PEKO MINE CROWN PILLAR RESOURCE ESTIMATE

Introduction

These resource calculations and estimates were conducted by Mr P.A. Jones, B.App.Sc(Geology), MAIG, MAusIMM who has over twenty five years experience as a geologist in open pit and underground mining, project development, prospect evaluation and exploration as well as various management roles in a wide variety of commodities including gold, copper, lead, zinc, silver, nickel, phosphate, iron ore and silica in Australia, Indonesia, New Zealand, Malaysia, China, Papua New Guinea and Zimbabwe.

Geology and Mineralisation Summary

The Peko mine is recorded as producing 241,000 ounces of gold from 3,160,000 tonnes of ore averaging 3.51 g/t gold as well as 118,884 tonnes of copper averaging 4.0% Cu.

The mineralisation at Peko is believed to be a result of mineralised hydrothermal fluids, probably passing along a shear zone, reacting with Proterozoic iron oxide rich sediments and precipitating out Au-Cu-Bi sulphide mineralisation. The main characteristics of this style of mineralisation in the Tennant Creek mining field is a compact ore body within a magnetite host with distinct mineralogical zoning. This zoning is generally shown as a high grade gold core with a copper/bismuth capping. Later tectonic movements may modify the structure.

The main orebody outcropped and was approximately 450m long, 35m wide and 430m deep. The upper section of the orebody was mined in an open pit while the deeper ore was won using underground mining techniques.

Drilling is dense and regular immediately below the open cut mine workings.

Data

Extensive drilling from both the surface and underground has been completed over many years at the Peko Gold Mine, near Tennant Creek in the Northern Territory. Unfortunately over this period the drilling and assay data has become confused, now possibly incomplete and full of inconsistencies in quality and style as the project passed between various new owners.

The drilling data supplied for this estimate was contained in various spreadsheets with hole collar coordinates, down hole surveys and assays. Many holes in the different series were missing from the database and there was also significant duplication. There were many holes shown on old printed maps and sections that either were not available digitally or plotted differently, either with different coordinates, orientation or different grades. Table 1 summarises the drill holes in the database used in these calculations.

Hole Series	Hole Numbers	Holes	Total Metres
1010	1-22	22	379.5
1024	1021-1029 (no1027)	9	1135.4

1048	1-6	6	162.2
1055	1-15	15	434.4
1062	1-34 (No 4,7,8,11,17,23)	28	729.4
1070	1-38(no 12)	37	772.4
1130	1-499(no 2,22,23,27,28,30, 31,53,71,72,75,7 9-83,91,94,98,108, 114-116,119,130,134, 141,168-172,201-209,213,221-234,238-240,274,277,280, 296-297,302,321,327-329,333,349,354, 378,410,411,415-420,462-465,467,468,470, 471,476-480)	396	20725.7
1165	1- 29 (no 9-11,13-15,18-19,22,23)	19	536.8
1200	1-64 (no 13-16,18,19,22,24-28,55-57)	50	944.9
1240	1-7 (no 3)	6	1109.8
1260	3- 257 (no 7,10,12-14,18,22-27,30,34,35,42,4 7,56-60,62,64-68,86,88,89,91-102,107,157-159,161,173,189, 190,192,194-201,207,209,211, 216,222,223,225, 228,234,243,245, 246,251)	182	12567.7
1390	3,4	2	300.2
170	4,5	2	32.0
200	1-10	10	212.6
234	1-5	5	82.0
530	502,507	2	87.3

680	1-611 (no 3-8,10,11,13,15,16,29-31,50,51,54-56,60,61,63-65,67,68,71,75,76,86,89-94,105-17,109-111,113-119,124-129,134-600)	87	6215.8
780	1-4	4	40.2
830	N1-N5,1-850 (no 21,24,27,38,39,41,50,51,54,56,69,72-75,77,82,86,89-92,94,97,99,101,102,104,123-830,838,841)	113	6171.4
860	1-13	13	233.9
905	1-8	8	255.9
920	1-7 921-926	13	922.5
940	1,30	30	536.8
950	1,2,951,952	4	91.7
980	1- (no 21,22,31,32,48,57,62,80,82,84,95,96,127-129,135,137,147-149,165,170,175,176,182,199,210,220,245,256-260,289,291,298,355,359,373-375,384,392-396,401,402,404,407,419,420,422,423,425-448,452,456,459,461,462,466,469,472,475-900,915)	407	23907.0
Total		**1,478**	**78,602.0**

Table 1. Drill hole listing in database.

No information was available on sampling or analytical techniques and procedures or on sample recoveries. No assessment on the quality of the assays is therefore possible. In these estimates it has been assumed that the assays were of high quality and unbiased however this assumption cannot be guaranteed.

Many corrections were required to the data to allow proper loading into the MineMap drill hole database. Numerous repeats and overlapping sample intervals had to be sorted out and corrected.

All the holes are believed to be diamond drill holes collared from underground drill cuddies at 7.5m (25') intervals from where they were fanned out both vertically and laterally. There is no information available to on sample recoveries or core diameters of these holes.

Bulk Density

A bulk density of 3.5 was used to calculate tonnes from cubic metres. This figure was supplied by the owners and was based on figures found in Normandy reports that were in turn based on an unknown number of measurements of core and other samples.

The value of 3.5 may have been conservative in the higher grade zones where the host rock for the mineralisation contains significant quantities of magnetite and sulphides.

Of some concern however is that as the remnant mineralisation being modelled in this study is lower grade and likely to contain less magnetite and sulphides than the already stoped out volume to which the Normandy bulk density refers to. The average bulk density of these remnants may therefore be less than the given value of 3.5.

Past Production

Two mining methods were used at Peko. An open cut was taken down 15m was used to recover oxide ore. Underground workings were used to stope out the fresh ore. Recorded production at Peko is summarised in Table 2 below.

Peko	3,160,000 tonnes ore	3.5 g/t Au	7,481 Kg Au (241,000 ozs)
		14.0 g/t Ag	44,163 Kg Ag
		4.0 % Cu	118,884 tonnes Cu
		0.2% Bi	7,350 tonnes Bi

Table 2. Recorded production at Peko.

Peko Modeling

Only the Peko resource below the open cut and above the underground stopes (i.e. the crown pillar) was modeled using MineMap software as part of a feasibility study on whether the open pit can be deepened to recover this ore. There is no way of knowing, without extensive drilling (very difficult with the present open pit) if this crown pillar still exists as it may have fallen into the stopes below or have been mined out and not recorded.

A series of Normandy level plans at 5m intervals down to 920m RL on paper printouts showing the mined out underground stopes and a contour plan of the open pit were used to produce wireframes of the stopes and pit. These wireframes were used to estimate the mined out volume from the total resource.

The model of the total resource was calculated from wireframes constructed by snapping strings to drillhole intercepts using a 1.0 g/t Au lower cut-off displayed on plans.

Problems correctly snapping to drill hole intercepts caused by the vertically fanned holes superimposing on each other on the main levels was overcome by using only the horizontal holes for snapping strings to. This wireframing was then checked on sections to correct any mis-snapped strings. Both copper and gold grades within the gold wireframe were modelled in this manner. Due to the lack of regularly spaced holes with bismuth grades in the lower levels, bismuth was not modelled.

The parameters used in the modelling are outlined in Table 3.

Parameter	Peko
East/West limits	160E -400E
North/South limits	225N - 425N
Block dimensions (metres) X (strike), Y (across strike), Z (depth)	2.0m x 2.0m x2.0m
Algorithm	3D Ellipsoidal
Inverse Weighting Power	3
Upper RL	1010m RL
Base RL	848m RL
Search Ellipse X	20m
Search Ellipse Y	10m
Search Ellipse Z	20m
Rotation Z (dip off vertical)	0
Rotation Y (strike)	0
Rotation X (plunge)	-30

Table 3. Modelling parameters used to model the Peko deposit.

Peko Resource Estimate

Table 4 below summarises the crown pillar and remnant resources calculated above 940m RL from the modelling.

	Tonnes	Au g/t	Cu %	Bi ppm
Orebody (unstoped)	160,900	9.3	2.5	1,249
Orebody (mined)	54,900	14.3	6.1	1,192
Orebody Remaining	106,000	6.7	0.6	1,278

Table 4. Peko crown pillar and remnant resource estimate **ABOVE 940m RL (60m below surface) ONLY**.

Considering the close spacing of the drilling, with the average minimum distance from the nearest drill intercept within the search ellipse to the block model cell being less than 5m, this resource could normally be considered as Measured according to the JORC code for reporting mineral resource estimates. However, due to a lack of information on sample and assay quality, bulk density and doubts about whether the entire pillar still exists, it is classified by the author as Indicated.

Appendices showing more details of the Peko resources are attached.

Yours faithfully,

Phil Jones

Disclaimer