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INDEPENDENT GEOLOGICAL REPORT

2016 DRILLING OF THE PEKO TAILINGS PROJECT

TENNANT CREEK, NORTHERN TERRITORY

Independent report prepared for PekoBull Pty Ltd

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EXECUTIVE SUMMARY

Results from an RC and auger drilling program at the Peko Tailings Retreatment Project east of Tenant Creek have been independently assessed and compared with gold-copper-cobalt grades and thickness from previous drilling and Mineral Resource estimates.

RC drilling was successfully completed in Dams 2, 3, 4, and 5 that account for 98% of the total resource. Short auger holes were drilled in Dams 1 and 1X due to access difficulties. The RC drilling method delivers high quality samples uncontaminated by contact with the hole walls.

Assays for each dam were averaged and compared with historic Mineral Resource grades that were last reliably estimated in 1997 by Normandy Gold Pty Ltd:

Element	Au	Co	Cu	Ag
Unit	ppm	ppm	ppm	ppm
DAM 1	2.68	1166	3456	13.6
DAM 1X	2.89	1977	6573	14.0
Normandy	2.16	3138	8573	N/A
DAM 2	1.63	2201	4952	6.9
Normandy	1.61	1919	4686	N/A
DAM 3	1.17	983	2588	3.4
Normandy	1.28	939	2650	N/A
DAM 4	0.99	807	1729	3.7
Normandy	0.97	795	1808	N/A
DAM 5	1.24	217	932	1.6
Normandy	N/A	N/A	N/A	N/A

The new PekoBull results are closely correlated with the 1997 grade estimates, and in a number of cases, Au and Co exceed them. Copper and cobalt in Dam1 and 1X are lower as a result of a short period of copper leaching by a previous operator.

Tailings thickness was confirmed, and new material for comprehensive metallurgical testing was obtained.

PekoBull has significantly de-risked the project as a direct result of the completed program.

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1. INTRODUCTION

An independent assessment of the results of a drilling program at the Peko Tailings Retreatment Project was undertaken at the request of PekoBull Pty Ltd (PBPL) of Subiaco, Western Australia.

PBPL is seeking to develop a low cost gold-copper-cobalt processing facility to re-treat 3.75 Mt of magnetite tailings from the historic Peko gold-copper mine.

PBPL completed an RC and auger drilling program in January 2016 with the multiple objectives of confirming historic gold-copper-cobalt grades, consistency and thickness of the mineralized tailings, and to generate adequate new material for detailed design metallurgical testwork. The results from this program have been compared with data from historic sources.

2. DATA SUPPLIED

2.1 HISTORIC RESOURCES

Historic tonnage and grade estimates from several sources are summarized in an Information Memorandum by PBPL (January 2016). The main tailings dam was subdivided into four sub-dams as depicted in Figure 1.

The tailings contain 60% fine magnetite (<53um), 20% coarse magnetite (>53um) and 20% non-magnetic gangue minerals which house the bulk of the gold, copper and cobalt mineralisation.

In total the Project is stated to contain a non-JORC resource of 3.75Mt of tailings grading 1.14 g/t gold, 0.25% copper, 0.11% cobalt and 80% magnetite. The total tailings therefore contain an estimated 3Mt of coal washery grade magnetite, 138,244 ounces of gold, 9,567 tonnes of copper and 3,953 tonnes of cobalt.

Table 1: Metal Inventory - Peko tailings (PBPL, 2016*)

Dam	Tonnes	Gold		Copper		Cobalt	
		oz	g/t	tonnes	%	tonnes	%
No 1	72,201	5,104	2.16	619	0.85	227	0.31
No 2	645,283	33,402	1.61	3,024	0.47	1,238	0.19
No 3	516,629	21,261	1.28	1,369	0.26	485	0.09
No 4	2,519,235	78,567	0.97	4,555	0.18	2,003	0.08
TOTAL	**3,753,348**	**138,244**	**1.14**	**9,567**	**0.25**	**3,953**	**0.11**

**Resource estimate by Normandy Gold Pty Ltd 1997*

Figure 1. Historic subdivision of Peko tailings dams (PBPL, 2016)

2.2 RESOURCE REPORT – NORMANDY GOLD PTY LTD (1997)

Work by Normandy Gold provides the most reliable estimate of the in situ tonnage and grade of the four dams. Normandy undertook a program of drilling and resource estimation in 1996/97 with three objectives:

- check previous resource estimates and produce a new updated resource estimate
- determine if there were high grade gold zones that could be treated separately
- provide fresh representative samples for metallurgical evaluation

At the time Normandy was operating the nearby Warrego tailings retreatment plant that was due to cease operation in 1998.

The results of the work were reported in an internal report by Mujdrica et al, 1997. The Mineral Resource estimate was classified in the Measured category in accordance with the then Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (1992). The Mineral Resource is summarized in Table 1.

Normandy also assayed for cyanide soluble copper, arsenic and bismuth, and estimated the tonnage and grade of arsenic and bismuth:

As average grade 0.14% and 5,377t contained metal

Bi average grade 0.05% and 1,982t contained metal

The Normandy report describes earlier drilling and resource estimates undertaken at Peko, the earliest being pre-1985 by Peko Wallsend Ltd.

Comprehensive drilling was completed by ADL in 1985 under an agreement with Peko Wallsend Ltd, using an open hole power auger drill.

In the same year ADL entered into an agreement with Golconda to commence metallurgical test work using the ADL drill samples, but the program was later suspended until 1987 due to falling cobalt prices. In late 1987 three twin holes in Dams 2 and 3 showed that the 1985 ADL samples had become significantly oxidized, prompting a decision to redrill the dams, concentrating on Dams 1, 2 and 3 for a total of 135 holes and 1,213m (average depth 8.9m).

The method of drilling and sample collection for this program is not known but a resource estimate was reported in 1992 (Table 2):

Table 2. ADL-Golconda Peko Tailings Resource (1992*)

Dam Number	Tonnes	Au (g/t)	Cu (ppm)	Co (ppm)	Oxidation State
1	66,435	2.36	8,200	3,660	
2	425,993	1.57	5,400	2,620	>2m. Fresh
2	205,383	1.47	4,200	1,980	0-2m. Oxidised
3	527,002	1.36	2,900	1,100	
4	2,407,495	1.00	1,500	820	
Total Dams	**3,632,218**	**1.17**	**2,436**	**1,189**	

**Newcombe & Associates*

The results are only marginally different to the 1997 Normandy estimates in Table 1.

The Normandy drilling comprised 50m by 50m spaced, auger cased, core holes, with samples taken every metre downhole. This was the first confirmed use of cased holes and the implied greater confidence in sample integrity.

The drilling program totaled 103 holes for 760.25 metres and covered the four main dams, a small dump east of Dam 4 described as a Au/Cu/Pb/Zn dump and a veneer of surrounding thin tailings.

For the greater part sample recoveries exceeded 90% with more difficult moist material near the bottom of the dams. Samples were split in half using a knife while still in the core barrel and analysed for Au by fire assay and Cu, Co, Bi and As by AAS.

Normandy found that there were no apparent high grade gold domains within the resource despite a long processing history (1954-1976) and multiple ore sources (Peko, Ivanhoe, Orlando, Juno and part of Warrego mines).

3.0 PEKOBULL DRILLING

PBPL undertook a program of hand auger (19 holes, 38m) and track mounted RC drilling (46 holes, 409m) in January 2016 to validate the grades and thickness of tailings intersected by Normandy and predecessors. RC holes were 100mm diameter. The samples from the program also provided new material for upcoming detailed design metallurgical testwork. PBPL supplied GPS coordinates and all assays. Details are summarized in Table 3.

Table 3. PekoBull drilling summary

Dam	No. Auger Holes	Total Metres	No. RC Holes	Total Metres	Average Depth
1	15	30			2
1X	4	8			2
2			9	126	14
3			9	83	9
4			20	180	9
5			8	20	2.5
Total	**19**	**38**	**46**	**409**	

The locations of the holes are shown in Figure 2, where it can be seen that the numbering of the dams is slightly different to the 1997 layout in Figure 1. An operator subsequent to Normandy attempted a copper leaching project that resulted in part of the high grade copper Dam 1 being bulldozed to the west into a shallow leach pond, that is now known as Dam 1X. PekoBull has named Dam 5 as the small shallow dam to the east of Dam 4.

Drilling on Dam 1 was hampered by difficult soft ground conditions and drilling with the RC track rig was abandoned in favour of auger drilling to acquire some samples, at least, for grade verification. The four holes in Dam 1X were also augered due to the shallow thickness of the tailings (see Figure 3). GPS coordinates for the Dam 1 holes were not recorded but the auger holes were distributed to cover all of the dam.

A total of 447 samples were analysed at ALS in Perth for the following elements of interest:

Au	Method Au-AA26 (50g fire assay)
Cu, Co, Ag, Bi, Fe, S	Method ME-ICP61 (33 elements)

Results of average grades for Pekobull drilling are compared with the Normandy 1997 resource estimate grades in Table 4. Normandy did not assay for Ag, Fe and S, and Dam 5 was not treated as a separate entity.

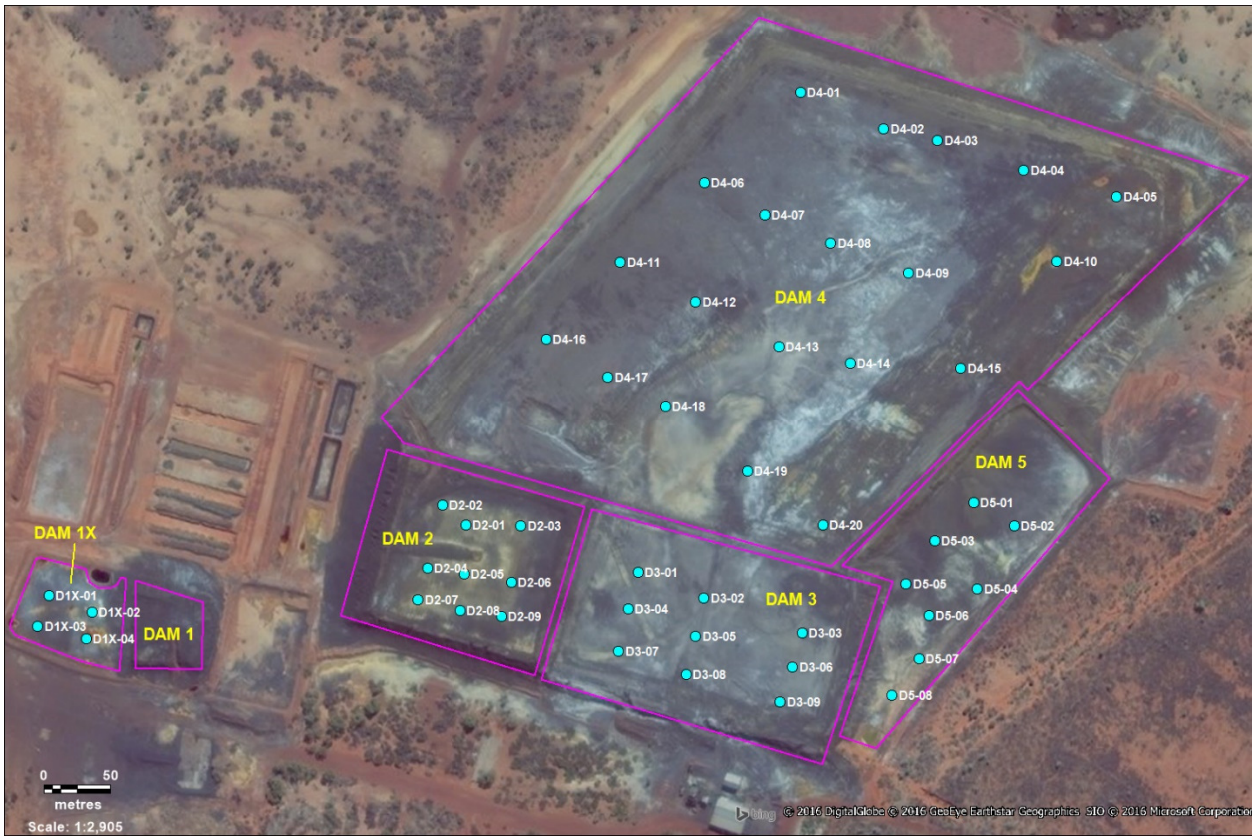

Figure 2. PekoBull drill collar locations

Figure 3. View looking west of Dam 1 and Dam 1X

The comparison shows that Pekobull Au and Co grades are often in excess of, or in close agreement with the previous figures, and Cu is generally in close agreement, except for Dam 1 where some high grade copper has been removed by the former leach operation. Gold grades in Dam 1 and 1X are substantially higher than the Normandy estimate.

Table 4. Comparison of Pekobull average grades with Normandy resource grades

Element	Au	Co	Cu	Ag	Bi	Fe	S
Unit	ppm	ppm	ppm	ppm	ppm	%	%
DAM 1	2.68	1166	3456	13.6	1073	47.1	5.23
DAM 1X	2.89	1977	6573	14.0	1116	47.6	6.45
Normandy	2.16	3138	8573	N/A	897	N/A	N/A
DAM 2	1.63	2201	4952	6.9	766	44.9	6.99
Normandy	1.61	1919	4686	N/A	833	N/A	N/A
DAM 3	1.17	983	2588	3.4	601	39.9	4.10
Normandy	1.28	939	2650	N/A	578	N/A	N/A
DAM 4	0.99	807	1729	3.7	453	41.1	3.86
Normandy	0.97	795	1808	N/A	429	N/A	N/A
DAM 5	1.24	217	932	1.6	588	35.8	0.93
Normandy	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Normandy examined downhole grade variation and produced tables for each dam with downhole average grades for Au, Cu, Co, Bi and As on a one metre interval basis. These tables illustrated the continuous nature of the grade distribution in the vertical profile. In Table 5 a random comparison is shown for PBPL hole D2-05 located in the centre of Dam 2 and the Normandy average grades for the same depth intervals in this dam.

In this example the PBPL hole selected happens to be higher in all three elements for the most aprt, and well illustrates the downhole continuity.

In most of the dams there is evidence of copper and cobalt leaching in the first two metres from surface.

Table 5. Dam 2 comparison of PBPL downhole grades (D2-05) & Normandy av. assays

Hole Depth (m)	PBPL Hole D2-05	NGPL 1997	PBPL Hole D2-05	NGPL 1997	PBPL Hole D2-05	NGPL 1997
	Au ppm	Au ppm	Cu ppm	Cu ppm	Co ppm	Co ppm
0-1	1.77	1.56	2,040	2,932	777	737
1-2	1.60	1.74	3,800	3,718	830	1,617
2-3	1.43	1.45	4,680	3,491	1,030	1,481
3-4	1.76	1.53	10,000	4,397	2,750	2,092
4-5	1.93	1.58	8,020	5,665	3,640	2,638
5-6	1.65	1.59	7,180	4,974	3,720	1,897
6-7	1.71	1.67	8,000	4,690	3,440	1,991
7-8	1.88	2.14	8,950	4,907	3,610	1,712
8-9	2.11	1.66	5,500	6,957	3,270	2,558
9-10	2.28	1.80	8,170	5,363	4,040	1,911
10-11	2.08	1.38	6,760	4,593	3,400	1,554
11-12	2.50	1.62	7,170	6,191	3,670	2,344
12-13	2.38	1.69	7,020	6,060	3,510	2,541
13-14	1.41	1.37	3,860	4,721	2,090	1,954
14-15	1.02	1.16	2,830	3,915	1,550	1,857

Lateral continuity of mineralization is indicated by the excellent results achieved in all of PekoBull's drill holes. Modelling of the lateral variation in grade in each dam is beyond the scope of this report, but summary comments are included in the Normandy report. It was noted that in the larger dams there is some lateral variation in gold and copper grade reflecting proximity to the discharge points around the perimeter of the dam, particularly in Dam 4 (the largest).

4.0 CONCLUSIONS

Drilling by PekoBull has successfully verified or exceeded the grade, thickness and lateral and downhole continuity of the Peko tailings deposit as reported by predecessor companies. In addition ample new sample material was made available for detailed upcoming metallurgical test work.

The project has passed a significant milestone in reducing, if not eliminating, any uncertainty relating to the in-situ Au-Cu-Co grades. There is sufficient previous work to reliably establish the volume and tonnage of tailings present and hence the contained metal inventory.

5.0 REFERENCES

Mujdrica, S. and Hatcher, M., 1997.

Peko Tailings Resource Report, August 1997. Internal report (text only) – Normandy Gold Pty Ltd.

Newcombe, L.A. & Associates, 1993

Treatment of Peko Tails 13 January 1992.

PekoBull Pty Ltd, 2016

Peko Tailings Retreatment Project. Information Memorandum January 2016.