

explored to increase the overall copper concentrate grades while maintaining similar recoveries. Additional testwork is planned during the 2018/2019 field season to optimize this work.

The Josemaría concentrates showed no major deleterious elements. However, mill feed blending strategies should be employed to generate flotation concentrates that have high copper grades whilst maintaining minimal deleterious element levels.

## 1.10 Mineral Resource Estimates

The Josemaría mineral resource estimate update is based on data from 116 drill holes totalling 52,725 m of drilling, of which 34 holes (13,164 m) are reverse circulation (RC) and 82 holes (39,561 m) are core holes. The total length of assayed intervals is 51,092 m and there are 27,344 assays.

A two-dimensional (2D) interpretation based on logged data was completed by NGEx geologists on east–west oriented sections spaced 100 m apart. Two-dimensional lines were then exported from GEMS and imported into the Leapfrog geological modelling software and the final three-dimensional (3D) wireframe solids were constructed.

Ordinary kriging (OK) and inverse distance squared (ID2) weighting interpolation was done in a single pass. All elements (Cu, Au, Ag, Mo, As, S and Fe) were interpolated using OK.

Model validation was carried out using visual comparison of blocks and sample grades in plan and section views; statistical comparison of the block and composite grade distributions; and swath plots to compare OK, ID2 and NN (nearest neighbour) estimates.

The classification of the mineral resources was done as a two-step process. An initial step which considered the geostatistical analysis of copper grades in the deposit was modified by a final revision to ensure consistency in the classification.

To evaluate the potential for reasonable prospects of eventual economic extraction for Josemaría, a Whittle pit shell was generated.

The analysis was done based on the copper equivalent (CuEq) grades in the block model. CuEq was calculated using metal prices of US\$3.00/lb copper, US\$1,400/oz gold and US\$23/oz Ag and were adjusted for metallurgical recoveries. Mineral resources for Josemaría are reported at a 0.2% CuEq grade for the sulphide material.

The mineral resource estimate for Josemaría, assuming open pit mining methods is reported using the 2014 CIM Definition Standards. Indicated and Inferred classifications only have been estimated; no measured mineral resources were classified.

The mineral resource estimates were prepared by Mr. Gino Zandonai, RM CMC. The Josemaría estimate has an effective date of 7 August 2015.

Mineral resource statements for Josemaría are presented in Table 1.1 and Table 1.2. Mineral Resources that are not mineral reserves do not have demonstrated economic viability.

**Table 1.1: Mineral resource statement for the sulphide material Josemaría project, San Juan, Argentina, 7 August 2015**

Cut-off (CuEq %)	Quantity	Grade				Contained Metal		
	(million tonnes)	Cu (%)	Au (g/t)	Ag (g/t)	CuEq (%)	Cu (billion lbs)	Au (million ozs)	Ag (million ozs)
<b>Indicated Mineral Resources</b>								
0.2	1,066	0.31	0.22	1.0	0.44	7.4	7.4	34.5
<b>Inferred Mineral Resources</b>								
0.2	404	0.24	0.15	0.8	0.33	2.0	2.0	10.8

**Table 1.2: Mineral resource statement for the oxide material Josemaría project, San Juan, Argentina, 7 August 2015**

Cut-off (Au g/t)	Quantity (million tonnes)	Grade			Contained Metal	
		Au (g/t)	Ag (g/t)	Cu (%)	Au (thousand ozs)	Ag (thousand ozs)
<b>Josemaría Indicated Mineral Resources</b>						
0.2	43	0.32	1.2	0.15	450	1,610
<b>Josemaría Inferred Mineral Resources</b>						
0.2	4	0.32	1.0	0	48	145

Notes to accompany Josemaría mineral resource statement:

1. Mineral resources have an effective date of 7 August 2015. The Qualified Person for the estimate is Mr. Gino Zandonai, RM CMC.
2. Mineral resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Sulphide mineral resources are reported using a copper equivalent (CuEq) cut-off grade. CuEq was calculated using US\$3.00/lb copper, US\$ 1,400/oz gold and US\$23/oz Ag and was based on copper, gold and silver recoveries obtained in metallurgical testwork on four composite samples representing the rhyolite, tonalite, porphyry and supergene zones. Copper recoveries for the rhyolite, tonalite and porphyry zones were calculated as a function of copper grade, ranging from a low of 81% to a high of 97%. Copper recovery in the supergene zone was fixed at 85%. Gold recoveries were fixed between 62% and 73% and silver recoveries were fixed between 53% and 75% depending on the zone.
4. Mineral resources are reported within a conceptual Whittle™ pit that uses the following input parameters: Cu price: US\$3.00/lb, mining cost: US\$2.20/t, process cost (including G&A): US\$7.40/t processed, copper selling cost: US\$0.35/lb and Over-all slope angle of 42°.
5. Mineral resources (sulphide) have a base case estimate using a 0.2% CuEq grade; mineral resources (oxide) are reported using a 0.2 g/t Au cut-off grade.
6. Totals may not sum due to rounding as required by reporting guidelines.

## 1.11 Mineral Reserve Estimates

The open pit mineral reserves for Josemaría are reported within a pit design based on open pit optimization results. 3-D mine designs were completed using MineSight software.

Mineral reserves were classified using the 2014 CIM Definition standards. Indicated mineral resources were converted to probable mineral reserves by applying the appropriate modifying