisation structure down dip and along strike. The programs are summarised annually in Table 2. Individual details of previous drilling campaigns are provided in previous announcements dated (11 Jul 2023 and 28 Nov 2024).

Drilling by Zenith has been undertaken on both existing and new infill and extensional drill lines, with spacing 40 m to 80 m over the southern 800 m strike extent. The drilling is more broadly spaced over the northern 800 m strike extent of the mining lease (Figure 3).

Drilling is predominantly oriented at 60° to 70° towards the ENE to present an optimal intersection angle for the fresh and saprolite gold-bearing domains (Figure 4). The deepest areas have less optimal, near vertical or partially down dip intersection angles due to restrictions from existing cleared lines and the

tenement boundary. Though the deep drilling intersection angle is less optimal it comprises diamond core sampling and is therefore considered suitable.

Table 2: Dulcie Far North Zenith drilling summary - used for the Mineral Resource

Year	Drill Type	Holes	Total Drilled (m)	Down Hole Surveys	Core Sampled (m)	RC/AC Sampled (m)	Au Assays
2019	RC	1	150	3	0	150	71
2020	AC	8	381	8	0	381	194
2021	AC	36	1538	36	0	1537	843
2021	RC	66	3005	66	0	2771	1577
2022	RC	32	4104	118	0	4072	4072
2023	RC	4	431	19	0	427	289
2023	RCD	14	2189.3	417	299.8	1397	830
2024	RC	17	2268	257	0	2232	1932
Total		178	14066.3	924	299.8	12967	9808

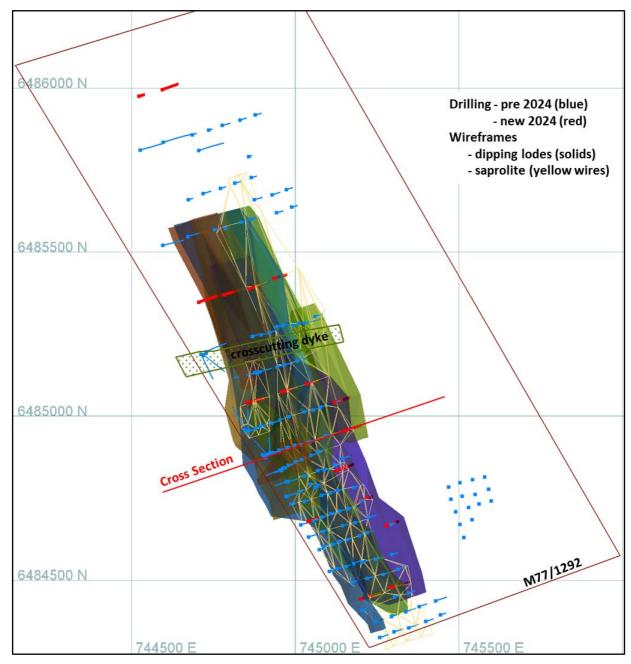


Figure 3: Dulcie Far North drill hole plan and mineralisation wireframes

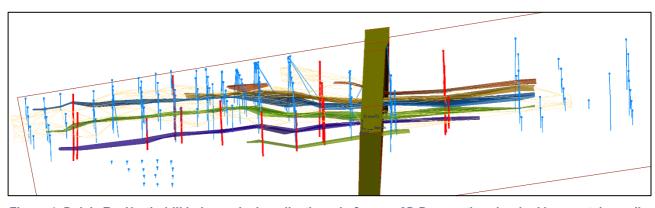


Figure 4: Dulcie Far North drill holes and mineralisation wireframes, 3D Perspective view looking west down-dip

### **Sampling/Sample Analysis**

All Zenith single metre RC and/or Aircore samples were collected from 1m riffle split or cone split intervals. The 1m Aircore bulk residue samples were deposited in rows of 10 or 20 on the ground, and the 1m RC samples were deposited into plastic bags. 4m Aircore composites were speared from the single metre spoils on the ground, while the 4m RC composite intervals were speared from the single metre plastic bags. The corresponding single metre cone or riffle split samples were collected for analysis when the 4m composite sample exceeded 0.25 g/t Au.

Diamond core holes in 2023 were oriented (bottom of hole), metre marked and geologically logged onsite. Core trays were despatched to Kalgoorlie for photographing and cutting. Core was half-cut, and samples were collected on 1m or less geological contacts.

All drill samples were despatched to commercial laboratories in Kalgoorlie or Perth for gold only determination using fire assay (50 g charge) with an AAS finish.

During all the RC and diamond drilling programs, duplicate samples were inserted every 25th sample (until 2023) or every 33rd sample (2024), certified gold reference material every 50th sample and controlled blanks were inserted every 100th sample. QAQC analysis was completed to assess any laboratory bias on these reference materials, and on the laboratories' internal QAQC checks to ensure best practice sampling and assay determination was maintained throughout the drilling, sampling and analysis process.

Collar surveys were completed inhouse with a Real-Time-Kinetic Global Positioning System (RTK-GPS) unit prior to 2023. In March 2023 licenced surveyors were engaged to pick up the 2023 drilling collars using an RTK-GPS and establish survey controls over the prospect area for the earlier drilling. 2024 collar positions were evaluated by surveyors using a Differential Global Positioning System (DGPS). A drone digital elevation model (DEM) survey with aerial photography was employed to assist future drill hole planning and modelling. Drill collar surveys prior to 2023 were corrected to the DEM survey reduced level (RL).

Downhole multi-shot camera surveys were undertaken upon completion of each RC hole by the drilling contractors during each program. The 2023 diamond holes were surveyed using continuous downhole gyroscopic surveys on all diamond tails.

# Interpretation

Surface topography is based on a drone DEM survey and extended where necessary based on drill collar surveys.

The weathering profile was interpreted from logged material types and wireframed (Figure 5) in three dimensions using the Vulcan<sup>TM</sup> software package. A Proterozoic dyke was interpreted and wireframed from geophysical data and confirmed by drilling. The dyke crosscuts the mineralisation at about 6,485,200 mN.

Mineral Resource domains were interpreted using a 0.3 g/t Au grade threshold guideline on cross sections and wireframed. Generally, on each section there are three dominant planar hypogene gold

domains dipping 30° towards WSW (250°) defined by drilling (Figure 4). In places there is evidence of an additional hanging wall zone and two footwall gold zones.

A saprolite hosted sub-horizontal gold zone is evident and interpreted wherever mineralisation is potentially supergene enriched with respect to the interpreted oxidation surface (Figure 5). The supergene gold mineralisation is strongest under the up-dip projection of the hypogene gold domains and follows the oxidation surface and down into the immediate footwall areas (i.e. eastern spread). Development of supergene gold mineralisation between the dominant hypogene gold mineralised structures is variable and patchy. At this stage the supergene gold blanket has been interpreted through the more weakly gold mineralised portions of the deposit.

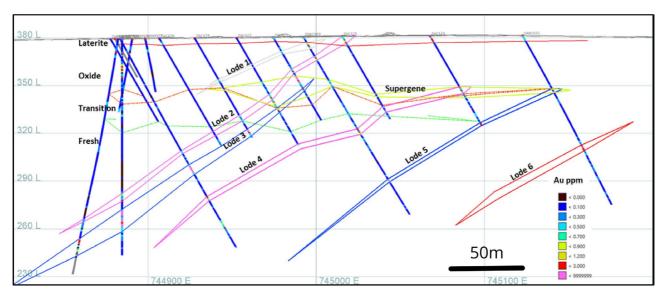


Figure 5: Dulcie Far North example cross section – weathering and resource domain wireframes; see Figure 3 for cross section location

#### **Estimation**

A sub-celled block model was constructed with parent (maximum) block sizes of 10 by 10 by 8m for waste but with a maximum of 5 by 10 by 2m for all Mineral Resource domains. Sub-celling down to 5 by 1m was allowed to provide volume accuracy.

Block grades were estimated using inverse distance squared weighting and an assumed anisotropy ratio of 1 by 0.6 by 0.2, using 2m composites cut to a maximum gold grade of 10 g/t Au.

For the hypogene (fresh) gold domains the estimation was oriented at a plunge of 20° towards 305° within the overall plane that dips at 30° towards 250°. The plunge reflects structural observations collected from diamond drill core by the exploration team.

For the supergene gold domain, estimation was oriented as a flattening horizontal anisotropy with the plunge reflecting the intersection with the mineralising structures and a strike of 340°.

Estimation searches used two consecutive passes. The first pass for gold mineralisation domains targeted at estimating potentially Inferred mineralisation and the second pass to fill the model with extrapolated estimates for future exploration planning purposes. The initial search pass of 80m by 60m

by 20m and then 200m by 100m by 40m if un-estimated, or if <2 drill holes were used in the first pass. Additional estimated parameters included:

- 3 composites per drill hole
- maximum 15 composites.

Figure 6 displays the estimated gold grades for all blocks on a typical cross section through the Dulcie Far North gold deposit.

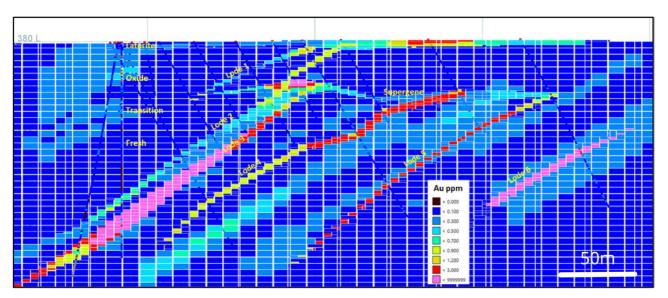


Figure 6: Dulcie Far North example cross section with estimate Au block grades; see Figure 3 for cross section location

In 2023 Zenith determined 71 bulk density measurements for half and whole core samples using a water immersion method. All samples were from deeper fresh material, and they included 15 measurements from within the Mineral Resource domains. Samples were dominantly amphibolite and average 3.0 to 3.1 t/m³ for waste and gold mineralised samples. High density values are supported by the intensity of metamorphism and some occurrence of magnetite and pyrrhotite.

At this early stage of assessment, a lower average is assumed for the fresh and general assumptions made for the weathered material types for which there is no current data. Bulk density values for the estimate include:

•	Laterite	2.0 t/m <sup>3</sup>
•	Oxide and Saprolite	$1.7 \text{ t/m}^3$
•	Fresh	$3.0 \text{ t/m}^3$

#### Classification

The reported Mineral Resource is considered suitable for Inferred Mineral Resource classification under the JORC (2012) Code with JORC table 1 details provided in Appendix A. Inferred classification is limited to blocks within 40 m of a drill hole or areas where three drill holes fall within a 90m radius. The process is identical to the previous Mineral Resource.

Figure 7 and Figure 8 provide an overview of the Inferred classification and block grades. Note that the supergene is broken out so as to not obscure the underlying hypogene gold domains. However, the hypogene gold domains also overlap and obscure the fact that some of the new lower gold domains have unclassified areas due to the wide drill spacing in the footwall areas.

Only 70% of the interpreted domain volumes are classified as Inferred and included in the reported Mineral Resource Estimate, with the remaining 30% presenting additional upside potential between existing drill lines that requires further drill confirmation.

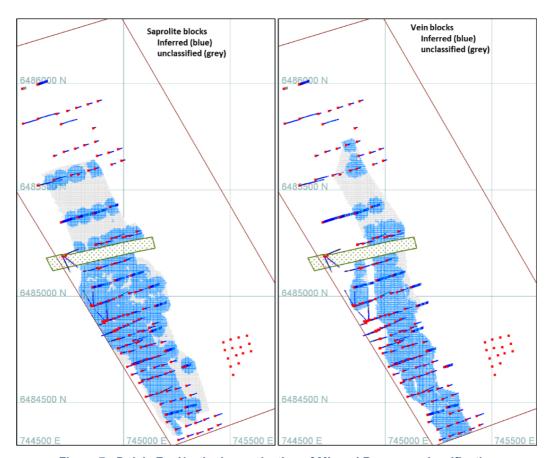


Figure 7: Dulcie Far North plan projection of Mineral Resource classification

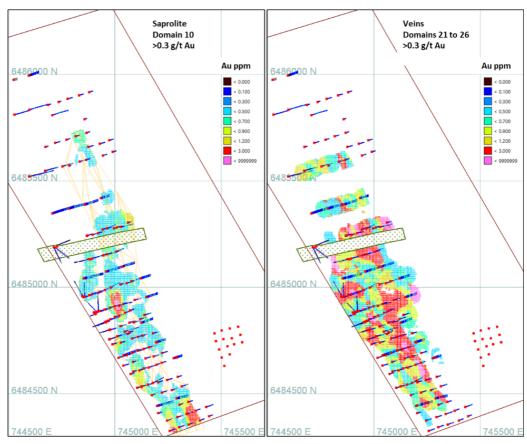


Figure 8: Dulcie Far North Plan Inferred Mineral Resource Au grade

# Mining and cut-off grade

There are no available mining or geotechnical studies at this stage. Mining is assumed to be best suited to open pit methods. The shallow dip and grade profile would generally be unsuitable for underground mining.

The Mineral Resource reported at a cut-off grade of  $0.5\,\mathrm{g/t}$  Au is considered reasonable for a standalone open pit mining option.

Preliminary pit optimisation for the previous Mineral Resource completed in early 2024 was undertaken by an independent mining engineer for internal management purposes only. This work indicated an open pit depth of 130 m and included the majority of the Mineral Resource. Though the pit is now out of date this work demonstrates reasonable prospects for economic extraction even with the 20m deepening of the block model and additional stacked lodes included in this updated Mineral Resource.

An alternative higher grade 1.5 g/t Au cut-off is included as an indication of the material that may suit toll treatment at existing mills in the region. This would include additional haulage distances of greater than 70 km.

#### Metallurgy

There is no metallurgical test work completed to date and no mining modifying factors or assumptions applied. The occurrence of pyrrhotite in drill core suggests that pressure oxidation or similar may be needed to obtain high recovery.

Zenith undertook some metallurgical test work on similar Dulcie mineralisation from the same mineralisation trend but ~3 km to the south of Dulcie Far North. Recoveries were >90% for laterite, saprolite and fresh mineralisation, see ASX-ZNC announcement dated 31 March 2021.

#### **Mineral Resource**

The Zenith (100%) Mineral Resource excludes the "Surface Gold" which includes all laterites and some oxide and supergene material.

The Dulcie Far North Mineral Resource is reported using a 0.5 g/t Au lower cut-off, which is assumed to be suitable for open pit mining and onsite processing. For a grade tonnage curve (8<sup>th</sup> December 2024) see Table 4.

The Mineral Resource for Dulcie Far North at a 0.5 g/t Au cut-off includes:

### Inferred Mineral Resource of 5.1 Mt at 1.3 g/t Au for 210 koz Au in-situ

Table 3 provides a breakdown of the 0.5 g/t Au cut-off Inferred Mineral Resource by weathering type and indicates little oxide and dominantly fresh hypogene material.

Table 3: Inferred Mineral Resource for Dulcie Far North as at 8 December (0.5 g/t Au cut-off by weathering zone)

Weathering Zone	Tonnes Mt	Bulk Density t/m³	Gold Au g/t	Metal Au koz
Oxide	0.30	1.70	1.14	11
Saprolite	0.64	1.70	1.18	24
Fresh	4.20	3.00	1.33	179
Total	5.14	2.63	1.30	214

The Mineral Resource at the 0.5 g/t Au cut-off represents a +40% increase in metal over the maiden Mineral Resource of 3.4 Mt at 1.4 g/t Au for 150 koz, announced on 11 July 2023. The additions can be attributed as half due to new footwall lodes and the other half due to extensions and infill drilling of the previously defined gold lodes. The Mineral Resource now comprises 6 stacked gold lodes along with a supergene gold zone.

Table 4: Dulcie Far North Inferred Zenith Mineral Resource grade tonnage curve <360 m RL

Cut-off	Mt	Au g/t	Au koz	9.00
0.0	8.34	0.93	249	
0.1	8.27	0.94	250	7.50
0.2	7.95	0.97	248	
0.3	7.19	1.04	240	
0.4	6.25	1.15	231	6.00
0.5	5.14	1.30	215	
0.6	4.42	1.42	201	4.50
0.7	3.80	1.54	188	1.50 ¥
0.8	3.28	1.67	176	3.00
0.9	2.81	1.81	164	3.00
1.0	2.41	1.95	151	
1.1	2.06	2.10	139	1.50 0.50
1.2	1.82	2.23	131	→Mt →Au g/t
1.3	1.59	2.37	121	0.00
1.4	1.42	2.49	113	0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5
1.5	1.27	2.61	107	Cut-off Au g/t

All Mineral Resources reported are constrained by the M77/1292 tenement boundary. The intersection of the hypogene mineralisation with the tenement occurs at 110 to 170 m below surface.

An alternative development approach to an onsite processing facility could involve mining and toll treatment at existing regional gold processing facilities. The additional costs including ore haulage would require a higher cut-off grade in the range of 1.5 to 2.0 g/t Au. The Inferred Mineral Resource reported at this higher 1.5 g/t Au cut-off is:

Inferred Mineral Resource of 1.3 Mt at 2.6 g/t Au for 110 koz Au in-situ as at 8th December 2024

Due to the low threshold used for interpretation, the higher-grade cut-off Mineral Resource will include additional grade estimation smoothing and greater uncertainty.

Assessment of the Mineral Resource against the JORC Table 1 criteria are provided in Appendix A.

#### **Potential and Risk**

Dulcie Far North presents significant exploration potential and upside, including:

- Saprolite bulk density may be higher and is currently untested.
- Areas interpreted but not classified due to wide spaced drill sections (see Figure 7).
- Extension of the hypogene zones both to the south, north and down-dip.
- Additional footwall structure is indicated by some laterite drilling further to the east but not drill tested.

#### Risks to the Mineral Resource include:

- Pit optimisation work has not yet been completed, including new drill data, to test if the total 120m vertical depth extent is viable for the available processing options and grade tenor.
- Some (~20%) of the Mineral resources would require a Mining Lease extension or agreement to allow extraction by open pit mining.
- The designation of surface gold rights is based on the best estimate of topography over the full
  mining lease. This will be subject to minor changes when the full ML is surveyed since the
  contractual agreement relates to the 6m below the lowest point of the ML. At this stage the
  lowest point is indicated but not yet accurately surveyed.
- Recent drilling has highlighted a likely saprock zonation for the weathering profile. It is not yet
  understood if this will affect the current density assumptions which are biased to deep sampling.
  Saprock as well as transition and oxide bulk density remain loosely defined and a key aspect for
  further definition.
- Detailed metallurgical gold extraction test work is required to assess how gold may be potentially recovered from the various gold lodes.

# Drill holes, Drill Hole Collar Information and Significant Intercepts Tables from the 28th November 2024 Exploration Results Announcement

All exploration related results used in this MRE upgrade were reported on 28<sup>th</sup> November, 2024 in the announcement titled "Highly Encouraging Results Returned from Recently Completed RC Drilling at Dulcie Far North (DFN)", available on the Zenith Mineral's Investor web page and including again here for ease of reference:

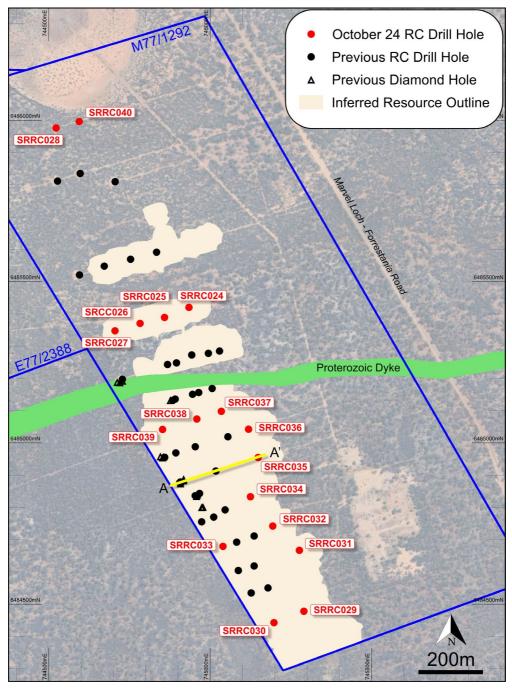


Figure 9: Zenith's Dulcie Far North RC + diamond drilling coverage over the Inferred Mineral Resource, highlighting the recent October 2024 RC drill holes in red (AC holes not displayed for clarity).

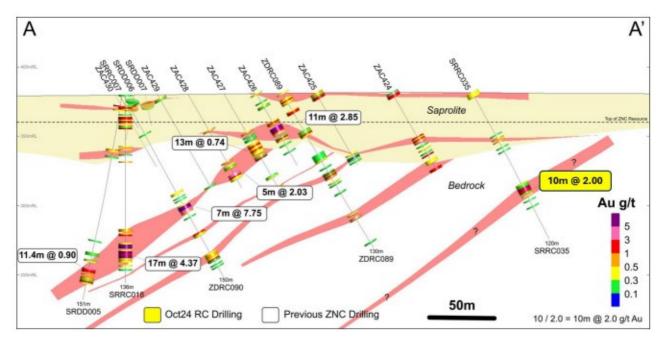


Figure 10: Cross section A-A' from Figure 9 (+/- 25m) indicating significant (>0.3 g/t Au) mineralisation encountered in SRRC035 at the eastern extent of the project area. Excellent potential is seen for multiple stacked footwall lodes to be encountered with further drilling planned along strike N-S.

Table 5: DFN October 2024 RC Drill Collar Location Details

HOLE ID	Easting GDA94z50	Northing GDA94z50	RL	EOH (m)	Azimuth	Dip	Status
SRRC024	744934	6485420	370	84	74	-60	Complete
SRRC025	744859	6485389	370	138	74	-60	Complete
SRRC026	744783	6485370	369	180	74	-60	Complete
SRRC027	744705	6485347	369	228	74	-60	Complete
SRRC028	744523	6485976	367	38	74	-60	Abandoned
SRRC029	745290	6484478	391	126	74	-60	Complete
SRRC030	745198	6484442	388	180	74	-60	Complete
SRRC031	745276	6484667	387	84	74	-60	Complete
SRRC032	745194	6484742	384	96	74	-60	Complete
SRRC033	745040	6484679	384	174	74	-60	Complete
SRRC034	745125	6484833	383	120	74	-60	Complete
SRRC035	745149	6484954	381	120	74	-60	Complete
SRRC036	745119	6485042	379	108	74	-60	Complete
SRRC037	745034	6485098	377	126	74	-60	Complete
SRRC038	744958	6485074	377	160	74	-60	Complete
SRRC039	744852	6485041	377	204	74	-60	Complete
SRRC040	744594	6485996	366	102	74	-60	Complete

Table 6: DFN Significant (> 0.1g/t Au) Gold Intersections (Shaded results are from ASX ZNC Release - 28 October 2024)

HOLE ID	From	То	Interval (m)	Gold (g/t)
SRRC024	0	4	4	0.17
and	18	31	13	0.22
and	38	49	11	0.26
and	83	84	1 (eoh)	0.16
SRRC025	0	4	4	0.11
and	30	48	18	0.13
and	55	57	2	0.25
and	62	77	15	0.43
incl	70	71	1	2.46
and	115	117	2	0.35
SRRC026	0	4	4	0.11
and	54	70	16	0.66
incl	61	62	1	1.16
and incl	68	69	1	7.18
and	78	96	18	0.83
incl	79	83	4	3.15
and	102	143	41	0.30
incl	116	117	1	3.47
and incl	136	137	1	1.08
and	149	150	1	0.17
and	165	169	4	0.16
and	175	180	5 (eoh)	0.19
SRRC027	57	58	1	0.42
and	64	65	1	0.10
and	110	122	12	0.23
and	134	189	55	0.32
incl	135	137	2	3.04
and incl	164	165	1	1.18
and incl	187	188	1	1.63
and	204	205	1	0.47
SRRC028				NSR
SRRC029	0	8	8	0.23
and	28	52	24	0.62
incl	35	37	2	4.90
and	63	70	7	0.09
and	94	104	10	0.21
and	110	118	8	0.18
and	123	124	1	0.10
SRRC030	4	8	4	0.18
and	14	21	7	0.38
incl	19	20	1	1.46

HOLE ID	From	То	Interval (m)	Gold (g/t)
and	33	34	1	0.40
and	45	46	1	0.18
and	54	55	1	0.22
and	73	88	15	1.01
incl	79	81	2	3.13
and incl	84	85	1	1.79
and incl	86	87	1	3.83
and	141	162	21	0.26
incl	141	142	1	1.98
and	170	177	7	0.11
SRRC031	0	4	4	0.15
and	44	45	1	0.23
and	57	71	14	0.26
and	76	81	5	0.12
SRRC032	0	4	4	0.12
and	32	39	7	0.58
incl	35	<b>36</b>	1	1.07
and	48	49	1	0.11
and	61	62	1	0.15
and	67	94	27	0.13
incl	68	69	1	2.23
SRRC033	38	39	1	0.25
	48	52	4	0.23
and	64	66	2	0.14
and	80	83	3	0.27
and		109	11	1.74
and	98 105	109	2	
incl	125	107	2	8.07
and		174		0.20
and SRRC034	152 0	10	22 (eoh)	0.26 0.23
incl	<b>8</b>	9	10 <b>1</b>	1.78
	36	48	12	
and incl	38	39	1	0.32 <b>2.01</b>
	53	54	1	
and and	61	88	27	0.22 0.41
	61	<b>62</b>	1	3.12
incl		97		
and	94		3 6	0.11
and	102	108	1	0.09
and SRRC035	117 0	118 4	4	0.14
				0.46
and	35	49	14	0.23
and	72 <b>79</b>	103	31 <b>4</b>	0.72
incl	78	116		4.58
and	111	116	5	0.10
SRRC036	0	12	12	0.49

HOLE ID	From	То	Interval (m)	Gold (g/t)
and	32	42	10	0.08
and	48	67	19	0.22
incl	56	57	1	1.33
and	73	82	9	0.15
and	95	102	7	0.31
SRRC037	0	4	4	0.32
and	27	35	8	0.35
incl	27	28	1	1.64
and	42	51	9	0.35
incl	42	43	1	1.02
and	58	82	24	0.21
and	87	89	2	0.22
and	102	103	1	0.14
and	114	120	6	0.09
SRRC038	33	56	23	0.16
incl	35	36	1	1.04
and	62	69	7	0.58
incl	67	68	1	2.58
and	74	85	11	0.26
and	101	122	21	0.17
and	130	131	1	0.12
and	143	151	8	0.14
SRRC039	38	55	17	0.54
incl	44	45	1	1.84
and incl	49	50	1	2.52
and	84	85	1	0.48
and	92	95	3	0.24
and	103	105	2	0.20
and	112	113	1	0.17
and	118	119	1	0.11
and	124	125	1	0.27
and	133	167	34	0.28
incl	134	136	2	1.51
and	173	180	7	0.41
incl	177	178	1	1.24
and	200	202	2	0.11
SRRC040	49	50	1	0.18
and	61	63	2	0.16
and	75	76	1	0.63

<sup>0.1</sup>g/t Au cutoff with maximum 4m consecutive internal dilution; 'Included' are 1g/t Au cutoff with no internal dilution. True widths are estimated to be 90% of the reported downhole intersections.

# For further information, please contact:

#### **Zenith Minerals Limited**

Andrew Smith
Managing Director
P: +61 8 9226 1110
E: info@zenithminerals.com.au

# To learn more, please visit www.zenithminerals.com.au

This ASX announcement has been authorised by the Board of Zenith Minerals Limited.

#### **About Zenith Minerals Limited**

Zenith Minerals Limited (ASX: ZNC) is an Australian exploration company focused on advancing a diverse portfolio of gold and lithium projects in Western Australia and Queensland. The company is strategically positioned to capitalise on the growing demand for both precious metals and battery minerals. Key gold assets include the Red Mountain project in Queensland, which has returned high-grade results, and the Dulcie Far North project in Western Australia, located within the highly prospective Southern Cross/Forrestania Greenstone Belt. On the lithium front, Zenith's Split Rocks project has established a maiden resource, while the Waratah Well project presents further exploration potential. In addition to its core projects, Zenith holds a 25% interest in the Earaheedy Zinc Deposit, free carried through to a bankable feasibility study with Rumble Resources Limited.

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results and Exploration Activities is based on information compiled by Mr. Christopher Shanley, who is a Member of the Australian Institute of Geoscientists and full-time employee of Zenith Minerals Limited. Mr. Shanley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr. Shanley consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mr. John Horton, who is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and a full time employee of ResEval Pty Ltd. Mr. Horton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr. Horton consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# Appendix A: Dulcie Far North - JORC Table 1

Part 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.	Historic drilling prior to 2020 includes 112 RAB RC, and Aircore drill holes by Aztec, Sons of Gwalia and Gascoyne Gold Mines in the 1990s. This covers three previous sections at Dulcie Far North (DFN). Drilling displays similar mineralisation tenor but with inconsistent results suggesting locational offsets Two of the three sections are now entirely redrilled. Locational and quality issues prevent the use of all historic drilling being used for the Mineral Resource and they are not further described. The data provides a very useful exploration guide.  Zenith completed RC and diamond drilling between 2019 and 2024  Zenith RC intervals are systematically sampled using industry standard 1m intervals. Outside of mineralisation 4m composites  Reconnaissance Aircore traverses use 4m composites.  Surface and precollared Diamond holes may be sampled along sub 1m geological contacts, otherwise 1m intervals are the default.  Drill hole locations were designed to allow for spatial spread across the interpreted mineralised zone.  RC samples are collected, and cone split to 3-4 kg samples on 1m metre intervals, then 4m composites are speared from the bulk residue bags before despatching the laboratory.  Aircore samples are speared from piles on the ground and are composited into 4m intervals before despatching to the laboratory.  Single metre bottom of hole Aircore samples are also collected for trace element determinations.  Diamond core is half cut along downhole orientation lines. Half core is sent to the laboratory for analysis and the other half is retained for future reference.  Zenith drill samples use standard fire assaying with a 50 g charge with an OES finish. Trace element determination when undertaken uses a multi (4) acid digest and ICP- AES or MS finish.

Criteria	JORC Code explanation	Commentary
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).	Zenith drilling is completed using best practice NQ diamond core, face sampling RC drilling hammers (5 ¾" until 2003 and 5" in 2024) for all RC drill holes and 3" Aircore bits/RC hammers.
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.	All Zenith diamond core is jigsawed to ensure any core loss, if present is fully accounted for. Bulk RC and Aircore drill holes samples are visually inspected by the supervising geologist to ensure adequate clean sample recoveries are achieved. Note Aircore drilling while clean is not preferred in any resource estimation work. Any wet, contaminated or poor sample returns are flagged and recorded in the database to ensure no sampling bias is introduced.  Zones of poor sample return both in RC and Aircore are recorded in the database and cross checked once assay results are received from the laboratory to ensure no misrepresentation of sampling intervals has occurred.
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.	All drill samples are geologically logged on site by professional geologists. Details on the host lithologies, deformation, dominant minerals including sulphide species and alteration minerals plus veining are recorded as drilling progresses.  Drill hole logging is qualitative on visual recordings of rock forming minerals and quantitative on estimates of mineral abundance.  The entire length of each drill hole is geologically logged.
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	Duplicate samples are collected regularly (every 25 <sup>th</sup> until 2023 and every 33 <sup>rd</sup> in 2024 sample) from the RC and Aircore chips as well as quarter core from the diamond holes. Further, with selected drill-outs additional duplicates will be planned by ensuring there is an adequate spread of duplicate samples (25%) taken from predicted ore positions when ore zones are projected from adjacent drill holes.  Dry RC 1m samples are cone/riffle split to 1-2 kg as drilled and dispatched to the laboratory. Any wet samples are recorded in the database as such and allowed to dry before riffle splitting and dispatching to the laboratory.  All core, RC and Aircore chips are pulverized

Criteria	JORC Code explanation	Commentary
	sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	prior to splitting in the laboratory to ensure homogenous samples with >85% passing 75µm. 200 gm is extracted by spatula that is used for the 50 g charge on standard fire assays.  All samples submitted to the laboratory are sorted and reconciled against the submission documents. In addition to duplicates a high
		grade or low-grade standard is included every 50 <sup>th</sup> sample, a controlled blank is inserted every 100 <sup>th</sup> sample. The laboratory uses barren flushes to clean their pulveriser and their own internal standards and duplicates to ensure industry best practice quality control is maintained.
		The sample size is considered appropriate for the type, style, thickness and consistency of mineralisation.
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.	The fire assay method is designed to measure the total gold in the core, RC and Aircore samples. The technique involves standard fire assays using a 50 g sample charge with a lead flux (decomposed in the furnace). The prill is totally digested by HCl and HNO3 acids before measurement of the gold determination with ICP-OES finishes to give a lower limit of detection of 0.01 g/t Au. Aqua regia digest is considered adequate for surface soil sampling. Zenith included six different CRMs in total along with blanks that provided acceptable results. Zenith undertook regular field duplicates. These indicate an average variance of 15% which is greater than normally considered acceptable. However, some appear to be field errors. High variance is not evident for laboratory duplicates and repeats (5%). Further investigative work remains but considered acceptable for the current classification.  No field analyses of gold grades are completed. Quantitative analysis of the gold content and trace elements is undertaken in a controlled laboratory environment.  Industry best practice is employed with the inclusion of duplicates and standards as discussed above and used by Zenith as well as the laboratory. All Zenith standards and blanks are interrogated to ensure they lie within acceptable tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias.

Criteria	JORC Code explanation	Commentary
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.	As part of the review process, alternative Zenith personnel must also inspect the diamond core, RC and Aircore chips in the field to verify the correlation of mineralised zones between assay results and lithology, alteration and mineralisation.  All holes are digitally logged in the field and all primary data is forwarded to Zenith's Database Administrator (DBA) where it is imported into MX Deposit (a commercially database package). Assay data is electronically merged when received from the laboratory. The responsible project geologist reviews the data in the database to ensure that it is correct and has merged properly and that all the drill data collected in the field has been captured and entered into the database correctly.  The responsible geologist makes the DBA aware of any errors and/or omissions to the database and the corrections (if required) are made in the database immediately.  No adjustments or calibrations are made to any of the assay data recorded in the database.
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.	All hole collars are surveyed in MGA94 – Zone 50 grid coordinates using accurate differential GPS. 2023 drilling is surveyed by a licenced surveyor and RLs of earlier drilling corrected to a drone DEM survey. 2024 drilling was located by DGPS by surveyors. A few 2024 drill holes displayed some elevation drift and require resurvey.  All down hole surveys are collected using north seeking gyroscopic survey tools.
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 core drilling and RC drilling is generally completed orthogonal to the interpreted strike of the target horizon(s). In the case of DFN, the dominant strike of mineralisation is ~340° so drill hole azimuths were planned towards 60°-70°.  Aircore drilling is completed on systematic MGA E-W or N-S traverses with holes nominally 50 m apart.
Sample security	The measures taken to ensure sample security.	Sample security is integral to Zenith's sampling procedures. All bagged samples are delivered directly from the field to the dispatch centre in Southern Cross. The samples are placed in a bulka bag and dispatched overnight to the assay laboratory in Perth or Kalgoorlie whereupon the

Criteria	JORC Code explanation	Commentary
		laboratory checks the physically received samples against Zenith's sample submission/dispatch notes.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques and procedures are reviewed prior to the commencement of new work programmes to ensure adequate procedures are in place to maximize the sample collection and sample quality on new projects. No external audits have been completed.

Part 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.	The DFN Tenement (M77/1292) is owned 100% by Zenith (excluding third-party Nickel Sulphide rights and third-party rights to Surface Gold -the area of the Tenement that is less than 6 metres below the lowest part of the natural surface of the Tenement.)  A 2% Net Smelter Return Royalty is payable on all gold or lithium mined below 6 m from surface and a 0.125% Net Profit Royalty is payable on any gold mined below 6 m from surface.  Heritage surveys are completed as required prior to any ground disturbing activities in accordance with Zenith's responsibilities under the Aboriginal Heritage Act in Australia.  Currently the Tenement is in good standing. There are no known impediments to obtaining additional licences to operate in the area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Exploration and mining by other parties has been reviewed and is used as a guide to Zenith's exploration activities.  Previous parties completed shallow RAB, Aircore and RC drilling over parts of the project. The collar locations are uncertain and unverified, and the data is not relied upon or used for the Mineral Resource.
Geology	Deposit type, geological setting and style of mineralisation.	The targeted mineralisation is typical of orogenic structurally controlled Archaean gold lode systems. In all instances the mineralisation is controlled by anastomosing shear zones/fault zones passing through competent rock units, brittle fracture and stockwork mineralisation is common within the basaltic and BIF host rock.  Multi-element geochemical analysis of selected

Criteria	JORC Code explanation	Commentary
		drill holes samples has been used to define lithogeochemically discrete host rock stratigraphic units. These units have been wireframed and modelled in 3 dimensions and have been cross correlated with the geologist in the field drill logs to create the overall geological model for the Dulcie Far North deposit.
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.	No new exploration results are reported in this announcement.  Previous Zenith ASX-ZNC announcements report all significant intercepts and include announcements dated:  • 24 June 2021 • 31 July 2021 • 30 Sep 2021 • 4 October 2021 • 18 January 2022 • 1 March 2022 • 14 June 2022 • 25 January 2023 • 13 June 2023 • 28 Oct 2024 • 28 Nov 2024  A summary of the drill holes used for the Mineral Resource is provided in announcements dated:  • 11 July 2023 • 28 Nov 2024  Refer to figures 9 and 10 and tables 5 and 6 in this announcement, repeating figures 4 and 5 and tables 1 and 2 from the 28 Nov 2024 announcement.
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.	No new exploration results are reported in this announcement.  Resource estimates are spatially weighted and use length weighted drill hole composites.

Criteria	JORC Code explanation	Commentary
	The assumptions used for any reporting of metal equivalent values should be clearly 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').	No new exploration results are reported in this announcement.  Most drilling is orientated to towards the east to provide an intersection that is close to perpendicular to the primary mineralization structural dip.  The western most deep areas are drilled at less optimal vertical or partially down dip orientations dues to clearance and tenement boundary restriction. These are generally diamond core intersections.
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.	Plans and examples cross sections are provided in the text of this release.
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.	No new exploration results are reported in this release.
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.	Geophysical data, mapping and historic drilling was used to target the exploration drilling and follow-up but is not otherwise used or relied on for the Mineral Resource.  There are no relevant metallurgical, geotechnical or mining studies.  Zenith collected 71 density determinations for drill core as described below.
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.	Existing interpretations indicate a significant strike and dip extent with further northern and down dip extension potential.  Section spacing is too wide in places and excluded from the Mineral Resource. Infill drill sections should result in additional Mineral Resource.  Additional bulk density measurements across all lodes and domains are required for the future reporting of Indicated and Measured Resources.  Gold metallurgical test work across the

Criteria	JORC Code explanation	Commentary
		modelled domains is required for the future reporting of Indicated and Measured Resources.

Part 3: Estimation and Reporting of Mineral Resources

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.  Data validation procedures used.	Zenith collates and maintains the database in Expedio / MX Deposit – an industry specific data management solution. This imports assay and logging information and stores the data.  An independent specialist database consultant administers the database for Zenith.  For the Mineral Resource evaluation additional cross validation and drilling integrity checks were undertaken with only a few minor corrections required.  At this early stage a database audit and verification of assay certificates has not been completed.
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.	Chris Shanley and previous Competent Persons managed the successive exploration programmes and visited site on numerous occasions between 2020 and October 2024.
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.	Three or more moderately dipping mineralised structural zones are interpreted over 20 cross sections and 1600 m strike extent.  Mineralisation is typically depleted in the oxide zone with hypogene mineralisation becoming evident towards the base of the saprolite and dipping at ~30° towards the WSW.  An overprinting supergene zone of mineralisation is also evident at the base of the saprolite and strongest at or below the original hypogene structure.  Some enrichment in the laterite is also evident near where the original mineralisation structures are projected to outcrop. Laterite is not reported since it is owned by a 3 <sup>rd</sup> party.
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.	Hypogene and supergene mineralisation has a strike extent of 1600 m and a plan projected width of generally 200 m and up to 250 m. This consists of horizontal supergene and two dominant 30° west dipping zones generally 2 to 12 m thick.  Mineralisation rarely extends above 18 m below surface and down to 150 m below surface.

Criteria	JORC Code explanation	Commentary
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 data if available.	Hypogene and supergene mineralisation domains are interpreted at a 0.3 g/t Au threshold and reported for block above a 0.5 g/t Au cut-off grade.  Laterite was estimated but is not reported.  Resource domains exclude a larger E-W Proterozoic dyke.  Mineral resource blocks are 5 by 10 by 2 m blocks and sub-blocked down to 5 by 5 by 1 m on domain margins. Estimation uses 2 m composites cut to 10 g/t Au and inverse distance squared method with an assumed flattening anisotropy with a NW plunge (ratios 1 by 0.6 by 0.2).  Parameters include up to 3 composites per drill holes and 15 composites in total, designed to limit smoothing issues.  Other elements are not yet assessed or estimated.  Model validation on visual inspection.  There is no previous known mining.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The Mineral Resource is reported on a dry basis.  There is no available in-situ moisture content data.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	There are no reportable mining studies.  Preliminary pit optimisation for the previous Mineral Resource completed in early 2024 was undertaken by an independent mining engineer for internal management purposes only. This work indicated an open pit depth of 130m and included the majority of the Mineral Resource. Though the pit is now out of date this work demonstrates reasonable prospects for

Criteria	JORC Code explanation	Commentary
		economic extraction even with the 20m deepening of the block model and additional stacked lodes included in this updated Mineral Resource.  The Mineral Resource is reported at a cut-off grade of 0.5 g/t Au considered reasonable for a standalone open pit mining option.  An alternative higher grade 1.5 g/t Au cut-off is included as an indication of the material that may suit toll treatment at existing mills in the
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.	region.  Mining is assumed to be best suited to open pit methods. The shallow dip and grade profile would be unsuitable for underground mining.  The resource domain has a hard estimation boundary and additional mining dilution, and ore loss factors will be required for any mining assessment.  Preliminary pit optimisation for the previous Mineral Resource was completed in early 2024 by an independent third-party mining engineer. That work, which was completed for internal reporting purposes only, indicated a pit depth of 130 m and included the majority of the Mineral Resource. This demonstrates reasonable prospects for economic extraction even with the 20 m deepening of the block model and additional stacked lodes. The pit optimisation was based on a 3000 AUD/oz gold metal price and 1 Mtpa processing scenario.
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.	There is no metallurgical test work complete to date.  The occurrence of pyrrhotite in drill core suggests that pressure oxidation or similar may be needed to obtain high recovery.  Zenith undertook some metallurgical test work on similar Dulcie mineralisation from the same mineralisation trend but ~3 km to the south of Dulcie Far North. Recoveries were >90% for laterite, saprolite and fresh mineralisation, see ASX-ZNC announcement dated 31 March 2021.
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	Zenith are not aware of any environmental or heritage impediments to eventual mining.  Heritage and environmental surveys for drilling areas to date (including recently in May 2023

Criteria	JORC Code explanation	Commentary
	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.	and September 2024) have not revealed any issues.  Although there is no known previous mining on M77/1292, there is a historical heap leach pad mined by Thames Mining NL (circa 1990) within the lease.  Material from that pad is currently being used for road base fill to support the asphalt upgrade of the Forrestania Road to allow bulk haulage of lithium concentrates from the Mt Holland lithium mine located further to the south.  It is understood lateritic ore was sourced from elsewhere along the Dulcie Gold Trend.
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 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.	Zenith completed 71 whole and half core bulk density determinations in 2023, using a water immersion Archimedes method. These are all from deeper areas of fresh rock material. Core samples ranged to 0.3 to 1.5 kg and resulted in bulk density measurements between 2.6 and 3.8 t/m³ and averaging 3.0 t/m³.  15 samples were within the resource domains and averaged 3.1 t/m³. Though variable there is an indication that higher gold grade may be associated with higher bulk density indicating a range of 3.0 to 3.2 t/m³  At this early stage a conservative flat average density of 3.0 t/m³ is assumed for fresh rock.  With no data available a conservative 1.7 t/m³ for oxide and saprolite is assumed, based on previous experience.
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.	Domain interpretation include sections up to 400 m apart. However, most of the central area is drilled to on ~40 m cross sections.  Widely spaced sections are not reported with extrapolation limited to 40 m. The unreported areas and gaps require additional drilling to confirm the structure continuity and grade.  Classification of Inferred is based on the domain interpretation blocks within 40 m of a drill hole or if there are three drill holes within a 90 m search range. This restricts classification to only 60% of the domain interpretations that includes some wide spaced sections with gaps not classified.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The Mineral Resource estimate was completed by an independent third-party resource consultant, ResEval. The estimate has been

Criteria	JORC Code explanation	Commentary
		subject to an internal review by the Zenith technical team, but it has not been audited by a third-party specialist resource consultant.
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.	Zenith drilling indicates a consistent shallow dipping mineralisation with a potential NW plunge and capping supergene zone.  Previous drilling is shallower and available on three sections but not consistent with Zenith drilling with indications of collar location issues. The Early drilling has been discarded due to data quality issues that remain unresolved. Two of the three sections are also essentially redrilled, further reducing the benefit of including the previous sampling.  The current work presents the first interpretation, though this is similar to the structure and occurrence of mineralisation previously drilled by Zenith to the south at Dulcie.  Drilling remains widespread but indicates several continuous shallow dipping structures over a >1 km strike length. The Mineral Resource is limited and excludes part of the widest gaps > 40 m spacing. This removes any excessive inference with around 40% of the interpreted domain extent not reported at this stage.