CONFIDENTIAL

INVESTIGATION INTO MERCURY RECOVERY FROM DUMP TAILINGS MATERIAL USING GOLDKACHA CONCENTRATOR

REPORT NUMBER: A41/84/10
NOVEMBER 2010

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NOTES

1. This report refers specifically to the sample material received.
2. Tap water was used in all tests as required, except where indicated otherwise.
3. Abbreviations:

- A.V. (%) The material assay value in percentage.
- H.A.F. (%) Head accounted for the portion of the head grade accounted for by that fraction, obtained by multiplying the mass fraction by the assay. The total of the H.A.F. column should equal the head assay of the original sample.
- DIST (%) Distribution: simply the H.A.F. column expressed as a percentage, indicating the distribution of the valuable component between the products generated in the test.

EXECUTIVE SUMMARY

A 380kg typical mine tailings sample mixed with 50g mercury was subjected to gravity concentration using a Goldkacha Concentrator to investigate mercury recovery from dump tailings sample.

Mercury recovery was 99.4% into Goldkacha concentrates of 3.8% by mass. The mercury recovery was achieved while the Goldkacha was running at a relatively low speed of 71 rpm.

1. TEST PROCEDURES

1.1 SAMPLE PREPARATION

380 kgs of typical mine tailings sample was prepared and mixed with 50g of mercury.

1.2 GOLDKACHA CONCENTRATION TEST

The prepared sample was pulped to 30% solids with water and the resultant pulp was subjected to gravity concentration using a Goldkacha concentrator. The Goldkacha concentrate was further subjected to Knelson MD3 Concentrator to recover clean mercury from the concentrates. The mercury recovered was then weighed.

Goldkacha parameters:	Bowl Speed (rpm)	-	71
	Feed rate (kg/h)	-	2000
	Pulp density (%)	-	40
	Pass	-	Single

2. RESULTS

Results are detailed in the Appendix and summarised below.

3.1 Mercury Recovery via GoldKacha Concentrator

Table 1: Mercury Recovery Results

Product	Sample mass (g)	(%)	Mercury mass (g)	Mercury recovery (%)
GoldKacha Concentrate	14580.00	3.84	49.7	99.4
GoldKacha Tailings	365420.00	96.16	0.3	0.6
Feed	380000.00	100.00	50.0	100

- 49.7g or 99.4% of mercury was recovered into Goldkacha concentrate accounting for 3.84% by mass.

APPENDIX

TESTWORK – DETAILED RESULTS

MERCURY RECOVERY USING GOLDKACHA CONCENTRATOR

Sample Preparation:

A synthetic mix of 380kg typical mine tailings and 50g mercury was prepared.

Test Method:

The prepared sample was pulped with water and passed through a GK at 71 rpm . The mercury in the GoldKacha concentrate was 'assayed' for mercury by upgrading in a Knelson MD3 concentrator and the recovered mercury was weighed and compared against the amount added to the GoldKacha.

GoldKacha Parameters:	Speed (rpm)	71
	Feed rate (kg/h)	2000
	Feed density %solids	40
	Pass	single

Results

Product	Sample mass (g)	Sample mass (%)	Mercury mass (g)	Mercury recovery (%)
GoldKacha Concentrate	14580.00	3.84	49.7	99.4
GoldKacha Tailings	365420.00	96.16	0.3	0.6
Feed	380000.00	100.00	50.0	100