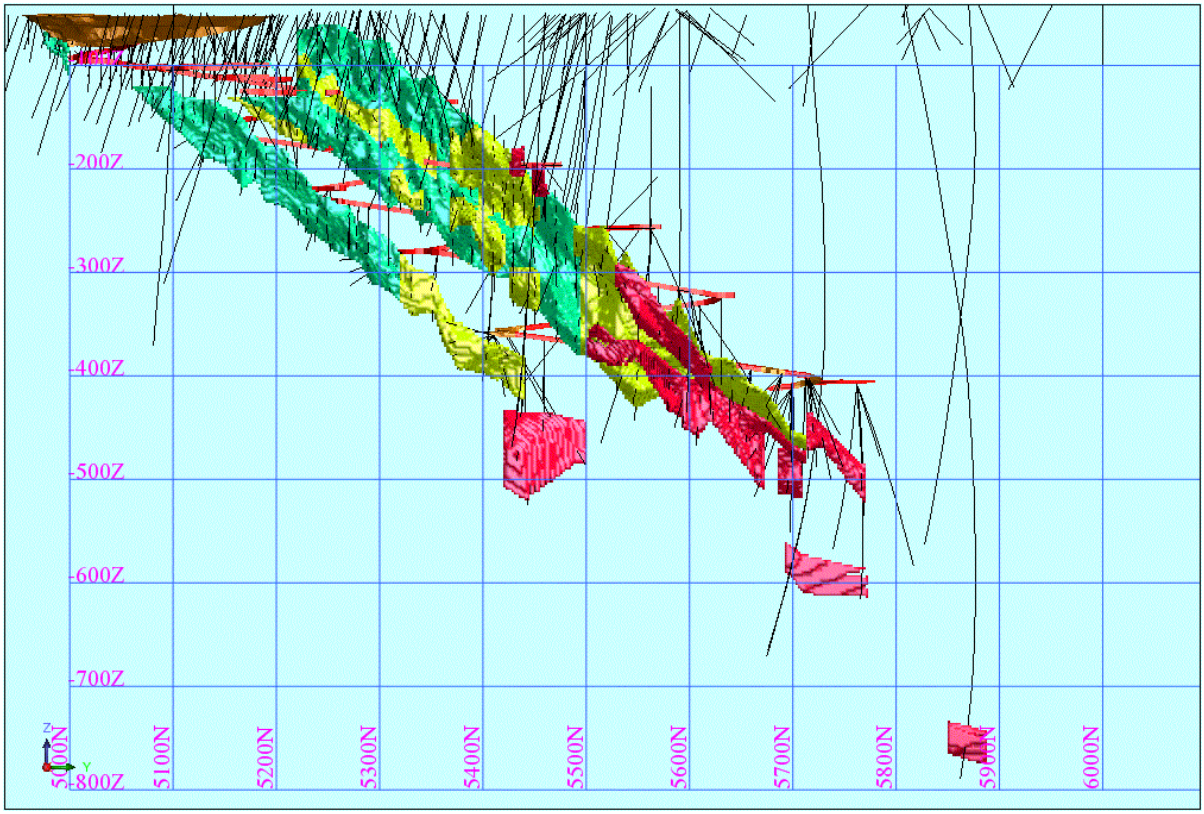
Pekka Lovén, Markku Meriläinen 15.September. 2010

MINERAL RESOURCE AND ORE RESERVE ESTIMATE

PAMPALO GOLD MINE



FOR

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MINERAL RESOURCE AND ORE RESERVE ESTIMATE

Introduction and summary

The following sections describe the methodology used by Outotec Minerals Oy in estimating the Mineral Resources and Ore Reserves of Pampalo Gold Mine Project.

Markku Merilainen and Pekka Lovén of Outotec (Finland) Oy, both Competent Persons as defined by Joint Ore Reserves Committee (JORC) prepared the Pampalo Mine project mineral resource estimate of July 1st 2010.

The authors visited Pampalo site between 19th and 20th of May 2010. During the visit the discussions were held with the Endomines Oy geologists and mining engineer.

The resource estimate complies with recommendations in the Australasian Code for Reporting of Mineral Resources and Ore Reserves (Joint Ore Reserve Committee – JORC-code).

The gold grade cut-off used to determine the mineral resources is 0.8 g/t.

Summary table of the mineral resources is as follows:

Resource Class	Tonnage	Au g/t
Measured	703 000	4.65
Indicated	488 000	3.72
Total Mineral Resource	1 191 000	4.27
Inferred Mineral Resource	240 000	3.6

Derived from the Mineral Resource estimate the Pampalo gold mine Ore Reserve is as follows:

Reserve Class	Tonnage	Au g/t
Proven	750 000	3.60
Probable	511 000	3.00
Total Ore Reserve	1 261 000	3.36

Data

Drill Hole Database

The drill hole database was obtained from Endomines Ab in Microsoft Access format.

The Pampalo database contains information on 802 drill holes with a total length of 59823.3 m. The number of assayed intervals is 26538. Assay file contains the assays of Au and top cut (10 g/t, 40 g/t, 80 g/t,100 g/t) au values.

The database does not include density measurements. Density of 2,7 ton/m^3 was used in the estimates.

Surface drillholes have been surveyed for dip only and as such the following drillholes were excluded from Measured and Indicated resource estimation because of clear miss location. Excluded drillholes are: R333, R325, R339, R331, p22, R312, T552.

Outotec (Finland) Oy has not validated the database against the original drill logs.

Both Wardell Armstrong International in 2008 and Runge Limited in 2009 did verify the database and found no errors and concluded that the database integrity is good.

Resource Estimate

Orebody Model

The resource outlines were constructed on east-west cross sections at a10m intervals using a combination of grade and geological features. The nominal cutoff grade used was 1 g/t Au. In some occasion it was necessary to include material below the cutoff in order to maintain the continuity of the structure.

The mineralized envelopes comprise numerous separate lenses as shown in Figure 1. Each of the resource wireframe was used as a hard boundary for grade interpolation.

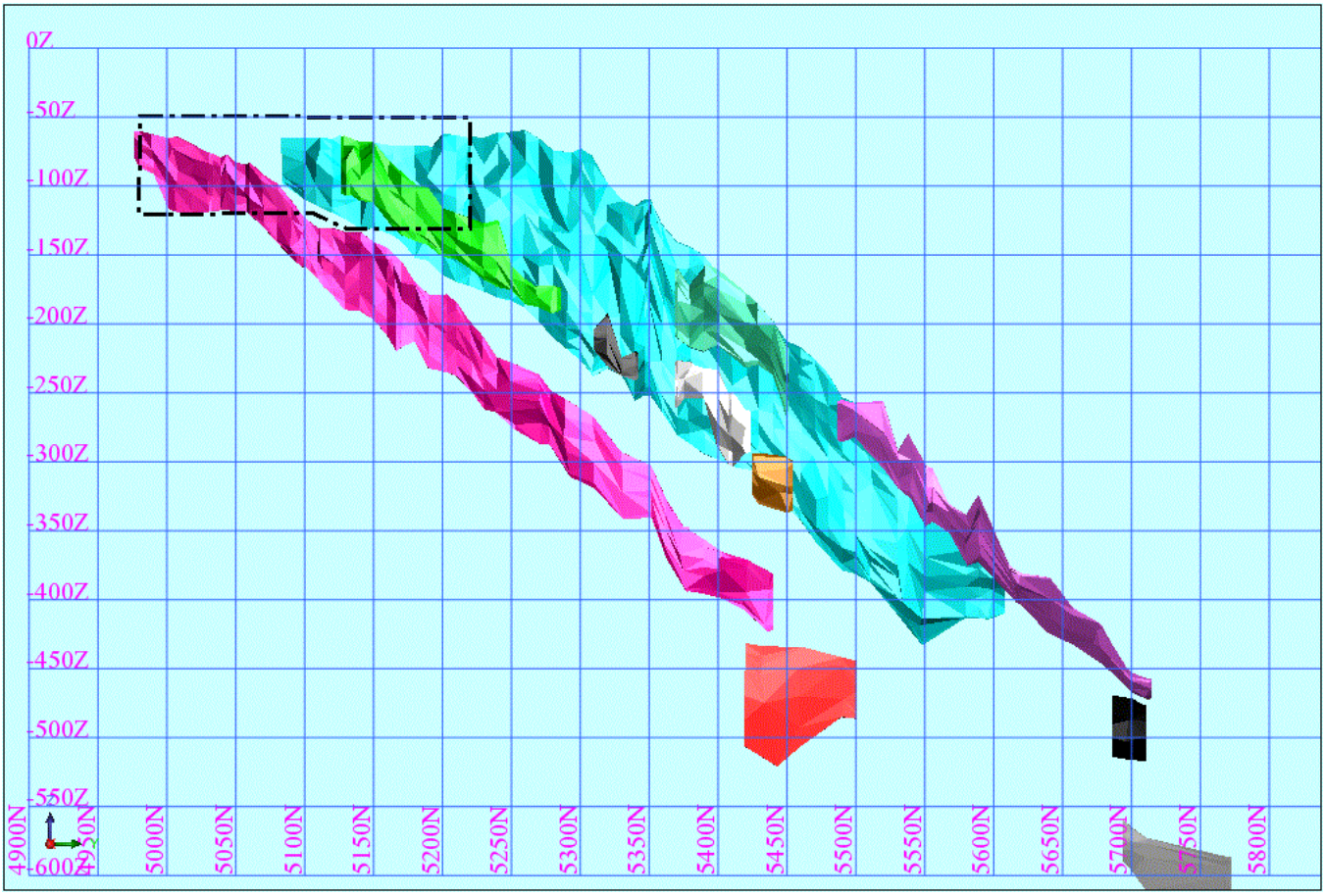

Figure 1. North-South projection of the resource model looking West (dashed line: mined out area).

Basic Statistics

The assay data was coded using the wireframes of the mineralized zones to define the resource intersections. The intersection codes were used to extract samples for statistical analysis and for compositing the data for grade interpolation.

Two datasets were analysed: 1) all samples within the resource wireframes (including mined out resource), 2) samples below –120 level (approximately representing the unmined resource).

Summary statistics are presented in the table below.

Variable	**au** all samples	**au** z<-120	**cut100au** all samples	**cut100au** z<-120
Number of samples	3591	2517	3591	2517
Minimum value	0	0	0	0
Maximum value	512	214	100	100
Mean	7.37	5.07	6.36	4.88
Median	2.27	2.10	2.27	2.10
Geometric Mean	2.36	2.14	2.35	2.13
Variance	595.1	146.1	183.9	93.2
Standard Deviation	24.4	12.1	13.6	9.7
CV	3.3	2.4	2.1	2.0
Skewness	11.6	9.6	4.8	5.8
Kurtosis	186.9	132.3	29.6	45.5

Table 1. Basic statistics of the assay data

There is quite a big difference between the means of the whole data set and the data representing the unmined area. The Figure 2 shows the spatial location of the assays in variable cylinder format.

The data is strongly positively skewed and the CV is well over 2, which indicates that high grade cutting is required before using the data in grade interpolation.

To determine the high grade cutting points the log probability plots for three datasets (southern lens, “Central + Norh” and “all samples”) were prepared to identify uncontinuity points or breaks in the plots, which may indicate the separation of particular populations in the data sets.

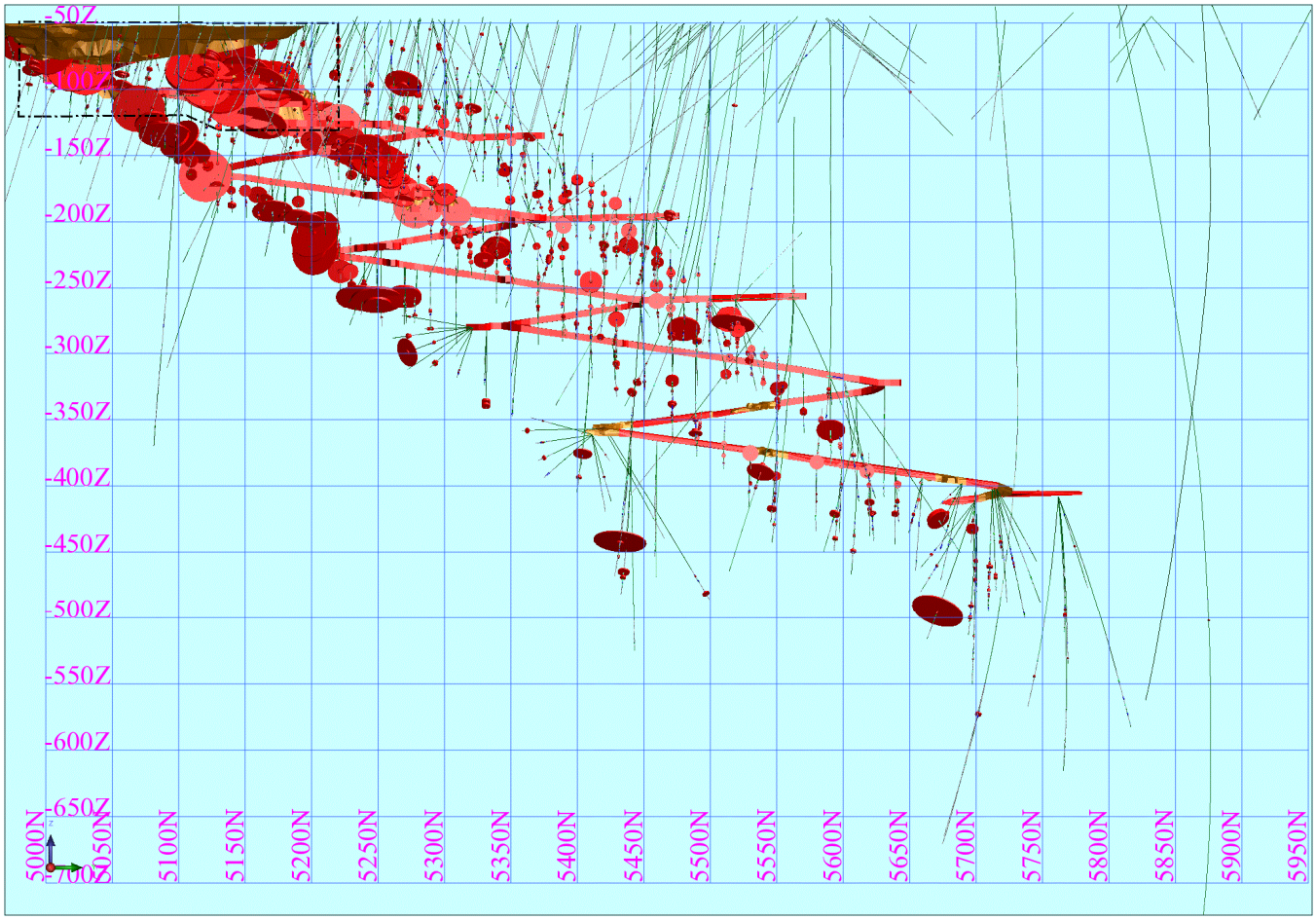

Figure 2. Assay data as variable size cylinders (dashed line mined out area).

No clear break was evident for “all samples” or CN lenses. Only the South lens data showed a slight inflexion at about 80 g/t Au point. However, it was decided to cap the high Au grades to 80 g/t for the South lens and to 100 g/t for all other lenses.

Block Model

The resource block model was created using Surpac software. The parent block size of 5m x 2m x 5m with sub-blocking to 2.5m x 1m x 2.5m was selected partly on a basis of the drilling density and partly to honor the geometry of the mineralized lenses. The summary of the block model parameters is in the table 2.

Type	Northing	Easting	Elevation
Minimum Coordinates	4905	10080	-900
Maximum Coordinates	6005	10480	0
User Block Size	5	2	5
Min. Block Size	2.5	1	2.5
Rotation	0	0	0
Attribute Name			
au_id	Au g/t; uncut		
cut100au_id	Au g/t; High grades capped to 100 g/t		
cut80au_id	Au g/t; High grades capped to 80 g/t		
avgdst_id	Average distance to samples		
min_ds_id	Distance to nearest sample		
ns_id	Number of samples		
class_code	Resource class code (1=Measurted, 2=Indicated, 3=Inferred)		
mined	1=mined out		

Table 2. Pampalo resource block model parameters.

Grade Interpolation

Prior to the grade interpolation the assay data was composited to 2m downhole composites honoring the mineralised lens boundaries. The composite length was chosen on the basis of the average length of the samples inside the mineralized envelopes of 1.45m rounded up to nearest full meter.

Inverse Distance squared method was used to interpolate the Au, Cut100au and Cut80au grades into the blocks.

The blocks inside each wireframe were filled in two phases using maximum search distances of 45 m and 90 m. The search ellipsoids were aligned to honor the main continuity directions of the ore lenses. A minimum of 3 and a maximum of 15 composites were used to estimate the grades into the blocks.

Blockmodel validation

The block model validation includes visual inspection and comparing the mean between the composited and estimated data. The visual inspection did not show any unusual problem when compared with drill hole grade across sections and statistical comparisons of global block mean and median grades and corresponding composite grades showed expected correlation.

Variable	Blockmodel au_id	Blockmodel cut100au_id	Composites au	Composites cut100au
Number of samples	16681	16681	3684	3684
Minimum value	0.33	0.33	0.00	0.00
Maximum value	145.6	60.9	512.2	100.0
Mean	5.86	5.17	7.18	6.20
Median	3.32	3.32	2.20	2.20
Geometric Mean	3.89	3.78	NA	NA
Variance	77.58	34.14	581.43	180.24
Standard Deviation	8.81	5.84	24.11	13.43
Coefficient of variation	1.50	1.13	3.36	2.17

Table 3. Basic statistics of the blockmodel and composites used to estimate the block grade.

Mineral Resource Classification

The historical open pit and trial underground mining have confirmed the continuity of grade and the geological framework controlling the mineralisation. The resource estimate is based on surface diamond drilling and close spaced underground diamond drilling. The average drill hole spacing is adequate to define the grade continuity and geological framework with a reasonable degree of confidence.

The main part of the mineralised zone, which is drilled from the decline, is classified as Measured and Indicated Mineral Resource. The mineralisation, which is modelled by 10 – 20m spaced core drilling and in which grade continuities in the known geological framework are confirmed, is classified as Measured Mineral Resource. As Indicated Mineral Resource is classified the parts of the main mineralisation, where the drilling spacing is mainly 15 – 25m, and the grade continuity can be considered to be confirmed. The main part of this indicated mineralisation is situated between the Northern and Central Lode. The mineral resource on some areas where the grade continuity and geological framework are not fully known is downgraded into Indicated Mineral Resource, even if the drilling density is high.

The assumed depth extensions of the mineralisation, which are drilled only by few surface holes, are classified as Inferred Mineral Resource.

Some small, mineralised lenses beside the main mineralised zones are also classified as Inferred Mineral Resource. In these lenses drilling density is low and the grade continuity is not fully known.

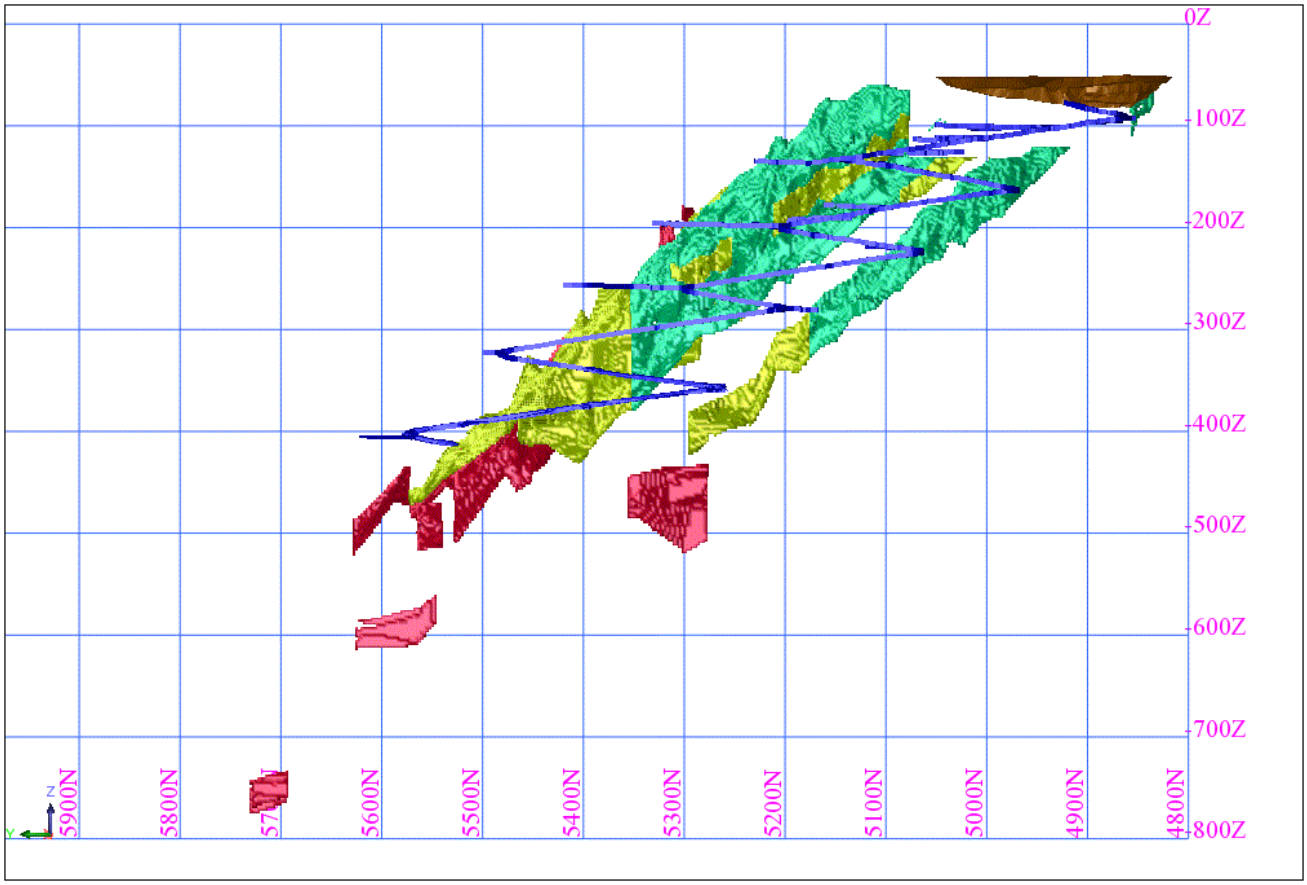

Figure 3. Resource block model. (green: Measured, yellow: Indicated, red: Inferred).

Mineral Resource Statement

The table below summarizes the mineral resources calculated by Outotec (Finland) Oy. The mineral resource has been calculated using 1.0 g/t Au cut off.

Resource Class	Tonnage	Au g/t
Measured	703 000	4.65
Indicated	488 000	3.72
Total Mineral Resource	1 191 000	4.27
Inferred Mineral Resource	240 000	3.6

Table 4.Pampalo Mineral Resource as of 15.9.2010.

Ore Reserve Estimate

Outotec Minerals Oy did not carry out detailed stope designs but estimated the ore reserves based on the properties of the possible mining method(s) and the past experience on the realized test mining by Outokumpu Oy. The resource for mining was calculated from the most resent resource block model by Outotec (Finland) Oy.

The assumed mining method is longitudinal bench cut and fill method (modified Avoca) with sublevel interval of 10m to 15 m.

The following mining recovery factors have been applied:

- Development 100%
- Stoping 88%
- Horizontal sill pillars 50%

In addition to the above a 5% general “layout loss” and 5% instability loss for those lenses in contact with the talc schist have been applied.

The key geotechnical issue is the talc schist in the hanging wall contact or in the close vicinity of the contact of the southern and the central lens. To mitigate the risk of instability it is very important to utilize the best industry practices in ground support and to keep the mining – backfilling cycle as short as possible when talc schist is present.

The waste rock dilution tonnage applied varies from 25% to 40% depending on the location. The grade of dilution represents of 1 m “halo” around the 1 g/t cut off mineralized envelopes. The grade of dilution varies between 0.25 g/t au to 0.5 g/t au.

The cut–off grade used in the ore reserve estimate was 1 g/t, which equals NSR ((Net Smelter Return) 22,7 €/ore ton with gold price 1030 USD, exchange rate 1,23, ie 843 €/oz (Endomines planning price).

NSR 22,7 €/ton exceeds Pampalo underground mine stoping, mucking and trucking and ore processing costs and is thus appropriate to be used as a cut-off grade (table 5).

Grade	1	g/t
€/oz	843,0	
€/g	27,1	
Rec%	90 %	
Paym%	93 %	average
NSR	22,7	€/ton

Table 5. Cut-off grade calculated using NSR principle

The table 6 below summarizes the Pampalo ore reserves at 1.0 g/t Au cut -off.

Reserve Class	Tonnage	Au g/t
Proven	750 000	3.60
Probable	511 000	3.00
Total Ore Reserve	1 261 000	3.36

Table 6.Pampalo Ore Reserve as of 15.9.2010.