

31st March 2021



Corporate Details

Zenith Minerals Limited (ASX:ZNC)

ABN: 96 119 397 938

Issued Shares	294.4M
Unlisted options	16.55M
Mkt. Cap. (\$0.12)	A\$35M
Cash (31-Dec-20)	A\$3.85M
Debt	Nil

Directors

Peter Bird	Exec Chair
Michael Clifford	Director-CEO
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Graham Riley	Non-Exec Director
Nicholas Ong	CFO & Co Sec

Major Shareholders

Directors	~7%
HSBC Custody. Nom.	10.4%
BNP Paribas. Nom.	5.0%
Granich	4.6%
Citicorp Nom	4.3%

Contact Us

Level 2, 33 Ord Street
WEST PERTH WA 6005
PO Box 1426
WEST PERTH WA 6872
Telephone: (08) 9226 1110
Email: info@zenithminerals.com.au
Web: www.zenithminerals.com.au



HIGH GOLD RECOVERIES - SPLIT ROCKS METALLURGICAL TESTWORK

- Initial metallurgical tests from the Split Rocks gold project in Western Australia have been very positive.
- The testwork shows high gold extraction in all 3 gold mineralisation sample types tested (average recovery of greater than 92%): The key points findings are as follows

- Samples are considered representative of the gold mineralisation drilled to date at the Dulcie laterite pit target: transition-clay, transition-saprock and fresh rock:
- High total gold extraction for all three samples (95.0%, 93.3% and 90.4% respectively with an average > 92%)
- Gravity gold content ranging from 12.4 – 34.7%
- Low leach residue grades of 0.03 – 0.07 g/t
- Rapid leach kinetics with the bulk of the extraction complete at the 8-hour mark
- Low cyanide consumption, average 0.38 kg/t NaCN
- All 3 samples 80% passing 90-micron grind

- The work was completed to assist with ongoing exploration targeting so we can identify commercial scale mineralisation.

- The potential implications of these findings to date are as follows:

- the results confirm that even relatively low-grade gold mineralisation should be included in the drill target mix.
- This initial metallurgical testwork program indicates that industry standard commercial cyanide leach gold processing techniques such as carbon in pulp (CIP) or carbon in leach (CIL) are likely to be effective on the Dulcie laterite pit type mineralisation.
- the leach results on coarse, raw RC drill chips opens the possibility that heap leaching may also be effective on Dulcie laterite pit transition-saprock material.

- In addition, testwork on raw RC drill chips (no laboratory grinding) also produced very encouraging leach results from two transition-saprock samples:

- The coarse crush bottle roll-cyanidation timed leach testwork from two tests returned 90.5% and 86.3% (average total gold extraction of 88.4 %) after 10 days of leaching with most of the gold being leached after 5-days.
- Reagent consumption was moderate for both cyanide and lime
- Note, no coarse leach testwork yet completed on all rock types.

- Additional gold leaching testwork is now planned on both coarse fresh and transition-clay material, whilst a comprehensive testwork program

based around diamond drill core, column leach and screening tests will be required to provide more definitive metallurgical results.

- Drilling is to continue on the property for at least the next 6 months with a resource definition focus. Specific shorter-term targets are illustrated in Figure 2.

Commenting on the initial metallurgical testwork, Executive Chairman Peter Bird said: “The data in relation to the preliminary or “sighter” metallurgical test work is very good news. The gold extraction process looks straightforward with features such as rapid leach cycles in various rock types delivering very high recoveries. It is still early in our evaluation journey, but the information gathered to date also gives us a number of potential process alternatives should we define sufficient ore tonnes. We will continue with our drilling with these positive data points in mind.”

Project Background

Zenith's Split Rocks project is located within the Southern Cross region in the Forrestania greenstone belt, approximately halfway between Perth and Kalgoorlie. Several very large current and previously operated gold mines located north and south along strike from Zenith's project area attest to the regional gold endowment of this area (Figure 1).

A major targeting exercise by the Company's geological team initially identified 12 high-quality gold drill targets at Split Rocks, subsequently expanded to 18 targets in the north eastern sector of the Company's 100% owned tenure (Refer to ASX Release 2-Sep-2020).

Drilling to date has tested 11 targets with outstanding first pass results returned at (Figures 2 & 3):

- Dulcie North: 32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au
- Dulcie Laterite Pit:
 - 2m @ 14.5 g/t Au, incl. 1m @ 20.8 g/t Au,
 - 18m @ 2.0 g/t Au (EOH) incl. 1m @ 23.7 g/t Au
 - 14m @ 3.5 g/t Au
- Estrela Prospect: 2m @ 9.8 g/t Au (open to north & south)
- Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au
- Water Bore: 4m @ 10.4 g/t Au

Phase 2 follow-up drilling at Estrela provided sufficient encouragement to continue to test the identified structural target further along strike to the north with new results including 2m @ 0.4 g/t Au and 1m @ 0.6 g/t Au along strike from 2m @ 9.8 g/t Au and 3m @ 2.6 g/t Au. The mineralised structure at Estrela appears to be present over at least 200 metres of strike but is disrupted by numerous unmineralized pegmatites.

A further 8 of the 18 targets generated by Zenith extending over 18km of strike are yet to have first pass drill testing. Given recent positive ASX announcements, first pass testing by aircore of these additional targets will be progressed in conjunction with follow-up work on the significant near surface gold results at the 4 Dulcie targets, Dulcie Laterite Pit, Dulcie North, Dulcie Far North & Water Bore.

Our partner is currently mining and heap leaching surface gold laterite ore at the Dulcie Heap Leach Gold Operation (DHLGO), where Zenith retains an option to gold rights below 6m from surface (refer to ASX release 21-Mar-2019).

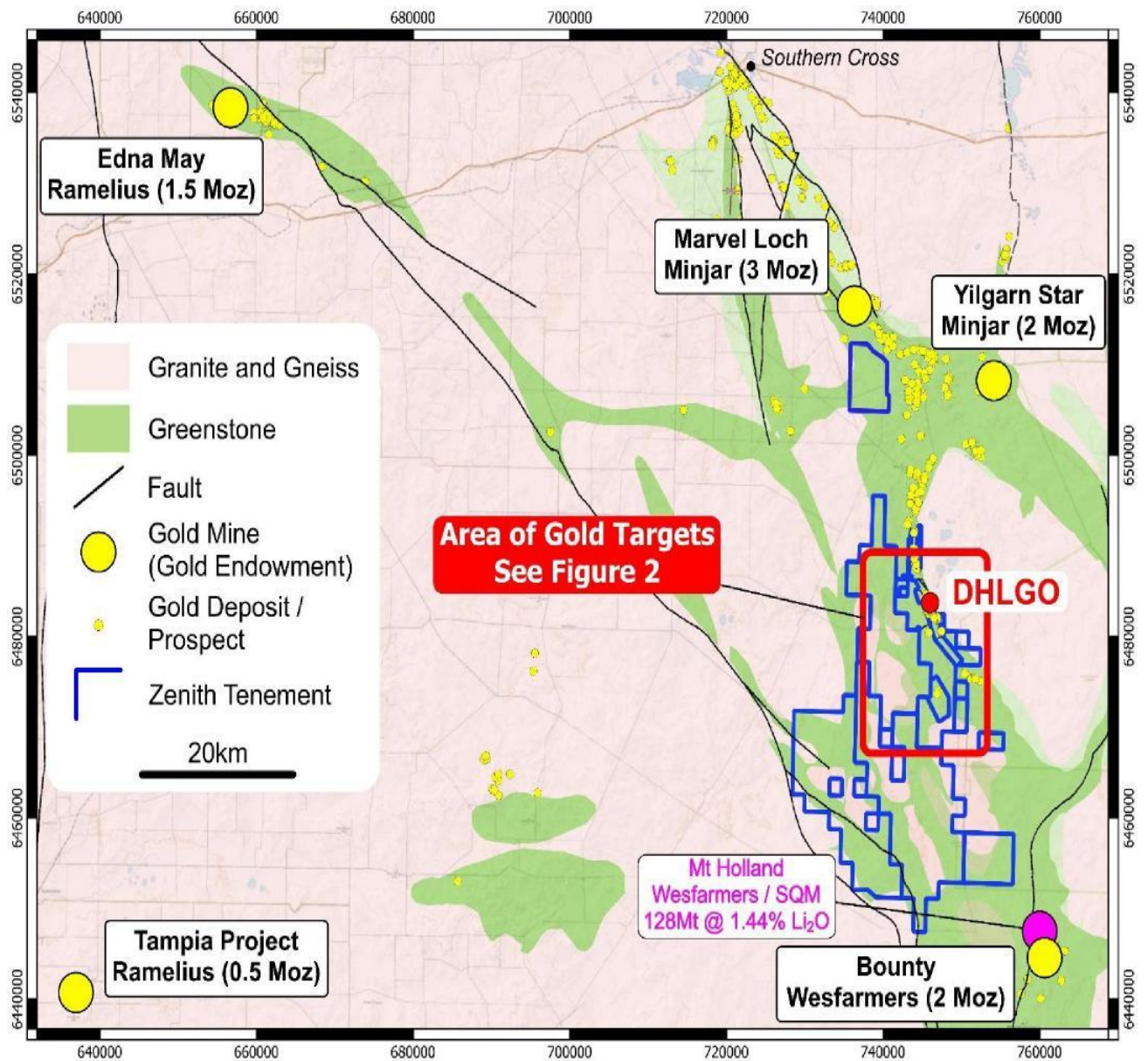


Figure 1- Split Rocks Project Location Map Showing Zenith tenements, Dulcie Heap Leach Gold Operation (DHLGO*) Prospect and Regional Gold Endowment. (*Gold rights below 6m subject to option agreement).

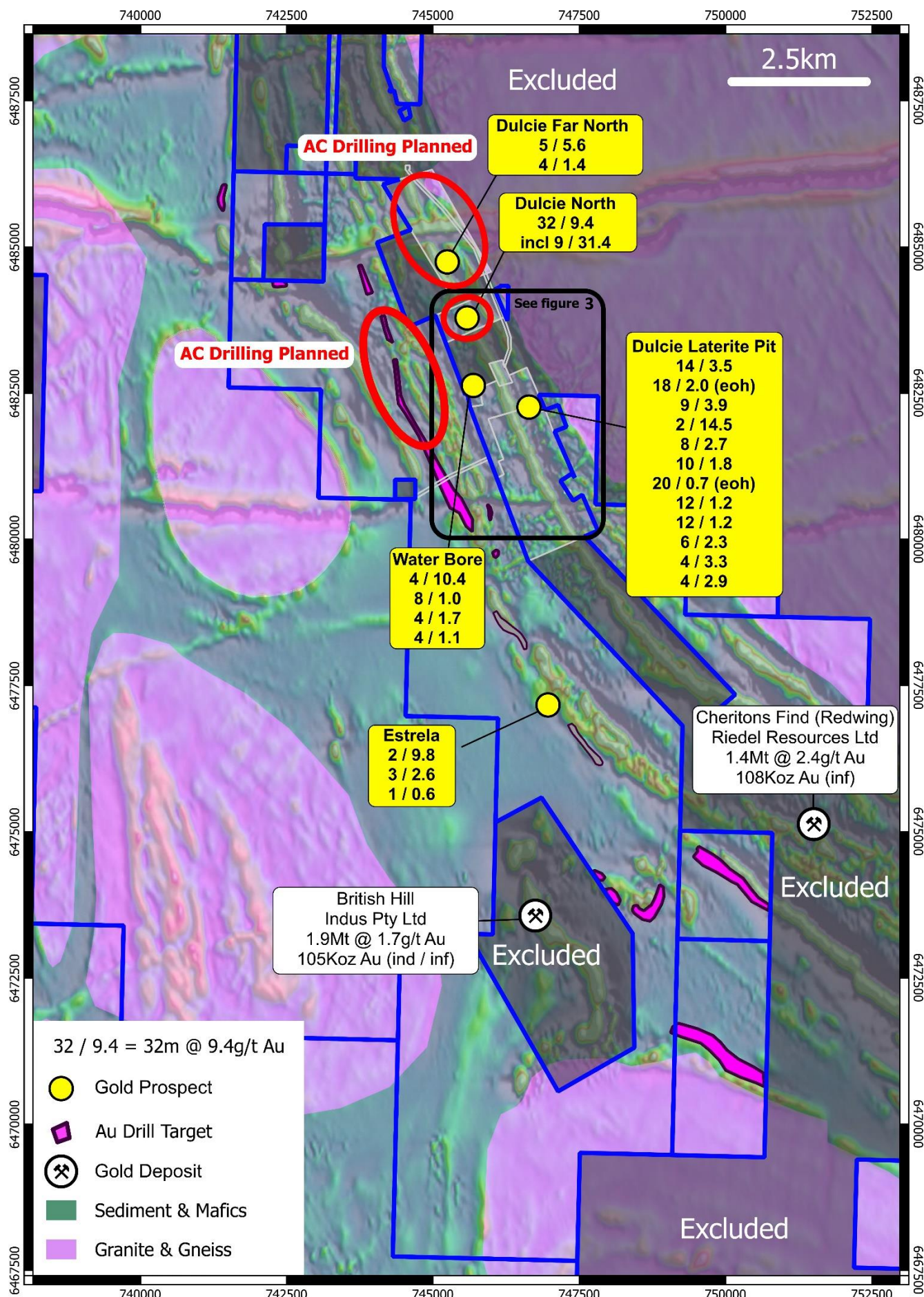


Figure 2: Split Rocks Project Gold Targets and Significant RC - Aircore Drill Results (yellow captions) showing gold drill targets, and areas of Planned Drilling

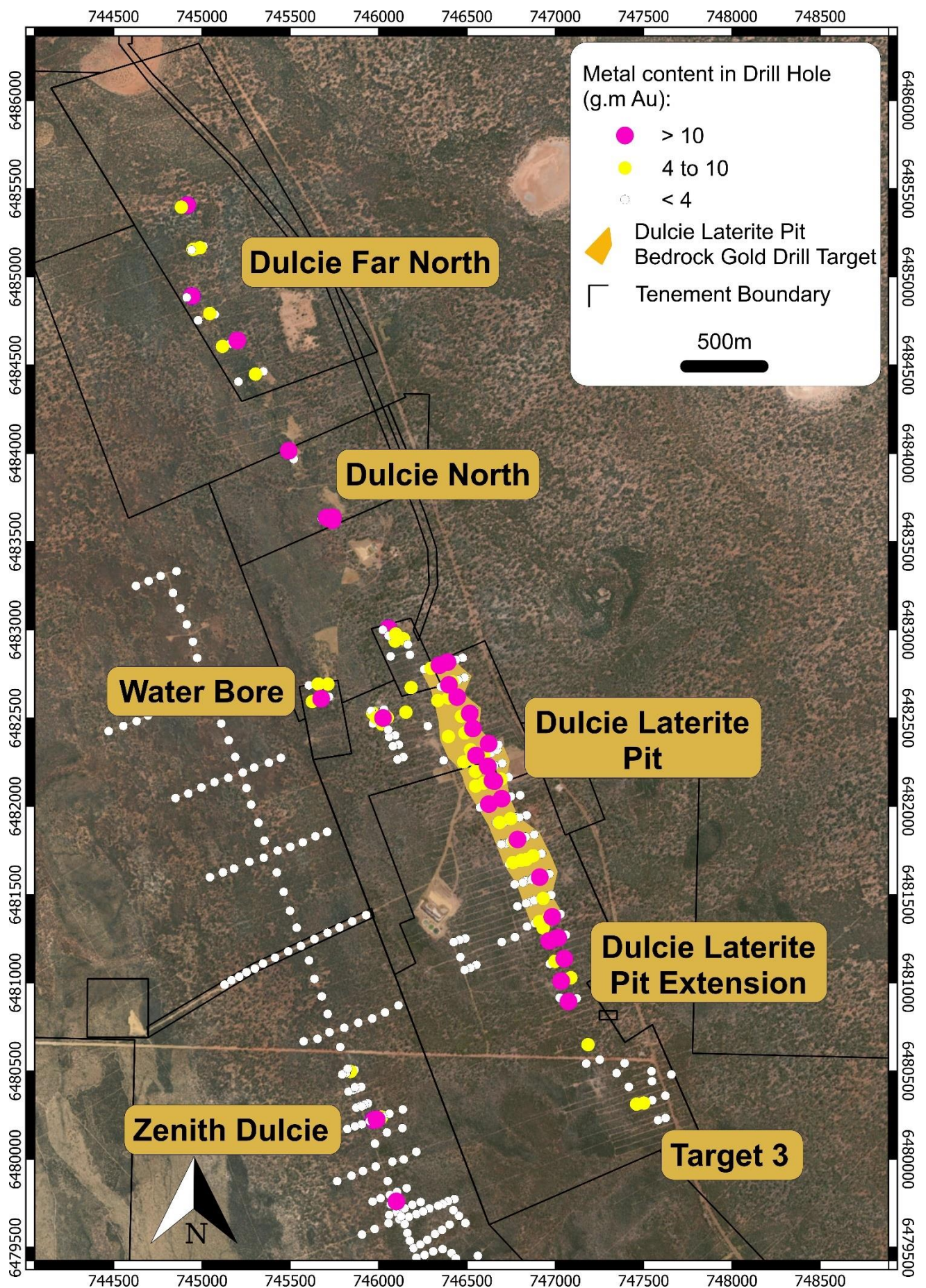


Figure 3: Split Rocks Gold Project Drill Results and Target Areas (shallow third party <75m depth and ineffective drill holes not shown)

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford 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 Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Material ASX Releases Previously Released

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.

For further information please refer to the Company's website or contact the Company directly.

Authorised for release by the Zenith Minerals Limited Board of Directors – 31 March 2021

For further information contact:

Zenith Minerals Limited

Directors Michael Clifford or Peter Bird

E: mick@zenithminerals.com.au / peter@zenithminerals.com.au

Phone +61 8 9226 1110

Media Enquiries

Fraser Beattie

E: fbeattie@canningspurple.com.au

Phone +61 8 6314 6300

About Zenith

Zenith has a vision to build a gold and base metals business with a team of proven project finders. Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities using third party funds.

Zenith is continuing to focus on its core Australian gold and copper projects including:

🚩 **Red Mountain Gold Project** in Queensland (100% owned) where ongoing drilling is following-up the high-grade near surface gold and silver intersected in the maiden & subsequent drill programs (ASX Releases 3-Aug-20 & 13-Oct-20, 9-Nov-20, 21-Jan-21), including:

- 13m @ 8.0 g/t Au & 3.2 g/t Ag from surface
- 15m @ 3.5 g/t Au, incl. 2m @ 22.4 g/t Au
- 5m @ 10.4 g/t Au, and
- 12m @ 4.9 g/t Au

🚩 **Split Rocks Gold Project** in Western Australia (100% owned), where recent drilling returned, high-grade near surface gold mineralisation at multiple targets (ASX Release 5-Aug-20, 2-Sep-20, 19-Oct-20, 28-Oct-20), including:

- Dulcie North: 32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au.
- Dulcie Laterite Pit:
 - 2m @ 14.5 g/t Au, incl. 1m @ 20.8 g/t Au,
 - 18m @ 2.0 g/t Au (EOH) incl. 1m @ 23.7 g/t Au &
 - 14m @ 3.5 g/t Au

- Estrela Prospect: 2m @ 9.8 g/t Au (open to north & south)
- Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au

➤ **Develin Creek Copper-Zinc Project** in Queensland (100% owned) – maiden drill test of the new Snook copper target located 30km south of Zenith's JORC resources discovers massive copper-zinc sulphides (ASX Release 17-Dec-20).

➤ **Jackadgery Gold Project** in New South Wales (option to earn initial 90%), historic trenching returned 160m @ 1.2 g/t Au. No drilling to date. Zenith planning maiden drill test (ASX Release 10-Sep-20).

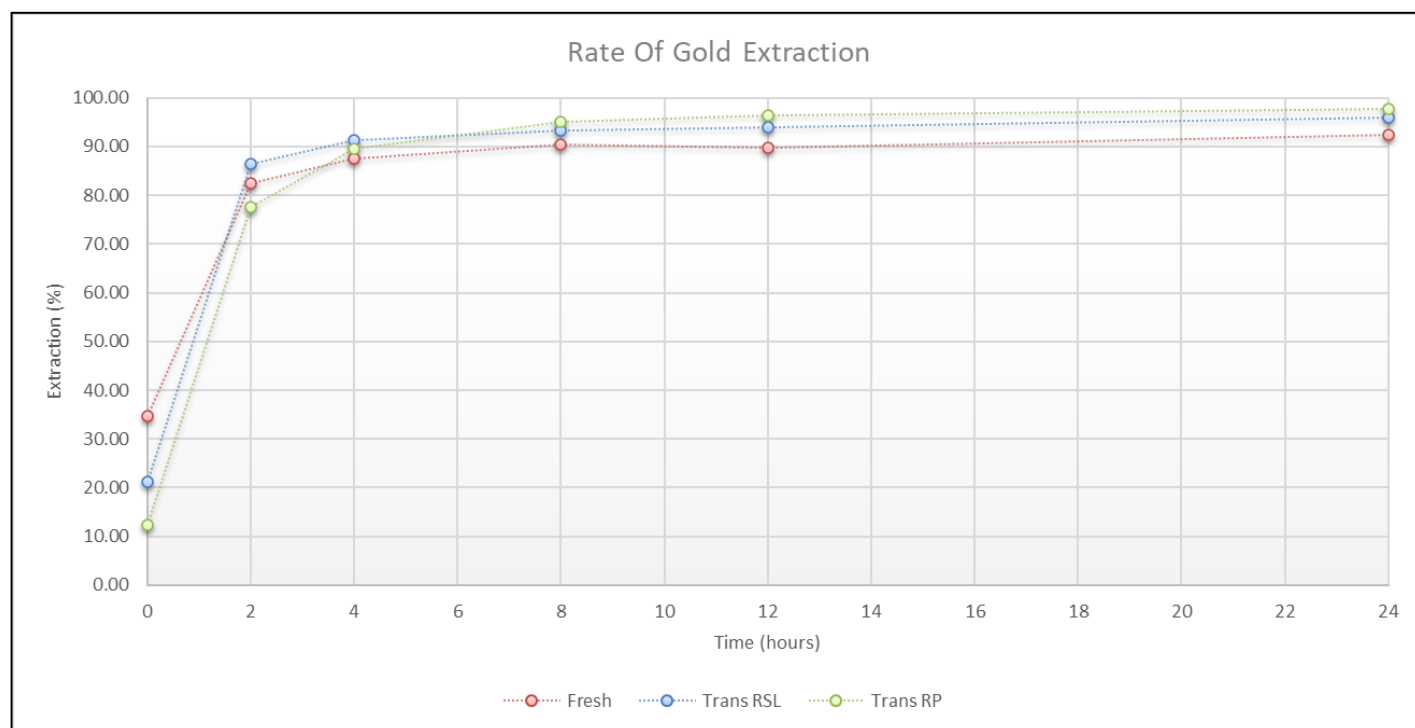
Metallurgical Testwork Details

Testwork was carried out at ALS Metallurgy Services in Perth Western Australia, sample details are included in JORC Tables 1 & 2 appended to this release.

3 material types were tested (Fresh, transition – saprock and transition – saprolite) using RC drill composite samples from the Dulcie laterite pit are summarised below.

Summary of Direct Cyanidation Time Leach Testwork (~1kg RC samples ground to 80% passing 90 micron):

Test No.	Sample ID	Grind Size p80 µm	Gravity Gold (%)	Recovery 2 hours (%)	Recovery 8 hours (%)	Recovery 12 hours (%)	Total Recovery 24 hours (%)	Leach Tail (g/t)	Calculated Head (Au g/t)	Average Head Assay (Au g/t)	NaCN usage (kg/t)	Lime Usage (kg/t)
JR6128	Fresh	90	34.75	82.44	90.36	89.67	92.36	0.07	0.85	0.78	0.33	0.65
JR6129	Trans RSL	90	21.28	86.51	93.27	93.92	95.84	0.05	1.08	1.78	0.43	5.86
JR6130	Trans RP	90	12.42	77.60	95.03	96.38	97.70	0.03	1.09	0.94	0.37	3.63



Summary of Coarse Crush Bottle Roll: Cyanidation Timed Leach Testwork, nil sparge (4kg raw RC samples):

SAMPLE ID	TEST #	CRUSH SIZE (mm)	RESIDUE GRADE (Au g/t)	TOTAL GOLD EXTRACTION (%)	CALCULATED HEAD (Au g/t)	AVG ASSAYED HEAD (Au g/t)	NaCN CONSUMPTION (kg/t)	LIME CONSUMPTION (kg/t)
TRANS RP BOTTLE COARSE	JR6153	AS Received	0.13	90.51	1.37	1.21 / 1.28	0.92	2.25
TRANS RP BOTTLE COARSE	JR6154	AS Received	0.19	86.29	1.39	1.21 / 1.28	0.87	2.17



PROJECT	A22046
CLIENT	Zenith Minerals
TEST No	JR6128
SAMPLE	Fresh
GRIND	P80: 90 (µm)
WATER	Perth Tap Water
DATE	Mar 21

DIRECT CYANIDATION TIME LEACH TESTWORK

Time (Hours)	Additions				Solution Data				Removed In Sample				Au Leach Vessel	Au Extrn. Total	Au Extrn. Total
	Ore (g)	Water (mL)	NaCN (g)	Lime (g)	Oxygen (ppm)	pH	NaCN (%)	Au (ppm)	Vol (mL)	NaCN (g)	Au (µg)	Cumm Au (µg)	(µg)	(µg)	(%)
	964.1	1222.0			1.0	7.9									
0		1222.0	1.22	0.44		10.5	0.100	0.000							34.75
2		1192.0	0.00	0.00	25.5	10.1	0.085	0.320	30	0.026	10	10	381	391	82.44
4		1162.0	0.00	0.19	24.2	10.0	0.083	0.355	30	0.025	11	20	413	433	87.53
8		1132.0	0.00	0.00	26.1	10.2	0.083	0.375	30	0.025	11	32	425	456	90.36
12		1102.0	0.00	0.00	24.3	10.5	0.083	0.370	30	0.025	11	43	408	450	89.67
24		1072.0	0.00	0.00	29.2	10.4	0.073	0.390	30	0.022	12	54	418	472	92.36
TOTAL			1.22	0.63					150	0.122	54				

GOLD EXTRACTION CALCULATIONS

Product	Quantity	Gold		
		Assay (ppm)	Mass (µg)	Dist'n (%)
Solids (g)	964.1	0.07	63	7.64
Solution (mL)	1072.0	0.39	418	50.98
Solution Samples *			54	6.62
Gravity Gold (ug)**			285	34.75
Total Extraction				92.36
Total			820	100.00
Calculated Head		0.85		
AVG Assay Head		0.78		

COMMENTS :

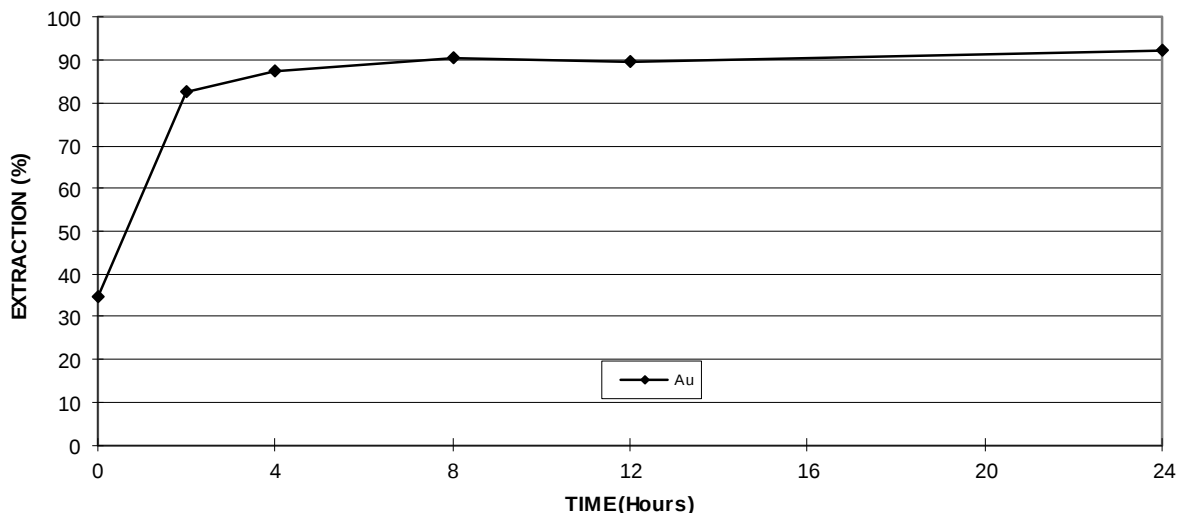
1. NaCN Addition : 1.27 (kg/t)
2. NaCN Consumption (kg/t) : 0.33 (kg/t)
3. Lime Consumption (kg/t) : 0.65 (kg/t)
4. Perth tap water used : 1.000 (SG)
5. Water Weight To Leach : 1222.0 (g)
6. Grind Size P80 : 90 (µm)
7. Leach test conducted in leach bottle with roll agitation.
8. 30 mL Solution Samples Were Removed At Each Sampling Period.
9. Leach Residue assay

0.07	g/t
0.06	g/t

* : Intermediate solution samples removed during the test.

** Gravity gold from mercury amalgamation of Knelson Concentrate

RATE OF GOLD EXTRACTION





PROJECT	A22046
CLIENT	Zenith Minerals
TEST No	JR6129
SAMPLE	Trans RSL
GRIND	P80: 90 (µm)
WATER	Perth Tap Water
DATE	Mar 21

DIRECT CYANIDATION TIME LEACH TESTWORK

Time (Hours)	Additions				Solution Data				Removed In Sample				Au Leach Vessel (µg)	Au Extrn. Total (µg)	Au Extrn. Total (%)
	Ore (g)	Water (mL)	NaCN (g)	Lime (g)	Oxygen (ppm)	pH	NaCN (%)	Au (ppm)	Vol (mL)	NaCN (g)	Au (µg)	Cumm Au (µg)			
	1000.0	1500.0				7.3									
0		1500.0	1.50	2.41		10.5	0.100	0.000							21.28
2		1470.0	0.00	1.40	26.7	9.7	0.090	0.470	30	0.027	14	14	691	705	86.51
4		1440.0	0.00	1.31	23.6	9.9	0.090	0.505	30	0.027	15	29	727	756	91.27
8		1410.0	0.00	0.74	25.8	9.9	0.088	0.520	30	0.026	16	45	733	778	93.27
12		1380.0	0.00	0.00	24.7	10.3	0.083	0.525	30	0.025	16	61	725	785	93.92
24		1350.0	0.00	0.00	24.1	10.1	0.070	0.540	30	0.021	16	77	729	806	95.84
TOTAL			1.50	5.86					150	0.126	77				

GOLD EXTRACTION CALCULATIONS

Product	Quantity	Gold		
		Assay (ppm)	Mass (µg)	Dist'n (%)
Solids (g)	1000.0	0.05	45	4.16
Solution (mL)	1350.0	0.54	729	67.45
Solution Samples *			77	7.11
Gravity Gold (ug)**			230	21.28
Total Extraction				95.84
Total			1081	100.00
Calculated Head		1.08		
AVG Assay Head		1.78		

COMMENTS :

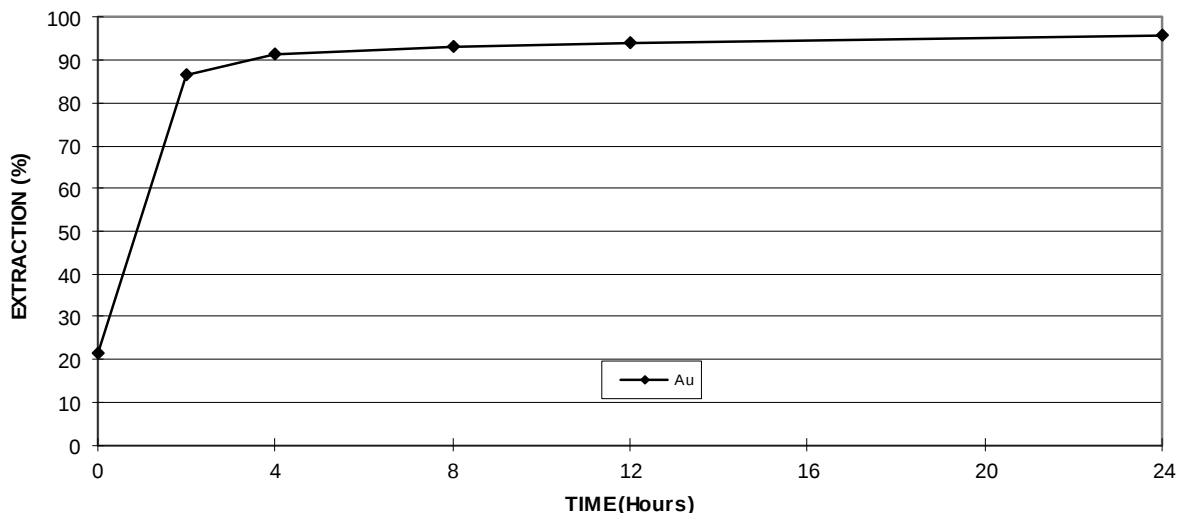
1. NaCN Addition : 1.50 (kg/t)
2. NaCN Consumption (kg/t) : 0.43 (kg/t)
3. Lime Consumption (kg/t) : 5.86 (kg/t)
4. Perth tap water used : 1.000 (SG)
5. Water Weight To Leach : 1500.0 (g)
6. Grind Size P80 : 90 (µm)
7. Leach test conducted in leach bottle with roll agitation.
8. 30 mL Solution Samples Were Removed At Each Sampling Period.
9. Leach Residue assay

0.05	g/t
0.04	g/t

* : Intermediate solution samples removed during the test.

** Gravity gold from mercury amalgamation of Knelson Concentrate

RATE OF GOLD EXTRACTION





PROJECT	A22046
CLIENT	Zenith Minerals
TEST No	JR6130
SAMPLE	Trans RP
GRIND	P80: 90 (µm)
WATER	Perth Tap Water
DATE	Mar 21

DIRECT CYANIDATION TIME LEACH TESTWORK

Time (Hours)	Additions				Solution Data				Removed In Sample				Au Leach Vessel (µg)	Au Extrn. Total (µg)	Au Extrn. Total (%)
	Ore (g)	Water (mL)	NaCN (g)	Lime (g)	Oxygen (ppm)	pH	NaCN (%)	Au (ppm)	Vol (mL)	NaCN (g)	Au (µg)	Cumm Au (µg)			
	964.1	1500.0				7.9	7.75								
0		1500.0	1.50	0.96		10.5	0.100	0.000							12.42
2		1470.0	0.00	0.93	29.0	10.5	0.093	0.455	30	0.028	14	14	669	683	77.60
4		1440.0	0.00	0.72	25.3	10.5	0.090	0.540	30	0.027	16	30	778	807	89.53
8		1410.0	0.00	0.89	26.9	10.5	0.090	0.580	30	0.027	17	47	818	865	95.03
12		1380.0	0.00	0.00	27.4	0.0	0.085	0.590	30	0.026	18	65	814	879	96.38
24		1350.0	0.00	0.00	25.6	0.0	0.075	0.600	30	0.023	18	83	810	893	97.70
TOTAL			1.50	3.50					150	0.130	83				

GOLD EXTRACTION CALCULATIONS

Product	Quantity	Gold		
		Assay (ppm)	Mass (µg)	Dist'n (%)
Solids (g)	964.1	0.03	24	2.30
Solution (mL)	1350.0	0.60	810	77.36
Solution Samples *			83	7.92
Gravity Gold (ug)**			130	12.42
Total Extraction				97.70
Total			1047	100.00
Calculated Head		1.09		
AVG Assay Head		0.94		

COMMENTS :

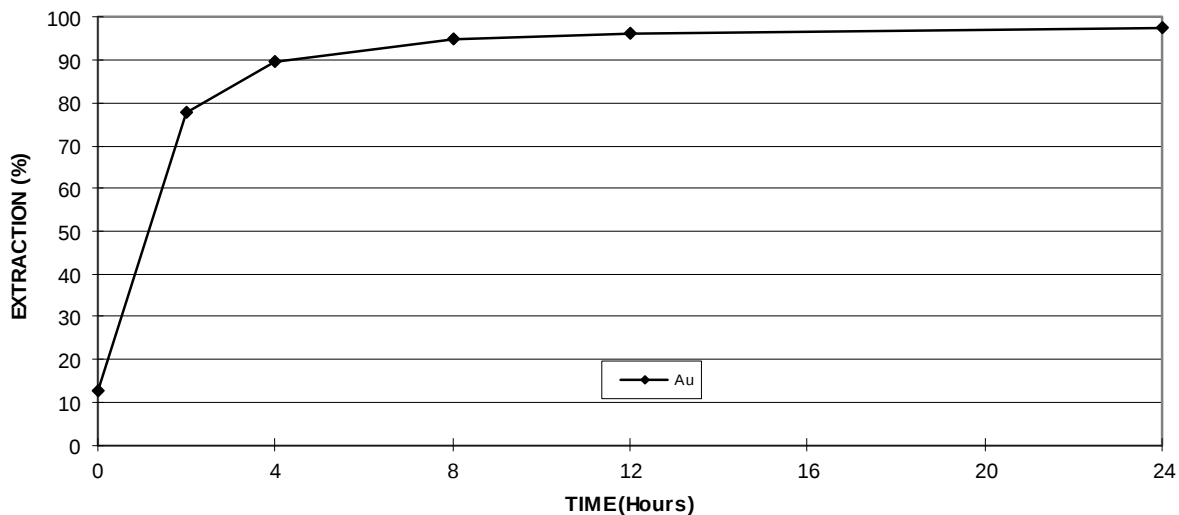
- NaCN Addition : 1.56 (kg/t)
- NaCN Consumption (kg/t) : 0.37 (kg/t)
- Lime Consumption (kg/t) : 3.63 (kg/t)
- Perth tap water used : 1.000 (SG)
- Water Weight To Leach : 1500.0 (g)
- Grind Size P80 : 90 (µm)
- Leach test conducted in leach bottle with roll agitation.
- 30 mL Solution Samples Were Removed At Each Sampling Period.
- Leach Residue assay

0.03	g/t
0.02	g/t

* : Intermediate solution samples removed during the test.

** Gravity gold from mercury amalgamation of Knelson Concentrate

RATE OF GOLD EXTRACTION





TIME (Hours)	ADDITIONS				SOLUTION DATA						Extraction (%)		
	Solids (g)	Water (mL)	NaCN (g)	Lime (g)	Oxygen (ppm)	pH	NaCN (%)	Solution Samples (mL)	Au (mg/L)			Au	
	4000.0	6000.0			8.6	7.41							
0		6000.0	6.00	5.00		10.52	0.100	30				0.00	
2		5970.0	0.00	0.00	8.42	9.91	0.080	30	0.265			28.87	
4		5940.0	0.00	0.00	8.54	9.79	0.080	30	0.505			55.01	
8		5910.0	0.00	0.00	8.61	9.65	0.068	30	0.610			66.39	
24		5880.0	0.00	0.00	8.76	9.52	0.058	30	0.710			77.17	
48		5850.0	0.00	4.01	8.67	9.35	0.060	30	0.770			83.61	
72		5820.0	0.00	0.00	8.49	9.72	0.060	30	0.775			84.14	
96		5790.0	0.00	0.00	8.56	9.62	0.060	30	0.830			89.98	
120		5760.0	3.00	0.00	8.41	9.53	0.050	30	0.835			90.51	
240		5730.0	0.00	0.00	8.62	9.34	0.090	30	0.835			90.51	
Total			9.00	9.01									

Product	GOLD		
	Assay (ppm)	Total (µg)	Dist'n (%)
Solids (g)	0.13	520	9.49
Solution (mL)	0.84	4785	87.30
Sol. samples (mL) *		176	3.21
Total Extraction			90.51
Total		5481	100.00
Calc. Head Grade	1.37		
Assay Head Grade	1.21 / 1.28		

1. NaCN Addition :	2.25	(kg/t)
2. NaCN Consumption :	0.92	(kg/t)
3. Lime Consumption :	2.25	(kg/t)
4. Tap water SG :	1.000	(g/mL)
5. Water weight to leach :	6000.0	(g)
6. Grind Size :	AS Received	
7. 30 mL solution samples were removed at each sampling period.		
8. Leach test conducted in leach bottle with roll agitation.		
9. Leach residue duplicate	0.12	(g/t)
Au Assays:	0.14	(g/t)

The graph illustrates the rate of gold extraction over a 240-hour period. The y-axis represents the extraction percentage, ranging from 0 to 100 in increments of 10. The x-axis represents time in hours, ranging from 0 to 240 in increments of 24. A single data series, labeled 'Au', shows a sharp initial increase in extraction, reaching about 67% by 12 hours, followed by a more gradual increase, reaching a plateau of approximately 91% after 120 hours.

TIME (Hours)	EXTRACTION (%)
0	0
6	29
12	55
18	67
24	78
48	84
72	85
96	90
120	91
240	91

PROJECT	A22046	
CLIENT	Zenith Minerals	
TEST No	JR6153	
SAMPLE	TRANS RP BOTTLE COARSE	
CRUSH SIZE	AS Received	
WATER	Pert h Tap Water	
DATE	Mar 21	

COARSE CRUSH BOTTLE ROLL: CYANIDATION TIMED LEACH TESTWORK :NIL SPARGE

TIME (Hours)	ADDITIONS				SOLUTION DATA					Extraction (%)		
	Solids (g)	Water (mL)	NaCN (g)	Lime (g)	Oxygen (ppm)	pH	NaCN (%)	Solution Samples (mL)	Au (mg/L)		Au	
	4000.0	6000.0			8.5	7.39						
0		6000.0	6.00	4.53			0.100	30			0.00	
2		5970.0	0.00	0.00	8.48	9.91	0.088	30	0.280		30.15	
4		5940.0	0.00	0.00	8.61	9.78	0.078	30	0.505		54.39	
8		5910.0	0.00	0.00	8.62	9.64	0.068	30	0.610		65.64	
24		5880.0	0.00	0.00	8.75	9.51	0.055	30	0.700		75.23	
48		5850.0	0.00	4.15	8.73	9.36	0.055	30	0.740		79.47	
72		5820.0	0.00	0.00	8.64	9.74	0.070	30	0.765		82.11	
96		5790.0	0.00	0.00	8.60	9.62	0.060	30	0.770		82.64	
120		5760.0	3.00	0.00	8.45	9.54	0.050	30	0.800		85.77	
240		5730.0	0.00	0.00	8.18	9.55	0.093	30	0.805		86.29	
Total			9.00	8.68								

EXTRACTION CALCULATIONS

Product	GOLD		
	Assay (ppm)	Total (µg)	Dist'n (%)
Solids (g)	0.19	760	13.71
Solution (mL)	0.81	4613	83.21
Sol. samples (mL) *		171	3.08
Total Extraction			86.29
Total		5544	100.00
Calc. Head Grade	1.39		
Assay Head Grade	1.21 / 1.28		

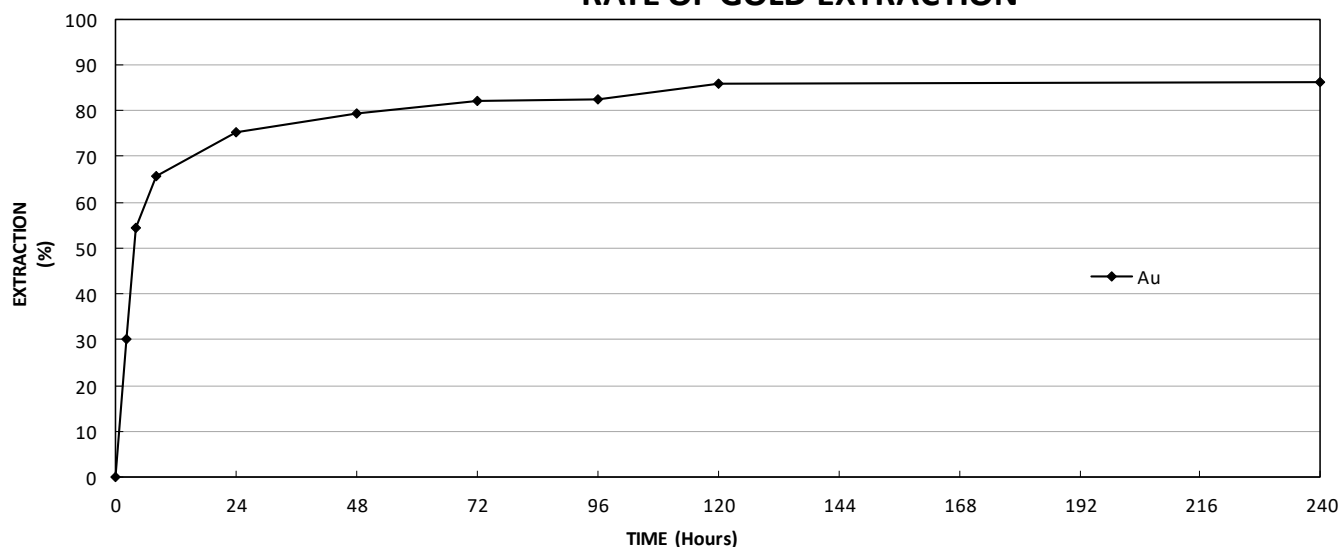
COMMENTS :

1. NaCN Addition : 2.25 (kg/t)
2. NaCN Consumption : 0.87 (kg/t)
3. Lime Consumption : 2.17 (kg/t)
4. Tap water SG : 1.000 (g/mL)
5. Water weight to leach : 6000.0 (g)
6. Grind Size : AS Received
7. 30 mL solution samples were removed at each sampling period.
8. Leach test conducted in leach bottle with roll agitation.
9. Leach residue duplicate

0.19	(g/t)
0.19	(g/t)

Taken as half of detection limit

RATE OF GOLD EXTRACTION



Each ALS Metallurgy Report is solely for the benefit of the Client, its officers and employees. The Client may disclose an ALS Metallurgy Report subject to the following terms:

- i. the ALS Metallurgy Report has been commissioned by the Client on the terms and conditions contained in this Agreement;
- ii. copyright in the ALS Metallurgy Report and all information and data contained in it, save for any information supplied by the Client, are owned by ALS Metallurgy;
- iii. moral rights in the ALS Metallurgy Report are owned by ALS Metallurgy;
- iv. the ALS Metallurgy Report has been prepared at the request of the Client for the purpose agreed between the Client and ALS Metallurgy. The Client may disclose the report to a third party for that purpose only, but ALS Metallurgy does not accept any responsibility or liability (including, without limitation, liability for negligence) to that third party. Any disclosure to a third party must be of the whole of the ALS Metallurgy Report, including ALS Metallurgy's disclaimer notice which is substantially the same as the terms outlined in this clause 9.c);
- v. while ALS Metallurgy has taken all due care to ensure that the information contained in the ALS Metallurgy Report is true and correct and is not misleading or deceptive, neither ALS Metallurgy, nor any of its officers, employees or agents make any representations or warranties, express or implied, other than to the Client, as to the accuracy of the information contained therein. Except insofar as liability under any law cannot be excluded, and subject to clause 4, ALS Metallurgy accepts no responsibility arising in respect of the information contained in the ALS Metallurgy Report for errors or omissions (including responsibility to any person by reason of negligence); and
- vi. ALS Metallurgy reserves its right to review, update or supplement any ALS Metallurgy Report. Any further information will be provided subject to the terms of this Agreement.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i>	RC chip composite samples subject to initial sighter gold leach extractive testwork.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	4 x 1m (2kg samples) combined to make a single sample composite for each of three main mineralisation types representative of the Dulcie Laterite pit zone of gold mineralisation: 1. Fresh rock 2. Transitional saprock 3. Transitional lower saprolite Industry standard extractive leach testwork

	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.	RC chip samples were crushed and pulverised to 80% passing 90 microns to produce 3 x composite samples for Direct Cyanidation Time Leach Testwork. In addition, 2 samples (4kg) of transitional saprock were subject to Coarse Crush Bottle Roll: Cyanidation Timed Leach Testwork, nil sparge.
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.).	Reverse circulation
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Drill chips were sieved and logged by a qualified geologist on site, data recorded in field on a laptop and then entered into a database
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Drilling produced generally dry samples with excellent recoveries, all 1m samples were cone split on site with a subsequent 4m composite sample generated using a riffle splitter to ensure a representative sample was collected for initial assay.
	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.	No indications of sample bias based on results to date
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.	Drill chips were sieved and logged by a qualified geologist on site. No reporting of resources
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Drill chips logging is qualitative. Representative chip samples collected and stored in 20 compartment plastic chip trays
	The total length and percentage of the relevant intersections logged.	All intervals logged and sampled
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No core
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	All 1m samples were cone split, subsequent metallurgical sample composites were generated via riffle splitting
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Metallurgical

	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Refer to details below re duplication of assays at stages throughout the sampling & metallurgical process to ensure representivity.
<i>Sub-sampling techniques and sample preparation - continued</i>	<i>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.</i>	Samples were selected based on geological logging and weighted average assay grades of 1m intervals. Samples were subject to at least a duplicate head grade analysis and a calculated head grade was derived based on the grade of the leach liquor plus residual grade.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each sample was ~1 to 4kg in weight which is appropriate to test for the grain size of material
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The technique measures both partial (leachable) and total gold
	<i>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.</i>	No geophysical tools used in this drilling program
	<i>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.</i>	Initial assays for 4m composite samples were cross checked against 1m weighted average grades at Nagrom in Perth, duplicate head assays and calculated head grades ALS Perth. In addition, certified reference material, blanks and duplicates samples were included in each original sample batch and appropriate levels of precision and accuracy were confirmed in QA/QC review.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Company personnel have observed the assayed samples
	<i>The use of twinned holes.</i>	No twinning
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field laptops and sample record books and then entered into a database
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
<i>Location of data points</i>	<i>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.</i>	Sample location is based on GPS coordinates +/-5m accuracy
	<i>Specification of the grid system used.</i>	The grid system used to compile data was MGA94 Zone 50
<i>Location of data points - continued</i>	<i>Quality and adequacy of topographic control.</i>	Topography control is +/- 5m
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Drill holes shown in Figures 2 to 3
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and</i>	The data alone will not be used to estimate a Mineral Resource or Ore Reserve.

	<i>Ore Reserve estimation procedure(s) and classifications applied.</i>	
	<i>Whether sample compositing has been applied.</i>	Samples were selected based on geological logging and weighted average assay grades of 1m intervals. Samples were subject to at least a duplicate head grade analysis and a calculated head grade was derived based on the grade of the leach liquor plus residual grade.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The intersections in all drill holes are interpreted to be close to true widths
	<i>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.</i>	As above
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered and secured bags until delivered to the laboratory
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>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.</i>	Zenith announced on the 21st March 2019 that it has a 2-year option to explore for bedrock gold (any gold 6 metres below surface) and lithium mineralisation on tenements covering the operating Dulcie Heap Leach Gold Project (DHLGO) in exchange for surface laterite gold rights on Zenith's adjoining exploration licence E77/2388. The option was extending for a further 12 months. Zenith may at its sole election exercise the option through the payment of a 2% NSR royalty payable on any future bedrock gold production from the DHLGO project area. The project is located predominantly on vacant crown land.
	<i>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.</i>	Tenements are mining leases and prospecting leases, current heap leach operation is active, no known impediments to obtain a licence to operate.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Refer to ASX release 21st March 2019.

Geology	Deposit type, geological setting and style of mineralisation.	Archean mesothermal lode gold mineralisation hosted within banded iron formation (BIF) and mafic rock types.						
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:	Hole_ID	Easting	Northing	RL	Depth (m)	Azimuth	Dip
		ZDRC026	746957	6481364	410	71	73	-60
		ZDRC027	746911	6481346	411	119	73	-60
		ZDRC028	746874	6481594	406	107	73	-60
	o easting and northing of the drill hole collar	ZDRC030	746767	6481800	401	83	73	-60
		ZDRC031	746720	6481788	403	95	73	-60
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	ZDRC036	746523	6482267	404	101	73	-60
		ZDRC038	746489	6482415	398	140	73	-60
		ZDRC039	746344	6482799	407	155	73	-60
	o dip and azimuth of the hole	ZDRC041	746398	6482688	400	101	73	-60
		ZDRC042	746353	6482677	412	79	73	-60
	o down hole length and interception depth	ZDRC043	746395	6482613	403	119	73	-60
	o hole length.							
		Hole_ID	From	To	Au (g/t)	Category	Av Grade	
		ZDRC027	70	71	0.88	Fresh		
		ZDRC031	69	70	0.82	Fresh		
		ZDRC036	76	77	1.14	Fresh		
		ZDRC043	63	64	1.05	Fresh		0.97
		ZDRC026	42	43	1.46	Transitional Saprock		
		ZDRC027	42	43	0.61	Transitional Saprock		
		ZDRC030	49	50	0.98	Transitional Saprock		
		ZDRC041	31	32	0.82	Transitional Saprock		0.97
		ZDRC028	46	47	0.86	Transitional lower saprolite		
		ZDRC036	47	48	1.18	Transitional Lower saprolite		
	ZDRC038	39	40	1.17	Transitional lower saprolite			
	ZDRC042	18	19	1.27	Transitional lower saprolite		1.12	
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.	Reported intersections are shown above along with average grades. No top cuts have been applied.						
	Where aggregate intercepts incorporate short lengths of high-grade results and longer	Refer to assay intervals reported above						

	<i>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.</i>	
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	The intersections in all drill holes are interpreted to be close to true widths based on drill core structural measurements.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	The intersections in all drill holes are interpreted to be close to true widths based on drill core structural measurements and cross section interpretations.
	<i>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').</i>	Mineralised intervals reported are down-hole lengths but are believed to be close to true thickness.
<i>Diagrams</i>	<i>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.</i>	Refer to Figures 1 - 3 and Table 1 and 2 in body of text of ASX release 11 Mar 2021.
<i>Balanced reporting</i>	<i>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.</i>	Refer to Figures 1 - 3 and Table 1 and 2 in body of text of ASX release 11 Mar 2021.

Other substantive exploration data	<i>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.</i>	Metallurgical testwork reported in this ASX release.
Further work	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	The testwork campaign was completed to guide the Company's exploration focus at Split Rocks, with the results confirming that even relatively low-grade gold mineralisation should be included in the drill target mix. Additional gold leaching testwork is now planned on both coarse fresh and transition-clay material, whilst a comprehensive testwork program based around diamond drill core, column leach and screening tests will be required to provide more definitive metallurgical results.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to Figures 1 - 3 and Table 1 and 2 in body of text of ASX release 11 Mar 2021.