

## APPENDIX 3: RESERVES AND RESOURCES AS AT DECEMBER 31, 2019

<i>Resources shown inclusive of Reserves</i>	ON A 100% BASIS			ON AN ATTRIBUTABLE BASIS		
	Tonnage (Mt)	Grade (Au g/t)	Content (Au koz)	Tonnage (Mt)	Grade (Au g/t)	Content (Au koz)
<b>Agbaou Mine (85% owned)</b>						
Proven Reserves	1.5	0.71	34	1.3	0.71	29
Probable Reserves	4.8	1.86	286	4.1	1.86	243
<b>P&amp;P Reserves</b>	<b>6.3</b>	<b>1.58</b>	<b>321</b>	<b>5.4</b>	<b>1.58</b>	<b>273</b>
Measured Resource (incl. reserves)	1.5	0.76	38	1.3	0.76	32
Indicated Resources (incl. reserves)	6.0	2.49	481	5.1	2.49	409
<b>M&amp;I Resources (incl. reserves)</b>	<b>7.6</b>	<b>2.14</b>	<b>519</b>	<b>6.4</b>	<b>2.14</b>	<b>441</b>
Inferred Resources	0.7	1.59	37	0.6	1.59	31
<b>Houndé Mine (90% owned)</b>						
Proven Reserves	1.8	1.57	89	1.6	1.57	80
Probable Reserves	30.9	2.09	2,075	27.8	2.09	1,867
<b>P&amp;P Reserves</b>	<b>32.6</b>	<b>2.06</b>	<b>2,164</b>	<b>29.4</b>	<b>2.06</b>	<b>1,948</b>
Measured Resource (incl. reserves)	1.7	1.75	96	1.5	1.75	87
Indicated Resources (incl. reserves)	58.6	2.01	3,797	52.8	2.01	3,417
<b>M&amp;I Resources (incl. reserves)</b>	<b>60.4</b>	<b>2.01</b>	<b>3,893</b>	<b>54.3</b>	<b>2.01</b>	<b>3,504</b>
Inferred Resources	6.9	2.07	456	6.2	2.07	411
<b>Ity Mine (85% owned except 100% owned Le Plaque area)</b>						
Proven Reserves	9.4	1.05	318	8.0	1.05	271
Probable Reserves	52.7	1.67	2,825	45.6	1.67	2,464
<b>P&amp;P Reserves</b>	<b>62.1</b>	<b>1.57</b>	<b>3,144</b>	<b>53.6</b>	<b>1.57</b>	<b>2,734</b>
Measured Resource (incl. reserves)	10.3	1.02	337	8.7	1.02	286
Indicated Resources (incl. reserves)	68.1	1.61	3,514	58.6	1.61	3,059
<b>M&amp;I Resources (incl. reserves)</b>	<b>78.4</b>	<b>1.53</b>	<b>3,851</b>	<b>67.3</b>	<b>1.53</b>	<b>3,345</b>
Inferred Resources	18.0	1.35	780	15.4	1.35	670
<b>Karma Mine (90% owned)</b>						
Proven Reserves	3.1	0.85	84	2.8	0.85	75
Probable Reserves	6.1	1.06	209	5.5	1.06	188
<b>P&amp;P Reserves</b>	<b>9.2</b>	<b>0.99</b>	<b>293</b>	<b>8.3</b>	<b>0.99</b>	<b>264</b>
Measured Resource (incl. reserves)	0.3	0.38	4	0.3	0.38	3
Indicated Resources (incl. reserves)	52.3	1.21	2,038	47.0	1.21	1,834
<b>M&amp;I Resources (incl. reserves)</b>	<b>52.6</b>	<b>1.39</b>	<b>2,350</b>	<b>47.3</b>	<b>1.39</b>	<b>2,115</b>
Inferred Resources	15.7	1.35	681	14.1	1.35	613
<b>Kalana Project (80% owned)<sup>7</sup></b>						
Proven Reserves	5.1	3.00	492	4.1	3.00	394
Probable Reserves	16.6	2.76	1,472	13.3	2.76	1,177
<b>P&amp;P Reserves</b>	<b>21.7</b>	<b>2.81</b>	<b>1,964</b>	<b>17.4</b>	<b>2.81</b>	<b>1,571</b>
Measured Resource (incl. reserves)	9.5	4.19	1,280	7.6	4.19	1,024
Indicated Resources (incl. reserves)	16.3	3.74	1,964	13.1	3.74	1,571
<b>M&amp;I Resources (incl. reserves)</b>	<b>25.8</b>	<b>3.92</b>	<b>3,254</b>	<b>20.7</b>	<b>3.92</b>	<b>2,603</b>
Inferred Resources	1.9	4.41	265	1.5	4.41	212
<b>Fetekro Project (65% owned)</b>						
Proven Reserves	-	-	-	-	-	-
Probable Reserves	-	-	-	-	-	-
<b>P&amp;P Reserves</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Measured Resource (incl. reserves)	-	-	-	-	-	-
Indicated Resources (incl. reserves)	14.6	2.54	1,190	9.5	2.54	774
<b>M&amp;I Resources (incl. reserves)</b>	<b>14.6</b>	<b>2.54</b>	<b>1,190</b>	<b>9.5</b>	<b>2.54</b>	<b>774</b>
Inferred Resources	0.9	2.17	60	0.6	2.17	39
<b>Total - Endeavour Mining</b>						
Proven Reserves	20.9	1.52	1,017	17.7	1.49	849
Probable Reserves	111.1	1.92	6,868	96.2	1.92	5,941
<b>P&amp;P Reserves</b>	<b>131.9</b>	<b>1.86</b>	<b>7,885</b>	<b>114.0</b>	<b>1.85</b>	<b>6,789</b>
Measured Resource (incl. reserves)	23.3	2.34	1,755	19.5	2.29	1,433
Indicated Resources (incl. reserves)	215.9	1.87	12,985	186.0	1.85	11,064
<b>M&amp;I Resources (incl. reserves)</b>	<b>239.3</b>	<b>1.96</b>	<b>15,058</b>	<b>205.5</b>	<b>1.93</b>	<b>12,782</b>
Inferred Resources	44.1	1.61	2,280	38.4	1.60	1,977

The mineral reserves and resources ("MRE") were estimated as at December 31, 2019 in accordance with the provisions adopted by the Canadian Institute of Mining Metallurgy and Petroleum (CIM) and incorporated into the NI 43-101. The Qualified Persons responsible for the mineral reserve and resource estimates are detailed in the following tables.

## MINERAL RESOURCES

QUALIFIED PERSON	POSITION	PROPERTY/DEPOSIT
Kevin Harris, CPG	V.P. Resources, Endeavour Mining Corp	Agbaou; Colline Sud, LaPlaque (Ity); North Kao, Yabonso, Rambo West, GG1 deposits (Karma); Bouere, Dohoun, Kari Pump deposits (Houndé); Lafigué (Fetekro)
Helen Oliver, FGS, CGeol	Group Resource Geologist, Endeavour Mining Corp.	Kari West, Kari Center (Hounde), Nami (Karma), Kalanko (Kalana)
Mark Zammit, MAIG	Principal, Cube Consulting Pty Ltd	Ity (except Colline Sud and La Plaque deposits); Vindaloo deposits (Houndé); GG1 (Karma)
Eugene Puritch, P.Eng.	President, P&E Mining Consultants Inc	GG2, Rambo, Kao Main (Karma)
Ivor Jones, FAusIMM	Principal Consultant, Denny Jones (Pty) Ltd	Kalana Project

## MINERAL RESERVES

QUALIFIED PERSON	POSITION	PROPERTY/DEPOSIT
Salih Ramazan, MAusIMM	Vice President – Mine Planning, Endeavour Mining	Ity, Agbaou, Houndé and Karma
Allan Earl, FAusIMM	Executive Consultant, Snowden Mining Industry Consultants (Pty) Ltd	Kalana Project, Ity (CIL)

- The mineral resources and reserves have been estimated and reported in accordance with Canadian National Instrument 43-101, 'Standards of Disclosure for Mineral Projects' and the Definition Standards adopted by CIM Council in May 2014.
- Mineral resources that are not mineral reserves have not demonstrated economic viability.
- All mineral resources are reported inclusive of mineral reserves.
- Tonnages are rounded to the nearest 100,000 tonnes; gold grades are rounded to one decimal place; ounces are rounded to the nearest 1,000oz. Rounding may result in apparent summation differences between tonnes, grade and contained metal.
- Tonnes and grade measurements are in metric units; contained gold is in troy ounces.
- Processing recoveries vary at each pit by many factors including material types, mineralogy and chemistry of the ore. The overall average recoveries are around 81% at Ity and Karma, 90% at Hounde and Agbaou.
- The reporting of mineral reserves and resources are based on a gold price as detailed below:

Project <sup>1</sup>	Agbaou	Kalana	Ity	Karma <sup>2</sup>	Houndé	Fetekro
Reserves Au price	1,300	1,200	1,300	1,350	1,300	n.a.
Resources Au price	1,500	1,400	1,500	1,500	1,500	1,500

<sup>1</sup>Cut-off grades for all resources open pits are 0.5g/tAu, except at Kalana where the cut-off grade is at 0.9g/tAu and at Karma where the cut-off grade is defined by material type: Oxide=0.2, Transition=0.2 and Sulfide=0.5.

Cut-off grades for reserves except for Kalana vary between 0.3-0.5g/t for Oxide ore, 0.3-0.8g/t for Transition ore, 0.3-0.7g/t for Sulfide ore.

Cut-off grade for Kalana pits reserve is 0.9g/t.


<sup>2</sup> Kao, GG2, and Rambo have a gold price of \$1,557/oz. Gold price for Kao Main and Rambo West reserves is \$1,350/oz.

- The Kalana Main deposit Mineral Resource is stated as per that published by Avnel, which forms the basis on which the stated Mineral Reserves were estimated.

In March 2019, Endeavour published an updated Mineral Resource Estimate for the Kalana Main deposit. The comparison between the Avnel MRE and the Endeavour MRE is demonstrated in the below:

(on a 100% basis)	PREVIOUS 2016 M&I RESOURCE	UPDATED 2019 M&I RESOURCE
Cut-off grade (g/t Au)	0.9	0.9 (For comparative purpose)
Tonnage (Mt)	23	18
Grade (g/t Au)	4.14	3.70
Content (Au Koz)	3,060	2,092
		2,290

The 2019 Kalana Main geological model was prepared by Helen Oliver. Ms Oliver FGS, CGeol is Endeavour Mining's Group Resource Geologist and a Qualified Person as defined by NI 43-101. The 2019 Kalana Main Resource Estimate was prepared by Geoff Booth, FAusIMM, Mining Consulting Manager for Snowden Mining Industry Consultants Pty Ltd and a Qualified Person as defined by NI 43-101.



The Kalana Main MRE is constrained within a \$1,500/oz gold Whittle pit shell as a limit of economic extraction, defined using the following parameters (all costs are in US dollars):

- Slope angles – Oxide 32°, Transition 45°, Fresh 54°
- Au recovery – Oxide 96.2%, Transition – 88.5%, Fresh – 89%
- Gold price = \$1,500/oz
- Mining cost (Oxide base cost at 380 mRL) = Bulk \$1.97/t, semi-selective \$2.06/t, selective \$2.34/t
- Mining cost (Transition base cost at 380 mRL) = Bulk \$1.79/t, semi-selective \$1.98/t, selective \$2.18/t
- Mining cost (Fresh base cost at 380 mRL) = Bulk \$2.41/t, semi-selective \$3.08/t, selective \$3.37/t
- Mining cost (depth cost below 380 mRL) = 0.005/t/m
- Processing cost – Oxide \$16.64/t, Transition \$20.37/t, Fresh \$21.40/t
- Selling cost - \$58/oz

The scientific and technical information relating to the Agbaou mine, Ity mine, Karma mine, Houndé mine and Kalana Project contained in this document has been derived from or based on the following technical reports. Copies of the reports are available electronically on SEDAR at [www.sedar.com](http://www.sedar.com) under the Corporation's profile. The Kalana report is available under the Avnel Gold Mining profile on SEDAR.

- Agbaou mine: "Technical Report, Mineral Resource and Reserve Update for the Agbaou Gold Mine, Côte d'Ivoire, West Africa" dated effective December 31, 2014.
- Ity mine: "Ity CIL Project National Instrument 43-101 Technical Report", dated December 9, 2016.
- Ity mine: Reserves and Resources were updated in 2017 after the completion of a Project Optimization Study. The results were published in the September 20, 2017 press release available on the company's website.
- Karma mine: "Technical Report on an updated Feasibility Study and a Preliminary Economic Assessment for the Karma Gold Project, Burkina Faso, West Africa" dated effective August 10, 2014.
- Houndé mine: "Houndé Gold Project, Burkina Faso, Feasibility Study NI 43-101 Technical Report", dated effective October 31, 2013.
- Houndé mine: Reserves were updated in 2015 by Orelogy "Cost review and Reserve update study", dated February 2015. Endeavour News Release February 19, 2015
- Kalana Project: "NI 43-101 Technical Report on Kalana Main Project", dated effective March 30, 2016.

## RESERVES AND RESOURCES: YEAR-OVER-YEAR COMPARISON

Resources shown inclusive of Reserves, on a 100% basis	AS AT DECEMBER 31, 2018			AS AT DECEMBER 31, 2019		
	Tonnage (Mt)	Grade (Au g/t)	Content (Au koz)	Tonnage (Mt)	Grade (Au g/t)	Content (Au koz)
<b>Agbaou Mine</b>						
Proven Reserves	0.3	1.63	16	1.5	0.71	34
Probable Reserves	8.3	1.67	445	4.8	1.86	286
<b>P&amp;P Reserves</b>	<b>8.6</b>	<b>1.66</b>	<b>461</b>	<b>6.3</b>	<b>1.58</b>	<b>321</b>
Measured Resource (incl. reserves)	1.9	0.87	54	1.5	0.76	38
Indicated Resources (incl. reserves)	7.6	2.51	610	6.0	2.49	481
<b>M&amp;I Resources (incl. reserves)</b>	<b>9.5</b>	<b>2.18</b>	<b>664</b>	<b>7.6</b>	<b>2.14</b>	<b>519</b>
Inferred Resources	0.8	1.72	46	0.7	1.59	37
<b>Houndé Mine</b>						
Proven Reserves	3.5	1.53	174	1.8	1.57	89
Probable Reserves	24.0	2.03	1,566	30.9	2.09	2,075
<b>P&amp;P Reserves</b>	<b>27.5</b>	<b>1.97</b>	<b>1,740</b>	<b>32.6</b>	<b>2.06</b>	<b>2,164</b>
Measured Resource (incl. reserves)	3.6	1.56	180	1.7	1.75	96
Indicated Resources (incl. reserves)	41.2	2.23	2,954	58.6	2.01	3,797
<b>M&amp;I Resources (incl. reserves)</b>	<b>44.7</b>	<b>2.18</b>	<b>3,134</b>	<b>60.4</b>	<b>2.01</b>	<b>3,893</b>
Inferred Resources	3.2	2.64	268	6.9	2.07	456
<b>Ity Mine</b>						
Proven Reserves	0.0	1.45	2	9.4	1.05	318
Probable Reserves	60.7	1.55	3,036	52.7	1.67	2,825
<b>P&amp;P Reserves</b>	<b>60.8</b>	<b>1.55</b>	<b>3,039</b>	<b>62.1</b>	<b>1.57</b>	<b>3,144</b>
Measured Resource (incl. reserves)	1.4	0.97	44	10.3	1.02	337
Indicated Resources (incl. reserves)	72.2	1.55	3,602	68.1	1.61	3,514
<b>M&amp;I Resources (incl. reserves)</b>	<b>73.6</b>	<b>1.54</b>	<b>3,646</b>	<b>78.4</b>	<b>1.53</b>	<b>3,851</b>
Inferred Resources	19.1	1.34	823	18.0	1.35	780
<b>Karma Mine</b>						
Proven Reserves	1.3	0.56	24	3.1	0.85	84
Probable Reserves	26.2	0.88	740	6.1	1.06	209
<b>P&amp;P Reserves</b>	<b>27.5</b>	<b>0.86</b>	<b>764</b>	<b>9.2</b>	<b>0.99</b>	<b>293</b>
Measured Resource (incl. reserves)	1.3	0.66	28	0.3	0.38	4
Indicated Resources (incl. reserves)	74.0	1.10	2,627	52.3	1.21	2,038
<b>M&amp;I Resources (incl. reserves)</b>	<b>75.3</b>	<b>1.10</b>	<b>2,655</b>	<b>52.6</b>	<b>1.39</b>	<b>2,350</b>
Inferred Resources	17.9	1.34	772	15.7	1.35	681
<b>Kalana Project</b>						
Proven Reserves	5.1	3.00	492	5.1	3.00	492
Probable Reserves	16.6	2.76	1,472	16.6	2.76	1,472
<b>P&amp;P Reserves</b>	<b>21.7</b>	<b>2.81</b>	<b>1,964</b>	<b>21.7</b>	<b>2.81</b>	<b>1,964</b>
Measured Resource (incl. reserves)	9.5	4.19	1,280	9.5	4.19	1,280
Indicated Resources (incl. reserves)	16.3	3.74	1,964	16.3	3.74	1,964
<b>M&amp;I Resources (incl. reserves)</b>	<b>25.8</b>	<b>3.92</b>	<b>3,254</b>	<b>25.8</b>	<b>3.92</b>	<b>3,254</b>
Inferred Resources	1.9	4.41	265	1.9	4.41	265
<b>Fetekro Project</b>						
Proven Reserves	-	-	-	-	-	-
Probable Reserves	-	-	-	-	-	-
<b>P&amp;P Reserves</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Measured Resource (incl. reserves)	-	-	-	-	-	-
Indicated Resources (incl. reserves)	6.9	2.25	499	14.6	2.54	1,190
<b>M&amp;I Resources (incl. reserves)</b>	<b>6.9</b>	<b>2.25</b>	<b>499</b>	<b>14.6</b>	<b>2.54</b>	<b>1,190</b>
Inferred Resources	3.0	2.31	221	0.9	2.17	60
<b>Group Total</b>						
Proven Reserves	10.3	2.13	707	20.9	1.52	1,017
Probable Reserves	135.8	1.66	7,259	111.1	1.92	6,868
<b>P&amp;P Reserves</b>	<b>146.2</b>	<b>1.70</b>	<b>7,967</b>	<b>131.9</b>	<b>1.86</b>	<b>7,885</b>
Measured Resource (incl. reserves)	17.8	2.78	1,586	23.3	2.34	1,755
Indicated Resources (incl. reserves)	218.1	1.75	12,255	215.9	1.87	12,985
<b>M&amp;I Resources (incl. reserves)</b>	<b>235.9</b>	<b>1.83</b>	<b>13,851</b>	<b>239.3</b>	<b>1.96</b>	<b>15,058</b>
Inferred Resources	45.9	1.62	2,394	44.1	1.61	2,280

Notes for the period ended December 31, 2019 are available in the section above. Notes for the period ended December 31, 2018 are available in the press release dated March 5, 2019 available on the Company's website and on SEDAR.