

ABN 74 084 669 036

Sydney Office
P +61 2 9696 2900
F +61 2 9696 2901
Level 24
175 Liverpool Street
Sydney NSW 2022

www.evolutionmining.com.au

ASX Announcement

12 February 2020

ANNUAL MINERAL RESOURCES AND ORE RESERVES STATEMENT

Key Highlights

- Cowal underground resource increased 77% to 2.5 million ounces
- Early addition of three new sub-levels to reserves at Ernest Henry
- Significant uplift to resources and reserves to come from Red Lake

Evolution Mining Limited (ASX: EVN) is pleased to release its annual Mineral Resources and Ore Reserves (MROR) estimates as at 31 December 2019 which reflects the delivery of significant growth and further upside opportunity at its long life, low cost assets. Group Mineral Resources are estimated at 15.2 million ounces of gold and 934,000 tonnes of copper. Group Ore Reserves are estimated at 6.6 million ounces of gold and 532,000 tonnes of copper.

Cowal

- Gold Mineral Resources of 8.6 million ounces
 - GRE46 Dalwhinnie underground Mineral Resources increased by 77% from 1.4 million ounces to 2.5 million ounces
- Gold Ore Reserves of 3.6 million ounces
 - Maiden underground Ore Reserve expected to be declared in the 2020 calendar year to support the development of an underground mine. Mineralisation remains open at depth and along strike with six drill rigs (three surface and three underground) continuing to expand the resource and increase confidence in grade continuity
- Evolution has added over 6.6 million ounces to Mineral Resources and 3.4 million ounces to Ore Reserves since it acquired Cowal in 2015

Ernest Henry

- Mineral Resources of 1.3 million ounces of gold and 356,000 tonnes of copper
- Ore Reserves of 0.7 million ounces of gold and 150,000 tonnes of copper
- Early addition of three new sub-levels to Ore Reserves
 - First Ore Reserves added below the 1200mRL to extend mine life
 - 18,000 metre drill program planned for the 2020 calendar year which will target Mineral Resources and Ore Reserves extensions below the 1200mRL

Red Lake

Red Lake Mineral Resources and Ore Reserves are not included in this Annual Statement.

On 26 November 2019 Evolution announced the acquisition of the high grade, long life Red Lake gold mine in Ontario, Canada. The transaction is expected to complete around the end of March 2020. As at 30 June 2018 Red Lake had a **Mineral Resource of 7.0 million ounces** (inclusive of reserves) and an **Ore Reserve of 2.1 million ounces**. Those Mineral Resources and Ore Reserves were prepared using Canadian 43-101 standards. Evolution expects that, when it reports Red Lake Mineral Resources and Ore Reserves in June 2020, Ore Reserves could be revised lower by approximately 30% using Evolution's estimation methodology and to allow for mining depletion since 1 July 2018.

Drilling has commenced at Red Lake with five rigs drilling near mine high grade resource extensions.
 Regional exploration drilling will commence in FY2021 targeting potential in a camp with historic head grades of +20g/t Au



Other growth opportunities

- Mungari Frog's Leg near mine high-grade extensions north of Boomer and regional opportunities
- Crush Creek drilling is expected to commence early in the June 2020 quarter to confirm and extend highgrade epithermal vein mineralisation. Evolution believes there is significant potential at Crush Creek to provide mine life extensions at Mount Carlton which is located 30 kilometres to the northwest
- Murchison, Cue, Drummond and Connors Arc are early-stage, greenfields exploration projects where Evolution is targeting orogenic lode gold and epithermal precious metals deposits with sufficient scale and geological potential to delineate a 2 to 3 million ounce resource

Commenting on the updated Mineral Resources and Ore Reserves estimate, Evolution Executive Chairman, Jake Klein, said:

"It is pleasing to achieve continued success in extending the mine life of our key low cost assets. The Cowal underground mine will provide a step change to production and costs and the extensions at Ernest Henry ensure this asset will continue to provide Evolution with high margin ounces on a sustainable basis. We are also excited about the potential for Red Lake to become a cornerstone asset with the appropriate level of investment in exploration and development."

Group Mineral Resources as at 31 December 2019 are estimated at **15.2 million ounces of gold** and **934,000 tonnes of copper** compared with the estimate at 31 December 2018 of 14.73 million ounces of gold and 982,000 tonnes of copper. The updated estimate accounts for mining depletion in 2019 of 890,000 ounces of gold. All Mineral Resources are constrained at an A\$2,000/oz economic threshold at Evolution's 100% owned assets.

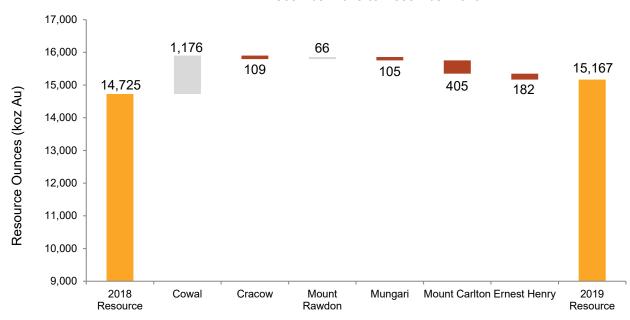
Key changes to the Group Mineral Resources estimate include:

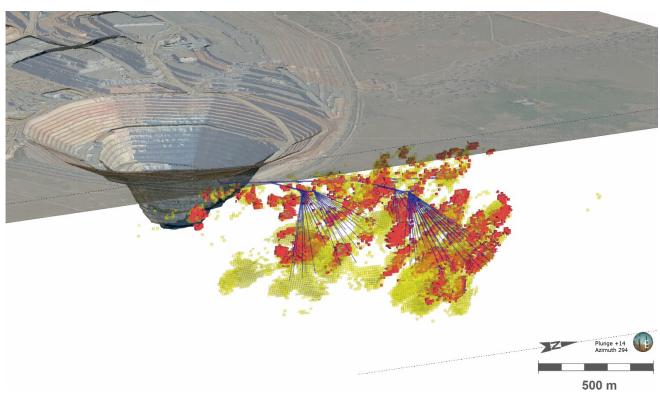
- Cowal: Addition of 1.18 million ounces after mining depletion of 332,000 ounces and the addition of 1.41 million gold ounces to the GRE46 Dalwhinnie underground resource following successful extensional drilling
- Mt Carlton: Decrease of 405,000 gold ounces after mining depletion of 113,000 ounces and post a geological review and updated interpretation of the mineralisation controls. A current drill program with a focus on opportunities to extend the Mt Carlton underground is expected to add to this resource
- Ernest Henry: Decrease of 182,000 ounces and 31,000 tonnes of copper due to depletion and the sub-level cave model ore delivery estimation. An 18,000 metre drill program planned for the 2020 calendar year will target resource extensions below the 1200mRL

The Group Mineral Resource Statement as at 31 December 2019 is provided below in Tables 1 and 3. Mineral Resources are reported inclusive of Ore Reserves and include all exploration and resource definition drilling information up to 31 December 2020 and have been depleted for mining to 31 December 2019.



Group Gold Resource net changes post mining depletion December 2018 to December 2019





Section of Cowal GRE46 underground area. Red shows the outline of the December 2018 mineable shape optimiser (MSO) outlines and yellow shows the December 2019 MSO outlines. Planned drilling from the exploration decline is shown in blue

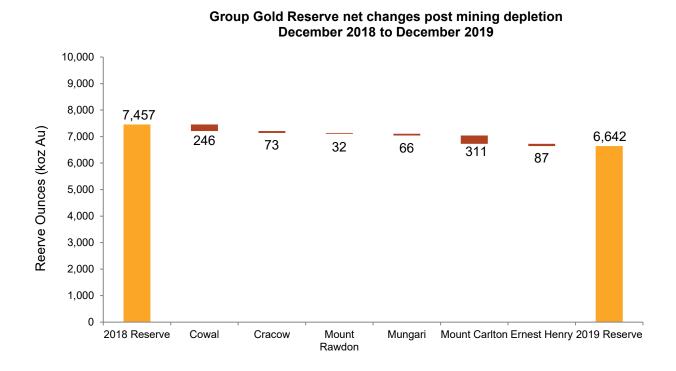


Group Ore Reserves as at 31 December 2019 are estimated at **6.6 million ounces of gold** and **532,000 tonnes of copper** compared with the 31 December 2018 estimate of 7.5 million ounces of gold and 538,000 tonnes of copper after accounting for mining depletion of 890,000 ounces of gold.

Key changes to the Group Ore Reserves estimate include:

- Cowal: Decrease of 246,000 ounces post mining depletion of 332,000 ounces. A maiden underground Ore Reserve expected to be declared in the 2020 calendar year to support the development of an underground mine
- Mt Carlton: Decrease of 312,000 ounces post mining depletion of 113,000 ounces and post a geological review and updated interpretation of the mineralisation controls. A current drill program with a focus on opportunities to extend the Mt Carlton underground is expected to add to these reserves
- Ernest Henry: Increase of 14,000 tonnes of copper and a decrease of 87,000 ounces gold post mining depletion which has been partially offset by the addition of three levels to reserves below the 1200mRL. An 18,000 metre drill program planned for the 2020 calendar year will target further additions to reserves below the 1200mRL. Evolution has a 49% interest in all gold, copper and silver added to reserves below this level

The Group Ore Reserve Statement as at 31 December 2019 is provided in Tables 2 and 4.



Commodity Price Assumptions

Commodity price assumptions used to estimate the December 2019 Mineral Resources and Ore Reserves are provided below. The reserve gold price assumption has been revised higher from A\$1,350 to A\$1,450 per ounce and remains below US\$1,000 per ounce. Silver and copper price assumptions are unchanged.

- Gold: A\$1,450/oz for Ore Reserves, A\$2,000/oz for Mineral Resources
- Silver: A\$20.00/oz for Ore Reserves, A\$26.00/oz for Mineral Resources
- Copper: A\$6,000/t for Ore Reserves, A\$9,000/t for Mineral Resources



JORC 2012 and ASX Listing Rules Requirements

The Mineral Resources and Ore Reserves statement included with this announcement has been prepared in accordance with the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code 2012) for all projects.

Group Mineral Resources and Ore Reserves summaries are tabulated on the following pages. A material information summary is also provided for the Cowal Mineral Resource and Ore Reserve pursuant to ASX Listing Rules 5.8 and 5.9 and the Assessment and Reporting Criteria in accordance with JORC Code 2012 requirements.

Approval

This release has been approved by the Evolution Board of Directors.

For further information please contact:

Investor Enquiries

Bryan O'Hara Group Manager Investor Relations Evolution Mining Limited

Tel: +61 (0)2 9696 2900

Media Contact

Michael Vaughan Media Relations Fivemark Partners

Tel: +61 (0)422 602 720

About Evolution Mining

Evolution is a leading, growth-focused Australian gold miner. Evolution operates five wholly-owned mines – Cowal in New South Wales; Mt Carlton, Mt Rawdon, and Cracow, in Queensland; and Mungari in Western Australia. In addition, Evolution holds an economic interest in the Ernest Henry copper-gold mine that will deliver 100% of future gold and 30% of future copper and silver produced from an agreed life of mine area. Outside of this life of mine area Evolution will have a 49% interest in future copper, gold and silver production at Ernest Henry.

On 26 November 2019 Evolution announced the acquisition of the high grade, long life Red Lake gold complex in Ontario, Canada. The transaction is expected to close around the end of March 2020.

Evolution has guided FY20 gold production, exclusive of Red Lake's contribution, of around 725,000 ounces at an All-in Sustaining Cost of A\$940 – A\$990 per ounce. Group guidance is expected to be updated on completion of the Red Lake transaction.



Competent Persons Statement

The information in this statement that relates to the Mineral Resources and Ore Reserves listed in the table below is based on, and fairly represents, information and supporting documentation prepared by the Competent Person whose name appears in the same row, who is employed on a full-time basis by Evolution Mining Limited and is a Member or Fellow of the Australasian Institute of Mining and Metallurgy and consents to the inclusion in this report of the matters based on their information in the form and context in which it appears. Each person named in the table below has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012.

Evolution employees acting as a Competent Person may hold equity in Evolution Mining Limited and may be entitled to participate in Evolution's executive equity long-term incentive plan, details of which are included in Evolution's annual Remuneration Report. Annual replacement of depleted Ore Reserves is one of the performance measures of Evolution's long-term incentive plans.

Activity	Competent Person
Cowal Mineral Resource	James Biggam
Cowal Ore Reserve	Ryan Kare
Mungari Mineral Resource	Andrew Engelbrecht
Mungari Ore Reserve	Ken Larwood
Mt Carlton Mineral Resource	Chris Wilson
Mt Carlton Open Pit Ore Reserve	Sam Patterson
Mt Carlton Underground Ore Reserve	Anton Kruger
Cracow Mineral Resource	Mike Smith
Cracow Ore Reserve	Matt Gray
Mt Rawdon Mineral Resource	Timothy Murphy
Mt Rawdon Ore Reserve	Mark Boon
Marsden Mineral Resources	Michael Andrew
Marsden Ore Reserve	Anton Kruger

Full details of the Ernest Henry Mineral Resources and Ore Reserves are provided in the report entitled "Glencore Resources and Reserves as at 31 December 2019" released 4 February 2020 and available to view at www.glencore.com. The information in this statement that relates to the Ernest Henry Mineral Resource and Ore Reserve is based on, and fairly represents, information and supporting documentation prepared by Colin Stelzer and Mike Corbett respectively. Colin and Mike are members of the Australasian Institute of Mining and Metallurgy and are full-time employees of Glencore. The Company confirms that all material assumptions and technical parameters underpinning the estimates in Glencore's market release continue to apply and have not materially changed. Colin Stelzer and Mike Corbett consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

Full details of the Red Lake Mineral Resources and Ore Reserves effective 30 June 2018 are provided in the report entitled "Red Lake Operations Ontario, Canada NI 43-101 technical report" released 22 February 2019 and available to view at www.sedar.com. For Red Lake MROR, Mineral Resources are inclusive of Reserves. Mineral Resources have been prepared using the Canadian NI 43-101 Standards, and are not JORC compliant (for example, under NI 43-101, Mineral Resources are reported inclusive of Ore Reserves). The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement. Michael Andrew and Rodrigo Pasqua, both



Evolution Mining employees consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

Forward looking statements

This report prepared by Evolution Mining Limited (or "the Company") include forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation. Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control. Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.



Table 1: December 2019 Group Gold Mineral Resource Statement

	Gold			Measured			Indicated			Inferred		То	tal Resourc	е		Dec 18
Project	Туре	Cut-Off	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	CP ³	Resource Gold Metal (koz)									
Cowal	Open pit	0.35	-	-	-	164.15	0.87	4,602	21.09	0.92	626	185.25	0.88	5,229		4,977
Cowal	Stockpile		42.79	0.63	860	-	-	-	-	-	-	42.79	0.63	860		1,027
Cowal	UG	1.5	-	-	-	6.79	3.03	661	22.93	2.50	1,842	29.72	2.62	2,502		1,411
Cowal	Total		42.79	0.63	860	170.94	0.96	5,263	44.02	1.74	2,468	257.76	1.04	8,591	1	7,415
Cracow ¹	Total	2.2	0.33	7.99	84	0.74	5.88	141	1.48	2.54	121	2.55	4.21	345	2	454
Mt Carlton	Open pit	0.35	-	-	-	3.55	2.04	233	0.40	1.12	14	3.96	1.90	247		634
Mt Carlton	Stockpile		0.35	1.06	12	4.84	0.54	84	-	-	-	5.19	0.58	96		49
Mt Carlton	UG	2.55	-	-	-	0.45	4.83	70	0.04	3.28	5	0.50	4.70	75		141
Mt Carlton	Total		0.35	1.06	12	8.85	1.36	387	0.45	1.33	19	9.64	1.35	418	3	823
Mt Rawdon ¹	Total	0.17	6.44	0.37	76	36.86	0.65	769	12.93	0.52	217	56.23	0.59	1,062	4	996
Mungari ¹	Open pit	0.5	0.58	1.30	24	38.38	1.22	1,508	6.49	1.52	317	45.45	1.27	1,849		1,902
Mungari	UG	1.8	0.53	5.34	91	1.77	3.28	187	3.17	2.77	283	5.47	3.18	560		611
Mungari ¹	Total		1.11	3.22	115	40.15	1.31	1,695	9.66	1.93	600	50.92	1.47	2,409	5	2,514
Ernest Henry ²	Total	0.9	7.70	0.65	161	47.90	0.62	950	9.00	0.61	177	64.60	0.62	1,288	6	1,470
Marsden	Total	0.2	-	-	-	119.83	0.27	1,031	3.14	0.22	22	122.97	0.27	1,053	7	1,053
Total			58.72	0.69	1,307	425.27	0.75	10,236	80.68	1.40	3,624	564.67	0.84	15,167		14,725

Data is reported to significant figures to reflect appropriate precision and may not sum precisely due to rounding Mineral Resources are reported inclusive of Ore Reserves. UG denotes underground

Full details of the Ernest Henry Mineral Resources and Ore Reserves are provided in the report entitled "Glencore Resources and Reserves as at 31 December 2019" released 4 February 2020 and available to view at www.glencore.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Reports and that all material assumptions and parameters underpinning the estimates in the Reports continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the Reports. Evolution Mining has an economic interest earning rights to 100% of the revenue from future gold production and 30% of future copper and silver produced from an agreed area, and 49% of future gold, copper and silver produced from the Ernest Henry Resource outside the agreed area. The Ernest Henry Resource is reported here on the basis of economic interest and not the entire mine resource. The above reported figures constitute 79.5% of the total Ernest Henry gold resource.

¹ Includes stockpiles

² Ernest Henry Operation cut-off 0.9% CuEq

³Group Mineral Resources Competent Person (CP) Notes refer to 1. James Biggam; 2. Michael Smith; 3. Chris Wilson; 4. Tim Murphy; 5. Andrew Engelbrecht; 6. Colin Stelzer (Glencore); 7. Michael Andrew



Table 2: December 2019 Group Gold Ore Reserve Statement

	Gold			Proved			Probable		Ţ	otal Reserve			Dec 18
Project	Туре	Cut- Off	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	CP ³	Reserves Gold Metal (koz)
Cowal	Open pit	0.45	-	-	-	89.43	0.96	2,773	89.43	0.96	2,773	1	2,853
Cowal	Stockpile		42.79	0.63	860	-	-	-	42.79	0.63	860		1,027
Cowal	Total		42.79	0.63	860	89.43	0.96	2,773	132.22	0.85	3,634	1	3,880
Cracow ¹	Underground	3.1	0.39	5.95	74	0.21	5.67	38	0.61	5.78	114	2	187
Mt Carlton	Open pit	1.8				1.51	3.58	174	1.51	3.58	174	3	465
Mt Carlton	Stockpile		0.35	1.06	12	4.84	0.54	84	5.19	0.58	96	3	49
Mt Carlton	Underground	3.2	-	-	-	0.36	3.44	40	0.36	3.44	40	4	108
Mt Carlton	Total		0.35	1.06	12	6.71	1.38	299	7.06	1.37	311		622
Mt Rawdon ¹	Open pit	0.24	3.73	0.45	53	20.92	0.72	485	24.65	0.68	538	5	570
Mungari ¹	Open pit	0.75	0.58	1.28	24	10.55	1.40	476	11.12	1.40	500		521
Mungari	Underground	2.9	0.43	4.05	56	0.07	5.35	12	0.50	4.25	68		113
Mungari ¹	Total		1.01	2.47	80	10.62	1.43	489	11.63	1.52	568	6	634
Ernest Henry ²	Underground	0.9	6.10	0.80	156	33.40	0.47	505	39.40	0.52	660	7	747
Marsden	Open pit	0.3	-	-	-	65.17	0.39	817	65.17	0.39	817	4	817
		Total	54.37	0.71	1,235	226	0.74	5,406	281	0.74	6,642		7,458

Data is reported to significant figures to reflect appropriate precision and may not sum precisely due to rounding

Full details of the Ernest Henry Mineral Resources and Ore Reserves are provided in the report entitled "Glencore Resources and Reserves as at 31 December 2019" released 4 February 2020 and available to view at www.glencore.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Reports and that all material assumptions and parameters underpinning the estimates in the Reports continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the Reports. Evolution Mining has an economic interest earning rights to 100% of the revenue from future gold production and 30% of future copper and silver produced from an agreed life of mine area, and 49% of future gold, copper and silver produced from the Ernest Henry Resource outside the agreed area. Ernest Henry Reserve is reported here on the basis of economic interest and not the entire mine reserve. The above reported figures constitute 89.5 % of the total Ernest Henry gold reserve.

¹ Includes stockpiles

² Ernest Henry Operation cut-off 0.9% CuEq

³Group Ore Reserve Competent Person (CP) Notes refer to 1. Ryan Kare; 2. Matt Gray; 3. Sam Patterson; 4. Anton Kruger; 5. Mark Boon; 6. Ken Larwood; 7. Mike Corbett (Glencore);



Table 3: December 2019 Group Copper Mineral Resource Statement

	Copper			Measured			Indicated			Inferred		To	tal Resourc	:e		Dec 18
Project	Type	Cut- Off	Tonnes (Mt)	Copper Grade (%)	Copper Metal (kt)	CP ³	Resources Copper Metal (kt)									
Marsden	Total	0.2	-	-	-	119.83	0.46	553	3.14	0.24	7	122.97	0.46	560	1	560
Ernest Henry ²	Total	0.9	2.60	1.17	30	20.90	1.16	243	7.10	1.16	83	30.60	1.16	356	2	387
Mt Carlton ¹	Open pit	0.35	0.35	0.21	1	3.55	0.36	13	0.40	0.18	1	4.30	0.33	14		29
Mt Carlton	Underground	2.55	-	-	-	0.45	0.77	3	0.04	0.53	0	0.50	0.75	4		6
Mt Carlton ¹	Total		0.35	0.21	1	4.01	0.41	16	0.45	0.21	1	4.80	0.38	18	3	34
		Total	2.95	1.04	31	144.74	0.56	812	10.69	0.85	91	158.37	0.59	934		982

Group Mineral Resources Competent Person³ (CP) Notes refer to: 1. Michael Andrew; 2. Colin Stelzer (Glencore); 3 Chris Wilson

Table 4: December 2019 Group Copper Ore Reserve Statement

	Copper			Proved			Probable			Total Reserve			
Project	Туре	Cut- Off	Tonnes (Mt)	Copper Grade (%)	Copper Metal (kt)	Tonnes (Mt)	Copper Grade (%)	Copper Metal (kt)	Tonnes (Mt)	Copper Grade (%)	Copper Metal (kt)	CP ³	Dec 18 Resources Copper Metal (kt)
Marsden		0.3	-	-	-	65.17	0.57	371	65.17	0.57	371	1	371
Ernest Henry ²	Total	0.9	1.80	1.50	27	13.20	0.93	123	15.10	1.00	150	2	136
Mt Carlton ¹	Open pit	1.8	0.35	0.21	1	1.51	0.61	9	1.86	0.54	10	3	27
Mt Carlton	Underground	3.2	-	-	-	0.36	0.39	1	0.36	0.39	1	1	4
Mt Carlton ¹	Total		0.35	0.21	1	1.88	0.57	11	2.22	0.51	11		31
		Total	2.15	1.29	28	80.25	0.63	505	82.49	0.65	532		538

Group Ore Reserve Competent Person³ (CP) Notes refer to: 1. Anton Kruger; 2. Mike Corbett (Glencore). 3. Sam Patterson;

The following notes relate to Tables 3 and 4.

Data is reported to significant figures to reflect appropriate precision and may not sum precisely due to rounding Mineral Resources are reported inclusive of Ore Reserves.

Evolution cut-off grades are reported in g/t gold

¹ Includes stockpiles

² Ernest Henry Operation cut-off 0.9% CuEq

Full details of the Ernest Henry Mineral Resources and Ore Reserves are provided in the report entitled "Glencore Resources and Reserves as at 31 December 2019" released 4 February 2020 and available to view at www.glencore.com. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Report and that all material assumptions and parameters underpinning the estimates in the Report continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the Reports. Evolution Mining has an economic interest earning rights to 100% of the revenue from future gold production and 30% of future copper and silver produced from an agreed life of mine area, and 49% of future gold, copper and silver produced from the Ernest Henry Resource outside the agreed area. Ernest Henry Reserve is reported here on the basis of economic interest and not the entire mine reserve. The above reported figures constitute 37.4% of the total Ernest Henry copper resource and 33.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource and 30.9 % of the total Ernest Henry copper resource



MATERIAL INFORMATION SUMMARY

Material Information Summaries are provided for the GRE46 Underground Mineral Resource at Cowal, the E42 Open Cut Mineral Resource and Ore Reserve, the Mt Carlton Mineral Resource and Ore Reserve pursuant to ASX Listing Rules 5.8 and 5.9 and the Assessment and Reporting Criteria in accordance with JORC Code 2012 requirements. The Assessment and Reporting Criteria in accordance with JORC Code 2012 is presented in Appendix 1.

1.0 COWAL

Cowal Mineral Resource

The December 2019 Cowal Mineral Resource estimate of 257.76Mt at 1.04g/t gold for 8,591koz gold represents an increase of 1,179koz gold compared to the December 2018 estimate of 240.64Mt at 0.96g/t gold for 7,415koz gold.

Changes to the Mineral Resource estimate for Cowal are largely due to:

- Addition of 693koz due to resource growth largely due to drilling at GRE46 Underground (+652k ounces)
 and remodelling of E42 Diorite domains (+41k ounces)
- Addition of 799koz through design changes at GRE46, E41, E42 open pits and GRE46 underground that reflects to an increase in Au price from A\$1,800/oz to A\$2,000/oz for resources
- Mining depletion during the period (-332koz)

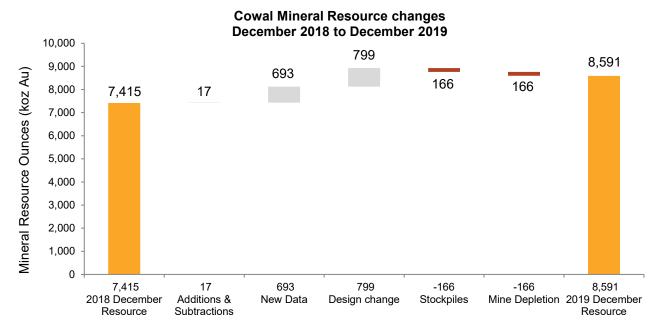
Cowal Mineral Resource December 2019

	Gold		N	/leasured	d	lr	ndicated		ı	nferred		Tota	l Resou	rce
Project	Туре	Cut- Off	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)									
Cowal ¹	OP	0.35	-	-	-	164.15	0.87	4,602	21.09	0.92	626	185.25	0.88	5,229
Cowal	S/P		42.79	0.63	860	-	-	-	-	-	-	42.79	0.63	860
Cowal	UG	1.50	-	-	-	6.79	3.03	661	22.93	2.50	1,842	29.72	2.62	2,502
Cowal	Total		42.79	0.63	860	170.94	0.96	5,263	44.02	1.74	2,468	257.76	1.04	8,591

Data is reported to significant figures to reflect appropriate precision and may not sum precisely due to rounding Mineral Resources are reported inclusive of Ore Reserves.

OP denotes open pit, UG denotes underground and S/P denotes stockpile





Ore Reserve

The December 2019 Cowal Ore Reserve estimate of 132.22Mt at 0.85g/t gold for 3,634koz represents a relative change of -6% for tonnes, 0% for grade for an overall decrease of -6% for metal.

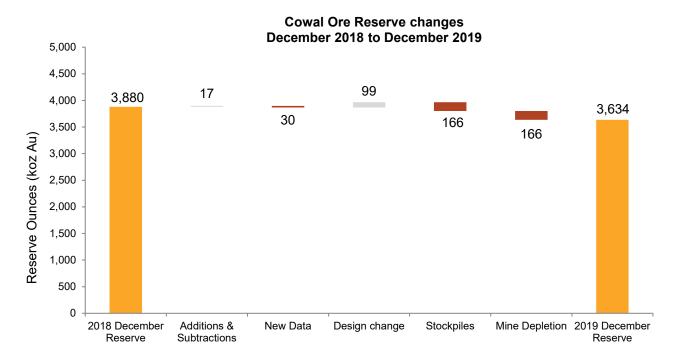
Reserves are based on a price of A\$1,450/oz for gold and recovery generated as a function of mill feed head grade whilst maintaining a cut-off of 0.45g/t for gold.

The Ore Reserve is also based on a Pre-feasibility Study completed for the In-Wall Ramp design on E42 in 2018.

Cowal Ore Reserve December 2019

	Gold			Proved			Probable		Т	otal Reserv	е
Project	Туре	Cut- off	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)
Cowal	OP	0.45	-	-	-	89.43	0.96	2,773	89.43	0.96	2,773
Cowal	S/P		42.79	0.63	860	-	-	-	42.79	0.63	860
Cowal	Total		42.79	0.63	860	89.43	0.96	2,773	132.22	0.85	3,634





1.1 GRE46 Underground and E41W Open Pit Mineral Resource (Cowal)

1.1.1 Material Assumptions for Mineral Resources

The Cowal open pit Mineral Resource estimate is defined within an optimised pit shell using an A\$2,000/oz gold price assumption and based on the same detailed geotechnical design parameters, practical mining considerations and mining depletion at 31 December 2019 as the Cowal Ore Reserve. The Mineral Resource estimate also draws on the experience gained since mining commenced in April 2005 at Cowal.

The GRE46 underground Mineral Resource estimate is defined by an underground mining shape optimiser using an A\$2,000/oz gold price assumption. The GRE46 Underground has assumed conventional mining techniques and parameters typical of current Evolution underground operations. It is assumed that metallurgical recovery will be similar to the E42 ore body.

1.1.2 Geology and Geological Interpretation

The mineralisation at the Cowal Mine comprises four deposits: GRE46, E41, E42 and E46

The GRE46 deposit is subdivided into the open pit and underground resources. The GRE46 zone trends north-south, dips vertical to -70° west, and extends approximately 1,650m along strike, 175m across strike and at least 800m down dip. Individual lenses in the GRE46 mineralised zone are 1.0m to 15m wide, 25m to 250m long, and extend 50m to 200m down dip. Lenses consist of narrow high-grade quartz carbonate, pyrite and base metal veins controlled within a structural north-south corridor, broad zones of alteration around lithology contacts and occasional zones of grade enrichment occur in dilatant structures within the deposit known as Quartz Sulphide Breccias. Host lithology varies from poorly mineralised massive intrusive diorite and fine volcaniclastic sediments through to the preferential mineralised trachyandesite lava in the north, lenses of coarse to conglomeritic volcaniclastic sediments and the andesitic Dalwhinnie sill unit to the east. Lithological contacts with strong competency contrasts also provide broad areas of mineralisation.

The E41 West mineralisation strikes north-northeast and dips -70° east, and measures 750m along strike and 250 m across strike. Individual mineralised zones are 35 m to 50m wide and extend down dip for 125m. The E41 East mineralisation strikes east-west and dips -35° to -80° south, and measures 475m along strike and 500 m across strike. Individual mineralised zones are 35m to 50m wide and extend down dip for 225m.

The E42 deposit dips -35° to -45° to the south west with an approximate extent of 850m by 850m and extends 500m down dip. Mineralisation is contained within small discontinuous veins contained within larger mineralised envelopes approximately 50m wide.



The E46 deposit mineralisation trends north-northeast, dips -40° west to flat-lying, and measures approximately 650m along strike and 17m across strike. Individual zones are approximately 50m wide and extend 200m down dip.

Confidence in the geological interpretation is good. The interpretation is based on drilling that ranges from a 25m by 25m spacing to 50m by 50m spacing. The interpretation also incorporates data gathered from the mapping of exposures created by open cut mining which has been in operation continuously since 2005. The mapping has assisted in understanding the controls on mineralisation to improve the confidence in the geological interpretation. All available data from drilling and mapping is used in the geological interpretation. Petrological, litho-geochemical and structural studies have also been undertaken and have been used to develop the geological interpretation.

The use of pit mapping and other production data such as grade control drill data has helped resolve local controls on mineralisation at E42 as such the current interpretations have applied this knowledge to surrounding deposits and is relatively robust. An iterative process has been adopted with respect to the geological interpretation to ensure that it reflects the current understanding of the geology and controls on mineralisation.

The factors that affect the continuity of grade and geology at the Cowal deposits are structure, lithology competency contrasts and alteration, in order of magnitude. Areas of higher grade are those where there is a greater frequency of structures intersecting a preferential host lithology sequence, such as the north of the GRE46 deposit where trachyandesite lavas and coarse volcaniclastic sediments which abut a competent diorite are cut by mineralising structures parallel to lithology boundaries. These factors have been addressed in the interpretation and domaining of the resource and the estimation process.

1.1.3 Sampling and Sub-sampling

Diamond core is cut with a diamond saw or chisel. Core is cut to preserve the bottom of hole orientation mark and the top half of core is always sent for analysis to ensure no bias is introduced. During the 2016 Stage H drilling program a majority of the NQ daughter holes were whole core sampled to expedite sample processing and assay turnaround. In 2019, portions of the GRE46 UG drill out have been whole core sampled to expedite assay turnaround.

RC/AC Samples have been split using either a riffle splitter from a bulk sample collected at the rig or a rotary cone splitter attached to the cyclone. For most holes, chip samples were collected dry, but several areas have been affected by groundwater.

1.1.4 Sample Analysis Methods

Early in the North Ltd program, samples were crushed to 95% minus 6mm and a sub-sample then pulverised to 95% minus 75µm. Mid-way in the North Ltd program, specifications were modified to crushing to 95% minus 10mm to 15mm followed by pulverising to 85% minus 75µm. Analysis of all the North Ltd samples was done at Australian Laboratory Services and Australian Assay Labs, Orange, NSW. Both independent facilities used fire assay of a 50g sample with an atomic absorption (AA) finish.

More recent sample preparation was conducted by SGS West Wyalong and consisted of:

Drying in the oven at 105° C; crushing in a jaw crusher; fine crushing in a Boyd crusher to 2-3mm; rotary splitting a 3kg assay sub-sample if the sample is too large for the LM5 mill; pulverising in the LM5 mill to nominal; 90% passing 75 μ m; and a 30g fire assay charge was taken with an atomic absorption (AA) finish. The detection limit was 0.01g/t Au.

1.1.5 Drilling Techniques

Most of the drilling used to generate the Mineral Resources at Cowal is diamond core for the primary portion of the deposit. RC and AC drilling was predominantly utilised to delineate the oxide areas.

Drill holes were drilled on a nominal even spaced grid pattern to avoid clustering and collar and down hole surveys were utilised to accurately record final locations. Industry standard sampling, assaying and Quality Assurance/Quality Control (QA/QC) practices were applied to all forms of drilling.

A majority of the resource definition holes are drilled with an HQ3 collar through the oxide and completed through the primary zone to target using NQ2 core. Due to the depth of holes into the north of the GRE46 deposit (650m Average) controlled diamond drilling with occasional directional diamond holes were utilised, this drilling consisted of a fence of NQ sized holes with a nominal 50x50m Spacing for deeper portions and 25x25 for the upper Open Pit resources.



Reverse Circulation and Air Core drilling was also used to delineate oxide areas of the resource utilising 4.5 - 5.5 inch face drill hammer. RC drilling was completed to base of oxide with some holes hosting diamond tails. Air Core drilling was conducted to refusal.

Core has been oriented using a variety of techniques in line with standard industry practice at the time.

1.1.6 Estimation Methodology

GRE46 open pit model remained unchanged with a separate GRE46UG Model developed for underground resource optimisation.

A review of the 2018 GRE46 model was undertaken to re-define domains with similar features and continuity of mineralisation. The review looked at primary material only. The resource estimation process has underlying assumptions that each domain shares similar characteristics.

Top cutting of assay data is considered appropriate where outliers exist outside the lognormal distribution. These values have the potential to unduly bias grade estimates.

A review was completed to establish the optimum search parameters for the kriging process. Search distances and kriging weights were examined for the effect on kriging variance, slope of regression and negative kriging weights.

Individual domains were reviewed in terms of grade distribution using frequency histograms.

1m composites were formed for use in grade estimation for the GRE46UG model. The decision to use 1m composites for underground was based on the narrow nature of the veins. Datamine software was used to composite data.

Estimation involved the use of Categorical Indicator Kriging (CIK) and Ordinary Kriging (OK) techniques to estimate grade into the domained model. CIK helps to define mineralised material above or below a defined threshold. Once defined OK techniques are used to estimate grade into the resource. A discretisation of 5 x 5 x 5 in the plane x, y, z was used with a minimum sample number of 6 and maximum of 32 for the estimate. Search ellipsoids are based on the modelled semi-variogram ranges for each domain.

Parent block size for the GRE46UG model was selected at 10m x 10m x 10m. Ordinary kriging was completed on all domains and block grades were compared with composite of cut data to ensure kriging grades were represented in block grades. Swath plots were used to compare the modelled gold distributions in relation to composites as well as visual validation on 25m sections.

An update of the E42 Open pit model was also conducted, to incorporate new drilling conducted in late 2018. Like GRE46, the estimation approach was based on CIK and OK methodologies.

Top cutting of assay data is considered appropriate where outliers exist outside the lognormal distribution. These values have the potential to unduly bias grade estimates.

Individual lithology domains were reviewed in terms of grade distribution using frequency histograms. Domains were combined where differences in sample populations were deem negligible or sample numbers inadequate.

1m composites were formed for use in grade estimation for the E42 open pit. The decision to use 1m composites for open pit was based on comparisons between 1m and 3m composites which yielded little differences in means and distributions. Surpac software was used to composite data.

A review was completed to establish the optimum search parameters for the kriging process. Search distances and kriging weights were examined for the effect on kriging variance, slope of regression and negative kriging weights.

The estimation process used relatively large search distances and sample numbers due to the high nugget values. This resulted in a relatively smoothed grade estimate due to less predictable grade distributions. A discretisation of 5 x 5 x 5 in the plane x, y, z was used with a minimum sample number of 6 and maximum of 32 for the estimate. The smoothing effect is constrained through the creation of appropriate waste domains based on grade indicator model. Search ellipsoids are based on the modelled semi-variogram ranges for each domain.

Parent block size for the open pit model was selected at 15m x 15m x 9m. Ordinary kriging was completed on all domains and block grades were compared with composite of cut data to ensure kriging grades were represented in block grades. Swath plots were used to compare the modelled gold distributions in relation to composites as well as visual validation on 25m sections.



No assumption of mining selectivity has been incorporated in the estimate.

1.1.7 Resource Classification

The Mineral Resource classification is based on good confidence of the geological and grade continuity, 25m by 25m spaced drill hole density in the bulk of the resource and up to 50m by 50m spaced data in the peripheral parts of the resource. Ten years of continuous open pit mining operations and the iterative use of 10 m by 10 m spaced grade control and production data have been used to refine the Mineral Resource estimate. Reconciliation of the Mineral Resource against production data supports the classification that has been applied to the Mineral Resource.

The Mineral Resource estimate appropriately reflects the view of the Competent Person and is assigned in accordance with the JORC 2012 guideline.

1.1.8 Cut-off Grade

Mineral Resources for open pit are reported using a cut-off grade of 0.35g/t Au. This reflects the cost and price assumptions derived from operational performance. Ore Reserves for open pit are reported using a cut-off grade of 0.45g/t Au. This reflects the new cut-off grade calculation methodology used. GRE46UG Mineral resources used a 1.5g/t Au cut-off grade which reflects the costs and price assumptions from an underground operational performance.

1.1.9 Mining and Metallurgical Methods and parameters and other modifying factors considered to date

Mining factors are based on the current operation at Cowal, which has been operating continuously since 2005. The mining factors applied reflect the current open cut operation.

The Mineral Resource spatial constraining shells for the open pits are based on the cost structure of the owner mining rates at E42 Open Pit. The GRE46 Underground has assumed conventional mining techniques and parameters typical of current Evolution underground operations.

Metallurgical assumptions are based on the performance of the Cowal processing plant which has been in continuous operation since 2006. All ore to date has been sourced from the E42 open pit. Oxide ore is stockpiled for later treatment. Sulphide ore is processed by crushing, two stage grinding, sulphide flotation, regrind, and CIL recovery. The plant currently processes 9.2Mtpa.

Although the new resources are located within the existing mining lease, any proposed mining extraction and processing will be subject to permitting and the completion of an Environmental Impact Study.

2.0 MT CARLTON

Mt Carlton Mineral Resource

The Mt Carlton Mineral Resource consists of the V2 gold-silver-copper deposit and stockpiled material.

The December 2019 Mt Carlton Mineral Resource estimate for V2 of 9.644Mt at 1.35/t gold, 19g/t silver and 0.38% copper for 418koz gold, 5.8Moz silver, and 18kt copper represents a decrease of -405koz gold, -2,690koz silver and -21kt copper net of mining depletion compared to the December 2018 estimate of 10.04Mt at 2.6g/t gold, 27g/t silver and 0.34% copper for 823koz gold, 8.76Moz silver, and 34kt copper.

Changes to the Mineral Resource estimate for the V2 deposit are largely due to:

- Mining depletion at V2 during the period -113koz Au, -417koz Ag, and -2kt Cu
- 360koz gold decrease due to updated mineral resource estimate

The decrease in the Mineral Resource is the result of:

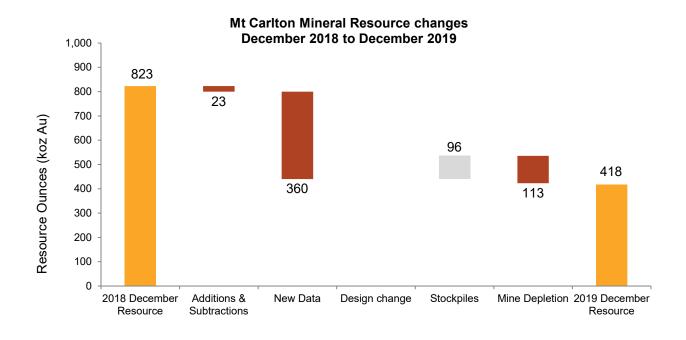
- Change in geological model of the West Lode defining a discrete sub-vertical feeder zone where previously the broad breccia zone style mineralisation was interpreted
- Mining depletion and net change in ROM stockpile



			Gold - M	t Carlton N	lineral Re	esources	s - Decemb	er 2019				
	M	leasured		lı	ndicated		ı	nferred		Tota	l Resour	ce
Gold	Tonnes Mt	Grade Au (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)
V2 Open Cut	-	-	-	3.55	2.04	233	0.40	1.12	14	3.96	1.90	247
V2 Underground	-	-	-	0.45	4.83	70	0.04	3.28	5	0.50	4.70	75
Stockpile	0.35	1.06	12	4.84	0.54	84	-	-	-	5.19	0.58	96
TOTAL	0.35	1.06	12	8.85	1.36	387	0.45	1.33	19	9.64	1.35	418

			Silver - N	It Carlton	Mineral	Resource	s - Decem	ber 2019				
	ı	Measured	ı		Indicated	i		Inferred		Tot	al Resou	rce
Silver	Tonnes (Mt) Grade Ag (g/t) Metal Ag (koz)			Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Ag (koz)	Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Ag (koz)	Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Ag (koz)
V2 Open Cut	-	-	-	3.55	27	3,060	0.40	27	343	3.96	27	3,403
V2 Underground	-	-	-	0.45	25	364	0.04	36	51	0.50	26	414
Stockpile	0.35	15	171	4.84	12	1,809	-	-	-	5.19	12	1,980
TOTAL	0.35	15	171	8.85	18	5,233	0.45	27	394	9.64	19	5,798

		С	opper - I	Mt Carlton	Mineral F	Resource	es - Decem	ber 2019				
	M	leasured		lı	ndicated		1	Inferred		Tota	l Resour	се
Copper	er Tonnes Grade Cont Metal (%) Cu (kt)			Tonnes Mt	Grade Cu (%)	Cont Metal Cu (kt)	Tonnes Mt	Grade Cu (%)	Cont Metal Cu (kt)	Tonnes Mt	Grade Cu (%)	Cont Metal Cu (kt)
V2 Open Cut	-	-	-	3.55	0.36	13	0.40	0.18	1	3.96	0.35	14
V2 Underground	-	-	-	0.45	0.77	3	0.04	0.53	0	0.50	0.75	4
Stockpile	0.35	0.21	1	-	-	-	-	-	-	0.35	0.21	1
TOTAL	0.35	0.21	1	4.01	0.41	16	0.45	0.21	1	4.80	0.38	18





Mt Carlton Ore Reserve

The Mt Carlton Ore Reserve consists of the V2 gold-silver-copper deposit and stockpiled material.

The December 2019 Mt Carlton Mineral Resource estimate for V2 of 7.06Mt at 1.37/t gold, 17.8g/t silver and 0.51% copper for 311koz gold, 4.1Moz silver, and 11kt copper represents a decrease of -311koz gold, -1,208koz silver and -19kt copper net of mining depletion compared to the December 2018 estimate of 4.78Mt at 4.04g/t gold, 34.2g/t silver and 0.63% copper for 622koz gold, 5.26Moz silver, and 30kt copper.

Changes to the Mineral Resource estimate for the V2 deposit are largely due to:

- Mining depletion at V2 during the period -113koz Au, -417koz Ag, and -2kt Cu
- A -311koz gold decrease due to updated mineral resource estimate

The decrease in the Ore Reserve is the result of:

- Change in geological model of the West Lode defining a discrete sub-vertical feeder zone where previously the broad breccia zone style mineralisation was interpreted
- Mining depletion and net change in ROM stockpile

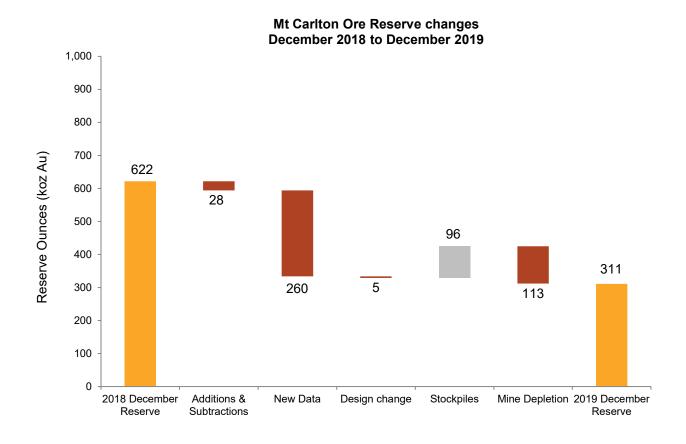
	Go	old - Mt Ca	riton Go	ld Mine	Ore Reser	ves - De	cember	2019		
			Proved		P	robable			Total	
Gold	Cut- off	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Au (g/t)	Cont Metal Au (koz)
V2 Underground	3.2	-	-	-	0.36	3.44	40	0.36	3.44	40
V2 Open Pit	1.8*	-	-	-	1.51	3.58	174	1.51	3.58	174
Stockpile		0.35	1.06	12	4.84	0.54	84	5.19	0.58	96
TOTAL		0.35	1.06	12	6.71	1.38	299	7.06	1.37	311

	Sil	ver - Mt Ca	arlton Go	ld Mine	Ore Rese	rves - De	cember	2019		
			Proved		P	robable			Total	
Silver	Cut- off	Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Au (koz)	Tonnes (Mt)	Grade Ag (g/t)	Cont Metal Au (koz)
V2 Underground	3.2	-	-	-	0.36	12.51	146	0.36	12.51	146
V2	1.8*	-	-	-	1.51	39.59	1,926	1.51	39.59	1,926
Stockpile		0.35	15.28	171	4.84	11.63	1,809	5.19	11.88	1,980
TOTAL		0.35	15.30	171	6.71	17.98	3,882	7.06	17.85	4,052

Copper - Mt Carlton Gold Mine Ore Reserves - December 2019										
		Proved		Probable			Total			
Copper	Cut- off	Tonnes (Mt)	Grade Cu (%)	Cont Metal Cu (kt)	Tonnes (Mt)	Grade Cu (%)	Cont Metal Cu (kt)	Tonnes (Mt)	Grade Cu (%)	Cont Metal Cu (kt)
V2 Underground	3.2	-	-	-	0.36	0.39	1	0.36	0.39	1
V2	1.8*	-	-	-	1.51	0.61	9	1.51	0.61	9
Stockpile		0.35	0.21	1	-	-	-	0.35	0.21	1
TOTAL		0.35	0.21	1	1.88	0.57	11	2.22	0.51	11

^{*}OP COG determined by NSR calculation 1.8g/t AuEq approximation used for reporting purposes only





2.1 Mt Carlton Open Pit and Underground Mineral Resources

2.1.1 Geology and Geological Interpretation

The Mt. Carlton project covers the northern margin of the Permian Bowen Basin, in particular the basal Lizzie Creek Volcanics with minor Back Creek Group sediments.

Mineralisation is hosted in the basal sequence of felsic to silicic volcanics un-conformably overlying the Lower Carboniferous Glen Alpine Adamellite. Mineralisation is hosted exclusively within the lower rhyodacitic volcanics. Mineralisation has been truncated and displaced by low angle detachment faults and cross cut by numerous steeply dipping late mafic dykes. Gold, silver, and copper mineralisation occurs in silicic cores enveloped first by a zone of quartz-alunite alteration, and then by an outer zone of quartz-dickite-kaolinite alteration. Proximal Au-Cu mineralization in the V2 pit occur in veins and hydrothermal breccia in three distinct ore zones (West, East and Link), which are aligned en echelon along a broadly E-W trending corridor.

2.1.2 Sampling and Sub-sampling

RC samples were collected using cone splitter at 1m intervals. All samples were collected dry. Field duplicates were collected in the same manner as original samples at a frequency of 1 in 20. RC and diamond core were logged for lithology, alteration, texture, weathering and mineralisation. Texture and structure data were recorded for core only. Core was routinely photographed after logging. Core was cut using a core saw and sampled at nominal one meter intervals from the same side in the tray at all times.

Samples were also collected using geological controls at preferential intervals. Core was cut in half through marked orientation lines or along on core axis. Quarter core was taken where check samples were required whiles whole core was taken for geotechnical testwork. Geotechnical logging was undertaken for oriented core, data collected included; core recovery, RQD, weathering, alteration, estimated rock strength, joint spacing, joint condition, lithological description/units, number of defects, defect type, roughness, infill and infill thickness.

2.1.3 Sample Analysis Methods

Half core samples averaging 2-3¹/₂kg along with quarter core samples are prepared and analysed at either the SGS Townsville or Intertek Townsville facilities. Weights of samples dried at 105°C are recorded and crushed to 2mm. Samples are split and excess bagged if crushed weight is greater than 3kg. LM5's are used to pulverise



samples to 85% passing 75um. A 200g pulp split is taken for analysis which comprise; a 50g charge fire assay with AA finish and ICP-AES for multi-element suite.

2.1.4 Drilling Techniques

RC and diamond drilling (DD – HQ diameter) methods were used to sample the V2 Resource areas. Data for the current estimates were collected from May 2019 to Dec 2019. Holes were drilled on 50m centres angled moderately steeply to 135° grid azimuth to optimally intersect strike of mineralisation. Areas of significant mineralisation and structural complexity were in-filled to $25m \times 25m$ spacing.

2.1.5 Estimation Methodology

At V2 a categorical indicator estimate using ordinary kriging was used for the current model with a block dimension of 5mX5mX5m. This reduction in block size from the 2018 model to better define the geometry of the narrow sub-vertical feeder zone which now comprises the majority of the V2 open pit resource. This reduction in block size has also improved the mining selectivity that is able to be applied to the V2 underground mining area. The Mineral Resource model was generated using several discrete domains. Grades for gold, silver, copper, arsenic, zinc, lead, iron, sulphur and calcium have been estimated using ordinary kriging after first differentiating the resource into high and low gold grade zones using categorical indicator kriging (CIK) into several mineralised domains.

In addition to the estimation of economic metals the Mt Carlton resource model incorporates details of structure, alteration and major lithology (including barren dykes) for both mineralised and waste blocks.

Six domains (High and Low Grade within the east, west and link zones of V2) were estimated. The domaining criteria was informed by data density and structure. The estimate was defined using 4,902 drillholes with corresponding 217,575 composited assays.

2.1.6 Resource Classification

Blocks in the resource model have been allocated a confidence category based on the number and location of samples used to estimate the grade of each block. The approach is based on the principle that larger numbers of samples, which are more evenly distributed throughout the search neighbourhood, will provide a more reliable estimate. The domain and availability of sample support was a key criteria to classify the Resource.

Blocks within the high-grade domains were classified as inferred, unless the sample support estimating the blocks was deemed to be sufficiently high for classification as indicated.

Blocks were deemed to have sufficiently high sample support if their respective high-grade domain contained more than one consecutive 25m section with at least two drillholes 25m apart. Polygons were digitized on 25m spaced sections where more than one drill hole was intersecting the high-grade zone within 25m of another drill hole on the section. Polygons on adjacent sections were wireframed, with lone polygons not wireframed. In these areas where support was high blocks within high grade domains were classified as indicated.

2.1.8 Cut-off Grade

The cut-off of 0.35g/t Au and 2.55g/t Au was used for V2 open cut and underground resource. No cut-off grade was applied to surface stockpiles.

2.1.9 Mining and Metallurgical Methods and parameters and other modifying factors considered to date

Mining factors are based on the current operation at Mt Carlton which has been operating an Open Pit since 2013. Unground mining commenced in July 2019.

Current open pit mining at Mt Carlton is a conventional truck and excavator operation, with standard waste rock dumps and ore stockpiling based on material type, hardness and oxidation state. A fleet of two excavators and six trucks is utilised to selectively mine ore material and waste in 2.5m-flitches over a 5m or 10m design bench height.

Underground mining is performed via mechanical mining methods utilising a Jumbo drill and normal underground LHD equipment.

Metallurgical assumptions are based on the performance of the Mt Carlton processing plant. A 2019 review of the Metallurgical heterogeneity from historic Metallurgical drillholes in the Mt Carlton Deposit indicated that no unique Geo-met domains are present and that a single recovery model for the entire deposit is appropriate. The recovery and processing work flow is described in Section 4 *Metallurgical factors or assumptions* in the Reserves table.



2.2 Mt Carlton Open Pit and Underground Ore Reserve

2.2.1 Material Assumptions for Ore Reserves

Open Pit:

The methodology used to convert the Mineral Resource to Ore Reserve can be described as optimisation of existing open pit operations through standard mine planning process steps of pit optimisation, mine design, mine schedule and financial modelling. Factors and assumptions have been formed from existing operating technical assumptions and cost models. On this basis the analysis is considered at a higher confidence level than Feasibility Study.

Current mining at Mt Carlton open pit is undertaken via conventional truck and excavator fleet to extract ore material to the ROM, waste material to the waste rock dumps with occasional stockpiling and reclaim of lower grade material. Ore is selectively mined to geological controlled grade boundaries in 2.5m flitch heights over a 5m or 10m design bench height. The current mining activities show the appropriateness of this mining method as the basis of the Ore Reserve.

The selective mining method eliminates recovery losses in favour of dilution with surrounding mineralised material. Dilution with mineralised material results in an immaterial small net increase in Ore Reserve and is therefore not applied to the Mt Carlton Open Pit Ore Reserve estimate. The economic analysis of the orebody for final spatial constrain accounts for ore dilution to ensure no uneconomic material is considered for mining. Reconciliation between resource model and mill performance at Mt Carlton to date demonstrate this approach as being within an acceptable uncertainty range for the style of mineralisation and mining method used.

External and internal Geotechnical studies are carried out to evaluate the operational designs. Ore Reserves are based on recommendations of pit slope berm and batter configurations recommended by Principal Consultant Geotechnical engineer from Oretek, reviewed by the Senior Geotechnical Engineer at Mt Carlton mine site.

Inferred material is excluded from the Ore Reserve and treated as waste material, which incurs a mining cost but is not processed and does not generate any revenue.

The selected mining method does not require additional infrastructure.

Underground:

Only the parts of the Link, East and West mineralisation zones which exist outside the open pit reserve design were considered for the purposes of conversion to Underground Reserve.

Mineable stope shapes were created using the Mineable Shape Optimiser (MSO) tool from Datamine, or manual wireframing processes, according to stope design parameters established in the feasibility study and detailed below. Stope shapes were created using Au gold grade as the MSO optimisation field at an incremental cut-off grade of \$2.5g/t. Stopes were then assessed for economic feasibility in a standard financial model.

Stope shapes were informed by geotechnical assessment to determine stable stope spans. The typical sublevel interval is 20m. Strike lengths vary between 6 and 20m, while stope widths are up to 12.5m.

Stope crown stability in the Link Zone will be negatively influenced by a less competent argillic material overlying the stopes. Additional crown ground support has been included in cost assumptions. Geotechnical assessment of the rock mass and stope size during the feasibility study has informed the stope dilution factor of 15% for the purposes of reserve assessment.

Geotechnical data was obtained by logging of core (48 holes), laboratory testing of material properties, structural logging of core and pit mapping of structures. The feasibility study geotechnical assessment and recommended mining parameters have been considered in determining the Ore Reserve for the underground.

A sharp boundary exists between ore and waste zones with lower grade surrounding the stope shape. A mining recovery factor of 92% is applied for operational recoveries of the ore.

2.2.2 Ore Reserve Classification

Open Pit:

The Ore Reserves are predominantly derived from Indicated Resources. This classification is based on the density of drilling, the orebody experience and the mining method employed. The only Probable Reserves derived from Measured Resources are those reported in known and quantified stockpiles.

It is the Competent Person's view that the classifications used for the Ore Reserves are appropriate.



Underground:

The reserve classification was carried out on the designed stopes. Stopes were assessed on the proportion of metal in each Resource category. Revenue was assumed from *Measured* and *Indicated* blocks only.

If all blocks within a stope were classified as *Measured or Indicated*, then it was classified as a *Probable Ore Reserve*.

Ounces contained in *Inferred* blocks were excluded from the Ore Reserve estimate and did not contribute to reported grades.

2.2.3 Mining Method

Current mining at Mt Carlton open pit is undertaken via conventional truck and excavator fleet to extract ore material to the ROM, waste material to the waste rock dumps with occasional stockpiling and reclaim of lower grade material. Ore is selectively mined to geological controlled grade boundaries in 2.5m flitch heights over a 5m or 10m design bench height. The current mining activities show the appropriateness of this mining method as the basis of the Ore Reserve.

The proposed underground mining method is transverse open stoping with backfill. The stopes height ranges from 15 to 20m and width varies from 10 to 30m. Parameters derived in geotechnical study work where used in the mining method selection.

2.2.4 Processing Method

The ore is processed through the Mt Carlton Bulk Sulphide Flotation Concentrator commissioned in 2013 and is comprised of the following unit operations: crushing; ore reclaim; SAG Mill; cyclone classification; bulk flotation and concentrate regrind; concentrate thickening and filtration. This technology is well tested globally for polymetallic orebodies and the successful treatment of Mt Carlton ores.

It has been assumed that deleterious elements will be managed operationally to be blended below the limits set in the Chinese smelter off take agreements as performed since the 2013 commissioning of the processing plant.

The current and estimated future average recoveries at V2 are 91% for Au, 80% for Ag and 93% for Cu. Recent operating history since commissioning supports the metallurgical parameters used in the Ore Reserve estimation. Detailed metallurgical characterisation test work of V2 extension lodes is in progress to confirm amenability of the existing Mt Carlton flowsheet.

Concentrate agreements with Chinese smelters to accept gold and silver concentrate contain recoverable payment terms based on concentrate grade. The Ore Reserve has been estimated that the concentrate will deliver above the specification payable grades over the life of the mine.

Recent operating history since commissioning supports the metallurgical parameters used in the Ore Reserve estimation.

2.2.5 Cut-off Grade

Open Pit:

As a result of multiple revenue contributing elements (gold, silver, copper), a cut-off grade for Open Pit Ore Reserves using a Net Smelter Return (NSR) has been applied to the resource model.

This method is used to account for the multiple revenue contributing elements (gold, silver and copper) and the incremental processing cost on a block by block basis. Incremental processing cost (which excludes site support cost) has been calculated in the reserve model per Mass Pull (MP) percent of each block. The mass pull of each block is calculated from estimated mineral grades using statistical analysis of historic recovery data throughout the operation of the processing plant. The difference between total Revenue and Processing Cost, for each block using ore reserve pricing and an incremental processing cost has been applied to the Mineral Resource model as a binary cut-off grade field for interrogation and reporting purposes.

Each individual block in the resource model then contains a processing cost and revenue. Any indicated or measured block which contains a positive NSR is reported as ore. The cut-off grade used for reporting purposes for the December 2019 Ore Reserve Estimate is the NSR field contained within the resource model.

To accompany the reporting tables a gold equivalent cut-off grade has been estimated from the contained value of the lowest gold grade mineralised block that returns a positive NSR. The value of each contained payable element has then been converted to equivalent gold grade at Ore Reserve reporting prices. This results in an average gold equivalent cut-off grade of 1.8g/t Au. This number accompanies the reporting tables but has not been used for Ore Reserve reporting purposes.



This represents a change from the December 2018 Ore Reserve estimation process. The cut-off grade used for the December 2018 Ore Reserve Estimate was a gold only cut-off grade of 0.8 g/t.

Underground:

Au equivalent cut-off values were established, having been calculated according to metal price assumptions, as well as revenue factors and operating costs built up for first principles in the Feasibility Study (2018).

Stope design was conducted optimising to gold grades only. Final cut-off grade was adjusted to account for copper and silver revenue at their respective contribution to UG revenue.

Variable mining costs over the range of mining methods meant that several cut-off values were employed. Over the orebody, average full and incremental stoping cut-off values of 3.2g/t and 2.5g/t respectively, were used in stope design optimisation. Lower cut off values were used for MSO optimisation in order to fairly represent planned stopes with reduced dilution as a result of higher selectivity following manual stope design.

2.2.6 Estimation Methodology

See section 1.1.6 above

2.2.7 Material Modifying Factors

There are no concerning material modifying factors that need to be highlighted with the Ore Reserve. All regulatory leasing, approvals, licensing, agreements and current infrastructure are in place. To demonstrate the Ore Reserve as economic it has been evaluated through a financial model. This process has demonstrated that the Ore Reserves at Mt Carlton a positive cash flow



APPENDIX 1: JORC CODE 2012 ASSESMENT AND REPORTING CRITERIA

The following information is provided in accordance with Table 1 of Appendix 5A of the JORC Code 2012 - Section 1 (Sampling Techniques and Data), Section 2 (Reporting of Exploration Results), Section 3 (Estimation and Reporting of Mineral Resources) and Section 4 (Estimation and Reporting of Ore Reserves).

Cowal GRE46 Underground Mineral Resource

JORC Code 2012 Edition - Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Most of the drilling used to generate the Mineral Resource at Cowal is diamond core for the primary portion of the deposit. Reverse Circulation and Air Core drilling was predominantly utilised to delineate the oxide areas.
	Drill holes were drilled on a nominal even spaced grid pattern to avoid clustering and collar and down hole surveys were utilised to accurately record final locations. Industry standard sampling, assaying and QA/QC practices were applied to all forms of drilling.
	Prior to 2018, Drill core was halved with a diamond saw in 1m intervals, irrespective of geological contacts. Since 2018, sampling to lithological contacts has been implemented and occasional full core intervals have been submitted for assay. Oxide material that was too soft and friable to be cut with a diamond saw was split with a chisel. Core was cut to preserve the bottom of hole orientation mark and the top half of core sent for analysis to ensure no bias is introduced. Early RC/AC samples were collected as a bulk sample in 1m intervals from the drill rig and riffle-split to generate a subsample for the analytical lab. More recently RC/AC samples are taken using a rotary cone splitter at 1m intervals. Throughout 2019, portions of the GRE drill out have been whole core sampled to speed up assay turnaround time.
	Early in the North program, samples were crushed to 95% minus 6mm and a sub-sample then pulverised to 95% minus 75µm. Mid-way in the North program, specifications were modified to crushing to 95% minus 10mm to 15mm followed by pulverising to 85% minus 75µm. Analysis of all the North samples was done at Australian Laboratory Services and Australian Assay Labs, Orange, NSW. Both independent facilities used fire assay of a 50g sample with an atomic absorption (AA) finish. More recent sample preparation was conducted by SGS West Wyalong and consisted of:
	Drying in the oven at 105°C; crushing in a jaw crusher; fine crushing in a Boyd crusher to 2-3mm; rotary splitting a 3kg assay sub-sample if the sample is too large for the LM5 mill; pulverising in the LM5 mill to nominal; 90% passing 75µm; and a 30g fire assay charge was taken with an atomic absorption (AA) finish. The detection limit was 0.01 g/t Au.
Drilling techniques	A majority of the resource definition holes are drilled with an HQ3 collar through the oxide and completed through the primary zone to target using NQ2. Due to the depth of holes into the north of the GRE46 deposit (650m Average) controlled diamond drilling with occasional directional diamond holes were utilised, this drilling consisted of a fence of NQ sized holes with a nominal 50x50m spacing for deeper portions and 25x25 for the upper Open Pit resources.
	Reverse Circulation and Air Core drilling was also used to delineate oxide areas of the resource utilising 4.5 - 5.5 inch bits. RC drilling was completed to base of oxide with some holes hosting diamond tails. Air Core drilling was conducted to refusal. Additional RC drilling was completed from within the existing Stage G pit during 2016.
	Core has been oriented using a variety of techniques in line with standard industry practice of the time.
	Provisions are made in the drilling contract to ensure that hole deviation is minimised and core/chip sample recovery is maximised. This is monitored by a geologist on a hole by hole basis. Core recovery is recorded in the database. There are no significant core loss or sample recovery issues. Core is reoriented and marked up at 1m intervals. Measurements of recovered core are made and reconciled to the driller's depth blocks, and if necessary, to the driller's rod counts.
	There is no apparent relationship between core-loss and grade.
Drill sample recovery	Provisions are made in the drilling contract to ensure that hole deviation is minimised and core/chip sample recovery is maximised. This is monitored by a geologist on a hole by hole basis. Core recovery is recorded in the database. There are no significant core loss or sample recovery issues. Core is reoriented and marked up at 1m intervals. Measurements of recovered core are made and reconciled to the driller's depth blocks, and if necessary, to the driller's rod counts.



Criteria	Commentary
Ontena	There is no apparent relationship between core-loss and grade.
Logging	All core intervals and RC/AC chips are logged.
Logging	Historically RC chips were logged in the field onto a printed template and uploaded to the database in the office. Current practice is for RC chips to be inspected at the rig while drilling, with detailed logging taking place in the office via LogChief software which is validated and uploaded directly into the Datashed database. Chips are logged for rock-type, alteration, mineralisation and veining as well as point data for base of transported and base of oxide/top of primary rock.
	Geologists log core for lithology, alteration, structure, and veining. Logging was done directly onto laptop computers using a software package called Logchief.
	The Cowal logging system allows recording of both a primary and a secondary lithology and alteration. Geologists also record the colour, texture, grain size, sorting, rounding, fabric, and fabric intensity characterising each lithological interval.
	The logged structures include faults, shears, breccias, major veins, lithological contacts, and intrusive contacts. Structures are also recorded as point data to accommodate orientation measurements.
	Structural measurements are obtained using alpha and beta measurements then converted using the downhole survey measurements to obtain the dip and dip direction. Freiberg compasses and Kenometer Core Orientation tools are used for structural measurements.
	Geologists log vein data including vein frequency, vein percentage of interval, vein type, composition, sulphide percentage per metre, visible gold, sulphide type, and comments relative to each metre logged.
	Routine Geotechnical logging is done by field technicians and geologists. Logging is on a per metre basis and includes percentage core recovery, percentage RQD, fracture count, and an estimate of hardness. The geotechnical data is entered into the database.
	Specialist Geotechnical Engineers have logged core from GRE46 underground deposit.
	All drill core, once logged, is digitally photographed on a core tray-by-tray basis. The digital image captures all metre marks, the orientation line (BOH) and geologist's lithology, alteration, mineralogy, and other pertinent demarcations. The geologists highlight geologically significant features such that they can be clearly referenced in the digital images.
Sub-sampling techniques and sample preparation	Diamond Core is cut with a diamond saw or chisel. Core is cut to preserve the bottom of hole orientation mark and the top half of core is always sent for analysis to ensure no bias is introduced. During the Stage H drilling program, a majority of the NQ daughter holes were whole core sampled to expedite sample processing and assay turnaround. Throughout 2019, portions of the GRE drill out have been whole core sampled to speed up assay turnaround time.
	RC/AC Samples have been split using either a riffle splitter from a bulk sample collected at the rig or a rotary cone splitter attached to the cyclone. For most holes, chip samples were collected dry, but several areas have been affected by groundwater.
	In 2003 Analytical Solutions Ltd conducted a Review of Sample Preparation, Assay and Quality Control Procedures for Cowal Gold Project. This study, combined with respective operating company policy and standards (North Ltd, Homestake, Barrick and Evolution) formed the framework for the sampling, assaying and QAQC protocols used at Cowal to ensure appropriate and representative sampling.
	Field duplicates are taken at regular intervals on RC/AC holes.
	Results per interval are reviewed for half core samples and if unexpected or anomalous assays are returned an additional quarter core may be submitted for assay.
Quality of assay data and laboratory tests	SGS West Wyalong acts as the Primary Laboratory and ALS Orange conducts independent Umpire checks. Both labs operate to international standards and procedures and take part in the Geostatistical Round Robin inter-laboratory test survey. The Cowal QA/QC program comprises blanks, Certified Reference Material (CRM), inter-laboratory duplicate checks, and grind checks. Typical protocols for QAQC checks are summarised below, however depending on sample submission batch sizes overall rates may vary slightly: 1 in 30 fine crush residue samples has an assay duplicate. 1 in 20 pulp residue samples has an assay duplicate.
	Wet screen grind checks are performed on 1 in 20 pulp residue samples. A blank is submitted 1 in every 38 samples, CRM's are submitted 1 in every 20 samples. The frequency of repeat assays is set at 1 in 30 samples.
	All sample numbers, including standards and duplicates, are pre-assigned by a QA/QC Administrator and given to the sampler on a sample sheet. The QA/QC Administrator monitors the assay results for non-compliance and requests action when necessary. Batches with CRM's that



Criteria	Commentary
	are outside the ±2SD acceptance criteria are reviewed and re-assayed if definitive bias is determined or if re-assay will make a material difference. Material used for blanks is uncertified, sourced locally, comprising fine river gravel which has been determined to be below detection limit. A single blank is submitted every 38 samples. Results are reviewed by the QA/QC Administrator upon receipt for non-compliances. Any assay value greater than 0.1g/t Au will result in a notice to the laboratory. Blank assays above 0.2g/t Au result in re-assay of the entire batch. The duplicate assays (Au2) are taken by the laboratory during the subsampling at the crushing and pulverisation stages. The results were analysed using scatter plots and relative percentage difference (RPD) plots. Repeat assays represent approx. 10% of total samples assayed. Typically, there is a large variance at the lower grades which is common for low grade gold deposits, however, the variance decreases to less than 10% for grades above 0.40g/t Au, which is the cut-off grade used at Cowal. Approximately 5% of the pulps, representing a range of expected grades, are submitted to an umpire assay laboratory (ALS Orange) to check for repeatability and precision. Analysis of the data shows that the Principal Laboratory is performing to an acceptable level.
Verification of sampling and assaying	No dedicated twinning drilling has been conducted however verification of significant intercepts has been conducted by Grade Control drilling and mining production and reconciliation has occurred at the E42 deposit since 2005.
	Cowal uses DataShed software system to maintain the database. Digital assay results are loaded directly into the database. The software performs verification checks including checking for missing sample numbers, matching sample numbers, changes in sampling codes, inconsistent "from-to" entries, and missing fields. Results are not entered into the database until the QA/QC Administrator approves of the results. A QA/QC report is completed for each drill hole and filed with the log, assay sheet, and other appropriate data.
Location of data points	All recent drill hole collars are surveyed using high definition Differential Global Positioning System (DGPS). All drill holes were surveyed using a downhole survey camera. For all hole types, the first survey reading was approximately 18 m from surface, then at 30 m intervals and, finally, at the end of each hole.
	On completion of each angled drill hole, a down hole gyroscopic (Gyro) survey is conducted. The Gyro tool was referenced to the accurate surface surveyed position of each hole collar and readings were taken at intervals to the base of each hole ("in run") and at intervals back to surface ("out run"). The results of these two surveys were then compared and a final survey produced if there was "closure" between surveys. The Gyro results were entered into the drill hole database without conversion or smoothing.
	An aerial survey was flown during 2003 by AAM Hatch. This digital data has been combined with surveyed drill hole collar positions and other features (tracks, lake shoreline) to create a digital terrain model (DTM). The survey was last updated in late 2014.
	In 2004, Cowal implemented a new mine grid system with the assistance of AAM Hatch. The current mine grid system covers all areas within the ML and ELs at Cowal with six digits.
Data spacing and distribution	Drilling at Cowal covers all mining and exploration licences, an approximate area of 20km (north-south) by 20km (east-west), with most of the drilling focused on E41, E42, E46, and GRE46. Drilling at the E41, E46, and GRE46 deposits has an average spacing of 50 m by 50 m both along and across strike, while E42 has a nominal drill hole spacing of 25 m by 25 m, extending to 50 m by 50 m on the periphery of the deposit and at depth.
	This drill spacing is generally sufficient to generate reliable Mineral Resource and Ore Reserve estimates utilising definitions and classifications consistent with the 2012 JORC Code. All drilling is sampled between 0.3m and 1.3m intervals irrespective of drill type; samples are then composited to 1 m for estimation.
Orientation of data in relation to geological structure	Predominant drill direction at Cowal is east-west; this is considered the best orientation to intersect the main controls on mineralisation in a normal manner. Vein analysis of GRE46 indicates East West Drilling to be a poor angle to intercept the main vein sets. Drilling from 2018 onwards has been reviewed to provide more appropriate angles of intercept for the bulk of mineralisation in GRE46. A number of south-north holes have been strategically drilled to confirm the existence of oblique mineralised structures to assist with geological interpretation and modelling.
	Additional holes that were drilled for the Stage H update were orientated at 030 or North-North-East for optimal mineralisation interception in the specific target area. Diamond holes were drilled from surface in an attempt to gain more geological understanding within the weathered top 100m of this area that had previously not been drilled. The majority of historical diamond holes were drilled at 60° inclination however parent holes of the FS were collared at 55° and following wedging and navigational cuts, some daughter holes finished as low as 20° inclination at EOH due to the target depth and pit wall angles limiting access. Infill drilling was done in some areas



Criteria	Commentary
	using in-pit RC to better define mineralisation directly below the existing Stage G pit floor.
Sample security	Drill contractors are issued with drill instructions by an Evolution geologist. The sheet provides drill hole names, details, sample requirements, and depths for each drill hole. Drill hole sample bags are pre-numbered. The drill holes are sampled by Evolution personnel who prepare sample submission sheets. The submission sheet is then emailed to the laboratory with a unique submission number assigned. This then allows individual drill holes to be tracked. An SGS West Wyalong (SGS) representative collects the samples from site twice daily, however, if samples are being sent to other laboratories a local freight company is used to collect the samples from site and deliver them to the laboratory. Upon arrival, the laboratory sorts each crate and compares the received samples with the supplied submission sheet. The laboratory assigns a unique batch number and dispatches a reconciliation sheet for each submission via email. The reconciliation sheet is checked, and any issues addressed. The new batch name and dispatch information is entered into the tracking sheet. The laboratory processes each batch separately and tracks all samples through the laboratory utilising the LIMS system. Upon completion, the laboratory emails Standard Industry Format (SIF) files with the results for each batch to Evolution personnel. The assay batch files are checked against the tracking spreadsheet and processed. The drill plan is marked off showing completed drill holes. Any sample or QA/QC issues with the results are tracked and resolved with the laboratory.
Audits or reviews	QA/QC Audits of the Primary SGS West Wyalong Laboratory are carried out on an approximately quarterly basis and for the Umpire ASL Orange Laboratory approximately on a six-monthly basis. Any issues are noted and agreed remedial actions assigned and dated for completion. Numerous internal audits of the database and systems have been undertaken by site geologists and company technical groups from North Ltd, Homestake, Barrick and Evolution. External audits were conducted in 2003 by RMI and QCS Ltd. and in 2011 and 2014 review and validation was conducted by RPA. Recent audits have found no significant issues with data management systems or data quality. Optiro conducted an external audit of Mineral Resource and Ore Reserve estimation process in 2019. No material issues were identified in the review.

Section 2 Reporting of Exploration Results

Criteria	Commentary				
Mineral tenement and land tenure status	The Cowal Mine is located on the western side of Lake Cowal in central New South Wales, approximately 38km north of West Wyalong and 350km west of Sydney. It is situated within the Bland Creek Valley, which is a region that supports mainly dry land agriculture with irrigation farming in the Jemalong/Wyldes Plains Irrigation Districts located to the northeast of the mining lease.				
	Land and tenure Evolution has a total acquired to act as a pl local landowners and ti Land within Mining Lea reserve (TSR), a game ML grant. The TSR has to the south of the ML ti been closed. Agricultural activities of previous owners and n Mineral Tenure The Cowal Mine tener covering 1073 km2, as The Cowal ML 1535 of Wales Mining Act 1992 Table 1-1 Cowal Gol	nysical buffer to re the general public. se 1535 (ML) is a ne reserve, and three seen relocated at the maintain public at the eighbours under licent incorporates summarised in Talencompasses applicate.	duce the effects of a nixture of freehold over the enformed Crown round the ML and the access to Lake Cowa holdings are current cence agreements. five contiguous expuble 1-1. All leases a roximately 2,630 ha	mining and proces when by Evolution, roads were adjus e game reserve had. The unformed (by undertaken by cloration licences re 100% held by E	A travelling stock ted as part of the as been relocated Crown roads have a number of the (EL) and one ML Evolution.
	Tenement Status Area (km²) Grant Expiry				
	- 1	Renewal	65		
	EL 1590	Pending	110	13-Mar-81	13-Mar-19
	EL 5524	Current	113	16-Sep-98	16-Sep-24
	EL 6593	Current	10	06-Jul-06	06-Jul-25
	EL 7750	Current	596	27-May-11 02-Mar-17	27-May-22 02-Mar-23
	EL 8524	Current	270	U∠-Mar-17	UZ-IVIAT-23



Criteria	Commentary				
	EL 8781	Current	221	25-Jul-18	25-Jul-21
	ELA 5886	Pending Grant	22		
	ML 1535	Current	26	13-Jun-03	12-Jun-24
	ML 1791	Current	2.5	20-Jun-19	20-Jun-40

The ML is granted by the Minister for Mineral Resources of the State of New South Wales (the Minister.) Obligations to retain the ML are detailed in the Conditions of Authority for the Mining Lease and outline all requirements for operating within the lease:

Royalties

A New South Wales government royalty is applicable to Cowal, payable on the value of the processed gold. The royalty is calculated as follows:

Royalty = 4% of {Total Revenue – Processing Costs – (33% of site Administration costs) – Depreciation}

For financial evaluations, the 4% gross royalty has been equated to approximately 3% of the gold produced.

Cultural Heritage

A survey of aboriginal sites and artefacts on the mining lease was conducted under the Cowal Gold Mine Environmental Impact Statement submitted by North Ltd. (North) in 1998. The survey results and the registered Aboriginal sites identified in each management zone are outlined in the Cowal Gold Project Indigenous Archaeology and Cultural Heritage Management Plan (IACHMP) (Barrick, 2003).

Aboriginal heritage sites which occur within ML 1535 and have been registered with the New South Wales Department of Environment, Climate and Water (DECCW). These sites range from open scatters to base camps to a sacred tree. Summaries of the survey results and the registered Aboriginal sites identified in each management zone are outlined in the IACHMP.

All relevant permits and consents have been obtained under Section 87 and Section 90, respectively, pursuant to the National Parks and Wildlife (NPW) Act for the management of Aboriginal Heritage Artefacts at Cowal Gold Operation (CGO). All activities at CGO have been conducted in accordance with relevant permit and consent conditions and the IACHMP.

All earthworks have been monitored and no non-compliances have been reported. Collection works have been undertaken at CGO by archaeologists with observation/participation of members of the Aboriginal community, in accordance with the permits and consents. All collected Aboriginal objects are currently retained in a Keeping Place within ML 1535.

No items considered to be of important European heritage which cannot be disturbed have been found near the Project.

Environmental status

CGO has numerous documented operational phase environmental management strategies, management plans, and programs to meet the requirements of the February 1999 Development Consent and various Environmental Licences, Permits, and the Mining Operations Plan

The E42 deposit has been developed generally in accordance with the Environmental Impact Statement (EIS) issued by North Ltd on March 13, 1998. This document details all environmental requirements that must be met prior to and during construction, during operations, and following the cessation of operations leading to the relinquishment of the tenements.

Over the course of the mine life, CGO has submitted a number of applications to modify the development consent in line with various pit expansions, operating adjustments and mine life extensions. To Dec 2016 12 Modifications had been approved with Modification 13 permitted in February 2017 which gives regulatory approval to extend the mine life to 2032.

There are no current environmental liabilities on the property. CGO has all required permits to conduct the proposed work on the property. There are not any other known significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

Exploration done by other parties

Before 1980 limited exploration and shallow gold mining activities were mainly constrained to the west of Lake Cowal in areas of better outcrop. No investigation of the lake was made due to virtually nil outcrop and up to 80m of Recent lacustrine sediments and the cyclical flooding.

Following upon the success in the Goonumbla area, (now the Northparkes group of mines), the exploration company, Geopeko, identified the Cowal area as having some potential for porphyry copper development and subsequently conducted reconnaissance RAB drilling. By 1988 the company had broadly delineated the geology of the Cowal Igneous Complex (CIC) and a number of low grade porphyry copper deposits in the south of the CIC and had outlined an anomalous 0.1 ppm Au "gold corridor", (approximately 2km by 7.5km), along the western margin of the lake which now includes the E41, E42, Galway/Regal and E46 deposits.

Exploration continued into the early 1990s and a feasibility study of the E42 deposit, was



Criteria	Commentary
	completed in 1995. Provisional mining consent was obtained in 1999. In 2000, Rio Tinto acquired North Ltd who subsequently sold to Homestake Mining in May 2001 by December 2001 Homestake had merged into Barrick Gold Corporation. Native title agreements were completed in 2003, culminating in the granting of ML1535 to Barrick Gold of Australia Limited. During this time extensive mineral resource/ore reserve definition drilling was undertaken. Construction began in 2004, with the first gold produced in 2006. The mine and exploration ground were purchased by Evolution Mining Ltd in 2015 and further drilling has continued to expand upon the resource of E42 and extend the gold corridor.
Geology	Regional Geology
	Middle Ordovician arc volcanism associated with westward subduction resulted in the deposition of widespread mafic to intermediate volcaniclastic and turbiditic rocks and intrusive activity with associated porphyry copper and gold mineralisation throughout the central west of New South Wales. Remnants of the arc complex extend from Junee to Nyngan and include lithologies comprising the Northparkes Volcanic Group and the Lake Cowal Volcanic Complex. Arc volcanism and sedimentation ceased during the Late Ordovician to Early Silurian Benambran Orogeny. Deformation associated with the Benambran Orogeny initiated the Gilmore, Parkes and Coolac-Narromine Fault Zones. Intermittent igneous and volcanic activity continued in the region through to the Late Silurian.
	At the end of the Silurian, extension and marine incursion, (likely resulting from the retreat of the subduction zone), initiated the deposition of the sedimentary and volcanic rocks of the Ootha and Deriwong Groups. Rifting within the Ordovician volcanic arc separated the Lake Cowal and Northparkes Volcanic Complexes and produced the Jemalong Trough which underwent deposition through to the Early Devonian. A change in tectonic regime from extension to compression resulted in reverse movement along reactivated structures within the Gilmore, Parkes and Coolac-Narromine Fault Zones and the formation of the Booberoi fault.
	The last orogeny to affect the region was the Late Devonian to Early Carboniferous Kanimblan Orogeny which produced the Tullamore Syncline and the Forbes Anticline and reactivated the earlier major fault zones. Limbs of synclines in the Jemalong Trough were steepened and overturned during reverse faulting and parts of the Lake Cowal Volcanic Complex were thrust eastwards along the Marsden Thrust.
	The Cowal gold deposits (E41, E42, E46, Galway, and Regal) occur within the 40km long by 15km wide Ordovician Lake Cowal Volcanic Complex, east of the Gilmore Fault Zone within the eastern portion of the Lachlan Fold Belt. There is sparse outcrop across the Lake Cowal Volcanic Complex and, as a consequence, the regional geology has largely been defined by interpretation of regional aeromagnetic and exploration drilling programs.
	The Lake Cowal Volcanic Complex contains potassium rich calc-alkaline to shoshonitic high level intrusive complexes, thick trachyandesitic volcanics, and volcaniclastic sediment piles. The Cowal Complex is a strong regional magnetic high anomaly with a sharp linear western margin, represented by the Gilmore Fault Zone, separating the Lake Cowal Volcanics from the relatively low magnetic response of sediments to the west.
	Similar Ordovician magmatic rocks are found over a large area of the eastern Lachlan Fold Belt and are commonly associated with copper-gold mineralisation (e.g., Northparkes, Cadia, Peak Hill, and Gidginbung). The main diorite intrusion at E42 has a K-Ar dating of 456 \pm 5 Ma (Early to Mid-Ordovician). The gold deposits at Cowal are structurally hosted, epithermal to mesothermal gold deposits occurring within and marginal to a 230 m thick dioritic to gabbroic sill intruding trachyandesitic volcaniclastic rocks and lavas.
	The overall structure of the gold deposits is complex but in general consists of a faulted antiform that plunges shallowly to the north-northeast. The deposits are aligned along a north-south orientated corridor with bounding faults, the Booberoi Fault on the western side and the Reflector Fault on the eastern side (the Gold Corridor).
	Mineralisation
	The mineralisation at the Cowal Mine comprises four deposits: GRE46, E41, E42 and E46.
	The GRE46 deposit is subdivided into the open pit and underground resources. The GRE46 zone trends north-south, dips vertical to -70° west, and extends approximately 1,650m along strike, 175m across strike and up to 800m down dip. Individual lenses in the GRE46 mineralised zone are 1.0m to 15m wide, 25m to 250m long, and extend 50m to 200m down dip. Lenses consist of narrow high-grade quartz carbonate, pyrite and base metal veins controlled within a structural



Criteria	Commentary
	north-south corridor, occasional zones of grade enrichment occur in dilatant structures within the deposit known as Quartz Sulphide Breccias. Host lithology varies from poorly mineralised massive intrusive diorites and fine volcaniclastic sediments through to the preferential host of Trachyandesite lava, lenses of coarse to conglomeritic volcaniclastic sediments to the south and the Dalwhinnie Andesitic sill in the east.
	The E41 West mineralisation strikes north-northeast and dips -70° east, and measures 750m along strike and 250 m across strike. Individual mineralised zones are 35 m to 50m wide and extend down dip for 125m. The E41 East mineralisation strikes east-west and dips -35° to -80° south, and measures 475m along strike and 500 m across strike. Individual mineralised zones are 35m to 50m wide and extend down dip for 225m.
	The E42 deposit dips -35° to -45° to the south west with an approximate extent of 850m by 850m and extends 500m down dip. Mineralisation is contained within small discontinuous veins contained within larger mineralised envelopes approximately 50m wide.
	The E46 deposit mineralisation trends north-northeast, dips -40° west to flat-lying, and measures approximately 650m along strike and 17m across strike. Individual zones are approximately 50m wide and extend 200m down dip.
Drill hole Information	No exploration results have been reported in this release.
Data aggregation methods	No exploration results have been reported in this release.
Relationship between mineralisation widths and intercept lengths	No exploration results have been reported in this release.
Diagrams	No exploration results have been reported in the release; therefore no diagrams have been produced.
Balanced reporting	No exploration results have been reported in the release.
Other substantive exploration data	No significant exploration activities have occurred during the reporting period.
Further work	Infill Resource definition is planned to convert Inferred category to Indicated category and to test for extensions to mineralisation along strike and down-dip.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	Cowal uses DataShed software system to maintain the database. Assay results, returned from the laboratory as digital files, are loaded directly into the database. The software performs verification checks including checking for missing sample numbers, matching sample numbers, changes in sampling codes, inconsistent "from-to" entries, and missing fields. Results are not entered into the database until the QA/QC Administrator approves of the results. A QA/QC report is completed for each drill hole and filed with the log, assay sheet, and other appropriate data
Site visits	The Competent Person for the Cowal Mineral Resource estimates is based at Cowal Mine, is part of the operational management team and reviews all aspects of the Mineral Resource informing data and estimations.
Geological interpretation	Confidence in the geological interpretation is good. The interpretation is based on drilling that ranges from a 25m by 25m spacing to 50m by 50m spacing. The interpretation also incorporates data gathered from the mapping of exposures created by open cut mining which has been in operation continuously since 2005. The mapping has assisted in understanding the controls on mineralisation to improve the confidence in the geological interpretation. All



Criteria	Commentary
	available data from drilling and mapping is used in the geological interpretation. Petrological, litho-geochemical and structural studies have also been undertaken and have been used to develop the geological interpretation.
	The use of pit mapping and other production data such as grade control drill data has helped resolve the controls on mineralisation as such the current interpretation is relatively robust. An iterative process has been adopted with respect to the geological interpretation to ensure that it reflects the current understanding of the geology and controls on mineralisation. The factors that affect the continuity of grade and geology at Cowal are structure, lithology and alteration, in order of magnitude. Areas of higher grade are those where there is a greater
	frequency of structures intersecting the host lithology, such as the core of the E42 resource. These factors have been addressed in the interpretation and domaining of the resource and the estimation process.
Dimensions	The Mineral Resource area which incorporates the E41, E42, E46 and the GRE46 has the following dimensions, 4,425 m (north), 2,500 m (east) and 1,300 m (elevation).
Estimation and modelling techniques	GRE46 open pit model remained unchanged with a separate GRE46UG Model developed for underground resource optimisation.
	A review of the 2018 GRE46 model was undertaken to re-define domains with similar features and continuity of mineralisation. The review looked at primary material only. The resource estimation process has underlying assumptions that each domain shares similar characteristics.
	Top cutting of assay data is considered appropriate where outliers exist outside the lognormal distribution. These values have the potential to unduly bias grade estimates.
	A review was completed to establish the optimum search parameters for the kriging process. Search distances and kriging weights were examined for the effect on kriging variance, slope of regression and negative kriging weights.
	Individual domains were reviewed in terms of grade distribution using frequency histograms.
	1m composites were formed for use in grade estimation for the GRE46UG model. The decision to use 1m composites for underground was based on the narrow nature of the veins. Surpac software was used to composite data.
	Estimation involved the use of Categorical Indicator Kriging (CIK) and Ordinary Kriging (OK) techniques to estimate grade into the domained model. CIK helps to define mineralised material above or below a defined threshold. Once defined OK techniques are used to estimate grade into the resource. A discretisation of 5 x 5 x 5 in the plane x, y, z was used with a minimum sample number of 6 and maximum of 32 for the estimate. Search ellipsoids are based on the modelled semi-variogram ranges for each domain.
	Parent block size for the GRE46UG model was selected at 10m x 10m x 10m. Ordinary kriging was completed on all domains and block grades were compared with composite of cut data to ensure kriging grades were represented in block grades. Swath plots were used to compare the modelled gold distributions in relation to composites as well as visual validation on 25m sections.
	An update of the E42 Open pit model was also conducted, to incorporate new drilling conducted in late 2018. Like GRE46, the estimation approach was based on CIK and OK methodologies.
	Top cutting of assay data is considered appropriate where outliers exist outside the lognormal distribution. These values have the potential to unduly bias grade estimates.
	Individual lithology domains were reviewed in terms of grade distribution using frequency histograms. Domains were combined where differences in sample populations were deem negligible or sample numbers inadequate.
	1m composites were formed for use in grade estimation for the E42 open pit. The decision to use 1m composites for open pit was based on comparisons between 1m and 3m composites which yielded little differences in means and distributions. Datamine software was used to composite data.
	A review was completed to establish the optimum search parameters for the kriging process. Search distances and kriging weights were examined for the effect on kriging variance, slope of regression and negative kriging weights.



Criteria	Commentary
	The estimation process used relatively large search distances and sample numbers due to the high nugget values. This resulted in a relatively smoothed grade estimate due to less predictable grade distributions. A discretisation of 5 x 5 x 5 in the plane x, y, z was used with a minimum sample number of 6 and maximum of 32 for the estimate. The smoothing effect is constrained through the creation of appropriate waste domains based on grade indicator model. Search ellipsoids are based on the modelled semi-variogram ranges for each domain.
	Parent block size for the open pit model was selected at 15m x 15m x 9m. Ordinary kriging was completed on all domains and block grades were compared with composite of cut data to ensure kriging grades were represented in block grades. Swath plots were used to compare the modelled gold distributions in relation to composites as well as visual validation on 25m sections
	No assumption of mining selectivity has been incorporated in the estimate.
	Only Au was estimated in the Mineral Resource, Ag which is a by-product of the processing has an assumed ratio of 1:1 with Au. Ag has not been accounted for in the estimation of Mineral Resources or Ore Reserves.
	Validation of the Mineral Resource comprised comparing block grades against the data used to inform the estimate on a domain by domain basis, visual comparison of the informing data against the estimate and the use of swath plots showing grade trends by easting northing and elevation of the input data against the estimate. For the E42 deposit the Mineral Resource was reconciled against production. To date reconciliation of the Mineral Resource against production is in line with resource classification applied and the expected confidence limits of the classification on a global basis.
Moisture	Mineral Resource tonnage estimates are on a dry basis.
Cut-off parameters	Mineral Resources for open pit are reported using a cut-off grade of 0.35g/t Au this reflects the cost and price assumptions derived from operational performance. GRE46UG Mineral resources used a 1.5g/t Au cut-off grade which reflects the increased costs and price assumptions from an underground operational performance.
Mining factors or assumptions	Mining factors are based on the current operation at Cowal, which has been operating continuously for the past fourteen years. The mining factors applied reflect the current open cut operation.
	The Cowal open pit Mineral Resource estimate is defined within an optimised pit shell using an A\$2,000/oz gold price assumption and based on the same detailed geotechnical design parameters, practical mining considerations and mining depletion at 31 December 2019 as the Cowal Ore Reserve. The Mineral Resource estimate also draws on the experience gained since mining commenced in April 2005 at Cowal.
	The GRE46 underground Mineral Resource estimate is defined by an underground mining shape optimiser using an A\$2,000/oz gold price assumption. The mining method is assumed to be a selective narrow vein style; design parameters and practical mining considerations have been applied accordingly. It is assumed that metallurgical recovery will be similar to the E42 ore body.
	The Mineral Resource spatial constraining shells for the open pits are based on the cost structure of the owner mining rates at E42 Open Pit.
	The GRE46 Underground has been assumed to be mined by selective narrow vein techniques. A model has been developed that is fit for purpose considering this mining method.
Metallurgical factors or assumptions	Metallurgical assumptions are based on the performance of the Cowal processing plant which has been in continuous operation since 2006. Majority of ore to date has been sourced from the E42 open pit. A 20kt bulk sample from GRE46 was fed in late 2019 for metallurgical performance.
	Metallurgical samples testwork is being carried out on samples from the GRE46 underground as part of the prefeasibility study to support the development of the deposit.
	Oxide ore is stockpiled and co treated through the float tail leach circuit. Sulphide ore is processed by crushing, two stage grinding, sulphide flotation, regrind, and CIL recovery. The plant currently processes 9.2Mtpa.
Environmental factors or assumptions	Cowal has a long history of mining and processing ore. Waste dump and residue disposal facilities are all currently in place in accordance with the required statutory approvals. The Cowal Mine currently has two Tailings Storage Facilities – the North Tailings Storage Facility (NTSF) and the South Tailings Storage Facility (STSF). The current TSFs are estimated to be
	_



Criteria	Commentary
	insufficient to store the ore that will be processed according to the FY19 LOM plan. A new Integrated Waste Levee has begun construction in FY20 to adequately accommodate tailings in the current LOM plan. Cowal Mine has a Water Management System in place. The overall objective of the water management system is to contain potentially contaminated water generated within the Project area while diverting all other water around the perimeter of the site. The water management system has the following major components: Up-catchment diversion system; Lake isolation system (comprising the temporary isolation bund, lake protection bund and perimeter waste rock emplacement); and Internal catchment drainage system (comprising the permanent catchment divide and contained water storages). Although the new resources are located within the existing mining lease, any proposed mining extraction and processing will be subject to permitting and the completion of an Environmental Impact Study.
Bulk density	North Ltd. conducted density testing during the early stages of project development. These data were supplemented in 2002 by five dedicated holes across E42 to provide support for previous density estimates. Since production and mining began in 2005 systematic SG sampling has been conducted to continually validate resource model density.
Classification	The Mineral Resource classification is based on good confidence of the geological and grade continuity, 25m by 25m spaced drill hole density in the bulk of the resource and up to 50m by 50m spaced data in the peripheral parts of the resource. Ten years of continuous mining operations and the iterative use of 10m by 10m spaced grade control and production data have been used to refine the Mineral Resource estimate. Reconciliation of the Mineral Resource against production data supports the classification that has been applied to the Mineral Resource. Contiguous volumes were flagged with either Indicated or Inferred classification, no in-situ material is classified as Measured. Measured resources at Cowal are stockpiled material which has been grade controlled by very close spaced drilling. The Mineral Resource estimate appropriately reflects the view of the Competent Person and
Audits or reviews	is assigned in accordance with the JORC 2012 guideline. Roscoe Postle and Associates (RPA) audited the Resource Model in 2011 and 2014. No material issues were identified in the audits. Optiro audited the Resource Model in 2019. No material issues were identified in the audit.
Discussion of relative accuracy/ confidence	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code. The relative accuracy relates to a global mineral resource estimate of grade and tonnes. Reconciliation of the mineral resource estimate for the past calendar year reconciled 5% under on tonnes and 6% under on grade compared to the declared ore mined, with DOM metal being 10% higher than predicted by the model. Historically at Cowal there has been a consistent under-call of the Mineral Resource against production ranging 10% to 20% annually over the life of the mine. No factoring has been applied to the tonnes, grade or metal in the resource model.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	The Ore Reserve estimate is based on the current Mineral Resource estimate as described in Section 3. The Mineral Resources reported are inclusive of those Mineral Resources modified to produce the Ore Reserve estimate.
Site Visits	The Competent Person is an employee of Evolution Mining Limited and has visited site. Validation of technical and economic assumptions used in the preparation of this Ore Reserve estimate occurred during this site visit.



Criteria	Commentary
Study Status	Cowal is a mature operation with over ten years of historical data. Ore Reserve estimates are generally consistent with current operating practices and experience. On this basis the analysis is considered at a higher level than a Feasibility Study.
Cut-off parameters	Ore Reserves for open pit are reported using a cut-off grade of 0.45g/t Au. This reflects the new cut-off grade calculation methodology which uses all operating ore costs at the end of the life of mine when ex-pit mining operations have ceased. This cut-off grade is the same as the December 2018 reserve cut-off grade.
Mining factors or assumptions	The methodology used to convert the Mineral Resource to Ore Reserve can be described as optimisation of existing open pit operations through standard mine planning process steps of pit optimisation, mine design, mine schedule and financial modelling. Factors and assumptions have been formed from existing operating technical assumptions and cost models. On this basis the analysis is considered at a higher than feasibility study.
	Current mining at Cowal open pit is undertaken via conventional truck and excavator fleet to extract ore material to the ROM, waste material to the waste rock dumps and stockpiling and reclaim of lower grade material. The current operations demonstrate the appropriateness of this mining method as the basis of the Ore Reserve estimate for the E41, E46 and E42 open pits. The In-Wall Ramp Ore reserve reported as part of the E42, differs from the above methodology as it also includes an In-wall ramp (developed with underground mining systems) to provide access for open pit mining and has a pre-feasibility study completed in 2018 for support.
	Ore dilution and recovery loss is specifically accounted for in the Mineral Resource modelling method and no additional mining dilution or recovery factors are applied to the Cowal Pit Ore Reserve estimate. This assumption is supported by the actual reconciliation between resource model and mill performance at Cowal to date being within acceptable uncertainty range for the style of mineralisation under consideration.
	External and internal Geotechnical studies are carried out to evaluate the operational designs. Ore Reserves are based on the most recent recommendations of pit slope berm, batter configuration.
	Inferred material is excluded from the Ore Reserves and treated as waste material, which incurs a mining cost but is not processed and hence does not generate any revenue. The optimisation evaluation shows the ultimate pit size is sensitive to Inferred Resources and will be the focus of future studies to improve geological confidence and convert into Ore Reserves.
	The selected mining method does not require additional infrastructure.
Metallurgical factors or assumptions	The ore is to be processed through an existing traditional CIP/ CIL process plant with the inclusion of the newly built Float Tails Leach circuit. The current and estimated future average throughput and recovery for gold is 8.3 to 9.2Mt and an average LOM recovery of 82% respectively. An operating history of over 14 years and metallurgical test work done by Barrick Australia Pacific in 2011 supports the metallurgical parameters used in the Ore Reserve estimation.
	The simplified Optimisation calculation for E42 used a mill recovery formula, calculated as follows:
	Recovery = (0.9330305-(0.078245/head))*100 with an upper cap placed at 88% E41 and E46 recoveries where varied and followed work done by Barrick Australia Pacific in 2011.
Environmental factors or assumptions	Cowal E42 open pit is current with all environmental approvals and compliant to those conditions set out in such approvals. Current approvals are sufficient for the E42 Ore Reserves pit design to be completed.
ลออนเทศแบทร	In relation to E42 IWR, E41 and E46 Open Pits Evolution is yet to obtain relevant statutory approvals, however it is proposed to seek approval under Part 4 of the EP&A Act, as a State Significant Development CGO has no reason to expect that applications for variations to the current approvals for future mining additions will not be approved.
Infrastructure	The mine is currently in operation, thus current infrastructure is adequate to support future operation.
Costs	Capital and operating costs have been determined based on the current operating cost base modified for changing activity levels and reasonable cost base reductions over the life of the mine. On this basis the analysis is considered at a higher level than a Feasibility Study. Site unit operating costs are applied both as break even site cost used to determine ultimate



Criteria	Commentary
	pit shell and marginal site cost used to define ore waste cut-off boundary within the ultimate pit shell. The breakeven cost base is predicated on similar levels of site activity to recent history with planned cost improvements built in. The marginal cut-off cost base is based on the period of low-grade stockpile reclaim at the end of mine life. During this reclaim only period mining activity would have ceased and activity level across site would be dramatically reduced relative to current level. No cost impact is expected from deleterious elements and no costs have been included in the Ore Reserve estimate for these. State Royalties are 4%, payable on the value of the processed gold. The royalty is calculated as follows: Royalty = 4% of {Total Revenue – Processing Costs – (33% of site Administration costs) – Depreciation}
Revenue factors	Revenue is calculated using a gold price A\$1,450/oz. A typical 3-year trailing average has not been used to set the commodity pricing. Instead a position has been set based on mean broker estimates and the company's longer-term view of these commodities.
Market assessment	Gold sold at spot price. Silver credits equate to approximately 1.5% of total revenue. All silver is sold at spot price. Silver estimates were not included during the optimisation process.
Economic	To demonstrate the Ore Reserve as economic it has been evaluated through a financial model. This process has demonstrated that the Ore Reserves for the Cowal open pit have a positive operating cash flow at the ore reserve gold price of A\$1,450/oz.
Social	Currently Evolution Mining has agreements with Traditional Owners and is on good terms with neighbouring pastoralists.
Other	
Classification	The Ore Reserves are predominantly derived from Indicated Resources. This classification is based on the density of drilling, the experience of 14 years mining of E42 and the mining method employed. The only Proved Reserves derived from Measured Resources are those reported in known and quantified stockpiles. It is the Competent Person's view that the classifications used for the Ore Reserves are appropriate.
Audits or reviews	This Ore Reserve has been reviewed externally by Optiro in 2019.
Discussion of relative accuracy/ confidence	The accuracy of the estimates within this Ore Reserve are mostly determined by the order of accuracy associated with the Mineral Resource model, the metallurgical input and the long-term cost adjustment factors used. In the opinion of the Competent Person, the modifying factors and long-term cost assumptions used in the Ore Reserve estimate are reasonable.



Mt Carlton

JORC Code 2012 Edition - Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Reported assay data for this report is based on RC, PQ and HQ diameter core. RC was drilled as pre-collar through unconsolidated or barren rock. PQ was drilled largely through weathered zones and broken ground of weak mineralisation then followed with HQ diamond core to end of hole. Oxidised core (PQ) is usually sampled using kitchen knife whilst competent HQ & NQ core was cut with a diamond saw along orientation lines. Nominal sampling intervals for all core is 1m lengths. Shorter or longer core (<2m) sampling lengths occur on occasions where adjustments are required due to core loss, alteration or lithology changes. RC sample recovery is consistently checked comparing recovered weight with nominal calculated weight over the same interval. The length of each core recovered from a drill run is recorded and the percentage recovered calculated. Field core recovery records are validated at the core shed prior to cutting and sampling. Bottom half of split core was preserved, and the other half sent for analysis consistently to avoid sampling bias. A duplicate quarter core sample is taken for every 20th core sample. Half core samples averaging 2-31/2kg along with quarter core samples are prepared and analysed at either the SGS Townsville or Intertek Townsville facility. A small number of samples (6 drillholes) were assayed at MinAnalytical in Perth using the Gamma-Activation Assay (GAA) method. Weights of samples dried at 105°C are recorded and crushed to 2mm. Samples are split and excess bagged if crushed weight is greater than 3kg. LM5's are used to pulverise samples to 85% passing 75um. A 200g pulp split is taken for analysis which comprises a 25g or 50g charge fire assay with AA finish and ICP-AES for multi-element suite.
Drilling techniques	Diamond drilling was undertaken with PQ and HQ bits. Holes were usually started with PQ and completed with HQ on occasions due to poor ground conditions. Coring was by triple tube and all cores were oriented using Reflex Act RD2 orientation tool.
Drill sample recovery	Field recovery records for core are reconciled with driller's depth blocks. Percentage core recovery is calculated and stored in a database along with Geotechnical records. All necessary care is taken to ensure every drill run has maximum core recovered. Short core runs were drilled in area with poor ground conditions to ensure core loss is significantly minimised. Areas of poor core recovery were noted during logging. "CL" is marked on depth blocks denoting core loss. Intervals of core losses are considered during sampling and referenced when assessing assay data. No discernible relationship between core loss and grade has been identified. Mineralisation is hosted within fresh advance argillic rhyodacite unit where core recoveries are 100%. Core loss sometimes occurs in the acid leach zones and sheared contacts bordering mafic dykes and rhyodacite. Drillers take great care drilling through such zones to minimise sample loss. Overall recovery is in excess of 98% and core loss is volumetrically insignificant. In weathered overlying lithology where oxidation has occurred between sheared lithology contacts, core loss is unavoidable, but recovery is generally in excess of 88%.
Logging	Geology logging is undertaken for all drill core and RC chips. Structural and geotechnical logging occurs for core only. Detailed logging is undertaken for the entire drillhole in domains of alteration, mineralisation and lithology. Densities of various lithological units & ASD data is captured as part of the logging process. Lithogeochemical samples are collected in areas where lithology units are not easily discernible otherwise at 20m intervals. The logging process is appropriate for Mineral Resource estimates, mining and metallurgical studies. General logging data captured are; qualitative (descriptions of the various geological features and units) and quantitative (numbers representing alteration intensities, vein densities, rock mass quality and defect planes) Drill holes (all core) were logged as full core prior to photographing (dry and wet) and cutting
Sub-sampling techniques and sample preparation	Core was cut using diamond core saw along orientation lines and sampled at nominal one metre intervals from the same side in the tray at all times. All core samples submitted to various analytical labs in, Townsville for analysis are half core except for duplicate core which is quarter core. The remaining half/quarter core is persevered in the tray for further test work or re-logging if required. Core sample preparation involves oven drying, coarse crushing to ~2mm followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size 85%



Critorio	Commentary
Criteria	Commentary
	passing 75 microns. A 25g or 50g sub-sample is utilised for fire assay. Sample preparation and analysis follows industry best practise and is appropriate for the mineralisation. Matrix-matched certified reference material along with blanks and field duplicates are inserted into sample stream along with the original samples. Standards, blanks and field duplicates cover 5% of sample volume to monitor sample preparation and the analytical process. The high sulphidation epithermal mineralisation at Mt Carlton occurs in zones of highly silicic altered hydrothermal breccias overprinted by several phases of sulfur salts containing bonanza gold grades and anomalous base-metal grades. Core sample size of 2-3½kg sample length over 1m is suitable for the mineralisation type. The sample sizes are considered appropriate for the material sampled. It is believed that grain size bears no impact on sampled material.
Quality of assay data and laboratory tests	All core samples are analysed at SGS Townsville. Gold was analysed using 25g or 50g charge fire assay followed by AAS finish. Base metal and other elements are analysed using ICP-AES following a four-acid digest. The analytical method used by SGS approaches total dissolution of high sulphidation epithermal mineral assemblages of the Mt Carlton deposit. The sample preparation and assay techniques meet industry best practise. Spectral data is collected consistently at a spot within a meter mark using short wave infrared spectrometer (ASD TerraSpec 4 Hi-Res). Data is processed using TerraSpec/TSG Pro software in the context of the project geology. The accuracy and spread of "Standard" data is acceptable within 2 standard deviations. Any outlier between the second and third standard deviation triggers
	an anomaly and is investigated. An entire batch is re-analysed when a sample plots outside three standard deviations. Blanks are acceptable within 10Xpractical detection limit, five samples preceding and following the outlier are re-analysed. The internal QAQC data of SGS is accessible online. The analytical system at SGS captures data at all stages of the sample preparation and analytical process. The system minimises human error and ensures high data integrity. SGS participates in an international "Round Robin" QAQC program to ensure best industry practice is maintained. Based on quality assurance and quality control acceptable performance, assay data is suitable for use in Mineral Resource estimation.
Verification of	Significant mineralisation intercepts are verified internally by other geologists within the company.
sampling and assaying	There were no twinned holes drilled. Data documentation, verification and validation are conducted in accordance with Evolution's Data Storage Standard Operating Procedure. Logging is undertaken in significant detail for entire drillhole in domains of alteration, mineralisation and lithology. Data validation is conducted by the Mine Geologist prior to uploading into the Database. Digital copies of logs are kept in dedicated folders on the Company server and backed up regularly. All changes to the database are recorded and auditable if required.
	No adjustment or calibrations were made to any assay data used in this report.
Location of data points	All drillhole collars are marked and picked up by Evolution mining surveyors using Total stations and Differential Global Position System (DGPS). Downhole surveys are conducted using Reflex digital camera and uploaded into the Database.
	Drillhole collars are surveyed in Map Grid of Australia 1994 (MGA94) Zone 55.
	Benchmark and temporary survey stations are checked annually by a third party (Minstaff Survey Pty).
Data spacing and distribution	Drillholes are planned on 50m and/or 25m drill centres depending structural complexity and mineralisation. Drillhole spacing was planned to test strike and down dip extensions of the mineralised lodes plunging north-east. Statistical assessment of drill results to date suggest a nominal 25mx25m drill centres are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures and classifications for the Mt Carlton high sulphidation deposit.
	No compositing of samples was applied.
Orientation of data in relation to geological structure	Results to date have not identified any bias attributed to sampling orientation.
Sample security	Chain of custody is managed by Evolution Mining. Core is stacked safely and stored by hole number at a secure compound at the Mt Carlton site. Samples are delivered to SGS Townsville or Intertek Townsville laboratory by company personnel or through a third-party trucking company. Samples that are delivered after hours to the laboratory facility are stored in locked yards prior to receipt. A reconciliation report is sent via email from the Laboratory acknowledging sample receipt.



Criteria	Commentary
Audits or reviews	Database/Block modelling audits and reviews were conducted by external entities (Rock Solid and Optiro Ltd). Internal reviews are conducted by Evolution's Transformation and Effectiveness Group. Unannounced Laboratory visits (SGS) and reviews from site personnel form part of a compliance audit. Database management and Block modelling refresher training and mentoring was organised as professional development for Mine geologists. The Database training was tailored to the outcome of the audit.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Mt Carlton Project is covered by Mining Lease ML10343. The ML area covers 1,171 ha. Native title agreements are in place for activities within the Mining Lease, and surrounding EPM's. ML 10343 is surrounded by several EPM's forming the Mt Carlton project area, with ML10343 within EPM10164. The Mt Carlton project currently covers 44,240ha. The EPM's are in good standing with no significant risk regarding land access which inhibit future work. A royalty agreement is currently in place between Conquest Mining Pty Ltd and Gold Fields Australasia Pty Ltd whose interest has been transferred to Maverick Pty Ltd since January 2017.
Exploration done by other parties	Exploration within the Mt Carlton EPM's and ML10343 commenced in the 1970's, with BHP, Ashton Mining, MIM Exploration and others exploring the Capsize Range area within the current EPM10164 for porphyry copper and epithermal styles of mineralisation. In 2006, Conquest Mining discovered the V2 high sulphidation epithermal Au-Cu deposit, and Ag rich A39 deposit, with follow up work within the ML10343.
Geology	The Mt Carlton high sulphidation deposit is located in the Early Permian Lizzie Creek. Mineralisation is hosted within porphyritic rhyodacite which underlays a package of andesite lavas and sedimentary-volcanics sequence. Basaltic to andesitic dykes crosscut mineralisation and mirror pre-existing structures. Gold mineralisation at V2 is associated with enargite—tennantite copper and silver minerals.
Drill hole Information	No exploration results have been reported in this release.
Data aggregation methods	No exploration results have been reported in this release.
Relationship between mineralisation widths and intercept lengths	Mt Carlton mineralisation generally trends NE and dips to the NW. Brecciated hydrothermal silicic veins which control mineralisation dips to the west and plunges NE. These zones are discrete and discontinuous. Mineralised domains are modelled on interpreted geology and structural trends from drillhole data and pit mapping. No exploration results have been reported in the release. This section is not relevant to this report on Ore Reserves and Mineral Resource.
Diagrams	No exploration results have been reported in the release; therefore, no diagrams have been produced.
Balanced reporting	No exploration results have been reported in the release.
Other substantive exploration data	No significant exploration activities have occurred during the reporting period.
Further work	Additional drillholes into the Link Zone Underground ore body to continue to define the mineralisation during H2 FY20.



Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	Data is collected and stored using Maxwell's Datashed™ geological database system. User access to the database is regulated by specific user permissions, and validation checks and relational steps are part of the process to ensure data integrity. Routine validation is conducted by site personnel during data importation using dedicated import templates with automatic flags for erroneous data. Data management is supported by Evolution's database specialists who conducts routine validation and historical verification of the data. External database audit for this reporting period was conducted by Rock Solid Pty Ltd. Database management training was tailored to the external audit outcome.
	Regular back-ups of the database are conducted and stored remotely.
Site visits	The Competent Person is a full-time employee of Evolution and based at the Mt Carlton site. A Sydney based Evolution Transformation and Effectiveness Group has oversight responsibilities of Mineral Resource estimation and geological modelling activities. A Senior Consulting Resource Geologist from Optiro Ltd visited site in December 2018 to review the new Geological interpretation for the West Lode and improved block modelling processes for the Link Lode. Transformation and Effectiveness Group visit site regularly to ensure compliance with Group standards.
Geological interpretation	A high degree of confidence in the geological interpretation supports the Mineral Resource estimate from logged drillholes and mapped open-pit exposures. Lithological and Alteration data are modelled in Leapfrog using explicit modelling technique. This interpretational approach is considered robust, aligns with spatial continuity and reduces estimation risk. Domains for the Mt Carlton Mineral Resource were generated using categorical indicator kriging to differentiate relatively unmineralised material from mineralised material, ie greater than 0.1g/t Au. The domains were limited to the modelled lower rhyodacite wireframe. They were further split into west, east and link zones 1).
	The Competent Person deems that the geological model used for the Mineral Resource is suitable for a global estimate of the deposit type.
Dimensions	The V2 Deposit forms the eastern limb of a large planar stratiform bounded gently dipping antiform feature, internally dismembered with horst and graben structures. The strike of the V2 Deposit is approximately 1,000m by an average width of 500m and 150m in thickness.
Estimation and modelling techniques	The estimation of the V2 Deposit was made using Surpac™ software, with OrePack™ software and Supervisor™ software. The Mt Carlton Mineral Resource model was generated using several discrete domains. Grades for gold, silver, copper, arsenic, zinc, lead, iron, sulphur and calcium have been estimated using ordinary kriging after first differentiating the resource into high and low gold grade zones using categorical indicator kriging (CIK) into several mineralised domains. The block model was generated and estimated in MGA grid Zone 55 using Surpac, with OrePack and Supervisor software. Block model (centroids) extents range between 558,450mE to 560,000mE, 7,758,000mN to 7,759,850mN and -250mRL to 250mRL based on block sizes of 5m by 5m by 5m (X, Y and Z). Block sizes are selected to reflect the selective mining unit (SMU) at Mt Carlton and are smaller than the average drill spacing of 25m by 25m. The Mineral Resource assay database remained uncomposited with typical sample lengths of 1m providing a dataset of 26,032 composites contained within the HG estimation domains from 4,902 holes comprising the main elements estimated. Top-cuts (also known as grade caps) were applied to domains where the CV is greater or equal to 1.6, where the top-cut is at or above the 98.5th percentile. In the case where the top-cut required to achieve a CV of 1.6 is below the 98.5th percentile, the grade was cut to the 98.5th percentile, and then a restricted search for samples above the top-cut was imposed which would create a CV of 1.6. Block estimation was performed by two search passes for the OK interpolations for both low-grade and high-grade domains. The search range for the first pass estimation was set to half of the maximum variogram range.



Criteria	Commentary
	variogram range.
	Routine validation of the estimate was completed using grade tonnage comparisons with previous estimates, swath plots, visual inspection, statistical analysis comparing estimated grades with input composite grades and historical production data.
	Review and validation of the estimate was completed by Evolution personnel with an oversight from the Transformation and Effectiveness. The estimate process is considered appropriate regarding the assumptions implied by the geological understanding at the time of the estimate.
Moisture	Tonnages are estimated on a dry basis. The tonnages of material on stockpiles are quoted on a dry basis.
Cut-off parameters	The cut-off parameter is 0.35g/t Au for V2 open cut and 2.55g/t Au for underground in the stated company Mineral Resource estimate.
	Cut-off parameters are based on Evolution's mining (open pit) and milling costs. The cut-off reflects the current and anticipated mining strategy and practices.
Mining factors or assumptions	The Mineral Resource is further constrained and reported within an A\$2,000/oz gold optimisation shell for the open-cut and MSO (mineable shape optimiser) for underground. V2 open-pit Mineral Resources are reported after mining depletion using the surveyed surface of the pit as of the 31st December 2019 and inside A\$2,000 optimised shell.
	Current production is by conventional truck and excavator open-pit mining methods with 5m benches taken in two individual 2.5m flitches.
	Block heights are matched to a panel height of 5m which matches the blasted bench height. Dilution attributed to the difference of the panel to SMU block size is quantified using Blast movement monitor vectors (BMM's) developed by Blast Movement Technology. Ore blasts are monitored by electronic directional transmitter balls which tracks pre and post blast movements. Ore boundaries are translated to reflect measured movement which reduce dilution, ore loss and misclassification.
Metallurgical factors or assumptions	The ore is processed through a bulk Sulphide flotation plant. Comprised of the following operational units; primary crusher, SAG mill, pebble crushing, cyclone classification, bulk flotation, concentrate regrind, concentrate thickening, filtration and bagging. It is well tested technology used throughout the world for polymetallic orebodies. Coarse gold is recovered through a Knelson concentrator circuit.
	Deleterious elements are managed operationally through blending to achieve specification set in the smelter off-take agreement.
	The current and estimated future average recoveries at V2 are 90% for Au, 84% for Ag and 94% for Cu.
	Historical metallurgy parameters and operational data are used in the Mineral Resource and Ore Reserve estimation.
	Concentrate is sold to a Chinese Smelter Company based on an off-take agreement containing recoverable payment terms.
Environmental factors or assumptions	Mt Carlton operates under permitted environmental guidelines with no material concerns defined that will impact the operations viability.
Bulk density	Specific gravity measurements are routinely taken from drill core samples. Density measurements were attained using the fully submerged rocks technique based on Archimedes principle. This data was assigned to drill hole composites and estimation undertaken within the mineralised domains. Density values were assessed and assigned based on estimation or lithology domain. Density values are deemed appropriate and are validated by routinely collecting samples from
Classification	active bench faces from the V2 pit. The Mineral Resource is stated inclusive of Ore Reserves and depleted to the mined surface
Sidesification	as of 31st December 2019 for the V2 pit and underground development. Blocks in the resource model have been allocated a confidence category based on the number and location of samples used to estimate the grade of each block. The approach is based on the principle that larger numbers of samples, which are more evenly distributed throughout the search neighbourhood, will provide a more reliable estimate.



Criteria	Commentary
	Blocks within the current pit design were deemed to have an appropriate level of confidence to be classified as indicated based on sample support. Blocks that were estimated in the high-grade resource domains outside the current pit design were queried on 50m spaced sections and classified as indicated if deemed to have sufficient sample support; nominally more than one drill hole within 25m on section. Blocks in the high-grade resource domains outside these criteria were classified as inferred. It is the Competent Person's view that the classifications used for the Mineral Resources are
	appropriate.
Audits or reviews	A review of the Mineral Resource estimation process was undertaken by Evolution's Transformation and Effectiveness Group and an external entity Optiro Pty Ltd.
Discussion of relative accuracy/	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per guidelines of the 2012 JORC Code.
confidence	The statement relates to global estimates of tonnes and grade. Stated Mineral Resources are rounded to 2 significant figures relevant to the accuracy of the
	estimate.
	Historically the Mineral Resource estimate has compared well with production data. Over the life of the project reported milled outcome is -4% ounces compared to predictions from the Resource Models.
	The recent changes made in geological interpretation to the feeder zone of the Western Lode remain untested as no significant amount of this material has yet been mined. However, the internal and external reviews performed on this area support the reported confidence and material classification for the Mineral Resource as of 31st December 2019.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	Open Pit and Underground: The estimation of Mineral Resources is outlined in Section 3. All Measured and Indicated resource classifications were considered for conversion to Ore Reserves. Mineral Resources are reported inclusive of Ore Reserves.
Site Visits	Open Pit and Underground: The Competent Person is an employee of Evolution Mining Limited and is based at the Mt Carlton site.
Study Status	Open Pit: Mt Carlton is an established open pit operation with commercial production commenced in July 2013. The updated Ore Reserve cost base assumptions are based on demonstrated performance with supported cost reduction initiatives and vary in line with changing activity levels at the site over the life of the operation. Underground: A Feasibility Study (Mt Carlton Operation: Mine Extension Feasibility Study) was completed in October 2018 and is the basis of this evaluation which converts near-pit Mineral Resources to underground Ore Reserves. Established feasibility study costs, mining parameters and additional reasonable assumptions have been applied to an updated mine design. Designs were based on the current mineral resource outlined in Section 3 as well as gold grades modelled in the Link zone using reasonable adjustments to the mineralized domains.
Cut-off parameters	Open Pit: As a result of multiple revenue contributing elements (gold, silver, copper), a cut-off grade for Open Pit Ore Reserves using a Net Smelter Return (NSR) has been applied to the resource model. This method is used to account for the multiple revenue contributing elements (gold, silver and copper) and the incremental processing cost on a block by block basis. Incremental processing cost (which excludes site support cost) has been calculated in the reserve model per Mass Pull (MP) percent of each block. The mass pull of each block is calculated from estimated mineral grades using statistical analysis of historic recovery data throughout the operation of the processing plant. The difference



Criteria

Commentary

between total Revenue and Processing Cost, for each block using ore reserve pricing and an incremental processing cost has been applied to the Mineral Resource model as a binary cut-off grade field for interrogation and reporting purposes.

Each individual block in the resource model then contains a processing cost and revenue. Any indicated or measured block which contains a positive NSR is reported as ore. The cut-off grade used for reporting purposes for the December 2019 Ore Reserve Estimate is the NSR field contained within the resource model.

To accompany the reporting tables a gold equivalent cut-grade has been estimated from the contained value of the lowest gold grade mineralised block that returns a positive NSR. The value of each contained payable element has then been converted to equivalent gold grade at Ore Reserve reporting prices. This results in an average gold equivalent cut-off grade of 1.8g/t Au. This number accompanies the reporting tables but has not been used for Ore Reserve reporting purposes.

This represents a change from the December 2018 Ore Reserve estimation process. The cut-off grade used for the December 2018 Ore Reserve Estimate was a gold only cut-off grade of 0.8 g/t.

Underground:

Au equivalent cut-off values were established, having been calculated according to metal price assumptions, as well as revenue factors and operating costs built up for first principles in the Feasibility Study (2018).

Stope design was conducted optimising to gold grades only. Final Cut-off grade was adjusted to account for copper and silver revenue at their respective contribution to UG revenue.

Variable mining costs over the range of mining methods meant that several cut-off values were employed. Over the orebody, average full and incremental stoping cut-off values of 3.2g/t and 2.5g/t respectively, were used in stope design optimisation. Lower cut off values were used for MSO optimisation in order to fairly represent planned stopes with reduced dilution as a result of higher selectivity following manual stope design.

Mining factors or assumptions

Open Pit:

The methodology used to convert the Mineral Resource to Ore Reserve can be described as optimisation of existing open pit operations through standard mine planning process steps of pit optimisation, mine design, mine schedule and financial modelling. Factors and assumptions have been formed from existing operating technical assumptions and cost models. On this basis the analysis is considered at a higher confidence level than Feasibility Study.

Current mining at Mt Carlton open pit is undertaken via conventional truck and excavator fleet to extract ore material to the ROM, waste material to the waste rock dumps with occasional stockpiling and reclaim of lower grade material. Ore is selectively mined to geological controlled grade boundaries in 2.5m flitch heights over a 5m or 10m design bench height. The current mining activities show the appropriateness of this mining method as the basis of the Ore Reserve.

The selective mining method eliminates recovery losses in favour of dilution with surrounding mineralised material. Dilution with mineralised material results in an immaterial small net increase in Ore Reserve and is therefore not applied to the Mt Carlton Open Pit Ore Reserve estimate. The economic analysis of the orebody for final spatial constrain accounts for ore dilution to ensure no uneconomic material is considered for mining. Reconciliation between resource model and mill performance at Mt Carlton to date demonstrate this approach as being within an acceptable uncertainty range for the style of mineralisation and mining method used.

External and internal Geotechnical studies are carried out to evaluate the operational designs. Ore Reserves are based on recommendations of pit slope berm and batter configurations recommended by Principal Consultant Geotechnical engineer from Oretek, reviewed by the Senior Geotechnical Engineer at Mt Carlton mine site.

Inferred material is excluded from the Ore Reserve and treated as waste material, which incurs a mining cost but is not processed and does not generate any revenue.

The selected mining method does not require additional infrastructure.

Underground:

Only the parts of the Link, East and West mineralisation zones which exist outside the open pit reserve design were considered for the purposes of conversion to Underground Reserve.

Mineable stope shapes were created using the Mineable Shape Optimiser (MSO) tool from Datamine, or manual wireframing processes, according to stope design parameters established in the feasibility study and detailed below. Stope shapes were created using Au gold grade as the MSO optimisation field at an incremental cut-off grade of \$2.5g/t. Stopes were then assessed for economic feasibility in a standard financial model.

Stope shapes were informed by geotechnical assessment to determine stable stope spans. The typical sublevel interval is 20m. Strike lengths vary between 6 and 20m, while stope widths are up to 12.5m.



Criteria	Commentary
	Stope crown stability in the Link Zone will be negatively influenced by a less competent argillic material overlying the stopes. Additional crown ground support has been included in cost assumptions. Geotechnical assessment of the rock mass and stope size during the feasibility study has informed the stope dilution factor of 15% for the purposes of reserve assessment. Geotechnical data was obtained by logging of core (48 holes), laboratory testing of material properties,
	structural logging of core and pit mapping of structures. The feasibility study geotechnical assessment and recommended mining parameters have been considered in determining the Ore Reserve for the underground.
	A sharp boundary exists between ore and waste zones with lower grade surrounding the stope shape. A mining recovery factor of 92% is applied for operational recoveries of the ore.
Metallurgical factors or assumptions	Open Pit and Underground: The ore is processed through a bulk Sulphide flotation plant. The plant is comprised of a primary crusher, a SAG mill, a pebble crusher, a cyclone classification circuit, bulk flotation cells, a concentrate regrind system, concentrate thickening and concentrate filtration and bagging. It is well tested technology used throughout the world for polymetallic orebodies. Coarse gold is recovered through a Knelson concentrator circuit.
	Deleterious elements are managed operationally through blending to achieve the concentrate specification set out in the smelter off-take agreement.
	Historical metallurgical data and process plant performance data has been used to develop models to estimate mineral recovery in the process plant. These models have been used in the estimation of Ore Reserves.
	Current and estimated future average recoveries are 90% for Au, 84% for Ag and 94% for Cu. Concentrate is sold under an off-take agreement containing specific payment terms-based concentrate
	quality.
Environmental factors or assumptions	Open Pit and Underground: Mt Carlton is current with all environmental approvals and compliant to those conditions set out in such approvals. Environmental rehabilitation plans are produced, and cost of the mine closure rehabilitation work is accounted for in the financial evaluation model.
Infrastructure	Open Pit and Underground:
	The mine is currently in operation and therefore has adequate infrastructure to support current and future operation.
Costs	Open Pit: Capital and operating costs have been determined based on the current operating cost base modified for changing activity levels and reasonable cost base reductions over the life of the mine. On this basis the analysis is considered at a higher level than a Feasibility Study.
	Site unit costs are applied both as break-even site cost used to determine ultimate pit shell and marginal site cost used to define ore waste cut off boundary within the ultimate pit shell. The break-even cost base is predicated on similar levels of site activity to recent history.
	Underground: Mining costs were developed as part of the 2018 MCO Mine Expansion Feasibility Study using mining proposals from two, independent, specialist UG mining contractors. Benchmarking and cost validation were undertaken against operating costs at similar underground mines within the Evolution Group. These mining costs were applied to the determination of the December 2018 UG Ore Reserve estimate.
	Open Pit and Underground: No cost impact is expected from deleterious elements and no costs have been included in the Ore Reserve estimate for these.
	Both state and third-party royalties are payable on all metal revenue. Total royalties comprise 7.25% for gold, 7.25% for silver, and 5.82% for copper.
Revenue factors	Open Pit and Underground: Revenue is calculated using a gold price of A\$1,450/oz, silver price of A\$20/oz, copper price of A\$6,000/t.
Market assessment	Open Pit and Underground: Gold and silver concentrate is sold to Chinese smelters under commercial agreements. These agreements are for life of mine terms. Gravity gold doré is sold to the ABC Refinery in NSW.



Criteria	Commentary
Economic	Open Pit: To demonstrate the Ore Reserve as economic it has been evaluated through the site life of mine planning financial model. All operating and capital costs as well as revenue factors were included in the financial model. This process has demonstrated that the Ore Reserves for the Mt Carlton open pit has a positive NPV. Sensitivity was conducted on the key input parameters of cost base, head grade and recovery and found to be robust. Underground: The Ore Reserves were economically evaluated through a standard financial model. All operating costs and revenue factors were included in the financial model. Capital costs were included in separate financial evaluations during feasibility study and life of mine planning processes. These processes demonstrated that the Ore Reserves for the underground operation can be profitably extracted under stated assumptions.
Social	Open Pit and Underground: Currently Evolution Mining has agreements with Traditional Owners and on good terms with neighbouring pastoralists.
Other	Open Pit: There are typical risks for an open pit operation such as heavy rain fall events and geotechnical risks. These risks are managed through the implementation of various risk management mechanisms as far as practical. Underground: NIL
Classification	Open Pit: The Ore Reserves are predominantly derived from Indicated Resources. This classification is based on the density of drilling, the orebody experience and the mining method employed. The only Probable Reserves derived from Measured Resources are those reported in known and quantified stockpiles. It is the Competent Person's view that the classifications used for the Ore Reserves are appropriate. Underground: The reserve classification was carried out on the designed stopes. Stopes were assessed on the proportion of metal in each Resource category. Revenue was assumed from Measured and Indicated blocks only. If all blocks within a stope were classified as Measured or Indicated, then it was classified as a Probable Ore Reserve. Ounces contained in Inferred blocks were excluded from the Ore Reserve estimate and did not contribute to reported grades.
Audits or reviews	Open Pit and Underground: Internal peer review by Evolution personnel has been conducted in accordance with Evolution's standards which confirms the stated Ore Reserve and supports the estimation parameters applied. This Ore Reserve has not been audited externally.
Discussion of relative accuracy/ confidence	Open Pit: The accuracy of the Ore Reserve estimate is directly influenced by the accuracy of the Mineral Resource model, the metallurgical input and the long-term cost and revenue assumptions applied. In the opinion of the Competent Person, the modifying factors and long-term cost assumptions used in the Ore Reserve estimate are reasonable. Underground: The accuracy of the Ore Reserve estimate is directly influenced by the accuracy of the Mineral Resource model, subsequent gold grade adjustments due to modified domaining in the Link Zone, the metallurgical input and the long-term cost and revenue assumptions applied. In the opinion of the Competent Person, the modifying factors and long-term cost assumptions used in the Ore Reserve estimate are reasonable.