



## Memorandum

**Date:** January 12<sup>th</sup>, 2007  
**To:** Francis Clouston **CC:** Yves Michaud, Robert Marchand  
**From:** Eve Bourgault Elzéar Belzile, Daniel Vallières  
**Subject:** Omai Underground resource estimate – January 2007

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### SUMMARY

A new resource estimate on Omai underground was completed based on drilling done up to December, 2006 (OMU-41). This memo is a detailed description of the steps taken to estimate its resource. 44 OGML diamond drill holes have been used to create the present block model.

The modeling resulted in the creation of thirteen sub-horizontal zones located inside a quartz-diorite stock in the main lithological unit (andesitic volcanics). Former OGML geologist B. Westin digitized the top eight zones and five lower zones were added by Francis Clouston and I. All zones mostly trend N30° with a shallow dip of 10° to the NW (Figures 1 and 2).

Exploratory data analysis (EDA) shows that all zones are different in terms of Au grade and assay distribution. No soft boundaries were used to estimate the zones (i.e. composites from a zone were not used to estimate grade in any other).

Grade capping analysis was performed on each homogeneous population for zones 41 to 55 and the quartz-diorite stock, using both decile analysis and the examination of log probability plots. When results were contradictory, a middle value was chosen. Results are shown in .

Solids were created using 3DR polylines snapped to drillholes and tie-lines. Solids 41 to 55 have been extended and modified following the new results provided by the new drillholes.

Rock Type	Rock Code	n > 0	Mean (g Au/t)	Var.	C.V.*	Median (g Au/t)	Maximum (g Au/t)	Log Mean	Log Var	Capping (g Au/t)	# Capped	% Au removed
Quartz-Diorite	40	5214	1.04	392.99	19.06	0.29	1406.27	-1.43	2.45	25	10	34.0
Min'zd Zone 1	41	225	2.86	37.1	2.13	1.5	70.67	0.24	1.68	25	3	8.1
Min'zd Zone 2	42	237	2.2	22.85	2.17	1.29	61.84	0.01	1.87	10	5	12.9
Min'zd Zone 3	43	170	2.34	34.76	2.52	1.22	56.13	-0.1	2.07	15	2	17.1
Min'zd Zone 4	44	209	18.49	52527.51	12.40	1.56	3315.5	0.32	2	30	2	76.2
Min'zd Zone 5	45	178	2.61	21.42	1.77	1.63	52.73	0.35	1.44	20	1	6.7
Min'zd Zone 6	46	873	2.92	52.62	2.48	1.43	170.97	0.22	2.05	30	7	8.8
Min'zd Zone 7	47	334	3.51	116.05	3.07	1.54	157.36	0.19	2.25	35	5	12.9
Min'zd Zone 8	48	357	2.3	29.74	2.37	1.33	75.53	-0.32	2.96	20	6	7.4
Min'zd Zone 9	49	485	2.28	28.62	2.35	1.52	79.33	-0.01	1.93	25	5	6.5
Min'zd Zone 11	51	240	2.15	27.79	2.45	1.27	72.72	0.10	1.43	15	2	12.3
Min'zd Zone 13	53	168	2.87	51.6	2.50	1.22	64.41	0.11	1.93	15	5	10.4
Min'zd Zone 14	54	35	7.42	234.14	2.06	1.33	53.31	0.65	2.26	30	4	8
Min'zd Zone 15	55	5	10.1	171.13	1.30	2.53	32.47	1.67	1.5	30	1	0.7

**Table 1: EDA and grade capping results**

Variograms were computed with the 3m capped grade composites. The results from the variograms were not conclusive. Structures were ambiguous but seem to suggest a relatively high nugget (70%) and effective ranges of 50 meters within the average plane of the ore zones (see Figure 3).

The block model is a standard type (50% volume threshold assignment) and was built using (10m \* 10m \* 5m) blocks with longest dimensions in the horizontal plane (X and Y axes). Grade interpolation was done using 5m equal length composites of the capped grades and the inverse distance squared (ID<sup>2</sup>) weighting scheme in three passes:

1. *Measured pass for lens 41 to 55:* A block grade is considered *measured* if at least 5 composites from three different holes (max 2 comps/hole) are found within a 25m \* 25m \* 10m elliptical search. A maximum number of 6 holes were used. **So few blocks (125) were interpolated within this category were then reclassified as indicated.**
2. *Indicated pass for lens 41 to 55:* A block grade is considered *indicated* if at least 3 composites from two different holes (max 2 comps/hole) are found within a 50m \* 50m \* 20m elliptical search. Only blocks that have not been estimated by the measured pass were interpolated. *(The indicated search ellipse parameters inside the quartz-diorite plug were flattened to 50m \* 50m \* 10m).*
3. *Inferred pass:* A block grade is considered *inferred* if at least 2 composites (max 2 comps/hole) are found within a 200m \* 200m \* 25m elliptical search. Only blocks that have not been estimated by the two previous passes were interpolated. *(The inferred search ellipse parameters inside the quartz-diorite plug were flattened to 200m \* 200m \* 25m).*

Mineral resources are tabulated by grade groups and rock groups (see Table 6).

**Omai Underground indicated resource total 11.2 Mt @ 2.49 g Au/t for 894 000 oz Au.** Within the mineralized zones 41 to 55 only, indicated resources total 9.3 Mt @ 2.56 g Au/t for 769 000 oz Au.

**Inferred resource totals 6.3 Mt @ 2.56 g Au/t for 517 000 oz Au.** 4.0 M/t @ 2.82 g Au/t totalizing 367 000 oz is located inside the mineralized zones 41 to 55.

## DATA USED

The drillhole database (Gems workspace DrillholeFUG) consists of 41 IAMGOLD (formally Cambior) diamond drill holes (DDH) (24 874 meters). The drill holes have lengths ranging from 91.5 to 978.30 meters (see Table 2). Most of the collars have been surveyed (only the last three remained to be surveyed at the time this resource was produced). Except for holes OMU-1, 2,3 and 5, all holes have been surveyed down-the-hole using either a Tropany or Flexit survey instrument.

Type	Company	Number of holes	Numbers (First-Last)
DDH	Cambior	3	OM 771 - 773
DDH	Cambior	41	OMU 01 - 41

Table 2: DrillholeFUG workspace data content

## TABLES

The analytical results of all drill holes are preserved in table “ASSAY\_2”. In addition to the initial fire assay (*1<sup>st</sup> Cut* field), the table contains the results of a pulp check and a second cut (coarse reject reassay). Final Au grade used is the average of all three results (*Avg\_Au\_g/t* field). Please refer to our November 30 memo detailing our previous resource estimate on comments made regarding possible selection bias during reassays and suggested ways to avoid them.

Table “COMP\_INTX” contains the drill holes intersections within the mineralization solids.

Table “COMP\_3M(E)” stored the compositing done at 3 meters equal length down each hole starting at the collar. It was used to calculate the variography.

Table “COMP\_5M” stored the compositing done at 5 meters equal length down each hole starting at the collar. It was used for the purpose of grade interpolation after extracting the records to the *Composites* table in the point area workspace.

## BLOCK MODELING

	Number of blocks	Size (m)	Min	Max
<b>Columns (X)</b>	40	10	15 200	15 600
<b>Rows (Y)</b>	65	10	10 000	10 650
<b>Levels (Z)</b>	160	5	200	-600
<b>Rotation</b>	0			

Table 3: Block model dimensions

## BLOCK MODEL FOLDER

	Name	Description
Standard	<i>Rock Type</i>	Lithological codes
	<i>Density</i>	Density of each block
	<i>Elevation</i>	Surface elevation grids (topo)
	<i>GOLD</i>	Grade (g/t) using capped Au values
	<i>PPP-Flag</i>	Resource category
	<i>AU uncap</i>	Grade (g/t) using uncapped Au values

Table 4: Block model folder "Omai UG" structure

Blocks were first initialized to andesitic volcanics (code 200) and updated sequentially using the solids listed in Table 5.

Note that even though some mineralization solids might have been extended beyond the qz-diorite stock to intercept some holes that have high grade intervals, they were strictly limited to the periphery of the qz-diorite stock when block rock codes were assigned.

Compared to last November's estimate, the major difference lies in the modeling in new zones at depth (54 and 55) in the quartz-diorite stock branch discovered late in 2006 ( ) and the extension of existing zones further south.

### SOLIDS USED FOR THE BLOCK MODEL

Name	Workspace	Creation date	Prec.	Code	Description
Ug-qzdr /Zone 41	LithoSolids	21-12-2006	2	41	Mineralized zone
Ug-qzdr /Zone 42	LithoSolids	21-12-2006	3	42	Mineralized zone
Ug-qzdr /Zone 43	LithoSolids	21-12-2006	4	43	Mineralized zone
Ug-qzdr /Zone 44	LithoSolids	21-12-2006	5	44	Mineralized zone
Ug-qzdr /Zone 45	LithoSolids	21-12-2006	6	45	Mineralized zone
Ug-qzdr /Zone 46	LithoSolids	21-12-2006	7	46	Mineralized zone
Ug-qzdr /Zone 47	LithoSolids	21-12-2006	8	47	Mineralized zone
Ug-qzdr /Zone 48	LithoSolids	21-12-2006	9	48	Mineralized zone
Ug-qzdr /Zone 49	LithoSolids	21-12-2006	10	49	Mineralized zone
Ug-qzdr /Zone 51	LithoSolids	21-12-2006	11	51	Mineralized zone
Ug-qzdr /Zone 53	LithoSolids	21-12-2006	12	53	Mineralized zone
Ug-qzdr /Zone 54	LithoSolids	21-12-2006	13	54	Mineralized zone
Ug-qzdr /Zone 55	LithoSolids	21-12-2006	14	55	Mineralized zone
Ug-qzdr /Zone 40	LithoSolids	19-12-2006	15	40	Quartz-Diorite Stock
DIABASE	LithoSolids	31-10-2006	1	60	Diabase
Pilier/ 61-30M	LithoSolids	19-12-2006	-	61	30M pillar below diab

Table 5: Solids list

Densities used were: 2.85 for the mineralized zones (41 to 55), 2.8 for the quartz-diorite stock, 3.0 for the diabase and 2.9 for the andesitic volcanics.

A solid set named 22-12-06Miner\_Topo.SS2 was created in the project's root directory for the purpose of facilitating the loading of the proper solids.

### DENSITY MODEL

The Density model was initialized from the Rock Type model using the values listed above. SG results were compiled from more than 300 measurements made at site under the supervision of Yves Michaud using the immersion method and are listed in the *All Specific Gravity Results\_rev (8 Dec 2006).xls* Excel file in the REPORTS directory.

## RESOURCE ESTIMATE

Table 6 shows the Omai underground mineral resources by category and by zone above a cutoff of 1.5 g Au/t. Note that most of the ore is located within zone 46 with about a third of the mineralized zones' indicated tonnes and ounces. This zone is also the second highest grade. **Overall resources (combined indicated and inferred, including ore in the qz-diorite stock) total 17.5Mt @ 2.51g Au/t (1.4M oz).** More than half of it is indicated ore within the thirteen mineralized ore zones.

Capping has a strong influence on the final grade estimate. As population's statistics showed (Table 1), zone 44 and the qz-diorite stock have isolated very high grade assays that hold most of the gold metal content. For example, capping only two assays in zone 44 (including one sample grading 3 315.5 gAu/t) removed 76% of the zone's metal content. The effect of capping is illustrated in Table 8: Omai Underground mineral resources by category and zones using UNCAPPED grades showing the resource estimate done on uncapped assays. Note how for zone 44 the tonnage has not increased significantly but average grade and contained ounces of gold have increased ten-fold.

**The presence of these high grade intercepts will certainly be a great factor of variability if underground mining is eventually considered and should probably be the subject of simulations in future studies to quantify their influence on mined tonnage and grade.**

<b>Omai Underground mineral resources</b>						
January 4 <sup>th</sup> 2007 - ID <sup>2</sup> estimate (capped grades)						
<b>CATEGORY</b>	<b>ZONE</b>	<b>Volume</b>	<b>Density</b>	<b>Tonnage</b>	<b>Gold</b>	<b>Gold</b>
		(000's m <sup>3</sup> )	(t/m <sup>3</sup> )	(000's t)	g/t	oz
<b>Indicated</b>	<b>41</b>	196	2.85	560	2.99	53 873
	<b>42</b>	133	2.85	380	1.98	24 189
	<b>43</b>	80	2.85	228	2.05	15 050
	<b>44</b>	168	2.85	479	2.27	34 981
	<b>45</b>	237	2.85	675	2.39	51 880
	<b>46</b>	1 186	2.85	3 382	2.84	309 121
	<b>47</b>	447	2.85	1 274	2.61	106 982
	<b>48</b>	345	2.85	985	2.34	74 020
	<b>49</b>	329	2.85	939	2.34	70 646
	<b>51</b>	86	2.85	245	2.03	15 975
	<b>53</b>	64	2.85	184	2.14	12 619
	<b>Mzn Total</b>	<b>3 274</b>	<b>2.85</b>	<b>9 331</b>	<b>2.56</b>	<b>769 336</b>
	<b>40 (host)</b>	661	2.80	1 851	2.10	124 950
	<b>Total ind.</b>	<b>3 935</b>	<b>2.84</b>	<b>11 182</b>	<b>2.49</b>	<b>894 287</b>
<b>Inferred</b>	<b>41</b>	15	2.85	43	2.15	2 961
	<b>42</b>	9	2.85	27	1.83	1 591
	<b>43</b>	58	2.85	165	2.51	13 334
	<b>44</b>	31	2.85	88	1.94	5 507
	<b>45</b>	116	2.85	331	2.51	26 659
	<b>46</b>	336	2.85	958	2.82	86 936
	<b>47</b>	47	2.85	134	2.20	9 477
	<b>48</b>	114	2.85	326	1.97	20 666
	<b>49</b>	161	2.85	459	2.42	35 771
	<b>51</b>	140	2.85	399	1.96	25 144
	<b>53</b>	226	2.85	646	2.14	44 471
	<b>54</b>	149	2.85	425	6.00	81 957
	<b>55</b>	15	2.85	43	8.86	12 175
		<b>Mzn Total</b>	<b>1 418</b>	<b>2.85</b>	<b>4 043</b>	<b>2.82</b>
	<b>40 (host)</b>	799	2.80	2 239	2.09	150 192
	<b>Total inf.</b>	<b>2 218</b>	<b>2.83</b>	<b>6 281</b>	<b>2.56</b>	<b>516 840</b>
<b>Total (ind. &amp; inf.)</b>		<b>6 153</b>	<b>2.84</b>	<b>17 463</b>	<b>2.51</b>	<b>1 411 127</b>

Table 6: Omai Underground mineral resources by category and by zone.

## “MINEABLE” RESOURCES ESTIMATE

Two sets of vertical sections (sections R: 10 005R to 10 685R and sections C: 15 205C to 15 585C) were created at 20 meters intervals for the purpose of the stopes design. Conceptual stopes were drawn manually by mining engineer Daniel Vallières on the R sections and on plan views. Thirteen stopes were then digitally assembled as excavation solids. The January version of these stopes is a modified version of the December design where the limits were altered to fit the group of blocks grading above 2 g Au/t while respecting minimum pillar width of 12m.

The following solid set was created for a quick recall of the excavation solids used: *04-01-2007*  
*\_Stopes.SS2*

Table 10 shows the Omai underground “mineable” resources estimate by stopes and by grade with a cutoff of 0 g Au/t. Capped gold values were used to estimate the resources inside the conceptual stopes. Note that most of the “mineable” resources are located within stopes F with over 50% of the listed tonnage, followed by stopes D and H with 19%. **Overall resources inside stopes (combined indicated and inferred) now total 9.4Mt @ 2.40 g Au/t (0.7M oz).** More than two third of it (70%) is categorized as indicated.

Note that if extraction is limited to the top 200m (below the 30m-thick diabase sill pillar), this would exclude stopes A, B and C (all located below elevation -180mRL) and remove approx.750 000 tonnes and 97 000 oz from the “mineable” resources.



## STOPES USED FOR “MINEABLE” RESOURCES CALCULATION

Name	Workspace	Creation date	Description
SOLID A	LithoSolids	04-01-2007	Stope
SOLID B	LithoSolids	04-01-2007	Stope
SOLID C	LithoSolids	04-01-2007	Stope
SOLID D	LithoSolids	03-01-2007	Stope
SOLID E	LithoSolids	04-01-2007	Stope
SOLID F	LithoSolids	04-01-2007	Stope
SOLID G	LithoSolids	04-01-2007	Stope
SOLID H	LithoSolids	04-01-2007	Stope
SOLID HF	LithoSolids	04-01-2007	Stope
SOLID I	LithoSolids	04-01-2007	Stope
SOLID J	LithoSolids	04-01-2007	Stope
SOLID K	LithoSolids	04-01-2007	Stope
SOLID L	LithoSolids	04-01-2007	Stope

**Table 7: Omai Underground “mineable” resources by stopes and by grades.**

Eve Bourgault, Project geologist  
Iamgold-Quebec inc.  
Longueuil

## References

Bourgault, E. *Omai Underground resource estimate*. Internal Iamgold memo, Nov. 30 2006, 11 pp.

Westin, B. *Omai Underground Study, Preliminary Interpretation*. Internal Cambior memo, Sept. 10 2006

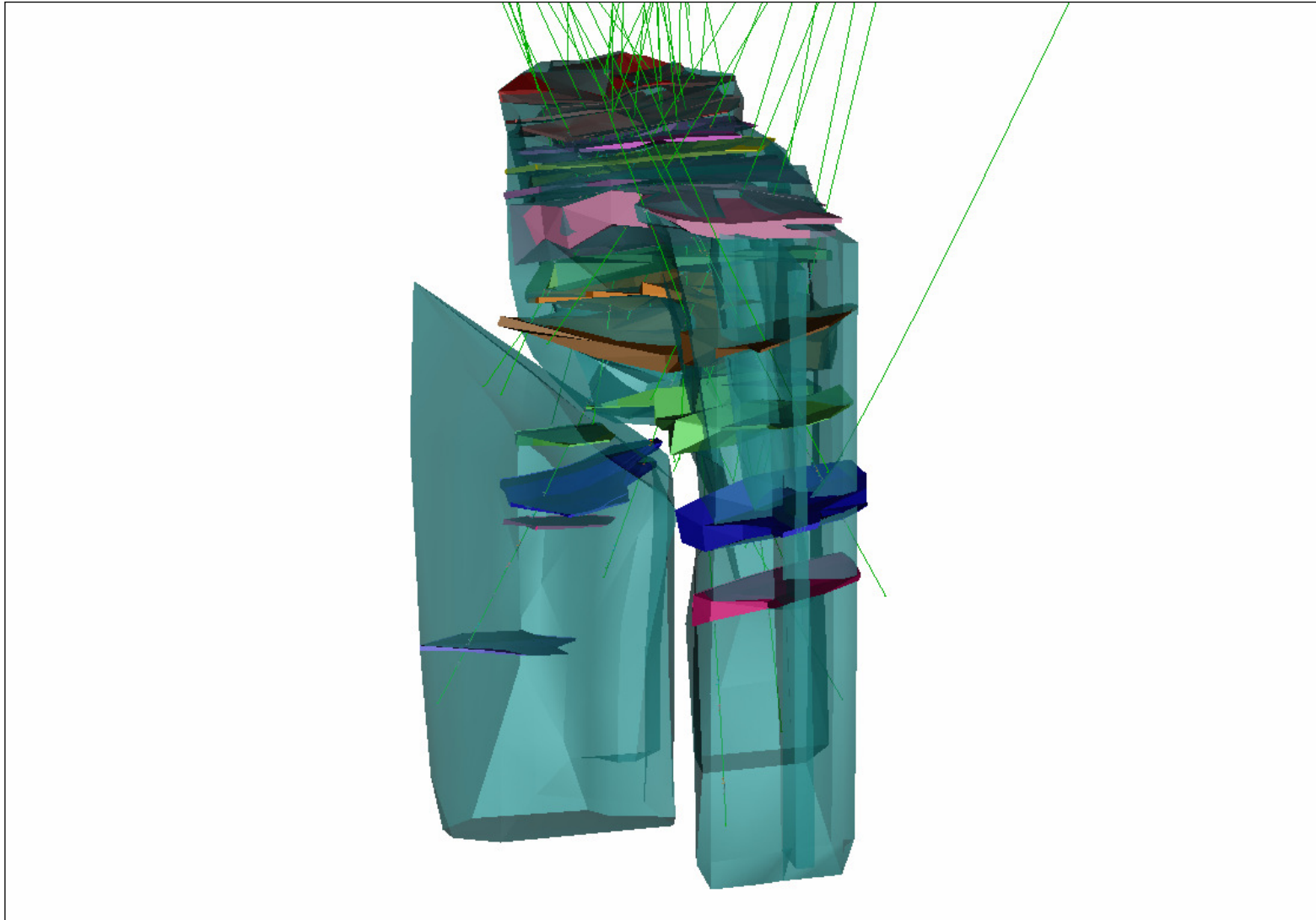


Figure 1 : Mineralization solids and quartz-diorite stock outline (cyan)

# Omai UG dowhole correlograms

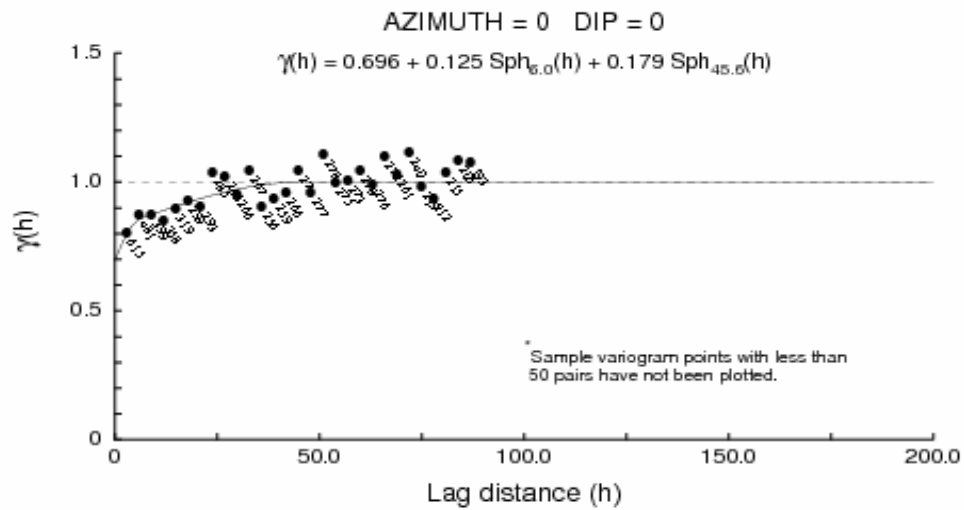


Figure 2 : Nugget effect (70%) and effective ranges (50m)

<b>Omai Underground mineral resources</b>							
January 4 <sup>th</sup> 2007 - ID <sup>2</sup> estimate (uncapped grades)							
<b>CATEGORY</b>	<b>ZONE</b>	<b>Volume</b>	<b>Density</b>	<b>Tonnage</b>	<b>Gold</b>	<b>Gold</b>	
		(000's m <sup>3</sup> )	(t/m <sup>3</sup> )	(000's t)	g/t	oz	
<b>Indicated</b>	<b>41</b>	198	2.85	564	3.47	63 033	
	<b>42</b>	165	2.85	470	2.68	40 470	
	<b>43</b>	85	2.85	242	2.31	17 972	
	<b>44</b>	169	2.85	482	19.44	301 104	
	<b>45</b>	247	2.85	704	2.63	59 469	
	<b>46</b>	1187	2.85	3383	3.15	342 596	
	<b>47</b>	447	2.85	1275	2.93	120 021	
	<b>48</b>	351	2.85	1000	2.90	93 398	
	<b>49</b>	335	2.85	956	2.70	83 155	
	<b>51</b>	86	2.85	245	2.67	21 071	
	<b>53</b>	64	2.85	184	2.96	17 491	
		<b>Mzn Total</b>	<b>3335</b>	<b>2.85</b>	<b>9506</b>	<b>3.79</b>	<b>1 159 780</b>
		<b>40 (host)</b>	805	2.80	2254	6.52	472 702
	<b>Total ind.</b>	<b>4140</b>	<b>2.84</b>	<b>11760</b>	<b>4.32</b>	<b>1 632 481</b>	
<b>Inferred</b>	<b>41</b>	17	2.85	48	2.24	3 494	
	<b>42</b>	12	2.85	36	2.67	3 058	
	<b>43</b>	58	2.85	165	2.65	14 076	
	<b>44</b>	31	2.85	88	4.79	13 612	
	<b>45</b>	116	2.85	331	2.68	28 487	
	<b>46</b>	336	2.85	958	3.18	97 829	
	<b>47</b>	47	2.85	134	2.30	9 898	
	<b>48</b>	123	2.85	351	2.31	25 999	
	<b>49</b>	164	2.85	467	2.53	37 950	
	<b>51</b>	144	2.85	412	2.25	29 836	
	<b>53</b>	235	2.85	670	2.77	59 610	
	<b>54</b>	149	2.85	425	8.14	111 142	
	<b>55</b>	15	2.85	43	9.35	12 854	
	<b>Mzn Total</b>	<b>1448</b>	<b>2.85</b>	<b>4127</b>	<b>3.38</b>	<b>447 846</b>	
	<b>40 (host)</b>	1359	2.80	3807	3.46	423 217	
	<b>Total inf.</b>	<b>2807</b>	<b>2.83</b>	<b>7933</b>	<b>3.42</b>	<b>871 063</b>	
<b>Total (ind. &amp; inf.)</b>		<b>6948</b>	<b>2.84</b>	<b>19694</b>	<b>3.95</b>	<b>2 503 544</b>	

Table 8: Omai Underground mineral resources by category and zones using UNCAPPED grades

Omai UG Mineable resources inside conceptual stopes January 2007

EXCAVATION	Indicated			Inferred			Total		
	Tonnage	AU CAP		Tonnage	AU CAP		Tonnage	AU CAP	
	(000's t)	g/t	oz	(000's t)	g/t	oz	(000's t)	g/t	oz
<b>A</b>	0	0.44	3	551	4.02	71 247	551	4.02	71 249
<b>B</b>	18	2.00	1 157	86	2.25	6 245	104	2.21	7 403
<b>C</b>	63	2.30	4 637	107	2.21	7 618	170	2.24	12 255
<b>D</b>	566	2.28	41 435	367	2.18	25 743	933	2.24	67 179
<b>E</b>	97	1.54	4 774	72	2.59	5 972	169	1.98	10 747
<b>F</b>	3 633	2.46	286 776	1 205	1.97	76 392	4 838	2.33	363 168
<b>G</b>	484	2.25	34 982	70	1.86	4 201	555	2.20	39 183
<b>H</b>	825	2.51	66 625	41	1.27	1 654	865	2.45	68 279
<b>HF</b>	162	2.15	11 189	67	1.32	2 856	229	1.91	14 045
<b>I</b>	99	2.23	7 108	63	1.82	3 668	162	2.07	10 777
<b>J</b>	167	2.22	11 930	33	0.80	846	200	1.99	12 776
<b>K</b>	373	2.53	30 363	103	2.09	6 907	476	2.44	37 270
<b>L</b>	100	2.30	7 372	14	1.67	728	113	2.22	8 100
<b>Total</b>	<b>6 587</b>	<b>2.40</b>	<b>508 352</b>	<b>2 778</b>	<b>2.40</b>	<b>214 078</b>	<b>9 365</b>	<b>2.40</b>	<b>722 430</b>

\*Cut off = 0 g Au /t

\*Note : Stope HF is the dashed one outlined by Daniel Vallières in the footwall of stope H to check its potential mineability.

Table 9: Omai UG “mineable” resources inside conceptual stopes