National Instrument 43-101 Technical Report

THE KIIMALA PROPERTY, CENTRAL OSTROBOTHNIA,

FINLAND.

Prepared for:

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Table of Contents

| 1 | SUMMARY | 9 |
|---------|-------------------------------------|-----------------|
| 2 | INTRODUCTION AND TERMS OF REFERENCE | 11 |
| 3 | RELIANCE ON OTHER EXPERTS | |
| 4 | PROPERTY DESCRIPTION AND LOCATION | 12 |
| - | | |
| ə Pl | PHYSIOGRAPHY | I UKE AND 16 |
| | | |
| 6 | HISTORY | 20 |
| | 6.1 ÄNGESNEVA (K1) DEPOSIT | |
| | 6.1.1 Title | |
| | 6.1.2 <i>Exploration</i> | |
| | 6.1.3 <i>Resources</i> | |
| | 6.1.4 Production | |
| | 6.2 KIIMALA (K2) PROSPECT | |
| | 6.2.1 Title | |
| | 6.2.2 Exploration | |
| | 6.2.3 Resources | |
| | 6.2.4 Production | |
| | 6.3 VESIPERA (K3) PROSPECT | |
| | 6.3.1 Title | |
| | 6.3.2 Exploration | |
| | 6.3.3 Resources | |
| | 6.3.4 Production | |
| | 6.4 ANGESLAMPI (K4) PROSPECT | |
| | 6.4.1 <i>Title</i> | |
| | 6.4.2 Exploration | |
| | 6.4.3 Resources | |
| | 6.4.4 Production | |
| | 6.5 TIITOLA (K5) PROSPECT | |
| | 6.5.1 <i>Title</i> | |
| | 6.5.2 Exploration | |
| | 0.5.3 Kesources | |
| | 6.5.4 Production | |
| | 6.6 POHLOLA (K6) PROSPECT | |
| | 0.0.1 <i>Title</i> | |
| | 0.0.2 Exploration | |
| | 0.0.5 Kesources | |
| | 0.0.4 Production | |
| | 6.7 ALAKYLA PROSPECT | |
| | 0.7.1 1111e | |
| | 0.7.2 Exploration | |
| | 0.7.5 Resources | |
| | 0.7.7 = FIOUUCHOR | |
| | U.O SAKJANN I LA F KUSPEU I | |
| | 0.0.1 111112 | |
| | 0.0.2 <i>Exploration</i> | |
| | 0.0. <i>J Kesources</i> | |

The Kiimala Property, Finland. NI 43-101 Technical Report

| 6.8. | 4 Production | |
|--------|--|----|
| 6.9 | OTHER AREAS | 53 |
| 6.9. | 1 Title | |
| 6.9. | 2 Exploration | |
| 6.9. | 3 Resources | |
| 6.9. | 4 Production | |
| 7 GE | OLOGICAL SETTING | 56 |
| 7.1 | GEOLOGY OF FINLAND | |
| 7.2 | MINING IN FINLAND | 60 |
| 7.3 | GOLD IN FINLAND | 62 |
| 7.4 | GEOLOGY OF THE DEPOSIT | 67 |
| 7.4. | 1 Geological Setting | |
| 7.4. | 2 Lithology and Petrography | |
| 7.4. | 3 Alteration | |
| 7.4. | 4 Structure | |
| 7.4. | 5 Geological Interpretation | |
| 8 DE | POSIT TYPE | 79 |
| 9 MI | NERALISATION | |
| 0.1 | MINED ALOCY AND DADACENESIS | 70 |
| 9.1 | 1 Gold | |
| 9.2 | GEOCHEMISTRY | |
| 10 555 | | 07 |
| 10 EX | PLORATION | 85 |
| 10.1 | STRUCTURAL STUDY | |
| 10.2 | REVIEW OF PREVIOUS DRILLING | |
| 11 DR | ILLING | |
| 11.1 | TECHNICAL SPECIFICATIONS | 91 |
| 11 | 1.1 Collar Locations | |
| 11. | 1.2 Drilling Equipment | |
| 11. | 1.3 Downhole Deviation Surveys | |
| 11. | 1.4 Core Orientation | |
| 11 | 1.5 Core Loss | |
| 12 SA | MPLING METHOD AND APPROACH | |
| 12.1 | Core Handling Procedures | |
| 12.2 | SAMPLING METHODOLOGY | |
| 12.3 | STRUCTURAL MEASUREMENTS | 94 |
| 12.4 | OTHER MEASUREMENTS | |
| 12.4 | 4.1 Specific Gravity | |
| 12.4 | 4.2 Rock Quality Designation | |
| 13 SA | MPLE PREPARATION, ANALYSES AND SECURITY | |
| 13.1 | SAMPLE PREPARATION AND ANALYSIS | 97 |
| 13.2 | DATA HANDLING | |
| 13.3 | QA/QC Procedures | |
| 13.3 | <i>B.1</i> Blanks, Standards and Duplicates Procedures | |
| 14 DA | TA VERIFICATION | |
| 15 AD | JACENT PROPERTIES | |
| 16 MI | NERAL PROCESSING AND METALLURGICAL TESTING | |

| 1 | 6.1 | MET | HOD | |
|----|-------|-------|--|-----|
| 1 | 6.2 | RESU | ILTS | |
| 1 | 6.3 | INTE | RPRETATION | |
| | 16.3. | .1 | Total Gold in Sample | |
| | 16.3. | .2 | Recoverable Gold (leach versus tailing) | |
| | 16.3. | .3 | Estimate of Recoverable Gold (leach versus ALS Chemex fire assays) | |
| 1 | 6.4 | SUM | MARY | |
| 17 | MIN | IERA | L RESOURCE ESTIMATES | |
| 1 | 7.1 | DAT | ABASE FOR DEPOSIT MODEL | |
| 1 | 7.2 | Geo | LOGICAL MODEL | |
| 1 | 7.3 | RAW | ASSAY INTERVALS | |
| 1 | 7.4 | Сом | POSITING AND TOP-CUTTING | |
| 1 | 7.5 | VAR | IOGRAPHY | |
| 1 | 7.6 | BLO | CK MODEL | |
| | 17.6. | .1 | Estimation Parameters and Search Distances | 118 |
| | 17.6. | .2 | Tonnage Calculations | 119 |
| | 17.6. | .3 | Block Model Validation | 119 |
| 1 | 7.7 | MIN | ERAL RESOURCE CLASSIFICATION | |
| | 17.7. | .1 | Mineral Reserves | |
| | 17.7. | .2 | Measured Mineral Resources | |
| | 17.7. | .3 | Indicated Mineral Resources | |
| | 17.7. | .4 | Inferred Mineral Resources | |
| 1 | 7.8 | MIN | ERAL RESOURCE ESTIMATES | |
| 1 | 7.9 | Expi | ORATION POTENTIAL | |
| 1 | 7.10 | Μ | INERAL RESERVE ESTIMATE | |
| 18 | OTH | IER | RELEVANT DATA AND INFORMATION | |
| 19 | CON | ICLU | ISIONS AND RECOMMENDATIONS | |
| 20 | REF | ERE | NCES | |
| 21 | CER | RTIFI | CATE OF QUALIFIED PERSON | |

List of Tables

| Table 1. List of the valid and pending claims on the Kiimala property |
|--|
| Table 2 Important localities and their significance around the Ängesneva property |
| Table 3 Historical holders of the Ängesneva Property |
| Table 4 List of exploration works undertaken by various organisations on the Ängesneva |
| property |
| Table 5 Summary of diamond drilling programmes at Ängesneva since 198721 |
| Table 6. Details of historical drilling by the Geological Survey of Finland (GTK). Easting and |
| northing according to the Finnish national coordinate system KKJ zone 2 |
| Table 7 Highlights of GTK drilling results. Parameters for compositing were 0.5g/t Au cut-off, |
| 7m at 0.0g/t Au internal dilution. No top cut. Intervals shown are those with gradethickness |
| greater than 2 gram.metres. True thickness is estimated to vary between 50-90 % of the |
| interval |
| Table 8 Historical sectional resource of the Ängesneva deposit, calculated by Sipilä, 1990 |
| Table 9 Historical holders of the Kiimala (K2) Property |
| Table 10. Details of historical drilling on the K2 prospect by the Geological Survey of Finland |
| (GTK). Easting and northing according to the Finnish national coordinate system KKJ zone |
| 2 |
| Table 11. Samples assaving >1.00 g/t Au from Kiimala (K2) Prospect |
| Table 12. Highlights of GTK drilling results at Kiimala (K2). Parameters for compositing were |
| 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated |
| to vary between 65-90 % of the interval |
| Table 13 Historical holders of the Vesiperä (K3) Property |
| Table 14. Details of historical drilling at the Vesiperä (K3) prospect. Easting and northing |
| according to the Finnish national coordinate system KKJ zone 2 |
| Table 15. Highlights of GTK and Belvedere drilling results at Vesinerä (K3). Parameters for |
| |
| compositing were 0.5g/t Au cut-off. 7m at 0.0g/t Au internal dilution. No top cut. True |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |
| compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval |

| Table 28. Summary of significant historical drillhole intersections at Alakylä. True thickness is |
|--|
| estimated to vary between 90-100 % of the interval |
| Table 29. Details of historical drilling at the Sarjankylä prospect. Easting and northing according |
| to the Finnish national coordinate system KKJ zone 2 |
| Table 30. Summary of significant historical drillhole intersections at the Sarjankylä prospect Not |
| enough information exists to estimate true thickness |
| Table 31. Details of historical drilling outside of the main prospects but currently under claim. |
| Easting and northing according to the Finnish national coordinate system KKJ zone 253 |
| Table 32 Details of historical drilling outside of the main prospect area not currently covered by |
| claim. Easting and northing according to the Finnish national coordinate system KKJ zone |
| 2 |
| Table 33. Significant intersections from the historical drillings outside of the main prospects. |
| Note that all of these are from drillholes within the current claim boundaries. Not enough |
| information exists to estimate true thickness |
| Table 34. Summary of individual samples with values > $0.4 \sigma/t$ Au, from areas outside of the main |
| prospects. Note that 26 out of these 27 samples are from holes drilled within the current |
| claim houndaries. Not enough information exists to estimate true thickness. |
| Table 35 Statistical data showing metallic are mining in Finland during the year 2010 60 |
| Table 36 Canatic types of gold mineralisation in Finland |
| Table 37 Summary statistics for Au As and Cu assays in drill core samples |
| Table 37. Summary of the Belvedere Descurces diamond drilling at Ängespeve Easting and |
| northing according to the Finnish national goordinate system KKI zona 2 |
| Table 30 Highlights of Palvedore drilling results. Parameters for compositing were 0.5g/t Au out |
| off 7m at 0.0g/t Au intermal dilution. No tan out. Intervals shown are these with |
| on, /m at 0.0g/t Au internal dilution. No top cut. Intervals snown are those with |
| grade*tnickness greater than 2 gram.metres. True tnickness is estimated to vary between $(0, 00, 0)$ of the intermal |
| 60-90 % of the interval |
| Table 40. Elements and detection ranges for ALS Chemex assaying methods |
| Table 41. Elements and detection limits for Labtium assaying methods |
| 1 able 42 Standard Au values used for Angesneva drill core assays 100 Table 42 Standard Au values used for Angesneva drill core assays 100 |
| Table 43 Summary of QA/QC procedures utilised for Belvedere drilling |
| Table 44. Detailed Cyanide Pressure Acid Leach (PAL1000) results for selected Angesneva drill |
| core samples |
| Table 45. Summary statistics of samples used for GTK PAL1000 leach tests 107 |
| Table 46. Summary recoverability statistics for Angesneva leach tests |
| Table 47 Basic statistics for raw assays of Au within the mineralised zone 111 |
| Table 48 Basic statistics for 1.5 m best-fit composite assays of Au within the mineralised zone |
| |
| Table 49. Block Model Parameters 118 |
| Table 50. Parameters of the backtransformed and standardised variogram model |
| Table 51. Modelled parameters of the anisotropy ellipsoid |
| Table 52. Block model estimation parameters 119 |
| Table 53. Basic statistics for block model Au values within the reported mineralised zone |
| Table 54. Mineral Resources at Ängesneva on June 2 nd , 2010 |
| Table 55 Grade-tonnage data for Ängesneva |
| |

List of Figures

| Figure 1 Infrastructure and location of Finland in relation to BR Gold Mining's Kiimala |
|--|
| Property |
| Figure 2. Current land tenure on the Ängesneva area of the Kiimala Property, showing the |
| location of Ängesneva (K1) and other deposits, occurrences and exploration targets15 |
| Figure 3 Kiimala Property in relation to regional infrastructure, and other Belvedere properties |
| (red and green). The Joint Venture Area of Interest is defined by the blue polygon. Easting |
| and northing according to Finnish national coordinate system KKJ zone 3 |
| Figure 4 Kiimala Property in relation to local infrastructure, and other Belvedere properties. |
| including the Hitura Nickel Mine. The Area of Interest is defined by the blue polygon. |
| Claims are in red, and claim applications are in green. Easting and northing according to |
| Finnish national coordinate system KKJ zone 3. |
| Figure 5. Topography of the Kiimala property on the Ängesneva area and Ängesneva (K1) drill |
| collar locations (blue = GTK green = Belvedere) Easting and northing according to Finnish |
| national coordinate system KKJ zone 2. |
| Figure 6 Historical man (0.1 evel $Z = 96$ m) of the Ängesneva gold denosit (showing the |
| mineralisation houndary for a 0.0 nnm cut-off) with historical drilling sites of the CTK |
| (from Sinilä 1000a). The spacing of the drilling profiles is 50 m or 25 m 25 |
| (it on Sipira, 1990a). The spacing of the ut ming promes is 50 m of 25 m |
| Prognet Easting and parthing according to the Finnish national coordinate system KKI |
| r rospect. Easting and northing according to the rinnish national coordinate system KKJ |
| Evence 2. Logation of CTK drillholes and ID survey (red - maximum) on the Kiimala (K2) |
| Program Easting and northing according to the Finnish national coordinate system KKI |
| r rospect. Easting and northing according to the rinnish national coordinate system KKJ |
| Zone 2 |
| Figure 9. Location of instorical drinnois and ground magnetics (red = maximum) on the |
| vesipera (KS) Prospect. Easting and northing according to the Finnish national coordinate |
| System KKJ Zone 2 |
| Figure 10. Location of instorical drinnoles and if (led – maximum) on the vesipera (KS) |
| rospect. Easting and northing according to the Finnish national coordinate system KKJ |
| Zone 2 |
| Figure 11 Location of instorical driftioles and ground magnetics (red = maximum) with a background of tenession by on the Angelemmi (K4) and Tittele (K5) Progressite Festing and |
| background of topography, on the Angestampi (K4) and Thiota (K5) Prospects. Easting and |
| Firms 12 Leasting of historical drillease and ID (and maximum) with a head-maximum def |
| Figure 12 Location of historical drillinoles and IP (red = maximum) with a background of the seventee as the \ddot{A} resolution (K4) and Title (K5) Proceeds. Eacting and resulting |
| topography, on the Angestampi (K4) and Thtola (K5) Prospects. Easting and northing |
| according to the Finnish national coordinate system KKJ zone 2 |
| Figure 13 Location of Pohlola drillholes superimposed on a contour map of the IP (red = |
| maximum). Note the power lines (Z) that run between the claim areas (red). Easting and |
| northing according to the Finnish national coordinate system KKJ zone 2 |
| Figure 14 Location of claim applications and historical GTK drillholes on the Alakylä and |
| Sarjankylä prospects, superimposed on the airborne magnetic data (red = maximum). |
| Easting and northing according to the Finnish national coordinate system KKJ zone 246 |
| Figure 15 Results of bedrock mapping and bedrock sampling conducted by the GTK in the |
| vicinity of the Alakylä and Sarjankylä claim applications. Easting and northing according |
| to the Finnish national coordinate system KKJ zone 2 |
| Figure 16 Drillhole locations and ground magnetics (red = maximum) on the Alakylä prospect. |
| Easting and northing according to the Finnish national coordinate system KKJ zone 248 |
| Figure 17. Ground magnetic survey (red = maximum) and drillhole locations at the Sarjankylä |
| prospect. The Claim application is shown by the blue polygon. Easting and northing |
| |

| Figure 18 IP survey (red = maximum) and drillhole locations at the Sarjankyla prospect. The |
|--|
| Claim application is shown by the blue polygon. Easting and northing according to the |
| Finnish national coordinate system KKJ zone 2. |
| Figure 19. Historical drillholes outside of the main prospect areas on the Kiimala property |
| marked by round symbols. Easting and northing according to the Finnish national |
| coordinate system KKL zone 2 |
| Figure 20 Simplified geological man of the Fannessandian Shield with major testanostratigraphia |
| Figure 20 Simplified geological map of the Fernioscandian Sineld with major tectonostratigraphic |
| units (Ojata et al. 2007). Map adapted from Koistinen et al. (2001), tectonic interpretation |
| atter Lantinen et al. (2005). LGB = Lapland Greenstone Belt, CLGC = Central Lapland |
| Granitoid Complex, BMB = Belomorian Mobile Belt, CKC = Central Karelian Complex, IC |
| = Iisalmi Complex, PC = Pudasjärvi Complex, TKS = Tipasjärvi-Kuhmo-Suomussalmi |
| greenstone complex57 |
| Figure 21. Active metal ore producing mines in Finland during the year 201061 |
| Figure 22 Genetic types of gold deposits in Finland. An Internet link to the map is: |
| Figure 23. Geological setting of the Kiimala Property (yellow square) on the bedrock map of |
| Finland. The Raahe-Ladoga suture zone is marked by the red area |
| Figure 24. Gold deposits map of Finland showing the location of the Kiimala Property in |
| Northern Ostro-Bothnia, GTK FINNGOLD database |
| Figure 25 Location of the Ängesneva denosit (ton left corner) in relation to the Sariankylä- |
| Kiimala shaar zona halonging to the crustal scale Raaha-I adoga sutura zona. Man from |
| L actinon (2001) (20 |
| Eestinen (2001) |
| Figure 26. Geology of the Angesneva region. Modified after Sipila (1990). |
| Figure 27 Geology of the Angesneva area based on outcrop mapping, drilling and geophysical |
| ground measurements. (Note: BELANG014 is the northernmost drillhole)71 |
| Figure 28Fairly homogenous intermediate volcanic (BELANG016: 72m)72 |
| Figure 29. Typical appearance of mica schist (BELANG016: 190m) with foliation and deformed |
| quartz veinlets73 |
| Figure 30. Plagioclase porphyry (BELANG015: 128m)73 |
| Figure 31. Plagioclase porphyry close up (BELANG008: 265.30 m)74 |
| Figure 32 Amphibole plagioclase porphyry (BELANG017: 146 m)74 |
| |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) 75 Figure 34. Cross section (W-E) along profile N7114095 with histograms showing the distribution of gold. Histogram scale at top of picture. 77 Figure 35. Cross section (W-E) along profile N7113995 with histograms showing the distribution of gold. 78 Figure 36 Gold (1), bismuth (2), Bi-telluride (3) and chalcopyrite (4) inclusions in arsenopyrite at Ängesneva. Field of view 0.26 mm. From Kojonen et al. (1991) 81 Figure 37. Comparison of the GTK Au assay results from both FAAS and Fire assay methods of analysis. 82 Figure 38. Scatterplot of Au versus Cu of all samples from within the modelled mineralised shell 84 Figure 40. Stereonet plot of poles to shear orientation (n=211). Mean orientation is 63° towards 087°. 86 Figure 41. Stereonet plot of noles to shear orientation for shear zones with an associated cold 86 |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) 75 Figure 34. Cross section (W-E) along profile N7114095 with histograms showing the distribution of gold. Histogram scale at top of picture. 77 Figure 35. Cross section (W-E) along profile N7113995 with histograms showing the distribution of gold. 77 Figure 36 Gold (1), bismuth (2), Bi-telluride (3) and chalcopyrite (4) inclusions in arsenopyrite at Ängesneva. Field of view 0.26 mm. From Kojonen et al. (1991) 81 Figure 37. Comparison of the GTK Au assay results from both FAAS and Fire assay methods of analysis. 82 Figure 38. Scatterplot of Au versus Cu of all samples from within the modelled mineralised shell 84 Figure 40. Stereonet plot of poles to shear orientation (n=211). Mean orientation is 63° towards 087°. 86 Figure 41. Stereonet plot of poles to shear orientation for shear zones with an associated gold grade greater than 1 g/t Au (n=50). Mean orientation is 61° towards 091°. 86 Figure 42Stereonet plot of poles to vein orientation (n=2200). Mean orientation is 69° towards 105° 87 |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |
| Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m) |

| Figure 45. Histogram of specific gravity data within the modelled 0.5 g/t Au cutoff mineralised |
|---|
| shell96 |
| Figure 46. Schematic of Labtium robotised sample preparation unit |
| Figure 47. Standard assays and ranges from Belvedere Phase 1 Drilling101 |
| Figure 48. Standard assays and ranges from Belvedere Phase 2 Drilling101 |
| Figure 49. Standard assays and ranges from Belvedere Phase 3 Drilling102 |
| Figure 50. Duplicate sample assays from Belvedere Phase 3 Drilling. Dashed lines show $\pm 5\%$ |
| range102 |
| Figure 51Modelled mineralised domain at a 0.5 g/t Au cut-off at Ängesneva111 |
| Figure 52. Log histogram of raw (uncomposited) Au assays within the mineralised shell112 |
| Figure 53. Log Histogram showing the distribution of Au for the 1.5 m best-fit composites113 |
| Figure 54. Lognormal probability plot for Au in 1.5 m best-fit composites |
| Figure 55. Mean and Variance Plot of the 1.5 m best-fit composited data for Au114 |
| Figure 56. Downhole variogram for Au in 1.5 m best-fit composites |
| Figure 57. Major axis variogram of 1.5 m best-fit Au composites within mineralised shell 116 |
| Figure 58. Semi-major axis variogram of 1.5 m best-fit Au composites within mineralised shell |
| |
| Figure 59. Minor axis variogram of 1.5 m best-fit Au composites within mineralised shell 117 |
| Figure 60. Backtransfomed variogram models for the 1.5 m best-fit Au composites within |
| mineralised shell117 |
| Figure 61. Log Histogram showing the distribution of gold values in the block model |
| Figure 62. Block model from ESE. Grey <0.5 g/t Au; Green 0.5 – 1.0; Yellow 1.0 – 1.5; Red 1.5 – |
| 2.0; Magenta ≥ 2.0 g/t Au121 |
| Figure 63. Block model from SE, showing the en echelon nature of the high grade mineralisation. |
| Red 1.5 – 2.0 g/t Au; Magenta ≥ 2.0 g/t Au121 |
| Figure 64. Grade-tonnage curve for Ängesneva |

1 Summary

This Technical Report covers the gold deposits and mineralised occurrences of the Kiimala Property in Northern Ostrobothnia in western Finland. The principal focus of the report is the Ängesneva (K1) deposit, for which a mineral resource estimate was previously described in an NI 43-101 Technical Report filed by Belvedere Resources on 2nd June 2010. This current Technical Report restates the contents of the original Ängesneva (K1) Technical Report, with a few small changes: (a) the report contains historical information on other mineralised occurrences, (b) the report is addressed to new parties and (c) the report is prepared by a different Qualified Person than for the original report. No changes have been made to the original resource estimate.

BR Gold Mining Oy holds a 100% interest in the claims on the Kiimala Property described in this report. BR Gold Mining Oy is a Joint Venture Company owned by Belvedere Resources Ltd. and REBgold Ltd. The Kiimala property is located at Latitude 64.12°N, Longitude 24.95°E, in the Haapavesi community, western Finland.

The mineralised occurrences and deposits of the Kiimala Property can be classified as Palaeoproterozoic orogenic gold deposits, comprising of sets of steeply dipping en-echelon mineralised zones trending in a north to north-easterly direction, with quartz and sulphide bearing lodes. These zones are associated with second order interconnecting shears related to the nearby crustal scale, northwest-trending Ruhaperä shear zone, which is one of the main structures of the Raahe–Ladoga suture zone. The deposits are clearly shear zone related and like typical orogenic deposits, host gold-only mineralisation.

The Raahe-Ladoga suture zone has experienced a range of metamorphic (subducting plate during convergence and/or thickening of the crust during collision, late thermal event) and magmatic (different phases of granitoid intrusion) processes that have contributed to the generation and migration of gold-bearing fluids. These fluids were particularly focussed into obliquely oriented dilational sites, and the role of relatively competent rock units (granitoids, plagioclase porphyry and coarse, quartz-rich sediments) was important in channelling fluids to higher crustal levels.

The strike of the host rocks and mineralised shear zones follows the direction of positive magnetic and IP anomalies. The bedrock of the Ängesneva (K1) area consists mainly of mica schist, volcanosedimentary units and plagioclase porphyry units (the main host rock of the gold mineralisation). There are also minor felsic and mafic volcanic units. Regional prograde metamorphism took place up to amphibolite facies and the most characteristic metamorphic minerals in metasediments are biotite and andalusite.

The Ängesneva (K1) deposit is situated in and close to the contact zone between plagioclase porphyry and metapelitic schists. Ductile-brittle shears are focused within steeply dipping, north to northeast-striking en-echelon mineralised lenses and the orientation of the lenses broadly follows the strike of the shears. The gold mineralisation is associated with quartz

and sulphides emplaced parallel with the strike and dip of the shearing and lithological units. The main host rock of the gold mineralisation is the highly competent plagioclase porphyry, although mineralisation extends into the footwall mica schists.

Exploration has so far identified a zone of mineralisation plunging approximately 40° towards the northeast, and dipping approximately 70°-80° to the southeast. Mineralisation has been delineated by diamond drilling for approximately 370 metres along strike, and from bedrock surface down to at least 250 metres vertical depth. The mineralisation has a maximum true thickness of between 50 and 60 m. Drilling is on 25-metre profiles.

An intersection in BELANG014, to the north of the modelled mineralised zone, appears to identify a separate, parallel, mineralised structure, and requires follow-up.

In the original 2010 Technical Report, the Qualified Person determined that the existing data supports an Indicated Resource Estimate (according to the JORC code) of 3.85 Mt at a grade of 1.19 g/t Au, based on a cut-off grade of 0.5 g/t Au. The Qualified Person for this report concurs with this estimate of the mineral resources for the Ängesneva (K1) deposit.

The mineralisation was modelled as one domain. A wireframe was constructed based on a 0.5 g/t Au cut-off grade, permitting the inclusion of up to 7m waste. The mineral resource was calculated using block modelling to a maximum vertical depth of approximately 250 metres (Z=-160), made up of 10m x 10m x 2m blocks constrained by the modelled wireframe. The block model was rotated to an azimuth of 030° to better fit the geometry of the body.

Block grades were interpolated using 3 concentric search ellipses using ordinary Kriging with a minimum of 3 and a maximum of 25 samples. The first search ellipse had a maximum range of 26m (being 2/3 the range determined by variography), the second was 52m, and the final 104m. 8.6% of blocks were populated in the 1st pass, 63.6% in the 2nd pass and the remainder of 27.7% populated in the 3rd pass.

Bulk density of the mineralisation was based on actual specific gravity data collected during exploration. A total of 285 measurements were taken from within the modelled mineralised zone, giving an average bulk density of 2.83 tonnes/m³.

2 Introduction and Terms of Reference

This report was prepared at the request of BR Gold Mining Oy, following an agreement signed between Belvedere Resources Finland Oy (a 100% owned subsidiary of Belvedere Resources Ltd) and REBgold Corporation, whereby REBgold can earn an interest in the Kiimala Property (as well as other properties in Finland) under the terms of a earn-in agreement leading to a full Joint Venture if seen to completion. The agreement recognises an Area of Interest (AOI), containing a number of claims and mineral prospects, as well as any further gold properties discovered by either JV partner within the AOI in the future. The objectives of the report were:

- 1. To address the information contained in any existing NI 43-101 Technical Report to both parties, as well as to the newly formed company "BR Gold Mining Oy" which is serving as the Joint Venture vehicle.
- 2. To include any additional data relevant to the Area of Interest not included in any existing NI 43-101 Technical Reports
- **3.** To prepare the report as a National Instrument 43-101 Technical Report in accordance with Form 43-101F1. The instruction also stipulated that the report must be an "Independent Technical Report" as laid out under the definitions of "Independence" in section 1.4 of NI 43-101.

This Technical Report is an amended version of the NI 43-101 Technical Report "Ängesneva (K1) Gold Deposit, Kiimala Property, Central Ostrobothnia, Finland" dated 2nd June, 2010 filed by Belvedere Resources Ltd. This new Technical Report covers the known data for the entire Area of Interest as of 1stSeptember 2011, and contains all of the information contained in the original report. For the purpose of clarity, no information regarding the Mineral Resource Estimate of Ängesneva (K1) has been altered in any way.

The principal additions, compared to the original Technical Report, are that data have been provided on historical drilling and other mineral prospects from the entire Area of Interest, and not just the Ängesneva (K1) deposit. All of these changes have been added to Section 6: History, which has been renumbered with new sub-headings accordingly.

The sources of information for this report have been drawn largely from the results of drilling programmes (6,115.61 metres over 29 holes) carried out by Belvedere Resources Finland Oy in 2006-2010. In addition, further historical drilling data (totalling 11,412.38 metres over 180 holes) by the Geological Survey of Finland (GTK) and Outokumpu Oy, drilled in the period 1957 – 2006 has also been used. Copies of these files have either been supplied by Belvedere Resources Finland Oy or are publicly available on various Finnish Internet sites. Geophysical data has been collected by the GTK, and is publicly available. References to the sources of information are provided throughout the report.

3 Reliance on Other Experts

This report was prepared as a National Instrument 43-101 Technical Report in accordance with Form 43-101F1 for Belvedere Resources Ltd.

The quality of information, conclusions and estimates contained herein is consistent with the level of accuracy as well as the circumstances and constraints under which the work was performed, data generated and provided by third party sources identified herein and, while it is believed that such information is reliable under the conditions and subjects to the limitations set forth herein.

This version of the Technical Report has been prepared by competent persons under the supervision of Hannu Makkonen of the Geological Survey of Finland, acting as the "Qualified Person". In the original Technical Report, Thomas Lindholm of GeoVista AB (acting as the Qualified Person) prepared the section entitled "Mineral Resource and Mineral Reserve Estimates", which remains unchanged. The authors listed in the title page have prepared the remainder of the report.

Hannu Makkonen, as Qualified Person, takes responsibility for the full contents of this report.

4 Property Description and Location

Until June 2011, Belvedere Resources Finland Oy (a 100% owned subsidiary of Belvedere Resources Ltd) held a 100% interest in the Ängesneva (K1) project and other claims on the Kiimala Property. On 27thJune 2011, these claims were transferred to BR Gold Mining Oy, another subsidiary of Belvedere Resources Ltd. BR Gold Mining Oy is a special purpose corporate vehicle created to accommodate the Joint Venture agreement between Belvedere and REBgold, whereby REBgold can earn an incremental interest in the properties with increasing expenditure.

The Kiimala property is located at Latitude 64.12°N, Longitude 24.95°E, in the Haapavesi community, western Finland. The property is located 20 km west from Haapajärvi, 100 km south of Oulu, 95 km east of Kokkola and about 535 km north northwest of Helsinki (Figure 1). Both Oulu and Kokkola have all weather airports. There is a sealed road 4 km from the property and a gravel road to the centre of the area.



Figure 1 Infrastructure and location of Finland in relation to BR Gold Mining'sKiimala Property.

A claim reservation totalling 9 km² was granted to Belvedere Resources Finland Oy by the Finnish Ministry of Trade and Industry over the area in December 2004. An application was made to convert the reservation to mineral claims in November 2005 and seven individual claims were granted in March 2006 as detailed in Table 1 and Figure 2. The claims form a contiguous area of 577.2 hectares. Another claim named Tiitola was granted in July 2007 in the South-western part of these claims. The total area of the contiguous claims was raised to 676.3 hectares. In addition to the Ängesneva deposit, this large claim area hosts many other known occurrences of Au mineralisation, including Ängeslampi, Vesiperä, Kiimala and Pöhlölä. According to the Finnish Mining Law the claim gives the holder sole rights to explore and/or test mine for minerals till March 20th, 2011 for the first seven claims and till July 9th 2012 for Tiitola claim. On 3rd March, 2011 an application was made to extend the duration of the Kiimala for the claims for a further three years. The Alakylä and Sarjankylä claims have not yet been approved.

The Ängesneva prospect is situated in the Kiimala 1 and Kiimala 2 claims. The property is wholly owned by BR Gold Mining Oy and has no attached agreements or warrants with other parties. No expenditure requirements are attached to the property. The properties have not been legally surveyed, but boundaries are determined and finalised at time of application by the Ministry of Trade and Industry (MTI). No environmental liabilities are extant apart from normal legal requirements for damage compensation to landholders resulting from any exploration works. No permits are required to perform exploration activities. Private individuals and the Government Forest Department (Metsähallitus) own the land and surface rights of the Ängesneva claims areas.

| Claim No. | Name | App. Date | Granted | Expiry | Area (ha.) |
|-----------|----------------------|------------|---------------|------------|------------|
| 8084/1 | Kiimala 1 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 98.7 |
| 8084/2 | Kiimala 2 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 100.0 |
| 8084/3 | Kiimala 3 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 99.2 |
| 8084/4 | Kiimala 4 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 97.9 |
| 8084/5 | Kiimala 5 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 79.7 |
| 8084/6 | Kiimala 6 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 75.5 |
| 8084/7 | Kiimala 7 | 29/11/2005 | 20/03/2006 | 20/03/2011 | 26.2 |
| 8260/1 | Tiitola | 23/10/2006 | 09/07/2007 | 09/07/2012 | 99.1 |
| 8566/1 | Pirttisalo (Alakylä) | | Under Applica | ation | 65.8 |
| 9100/1 | Sarjankylä | | Under Applica | ation | 100.0 |

Table 1.List of the valid and pending claims on the Kiimala property.

The Qualified Person has examined the Claim Certificates, but has not reviewed the land ownership and has not independently verified the legal status or ownership of the Ängesneva property, and is relying on the validity of mineral title claimed by BR Gold Mining Oy.



Figure 2.Current land tenure on the Ängesneva area of the Kiimala Property, showing the location of Ängesneva (K1) and other deposits, occurrences and exploration targets

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Kiimala property is located 20 – 30 km's from four of the major towns of Ostrobothnia: Ylivieska, Haapavesi, Nivala and Oulainen. The property is easily accessed by gravel roads leading from sealed roads connecting Haapavesi with Ylivieska and Nivala (Figure 3, Figure 4& Figure 5). A network of gravel forest roads provides easy access to most of the property.

As is common with most of Finland the service infrastructure is excellent. There is an existing railway line passing through Nivala and Ylivieska, which in turn is well connected to Oulu or Kokkola, the two sea-port cities of Finland (Figure 1,Figure 3, Figure 4). The main railway line to the port and Boliden's zinc smelter at Kokkola runs through the town of Ylivieska. The nearest commercial airports are also at Kokkola and Oulu, approximately 100 km by road to the west and north respectively, with regular daily flights to Helsinki. Table 2 describes the relative location and importance of these localities.

| Name of the locality | Distance | Significance |
|----------------------|----------|--|
| Oulu | 100 km | Port, major town |
| Kokkola | 95 km | Port, major town, smelter |
| Ylivieska | 21 km | Major town |
| Haapavesi | 21 km | Community town and hosts the Ängesneva deposit |
| Nivala | 22 km | Community town and hosts the Hitura Ni mine |
| Oulainen | 16 km | Community town, nearest railway service. |

Table 2 Important localities and their significance around the Ängesneva property

All the other infrastructural facilities are readily available in the area. Water can be sourced from two separate (Ängeslampi) water bodies, each with an average area of 4 hectares. Both of these lakes lie within 1 km distance from the central part of the deposit. A 110,000 volt power line crosses the southern part of the property.

The area has a long history of mining, with the 600,000 tpa Hitura Ni-Cu mine located some 31 km to the south of the Ängesneva deposit, and approximately 40 km by road. The Hitura Mine was reopened in July 2010, and is currently owned by Belvedere Mining Oy, a 100% owned subsidiary of Belvedere. With the long history of mining in the region, there would be little problem with locally sourcing skilled mining and metallurgical personnel.

The Kiimala Property itself is located in flat lying to gently undulating terrain, with a mean elevation of approximately 100 metres above sea level (m.a.s.l.). Land use is confined to managed forest plantations of mainly birch and spruce. In marshy areas, vegetation includes stumpy pines, mosses and various types of grass.

There are a few outcrops in the northern parts of the claims areas. However, the main orebody does not have any exposure. As stated above the main water bodies of the areas are the two Ängeslampi lakes (elevation 98.2 m.a.s.l.). The overburden thickness in the claims area varies from 0.3 m in the areas where the bedrock almost outcrops to about 5.5 m in some parts. The average overburden thickness is about 2 m.

Weather conditions follow the typical northern Fennoscandian climate, with a temperate summer and cold winter. The temperature is mostly between 10 and 25 °C during the summer months (June – August) and between 0 and -30°C (mean -8.9°C) during the winter months (December – February). The average annual rainfall is between 500 and 550 mm in the project area. The terrain is covered by snow for 5-6 months during the winter, during which time bogs, small rivers and lakes are frozen.



Figure 3 Kiimala Property in relation to regional infrastructure, and other Belvedere properties (red and green). The Joint Venture Area of Interest is defined by the blue polygon. Easting and northing according to Finnish national coordinate system KKJ zone 3.



Figure 4Kiimala Property in relation to local infrastructure, and other Belvedere properties, including the Hitura Nickel Mine. The Area of Interest is defined by the blue polygon. Claims are in red, and claim applications are in green. Easting and northing according to Finnish national coordinate system KKJ zone 3.



Figure 5.Topography of the Kiimala propertyon the Ängesneva area and Ängesneva (K1) drill collar locations (blue = GTK, green = Belvedere). Easting and northing according to Finnish national coordinate system KKJ zone 2.

6 History

Since the 1980's there has been active gold exploration in Ostrobothnia mainly undertaken by the Geological Survey of Finland (GTK) and Outokumpu Oy and more recently by Belvedere Resources. The most significant deposits are Laivakangas in Raahe (Nordic Mines) and Kopsa in Haapajärvi (Belvedere Resources).

Gold mineralisation was first discovered in the Kiimala Property in 1984. An amateur prospector Mr K. Ahlholm located gold in outcrop in the Vesiperä area (about 3 km to south of the Ängesneva deposit) assaying 75 g/t gold and 15% arsenic. Outokumpu Oy commenced regional exploration works for gold and discovered the Pöhlölä gold tungsten occurrence to the South later in the year.

The Geological Survey of Finland (GTK) also became active in the area from 1984 to the present. Exploration works in the area have consisted of bedrock mapping, trenching, lowaltitude airborne magnetic, electric and radiometric survey, magnetic, electromagnetic and IP ground surveys, geochemical and stratigraphic till surveys (lisalo 1987, 1988, 1994), percussion drilling, thin section investigations, and diamond drilling. They discovered numerous occurrences of gold in drillholes and large associated till and bedrock geochemical anomalies in a 25km x 2km belt, extending from Antikanperä in the northwest to Sarjankylä in the southeast. Endomines Oy briefly held the area under reservation in 2001, but no further work was undertaken.

The Ängesneva deposit itself, was discovered when the GTK identified an IP anomaly (induced polarisation) under a peat bog in 1987. Follow-up bedrock sampling with shallow percussion holes on 10 profiles spaced 5-20m apart with a drill spacing along 5-10m outlined surface gold mineralisation. Diamond drilling commenced in 1988 for a total of 46 holes, totalling 3,557 metres. The deposit was drilled on a minimum of 50 metre x 50 metre centres using T56 drilling equipment producing core of approximately 41.7 mm diameter.

6.1 Ängesneva (K1) Deposit

6.1.1 Title

| Name of the Company | Period of exploration | |
|------------------------------------|-----------------------|--|
| Geological Survey of Finland (GTK) | 1984 - 1991 | |
| Endomines Oy | 2001 - 2003 | |
| Belvedere Resources Finland Oy | 2004 - 2011 | |
| BR Gold Mining Oy | 2011 - present | |

The previous claim holders of the Ängesneva property are as below in Table 3.

Table 3 Historical holders of the Ängesneva Property

6.1.2 Exploration

Ängesneva exploration started with the discovery of the prospect by the GTK in 1987 by delineating some Vesiperä-type geophysical anomalies under a peat bog. Since then a wide range of exploration techniques have been utilised. The anomalies were checked by till and bedrock surface sampling and by percussion drilling; the latter indicated the presence of a Au mineralisation. The details of the various exploration techniques are provided in Table 4.

BR Gold Mining Oy continues to explore the deposit with a view to delineating a mineable resource in this deposit.

| Organisation | Period | Exploration methods |
|----------------------|-------------|---|
| Geological Survey of | 1984 - 1991 | Detailed bedrock mapping & trenching; low- |
| Finland (GTK) | | altitude airborne magnetic, electric and |
| | | radiometric survey; ground based magnetic, |
| | | gravimetric, VLF-R, slingram (HLEM), and IP |
| | | surveys; geochemical and stratigraphic till survey, |
| | | thin section investigations; percussion drilling; |
| | | diamond drilling; resource estimation |
| | | |
| Belvedere Resources | 2004 - date | Diamond drilling, structural study, geochemical |
| Finland Oy | | MMI sampling, Resource estimation. |

Table 4 List of exploration works undertaken by various organisations on the Ängesneva property

6.1.2.1 Diamond Drilling

Drilling has been conducted by the GeologicalSurvey of Finland (GTK) and Belvedere Resources Finland Oy(Table 5). The details of the GTK drilling are in Table 6 andTable 7.

| Organisation | Period | Holes | Metres | Comments |
|----------------------|-------------|-------|----------|--------------------------------------|
| Geological Survey of | 1988 – 1989 | 46 | 3,557.40 | T-46 conventional; 31.7 mm core. |
| Finland (GTK) | | | | |
| Belvedere Resources | 2006 | 4 | 563.71 | WL-76 wireline; 57.5 mm core. |
| Finland Oy | | | | Ballmark core orientation. EMS |
| | | | | surveys |
| Belvedere Resources | 2007 | 9 | 2,080.40 | WL-76 wireline; 57.5 mm core. Ezy- |
| Finland Oy | | | | Mark core orientation. EMS surveys |
| Belvedere Resources | 2009 - 2010 | 10 | 2,966.20 | WL-56 wireline; 39 mm core. Deviflex |
| Finland Oy | | | | and Reflex Gyro surveys |
| | | 69 | 9,167.71 | |

 Table 5 Summary of diamond drilling programmes at Ängesneva since 1987

| Hole id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year |
|---------|---------|----------|------------|--------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| R367 | 2546822 | 7114045 | 97.0 | 110.10 | 270 | 45 | 1988 |
| R368 | 2546829 | 7113995 | 96.0 | 100.30 | 270 | 45 | 1988 |
| R369 | 2546771 | 7113994 | 95.7 | 96.40 | 270 | 46.8 | 1988 |
| R370 | 2546765 | 7113945 | 95.9 | 100.30 | 270 | 46.8 | 1988 |
| R371 | 2546718 | 7113943 | 95.6 | 64.20 | 270 | 46.9 | 1988 |
| R372 | 2546721 | 7113895 | 95.6 | 64.90 | 270 | 45 | 1988 |
| R373 | 2546772 | 7113895 | 96.3 | 114.60 | 270 | 46 | 1988 |
| R374 | 2546728 | 7113793 | 95.4 | 93.80 | 270 | 46.2 | 1988 |
| R375 | 2546641 | 7113695 | 96.4 | 68.70 | 270 | 45 | 1988 |
| R381 | 2546709 | 7113952 | 96.8 | 19.90 | 315 | 70 | 1988 |
| R382 | 2546704 | 7113957 | 96.8 | 20.00 | 135 | 70 | 1988 |
| R383 | 2546712 | 7113941 | 96.8 | 29.00 | 270 | 70 | 1988 |
| R384 | 2546815 | 7113944 | 95.7 | 150.20 | 270 | 45 | 1988 |
| R385 | 2546873 | 7113993 | 97.5 | 175.40 | 270 | 45 | 1988 |
| R386 | 2546819 | 7113893 | 95.9 | 165.10 | 270 | 45 | 1988 |
| R387 | 2546778 | 7113793 | 95.5 | 149.30 | 270 | 45 | 1988 |
| R388 | 2546872 | 7114044 | 99.5 | 161.60 | 270 | 45 | 1988 |
| R394 | 2546791 | 7114044 | 95.8 | 39.55 | 270 | 70 | 1989 |
| R395 | 2546771 | 7114044 | 95.8 | 30.10 | 270 | 70 | 1989 |
| R396 | 2546771 | 7114020 | 95.8 | 40.60 | 270 | 70 | 1989 |
| R397 | 2546752 | 7114018 | 95.7 | 30.10 | 270 | 70 | 1989 |
| R398 | 2546731 | 7114018 | 95.7 | 31.35 | 270 | 70 | 1989 |
| R399 | 2546751 | 7113994 | 95.7 | 31.50 | 270 | 70 | 1989 |
| R400 | 2546731 | 7113995 | 95.7 | 37.45 | 270 | 70 | 1989 |
| R401 | 2546711 | 7113995 | 95.7 | 30.10 | 270 | 70 | 1989 |
| R402 | 2546751 | 7113969 | 95.7 | 40.15 | 270 | 70 | 1989 |
| R403 | 2546731 | 7113969 | 95.6 | 32.25 | 270 | 70 | 1989 |
| R404 | 2546711 | 7113969 | 95.5 | 31.60 | 270 | 70 | 1989 |
| R405 | 2546743 | 7113944 | 96.8 | 33.00 | 270 | 70 | 1989 |
| R406 | 2546722 | 7113943 | 95.6 | 50.35 | 270 | 70 | 1989 |
| R407 | 2546726 | 7113919 | 95.6 | 62.40 | 270 | 70 | 1989 |
| R408 | 2546707 | 7113920 | 95.6 | 30.70 | 270 | 70 | 1989 |
| R409 | 2546685 | 7113920 | 95.6 | 29.30 | 270 | 70 | 1989 |
| R410 | 2546695 | 7113896 | 95.6 | 31.35 | 270 | 70 | 1989 |
| R411 | 2546676 | 7113896 | 95.5 | 29.55 | 270 | 70 | 1989 |
| R412 | 2546695 | 7113869 | 95.6 | 42.10 | 270 | 70 | 1989 |
| R413 | 2546678 | 7113870 | 95.5 | 25.20 | 270 | 70 | 1989 |
| R414 | 2546715 | 7113869 | 95.6 | 48.35 | 270 | 70 | 1989 |
| R415 | 2546697 | 7113844 | 95.4 | 31.75 | 270 | 70 | 1989 |
| R416 | 2546922 | 7113995 | 99.2 | 219.40 | 270 | 45 | 1989 |
| R417 | 2546922 | 7114044 | 100.0 | 224.50 | 270 | 45 | 1989 |
| R418 | 2546870 | 7113945 | 95.7 | 200.00 | 270 | 45 | 1989 |
| R429 | 2546751 | 7114044 | 95.8 | 29.00 | 270 | 70 | 1989 |
| R435 | 2546871 | 7114094 | 100.0 | 128.80 | 270 | 40 | 1989 |
| R436 | 2546871 | 7114095 | 100.0 | 154.60 | 270 | 55 | 1989 |
| R437 | 2546771 | 7113844 | 95.5 | 128.50 | 270 | 45 | 1989 |

 Table 6.Details of historical drilling by the Geological Survey of Finland (GTK).Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole id | From | То | Interval | Aunom | Ac nom | Grade*thickness |
|---------|--------|--------|----------|--------|--------|-----------------|
| | (m) | (m) | (m) | Au ppm | As ppm | (gm) |
| R367 | 96.95 | 98.10 | 1.15 | 3.04 | 8830 | 3.50 |
| R368 | 63.20 | 90.20 | 27.00 | 0.92 | 2684 | 24.76 |
| R369 | 42.00 | 68.80 | 26.80 | 1.65 | 8742 | 44.09 |
| R370 | 24.50 | 75.30 | 50.80 | 1.06 | 2384 | 53.99 |
| R371 | 5.75 | 27.20 | 21.45 | 2.09 | 3425 | 44.75 |
| R372 | 28.35 | 38.00 | 9.65 | 1.10 | 1268 | 10.65 |
| R373 | 73.85 | 80.75 | 6.90 | 0.73 | 1129 | 5.04 |
| R373 | 88.00 | 102.00 | 14.00 | 0.78 | 2271 | 10.86 |
| R374 | 70.60 | 74.60 | 4.00 | 0.56 | 2505 | 2.22 |
| R381 | 5.90 | 10.10 | 4.20 | 2.19 | 9575 | 9.18 |
| R383 | 3.80 | 15.00 | 11.20 | 0.96 | 4093 | 10.71 |
| R384 | 90.50 | 126.35 | 35.85 | 0.98 | 1941 | 35.19 |
| R385 | 113.00 | 169.25 | 56.25 | 1.16 | 2694 | 65.38 |
| R386 | 52.85 | 54.30 | 1.45 | 10.00 | 157160 | 14.50 |
| R387 | 43.20 | 44.80 | 1.60 | 1.42 | 3380 | 2.27 |
| R387 | 119.00 | 123.00 | 4.00 | 0.84 | 5410 | 3.36 |
| R388 | 78.70 | 107.00 | 28.30 | 0.91 | 2152 | 25.69 |
| R388 | 116.00 | 122.00 | 6.00 | 1.59 | 8660 | 9.54 |
| R395 | 6.80 | 14.15 | 7.35 | 5.45 | 13602 | 40.08 |
| R398 | 20.45 | 21.60 | 1.15 | 2.12 | 6300 | 2.44 |
| R399 | 3.50 | 10.35 | 6.85 | 1.05 | 2459 | 7.16 |
| R399 | 19.60 | 24.50 | 4.90 | 1.47 | 1092 | 7.22 |
| R400 | 29.50 | 35.50 | 6.00 | 0.87 | 3100 | 5.20 |
| R402 | 11.50 | 40.15 | 28.65 | 0.70 | 2959 | 20.12 |
| R403 | 8.95 | 11.30 | 2.35 | 0.90 | 100 | 2.12 |
| R405 | 6.40 | 30.00 | 23.60 | 1.10 | 3113 | 26.06 |
| R406 | 6.00 | 9.00 | 3.00 | 0.75 | 2150 | 2.25 |
| R406 | 13.10 | 37.50 | 24.40 | 0.70 | 3602 | 17.01 |
| R407 | 9.00 | 62.40 | 53.40 | 1.23 | 3342 | 65.66 |
| R408 | 6.90 | 25.55 | 18.65 | 1.20 | 1900 | 22.38 |
| R409 | 6.00 | 10.65 | 4.65 | 0.94 | 2032 | 4.37 |
| R410 | 5.00 | 21.65 | 16.65 | 1.50 | 3606 | 24.92 |
| R412 | 6.20 | 10.20 | 4.00 | 0.93 | 1500 | 3.72 |
| R412 | 28.25 | 41.00 | 12.75 | 0.83 | 2886 | 10.60 |
| R413 | 15.80 | 25.20 | 9.40 | 1.00 | 1994 | 9.44 |
| R416 | 160.00 | 216.00 | 56.00 | 1.18 | 4637 | 66.12 |
| R417 | 133.00 | 155.90 | 22.90 | 1.47 | 3119 | 33.63 |
| R417 | 189.00 | 199.00 | 10.00 | 2.45 | 16920 | 24.50 |
| R418 | 142.50 | 182.00 | 39.50 | 0.79 | 2143 | 31.13 |
| R435 | 93.40 | 97.50 | 4.10 | 0.55 | 0 | 2.26 |
| R436 | 96.70 | 100.00 | 3.30 | 7.43 | 2785 | 24.51 |
| R436 | 114.20 | 115.20 | 1.00 | 2.50 | 23700 | 2.50 |
| R436 | 136.30 | 137.55 | 1.25 | 2.80 | 16800 | 3.50 |
| R437 | 98.70 | 110.35 | 11.65 | 0.57 | 0 | 6.63 |

Table 7. Highlights of GTK drilling results. Parameters for compositing were 0.5g/t Au cut-off, 7m at0.0g/t Au internal dilution. No top cut. Intervals shown are those with gradethickness greater than2 gram.metres. True thickness is estimated to vary between 50-90 % of the interval.

6.1.2.2 Geophysical Surveys

Airborne Geophysical Surveys

The GTK carried out regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. The prospect area and its surroundings have a good level of coverage. Low altitude surveys now extend to the whole of Finland.

Ground Geophysical Surveys

Numerous ground geophysical surveys were carried out over the Kiimala Property by the GTK during the period 1985 – 1989. These include gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. Belvedere has conducted no ground geophysical surveys on the property.

6.1.3 Resources

Following the 1988 – 1989 diamond drilling programme, a resource estimation was made by Sipilä in 1990a. This resource estimate was calculated using a conventional sectional approach to produce an *in-situ* estimation without any top-cuts or category classes. The resource (Table 8) was calculated for two cut-off grades (0.9 and 2.0 ppm) based on the drilling grid presented in Figure 6.

The mineralisation is divided into three layers according to depth. Volumes are calculated on each 25 metre profile (0-50 m layer) and on each 50 m profile between 50 -100m and 100-150m. The different densities are applied to each volume layer to work out the tonnages. A total of 26 measurements were taken to calculate the 0-50m density of 2.79 g/cm³, 21 measurements were taken to derive the density for the 50-100m layer of 2.83 g/cm³ and 14 measurements were taken to derive the density of 2.84 g/cm³ for the 100-150m layer. Using these figures the resources were calculated down to the 150 metre vertical level.

| Cut-off 0.9 ppm Au | | | | | | | | |
|---|---|--|---------------------------------------|--|--|--|--|--|
| Layer | Tonnage | Au (ppm) | As (%) | | | | | |
| 0 – 50 | 314,252 | 1.45 | 0.57 | | | | | |
| 50 - 100 | 515,929 | 1.62 | 0.41 | | | | | |
| 100 - 150 | 405,157 | 1.51 | 0.59 | | | | | |
| Total | 1.24 Mt | 1.54 | 0.51 | | | | | |
| Cut-off 2.0 ppm Au | | | | | | | | |
| | Cut-off 2.0 |) ppm Au | | | | | | |
| Layer | Cut-off 2.0 Tonnage |) ppm Au Au (ppm) | As (%) | | | | | |
| Layer 0 – 50 | Cut-off 2.0 Tonnage 42,720 |) ppm Au Au (ppm) 2.98 | As (%) 1.44 | | | | | |
| Layer 0 – 50 50 – 100 | Cut-off 2.0 Tonnage 42,720 124,592 | D ppm Au Au (ppm) 2.98 3.50 | As (%) 1.44 0.84 | | | | | |
| Layer 0 – 50 50 – 100 100 - 150 | Cut-off 2.0 Tonnage 42,720 124,592 97,882 | D ppm Au Au (ppm) 2.98 3.50 2.70 | As (%) 1.44 0.84 1.10 | | | | | |

Table 8 Historical sectional resource of the Ängesneva deposit, calculated by Sipilä, 1990



Figure 6 Historical map (0-Level, Z = 96 m) of the Ängesneva gold deposit (showing the mineralisation boundary for a 0.9 ppm cut-off) with historical drilling sites of the GTK (from Sipilä, 1990a). The spacing of the drilling profiles is 50 m or 25 m.

6.1.4 Production

There has been no historical production from the Ängesneva deposit.

6.2 Kiimala (K2) Prospect

The Kiimala (K2) Prospect lies roughly 500 metre north of Ängesneva (K1) Deposit (Figure 2). It was previously known by the GTK as the "Kiimala 2" prospect, and was discovered in 1985 along with many of the other prospects and mineralisations within the region. All exploration works on the property have been conducted by the GTK.

It comprises a set of stockwork quartz veins and massive sulphide breccia which are in a set of minor, en echelon shear zones. The occurrence is hosted by a hypabyssal gabbro. Native, dominantly free gold is apparently associated with pyrrhotite.

6.2.1 Title

The previous claim holders of the Kiimala (K2) property are as below in Table 9.

| Name of the Company | Period of exploration | | | |
|------------------------------------|-----------------------|--|--|--|
| Geological Survey of Finland (GTK) | 1984 - 1991 | | | |
| Endomines Oy | 2001 - 2003 | | | |
| Belvedere Resources Finland Oy | 2004 - 2011 | | | |
| BR Gold Mining Oy | 2011 - present | | | |

Table 9 Historical holders of the Kiimala (K2) Property

6.2.2 Exploration

All exploration activities on the Kiimala (K2) prospect were carried out by the GTK during the period 1984 - 1991, and include bedrock mapping, till sampling and numerous geophysical techniques that cover large parts of the Kiimala property and broader area of interest.

The GTK carried out regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. The prospect area and its surroundings have a good level of coverage. Low altitude surveys now extend to the whole of Finland. Numerous ground geophysical surveys were carried out over the Kiimala Property by the GTK during the period 1985 – 1989. These include gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. Belvedere has conducted no ground geophysics on the property.

In 1988 – 1989 the GTK did a small diamond drilling programme where they drilled 11 holes, totalling 1,217 metres (Table 10). The location of these holes in relation to ground magnetics and IP are shown in Figure 7 and Figure 8 respectively.

| Hole_id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year |
|---------|---------|----------|------------|---------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| R389 | 2546620 | 7114596 | 98.9 | 51.40 | 270 | 45.8 | 1988 |
| R390 | 2546642 | 7114596 | 100.0 | 67.80 | 270 | 45.7 | 1988 |
| R391 | 2546743 | 7114496 | 99.2 | 86.50 | 270 | 44.8 | 1988 |
| R392 | 2546642 | 7114546 | 99.0 | 77.40 | 270 | 44.3 | 1988 |
| R393 | 2546642 | 7114646 | 99.2 | 149.45 | 270 | 45 | 1988 |
| R423 | 2546414 | 7115146 | 98.1 | 149.30 | 90 | 45 | 1989 |
| R424 | 2546414 | 7115046 | 98.2 | 151.80 | 90 | 45 | 1989 |
| R425 | 2546544 | 7114696 | 98.3 | 215.80 | 90 | 45 | 1989 |
| R426 | 2546562 | 7114596 | 99.0 | 132.80 | 0 | 60 | 1989 |
| R427 | 2546643 | 7114636 | 99.2 | 68.80 | 90 | 45 | 1989 |
| R428 | 2546572 | 7114555 | 98.9 | 66.30 | 90 | 45 | 1989 |
| | | | | 1217.35 | | | |

 Table 10.Details of historical drilling on the K2 prospect by the Geological Survey of Finland (GTK).

 Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 7 Location of GTK drillholes and ground magnetic (red = maximum) on the Kiimala (K2) Prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 8. Location of GTK drillholes and IP survey (red = maximum) on the Kiimala (K2) Prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole_id | From To | | Length | Auppm |
|---------|---------|--------|--------|-------|
| | (m) | (m) | (m) | |
| R389 | 6.00 | 8.00 | 2.00 | 1.95 |
| R389 | 8.00 | 9.00 | 1.00 | 1.51 |
| R390 | 12.80 | 13.50 | 0.70 | 2.06 |
| R390 | 42.60 | 43.05 | 0.45 | 4.22 |
| R390 | 44.40 | 45.50 | 1.10 | 1.59 |
| R390 | 45.50 | 47.00 | 1.50 | 1.16 |
| R390 | 47.00 | 47.60 | 0.60 | 13.30 |
| R390 | 47.60 | 48.30 | 0.70 | 4.23 |
| R390 | 48.80 | 49.30 | 0.50 | 2.08 |
| R390 | 50.65 | 51.95 | 1.30 | 2.52 |
| R390 | 53.55 | 55.50 | 1.95 | 1.80 |
| R390 | 57.80 | 59.85 | 2.05 | 5.85 |
| R423 | 97.95 | 100.05 | 2.10 | 1.00 |
| R425 | 182.40 | 183.40 | 1.00 | 9.00 |
| R425 | 202.90 | 204.10 | 1.20 | 3.30 |
| R426 | 73.85 | 74.90 | 1.05 | 1.65 |
| R426 | 115.70 | 116.15 | 0.55 | 3.00 |
| R426 | 116.15 | 116.70 | 0.55 | 1.65 |
| R426 | 116.70 | 117.20 | 0.50 | 1.40 |
| R426 | 118.80 | 119.95 | 1.15 | 1.45 |

In total 93 samples (141.65 metres) were assayed for Au (by AAS), of which 20 samples assayed \geq 1 g/t Au (Table 11):

Table 11.Samples assaying ≥1.00 g/t Au from Kiimala (K2) Prospect.

A number of intervals can be composited, as shown in Table 12.

| Hole_id | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm | Grade*thickness |
|---------|----------|--------|--------------|--------|--------|--------|-----------------|
| | | | | | | | |
| R389 | 6.00 | 9.00 | 3.00 | 1.80 | 390 | 792 | 5.4 |
| R390 | 42.60 | 59.85 | 17.25 | 2.27 | 420 | 2839 | 39.2 |
| R423 | 95.95 | 105.00 | 9.05 | 0.74 | 1000 | 545 | 6.7 |
| R424 | 119.00 | 121.00 | 2.00 | 0.81 | 1900 | 731 | 1.6 |
| R425 | 182.40 | 191.40 | 9.00 | 1.46 | 54300 | 202 | 13.1 |
| R425 | 202.40 | 205.50 | 3.10 | 1.62 | 600 | 0 | 5.0 |
| R426 | 73.85 | 77.80 | 3.95 | 0.75 | | 35 | 3.0 |
| R426 | 115.70 | 119.95 | 4.25 | 1.19 | | 336 | 5.0 |

Table 12.Highlights of GTK drilling results at Kiimala (K2). Parameters for compositing were 0.5g/tAu cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to varybetween 65-90 % of the interval.

6.2.3 Resources

No mineral resource estimate has been completed for the Kiimala (K2) prospect

6.2.4 Production

There has been no historical production from the Kiimala (K2) prospect.

6.3 Vesiperä (K3) Prospect

The Vesiperä (K3) Prospect lies roughly 2 kmsSSW of the Ängesneva (K1) Deposit (Figure 2). It was discovered in 1984 and wasthe first of many mineralisations discovered in the region. Interest in the area was initiated as a result of an amateur prospector finding an arsenopyrite-rich sample taken from outcrop that assayed 75 g/t Au.Follow-up work by Outokumpu, led to the discovery of the biggest lode 250m SSE from the first outcrop sample.

Mineralisation at Vesiperä (K3) is characterised by mineralised quartz veins and thin shear bands, and comprises several subparallel lodes in a plagioclase porphyry(subvolcanic sill) intruded into a sequence of metasedimentary and metavolcanic rocks. Gold occurs, with native bismuth and electrum, as inclusions in arsenopyrite and as free grains, inclusions and in fractures of silicates.

Mineralisation is interpreted to be orogenic mesothermal with a strong structural control. The mineralisation is hosted by a number of east-dipping, narrow (0.1 - 15 cm wide) NNW trending shears and related conjugate fractures. Gold mineralisation took place at or soon after the regional metamorphic peak (amphibolite facies), at about 3 kbar and slightly below 500 °C in structurally favourable sites close to the major shear zones (Vasti, 1991; Tadpole, 2000).

6.3.1 Title

| Name of the Company | Period of exploration |
|------------------------------------|-----------------------|
| Geological Survey of Finland (GTK) | 1984 - 1991 |
| Endomines Oy | 2001 - 2003 |
| Belvedere Resources Finland Oy | 2004 - 2011 |
| BR Gold Mining Oy | 2011 - present |

The previous claim holders of the Vesiperä (K3) property are as below in Table 13

Table 13 Historical holders of the Vesiperä (K3) Property

6.3.2 Exploration

Most of the exploration activities on the Vesiperä (K3) prospect were carried out by the GTK during the period 1984 - 1991, and include bedrock mapping, bedrock surface sampling, till sampling and numerous geophysical techniques that cover large parts of the Kiimala property and broader area of interest (Sipilä 1988a, Västi 1991).

The GTK carried out regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. The prospect area and its surroundings have a good level of coverage. Low altitude surveys now extend to the whole of Finland. Numerous ground geophysical surveys were carried out over the Vesiperä and the whole Kiimala Property by the GTK during the period 1985 – 1989. These include gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. Belvedere has conducted no ground geophysical surveys on the property.

As outcrops are poorly distributed, the GTK carried out a systematic bedrock sampling programme of 900 samples in traverse 50 metres apart, with sampling every 5-10 metres. The results formed the basis of the subsequent diamond drilling programme, although Eilu (1999) mentions that a number of the anomalies were not followed up.

In the period 1986 – 1988 the GTK carried out a diamond drilling programme consisting of 34 holes, totalling 2,086 metres. In 2007, Belvedere Resources drilled one hole (112 metres)(Table 14). The location of these holes in relation to ground magnetics and IP are shown in Figure 7, Figure 9 and Figure 10 respectively.

| Hole_id | Easting | Northing | Elevation | Depth Azimuth | | Dip | Year |
|-----------|---------|----------|------------|---------------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| BELVES001 | 2547620 | 7111725 | 100 | 112.30 | 270 | 45 | 2007 |
| R305 | 2547575 | 7111924 | 102.3 | 30.00 | 225 | 35 | 1986 |
| R306 | 2547549 | 7111916 | 102.6 | 30.90 | 225 | 35 | 1986 |
| R307 | 2547595 | 7111752 | 102.1 | 84.05 | 270 | 40 | 1986 |
| R308 | 2547525 | 7111904 | 102.6 | 30.00 | 225 | 35 | 1986 |
| R309 | 2547812 | 7111855 | 102.3 | 95.60 | 270 | 45 | 1986 |
| R310 | 2547760 | 7111920 | 102 | 97.75 | 270 | 40 | 1986 |
| R311 | 2547526 | 7111917 | 102.9 | 15.55 | 225 | 40 | 1986 |
| R312 | 2547760 | 7112001 | 101.1 | 124.00 | 270 | 40 | 1986 |
| R313 | 2547594 | 7111945 | 101.7 | 114.40 | 225 | 40 | 1986 |
| R314 | 2547551 | 7112074 | 101.6 | 95.55 | 225 | 40 | 1986 |
| R315 | 2547554 | 7112006 | 101.4 | 29.70 | 225 | 35 | 1986 |
| R316 | 2547655 | 7111752 | 102.6 | 137.30 | 270 | 40 | 1986 |
| R317 | 2547554 | 7111979 | 101 | 19.65 | 220 | 30 | 1986 |
| R318 | 2547545 | 7111975 | 101.2 | 28.20 | 220 | 30 | 1986 |
| R341 | 2547597 | 7111702 | 103 | 84.40 | 270 | 40 | 1987 |
| R342 | 2547599 | 7111802 | 102 | 119.60 | 270 | 40 | 1987 |
| R345 | 2547845 | 7111701 | 103 | 128.69 | 270 | 45 | 1987 |
| R346 | 2547760 | 7111888 | 101.8 | 115.00 | 270 | 40 | 1987 |
| R347 | 2547759 | 7111950 | 101.4 | 81.00 | 270 | 40 | 1987 |
| R348 | 2547772 | 7111796 | 102.3 | 10.40 | 0 | 90 | 1986 |
| R349 | 2547763 | 7111795 | 102.3 | 20.70 | 270 | 75 | 1986 |
| R350 | 2547767 | 7111747 | 102.4 | 10.50 | 270 | 75 | 1986 |
| R351 | 2547794 | 7111697 | 103.3 | 11.50 | 270 | 75 | 1986 |
| R352 | 2547970 | 7111500 | 104.2 | 10.50 | 270 | 75 | 1986 |
| R353 | 2547796 | 7111291 | 104.3 | 10.00 | 270 | 75 | 1987 |
| R354 | 2547835 | 7111290 | 104.3 | 8.30 | 270 | 75 | 1987 |
| R355 | 2547388 | 7111295 | 103.3 | 30.70 | 270 | 75 | 1987 |
| R356 | 2547366 | 7111785 | 102.5 | 10.15 | 270 | 75 | 1987 |
| R357 | 2547447 | 7111754 | 102.8 | 20.30 | 270 | 75 | 1987 |
| R376 | 2547554 | 7111752 | 102.6 | 63.00 | 270 | 45 | 1988 |
| R377 | 2547554 | 7111802 | 102.4 | 51.00 | 270 | 45 | 1988 |
| R378 | 2547598 | 7111851 | 101.9 | 99.00 | 270 | 45 | 1988 |
| R379 | 2547644 | 7111701 | 103.4 | 140.00 | 270 | 45 | 1988 |
| R380 | 2547646 | 7111651 | 103.7 | 128.90 | 270 | 45 | 1988 |
| | | | | 2198.59 | | | |

 Table 14.Details of historical drilling at the Vesiperä (K3) prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole_id | From | То | Interval | Au ppm | As ppm | Cu ppm | Grade*thickness |
|-----------|--------|--------|----------|--------|--------|--------|-----------------|
| | (m) | (m) | (m) | | | | |
| BELVES001 | 13.17 | 23.22 | 10.05 | 0.87 | 53 | 158 | 8.7 |
| BELVES001 | 39.72 | 79.89 | 40.17 | 0.74 | 91 | 221 | 29.6 |
| BELVES001 | 88.00 | 99.98 | 11.98 | 2.99 | 1520 | 171 | 35.8 |
| R305 | 3.20 | 4.60 | 1.40 | 7.01 | 393.8 | 631 | 9.8 |
| R307 | 27.40 | 29.40 | 2.00 | 1.10 | 55.3 | 121 | 2.2 |
| R307 | 53.50 | 63.85 | 10.35 | 4.93 | 14230 | 220 | 51.0 |
| R308 | 11.90 | 14.90 | 3.00 | 4.21 | 3345 | 294 | 12.6 |
| R309 | 51.60 | 57.80 | 6.20 | 0.67 | 2293 | 725 | 4.1 |
| R310 | 54.20 | 58.70 | 4.50 | 3.32 | 8267 | 708 | 14.9 |
| R314 | 32.95 | 33.95 | 1.00 | 3.00 | 4297 | 436 | 3.0 |
| R316 | 82.00 | 84.00 | 2.00 | 1.30 | 2667 | 374 | 2.6 |
| R316 | 91.40 | 93.60 | 2.20 | 4.36 | 35790 | 212 | 9.6 |
| R316 | 119.05 | 121.05 | 2.00 | 1.95 | 4436 | 137 | 3.9 |
| R341 | 23.50 | 30.30 | 6.80 | 2.98 | | 0 | 20.3 |
| R341 | 52.70 | 63.50 | 10.80 | 0.81 | 1400 | 0 | 8.8 |
| R342 | 20.85 | 24.05 | 3.20 | 0.89 | 6100 | 0 | 2.8 |
| R342 | 32.20 | 40.00 | 7.80 | 1.41 | 4700 | 0 | 11.0 |
| R342 | 59.50 | 63.50 | 4.00 | 2.20 | 11000 | 0 | 8.8 |
| R345 | 61.05 | 70.00 | 8.95 | 0.65 | | 400 | 5.8 |
| R376 | 9.70 | 10.70 | 1.00 | 2.70 | 50 | 360 | 2.7 |
| R376 | 18.40 | 24.40 | 6.00 | 1.38 | 100 | 353 | 8.3 |
| R376 | 35.00 | 38.00 | 3.00 | 2.51 | 6460 | 326 | 7.5 |
| R376 | 43.50 | 47.00 | 3.50 | 2.18 | 50 | 104 | 7.6 |
| R377 | 5.60 | 8.60 | 3.00 | 0.90 | 60 | 143 | 2.7 |
| R377 | 16.60 | 18.60 | 2.00 | 2.45 | 240 | 334 | 4.9 |
| R379 | 37.50 | 41.50 | 4.00 | 1.65 | 1610 | 768 | 6.6 |
| R379 | 76.30 | 79.70 | 3.40 | 0.69 | 1570 | 225 | 2.3 |
| R379 | 101.80 | 110.50 | 8.70 | 1.59 | 1920 | 280 | 13.8 |
| R380 | 64.55 | 66.00 | 1.45 | 2.58 | 73100 | 593 | 3.7 |

Table 15.Highlights of GTK and Belvedere drilling results at Vesiperä (K3). Parameters for compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. True thickness is estimated to vary between 90-100 % of the interval.



Figure 9. Location of historical drillholes and ground magnetics (red = maximum) on the Vesiperä (K3) Prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 10. Location of historical drillholes and IP (red = maximum) on the Vesiperä (K3) Prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.
6.3.3 Resources

Following the 1986 – 1988 diamond drilling programme, a resource estimation was made by Sipilä in 1988a. This resource estimate was calculated using a conventional sectional approach to produce an *in-situ* estimation without any top-cuts or category classes. The resource (Table 8) was calculated for two levels: above and below the +50m level. The uppermost (above +50m level) level is based on a cut-off grade of 0.9 g/t Au and a minimum grade in the internal gangue of 0.1 g/t Au; whereas the lower level used a cut-off grade of 1.2 g/t Au and a minimum grade of the internal gangue of 0.2 g/t Au.

| | Density (g/cm ³) | Tonnes | Au g/t | As % |
|-----------|------------------------------|--------|--------|------|
| Above +50 | 2.746 | 243500 | 2.5 | 0.69 |
| Below +50 | 2.896 | 47500 | 2.6 | 1.25 |
| Total | | 291000 | 2.5 | |

Table 16.Summary of historical mineral resource estimate for the Vesiperä (K3) mineralisation.

The mineralisation is divided into two layers according to depth. Volumes are calculated on five 50 m profiles for the upper depth level, and four 50 m profiles for the deeper level. The different densities are applied to each volume layer to work out the tonnages. A total of 36 measurements were taken to calculate the +50m level density of 2.746g/cm³, which was used for tonnage calculations above +50m level. 5 measurements were used to calculate the density of 2.896g/cm³ for the deeper level (below + 50m level).

6.3.4 Production

There has been no historical production from the Vesiperä (K3) prospect.

6.4 Ängeslampi (K4) Prospect

The Ängeslampi (K4) prospect (Figure 2) was discovered under a peat bog by the GTK in 1986, by a combination of following glacial erratic boulders containing 5 - 20 g/t Au, and identifying similar geophysical anomalies as for the Vesiperä mineralisation. These anomalies were checked by till and bedrock surface sampling; the latter indicated the presence of Au mineralisation.

The mineralisation is hosted by a plagioclase porphyry, within a sequence of metamorphosed (amphibolite facies) sedimentary and volcanic rocks. The mineralisation style is interpreted as mesothermal "orogenic", with the gold mineralisation having a strong structural control.

6.4.1 Title

The previous claim holders of the Ängeslampi (K4) property are as below in Table 17

| Name of the Company | Period of exploration |
|------------------------------------|-----------------------|
| Geological Survey of Finland (GTK) | 1986- 1987 |
| Endomines Oy | 2001 - 2003 |
| Belvedere Resources Finland Oy | 2004 - 2011 |
| BR Gold Mining Oy | 2011 - present |

Table 17. Historical holders of the Ängeslampi (K4) Property

6.4.2 Exploration

All exploration activities on the Ängeslampi (K4) prospect were carried out by the GTK during the period 1986 - 1987, and include bedrock mapping, till sampling and numerous geophysical techniques that cover large parts of the Kiimala property and broader area of interest (Sipilä 1988b).

The GTK carried out regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. The prospect area and its surroundings have a good level of coverage. Low altitude surveys now extend to the whole of Finland. Numerous ground geophysical surveys were carried out over the Kiimala Property by the GTK during the period 1985 – 1989. These include gravity, magnetics, Slingram (horizontal loop EM), and IP/resistivity. Belvedere has conducted no ground geophysical surveys on the property.

In 1986 – 1987 the GTK did a small diamond drilling programme where they drilled 8 holes, totalling 463 metres (Table 18). The location of these holes in relation to ground magnetics and IP are shown in Figure 11 and Figure 12 respectively.

| Hole_id | Easting (m) | Northing (m) | Elevation (m.a.s.l.) | Depth (m) | Azimuth (degrees) | Dip (degrees) | Year |
|---------|----------------|-----------------|-------------------------|--------------|----------------------|------------------|------|
| D210 | 2546252 | 7112770 | 100 | E0.65 | 100 | 40 | 1096 |
| K219 | 2540255 | /112//8 | 100 | 50.05 | 190 | 40 | 1990 |
| R320 | 2546259 | 7112744 | 100 | 41.3 | 0 | 45 | 1986 |
| R321 | 2546285 | 7112759 | 100 | 43.45 | 180 | 40 | 1986 |
| R322 | 2546285 | 7112732 | 100 | 49.2 | 180 | 40 | 1986 |
| R323 | 2546249 | 7112735 | 100 | 41.5 | 180 | 45 | 1986 |
| R324 | 2546215 | 7112739 | 100 | 22.2 | 180 | 45 | 1986 |
| R339 | 2546090 | 7112600 | 100 | 88.4 | 180 | 40 | 1987 |
| R340 | 2546090 | 7112685 | 100 | 126.4 | 180 | 40 | 1987 |

 Table 18.Details of historical drilling at the Ängeslampi (K4) prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

From these holes only 52 samples were assayed, of which only 4 samples assayed over 1 g/t Au. The single best assay was 1.00 m @ 13.5 g/t Au. Thirty samples assayed below the detection limit. The limited amount of data available is reflected in the table of composite grades (Table 19).

| Hole_id | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm | Grade*thickness |
|---------|-------------|-----------|-----------------|--------|--------|--------|-----------------|
| R319 | 20.30 | 22.80 | 2.50 | 0.73 | 88380 | 335 | 1.8 |
| R320 | 29.75 | 30.75 | 1.00 | 0.50 | 3651 | 468 | 0.5 |
| R323 | 17.00 | 20.00 | 3.00 | 4.97 | | | 14.9 |
| R339 | 33.50 | 34.50 | 1.00 | 0.70 | 10700 | 240 | 0.7 |

Table 19.Highlights of GTK drilling results at Ängeslampi (K4). Parameters for compositing were0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. Not enough information exists toestimate true thickness.

It is apparent from Figures Figure 11 and Figure 12 that the Ängeslampi (K4) prospect requires further work, with the current IP survey not even covering the whole prospect.

6.4.3 Resources

No historical resources have been calculated for the Ängeslampi (K4) prospect.

6.4.4 Production

There has been no historical production from the Ängeslampi (K4) prospect.



Figure 11 Location of historical drillholes and ground magnetics (red = maximum) with a background of topography, on the Ängeslampi (K4) and Tiitola (K5) Prospects. Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 12 Location of historical drillholes and IP (red = maximum) with a background of topography, on the Ängeslampi (K4) and Tiitola (K5) Prospects. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

6.5 Tiitola (K5) Prospect

Tiitola was discovered by the GTK in 1994 during bedrock mapping in an area initially suggested prospective by glacial erratic boulders found by an amateur prospector (Västi 1997).

The mineralisation at Tiitola is hosted by a hypabyssal gabbro intruded into a sequence of mica schists and meta-volcanics. The mineralisation is characterised by sets of NNE-trending shear bands and a few metres-wide shear zones. Native gold is dominantly associated with arsenopyrite and a bismuth mineral.

As with the other deposits and prospects on the Kiimala property, Tiitola is related to second order structures related to the NW-trending Ruhaperä shear zone, located about 2 km to the NE of the known mineralisation.

6.5.1 Title

The previous claim holders of the Tiitola (K5) property are as below in Table 20

| Name of the Company | Period of exploration |
|------------------------------------|-----------------------|
| Geological Survey of Finland (GTK) | 1994- 1996 |
| Endomines Oy | 2001 - 2003 |
| Belvedere Resources Finland Oy | 2004 - 2011 |
| BR Gold Mining Oy | 2011 - present |

Table 20 Historical holders of the Tiitola (K5) Property

6.5.2 Exploration

All exploration activities on the Tiitola (K5) prospect were carried out by the GTK during the period 1994 - 1995, and include bedrock mapping, till sampling and numerous geophysical techniques that cover large parts of the Kiimala property and broader area of interest.

The GTK carried out regional low altitude airborne measurements in the area employing magnetic, electromagnetic and radiometric methods. The prospect area and its surroundings have a good level of coverage. Low altitude surveys now extend to almost the whole of Finland. Numerous ground geophysical surveys were carried out over the Kiimala Property by the GTK during the period 1985 – 1989. These include gravity, magnetics, slingram (horizontal loop EM), and IP/resistivity. More localised ground geophysics was carried out over the Tiitola (K5) prospect during 1994 – 1995. Belvedere has conducted no ground geophysical surveys on the property.

In 1995 the GTK did a small diamond drilling programme where they drilled 11 holes, totalling 387 metres (Table 21). The location of these holes in relation to ground magnetics and IP are shown inFigure 11 and Figure 12 respectively.

| Hole_id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year |
|---------|---------|----------|------------|--------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| R449 | 2546473 | 7112120 | 100.5 | 36.1 | 270 | 45 | 1995 |
| R450 | 2546488 | 7112114 | 100 | 33.75 | 270 | 45 | 1995 |
| R451 | 2546503 | 7112119 | 100.5 | 63.95 | 270 | 45 | 1995 |
| R452 | 2546533 | 7112119 | 100.5 | 26.9 | 270 | 45 | 1995 |
| R453 | 2546502 | 7112118 | 100.5 | 22.5 | 90 | 45 | 1995 |
| R454 | 2546517 | 7112171 | 101 | 32.7 | 90 | 45 | 1995 |
| R455 | 2546467 | 7112171 | 100 | 50.7 | 90 | 45 | 1995 |
| R456 | 2546543 | 7112272 | 97.5 | 32.75 | 90 | 45 | 1995 |
| R457 | 2546388 | 7112071 | 97.5 | 34.6 | 90 | 45 | 1995 |
| R458 | 2546470 | 7112045 | 98.5 | 35.3 | 90 | 45 | 1995 |
| R459 | 2546426 | 7112045 | 98 | 17.25 | 90 | 45 | 1995 |
| | | | | 386.50 | | | |

Table 21 Details of historical drilling at the Tiitola (K5) prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

From these holes only 50 samples were assayed, of which only 7 samples assayed over 1 g/t Au. The single best assay was 0.70 m @ 5.88 g/t Au. Nine samples assayed below the detection limit. The limited amount of data available is reflected in the table of composite grades (Table 22).

| Hole_id | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm | Grade*thickness |
|---------|-------------|-----------|-----------------|--------|--------|--------|-----------------|
| R451 | 54.40 | 55.75 | 1.35 | 1.34 | 6340 | 362 | 1.8 |
| R455 | 37.70 | 41.10 | 3.40 | 2.45 | 6400 | 1178 | 8.3 |

Table 22. Summary of better drillhole intersects at the Tiitola (K5) prospect. Not enough information exists to estimate true thickness.

It is apparent from Figures Figure 11 and Figure 12 that the Tiitola (K5) prospect requires further work, with the current IP survey not even covering the whole prospect.

6.5.3 Resources

No historical resources have been calculated for the Tiitola (K5) prospect.

6.5.4 Production

There has been no historical production from the Tiitola (K5) prospect.

6.6 Pöhlölä (K6) Prospect

Pöhlölä was discovered by Outokumpu in 1984 by the identification of gold-bearing quartz veins and shear zones found in outcrop during regional gold exploration (Sandberg 1986). The mineralisation at Pöhlölä is hosted by mineralised quartz veins and shear zones in a tonalite intrusion, intruded into a metamorphosed volcano-sedimentary succession. Free native gold is primarily located in the quartz veins, associated with arsenopyrite and lesser amounts of pyrrhotite. The quartz veins are folded and range in scale between 0.5 and 10 cm wide. As with the other deposits and prospects on the Kiimala property, Pöhlölä is related to second order structures related to the NW-trending Ruhaperä shear zone, about 500 metres to the northeast of the known mineralisation.

6.6.1 Title

The previous claim holders of the Pöhlölä (K6) property are as below in Table 23

| Name of the Company | Period of exploration |
|--------------------------------|-----------------------|
| Outokumpu Oy | 1984 - 1986 |
| Geological Survey of Finland | 1987? - ? |
| Belvedere Resources Finland Oy | 2007 –2011 |
| BR Gold Mining Oy | 2011 – present |

Table 23 Historical holders of the Pöhlölä (K6) Property

6.6.2 Exploration

Following the initial identification of the outcrop, most of the local exploration was conducted by Outokumpu during the period 1984 – 1986. Exploration activities included geological mapping, till sampling an IP survey and a small diamond drill programme. Drilling consisted of 16 shallow holes, for a total of 183.20 metres. The holes were drilled in three profiles ten metres and sixty metres apart. The details of the drillholes are presented in Table 24 and displayed in Figure 13.

| Hole_id | Easting (m) | Northing (m) | Elevation (m.a.s.l.) | Depth (m) | Azimuth (degrees) | Dip (degrees) | Year |
|---------|----------------|-----------------|-------------------------|--------------|----------------------|------------------|------|
| POH01 | 2548240 | 7110666 | 109 | 14.10 | 360 | 45 | 1985 |
| POH02 | 2548240 | 7110666 | 109 | 7.30 | 180 | 45 | 1985 |
| POH03 | 2548240 | 7110660 | 109 | 14.15 | 180 | 45 | 1985 |
| POH04 | 2548240 | 7110646 | 109 | 14.40 | 180 | 45 | 1985 |
| POH05 | 2548245 | 7110620 | 110 | 14.30 | 360 | 45 | 1985 |
| POH06 | 2548245 | 7110605 | 110 | 11.00 | 180 | 45 | 1985 |
| POH07 | 2548250 | 7110573 | 111 | 14.20 | 360 | 45 | 1985 |
| POH08 | 2548240 | 7110542 | 112 | 16.00 | 180 | 45 | 1985 |
| POH09 | 2548250 | 7110513 | 113 | 7.40 | 360 | 45 | 1985 |
| POH10 | 2548250 | 7110508 | 113 | 7.20 | 180 | 45 | 1985 |
| POH11 | 2548185 | 7110541 | 112 | 6.70 | 180 | 45 | 1985 |
| POH12 | 2548185 | 7110549 | 111 | 10.00 | 360 | 45 | 1985 |
| POH13 | 2548175 | 7110547 | 111 | 10.05 | 360 | 45 | 1985 |
| POH14 | 2548175 | 7110601 | 109 | 14.80 | 180 | 45 | 1985 |
| POH15 | 2548175 | 7110601 | 109 | 7.30 | 360 | 45 | 1985 |
| POH16 | 2548185 | 7110600 | 109 | 14.30 | 180 | 45 | 1985 |
| | | | | 183.20 | | | |

Table 24.Details of historical drilling at the Pöhlölä (K6) prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

In total 134 samples were assayed, of which 12 assayed over 1 g/t Au. Table 25 shows the better intersections from the Pöhlölä drilling.

| | From | То | Interval | Au ppm |
|---------|-------|-------|----------|--------|
| Hole_id | (m) | (m) | (m) | |
| POH03 | 5.05 | 5.35 | 0.30 | 2.43 |
| POH03 | 7.50 | 8.05 | 0.55 | 1.32 |
| POH04 | 0.60 | 0.75 | 0.15 | 6.81 |
| POH04 | 0.95 | 1.45 | 0.50 | 1.90 |
| POH05 | 4.45 | 4.90 | 0.45 | 3.47 |
| POH06 | 10.15 | 10.35 | 0.20 | 1.39 |
| POH07 | 3.20 | 3.75 | 0.55 | 13.10 |
| POH12 | 6.75 | 7.05 | 0.30 | 1.06 |
| POH12 | 8.50 | 8.80 | 0.30 | 4.78 |
| POH13 | 5.55 | 6.20 | 0.65 | 1.10 |
| POH13 | 9.25 | 9.75 | 0.50 | 8.19 |
| POH13 | 9.75 | 9.87 | 0.12 | 18.40 |

Table 25 Summary of historical drillhole intersections >1 g/t Au at Pöhlölä. True thickness is estimated to vary between 65-95 % of the interval.



Figure 13 Location of Pöhlölä drillholes superimposed on a contour map of the IP (red = maximum). Note the power lines (Z) that run between the claim areas (red). Easting and northing according to the Finnish national coordinate system KKJ zone 2.

Following the Outokumpu period of exploration, the GTK covered the area in the same low altitude geophysics that covers the rest of the Kiimala property.

In 2007 Belvedere Resources undertook a channel sampling programme across some of the outcrops and exposed quartz veins on the Pöhlölä property. Samples were cut from bedrock using a diamond saw. In total 139 samples were sent for assay. Table 26 shows the best individual results. It is important to note that sampling was constrained by outcrop availability.

| | Sample | |
|---------|--------|--------|
| Sample | Length | Au g/t |
| PTS 036 | 0.29 | 1.08 |
| PTS 037 | 1.00 | 3.24 |
| PTS 099 | 0.40 | 2.11 |
| PTS 121 | 0.85 | 1.99 |
| PTS 124 | 0.30 | 6.40 |
| PTS 128 | 0.25 | 1.03 |
| PTS 134 | 0.20 | 1.26 |
| PTS 142 | 0.69 | 0.98 |

Table 26 Summary of best sample assays from the Belvedere Resources channel sampling at Pöhlölä

6.6.3 Resources

No resource estimate has been calculated for the Pöhlölä (K6) prospect

6.6.4 Production

There has been no historical production from the Pöhlölä (K6) prospect.

6.7 Alakylä Prospect

The first indication of gold in the region was a gold-rich outcrop detected by an amateur prospector in the 1930's. The actual Alakylä occurrence was discovered in outcrop by an amateur prospector in 2003. The mineralisation at Alakylä, occurs in a NW-trending zone dipping steeply (75 - 85) to the NE, and consists of at least three sub parallel lodes a few metres wide. Gold mineralisation is related to altered shear zones hosted by a plagioclase porphyry, and gold occurs closely associated with arsenopyrite.

6.7.1 Title

Previous holders of the Alakylä Prospect were the GTK who held a claim reservation for a year in the early 2000's. No claim has existed on the project. In June 2011 BR Gold Mining Oy applied for the claim (Figure 14) covering the project.

6.7.2 Exploration

In the period 2004 – 2006, the GTK conducted exploration in the area that included a glacial erratic (boulder) survey, a till geochemical survey, bedrock mapping (Figure 15), and ground



magnetic and electromagnetic surveys (Lestinen and Mursu 2007). In addition, the region has been covered by the low altitude airborne geophysics.

Figure 14 Location of claim applications and historical GTK drillholes on the Alakylä and Sarjankylä prospects, superimposed on the airborne magnetic data (red = maximum). Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 15 Results of bedrock mapping and bedrock sampling conducted by the GTK in the vicinity of the Alakylä and Sarjankylä claim applications. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

The GTK conducted a small diamond drilling programme in 2005 – 2006, consisting of 6 holes (526 metres). These are shown in Figure 16 and details of the drillholes are in Table 27.



Figure 16 Drillhole locations and ground magnetics (red = maximum) on the Alakylä prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole_id | Easting (m) | Northing (m) | Elevation (m.a.s.l.) | Depth (m) | Azimuth (degrees) | Dip (degrees) | Year |
|---------|----------------|-----------------|-------------------------|--------------|----------------------|------------------|------|
| R467 | 2552592 | 7107140 | 112 | 61.90 | 225 | 45 | 2005 |
| R468 | 2552563 | 7107113 | 112 | 61.50 | 225 | 45 | 2005 |
| R469 | 2552645 | 7107121 | 112 | 102.80 | 225 | 45 | 2005 |
| R477 | 2552645 | 7107121 | 112 | 100.00 | 225 | 60 | 2006 |
| R478 | 2552654 | 7107068 | 112 | 99.40 | 225 | 45 | 2006 |
| R479 | 2552690 | 7107104 | 112 | 100.00 | 225 | 45 | 2006 |
| | | | | 525.60 | | | |

| Table 27.Details of historical drilling at the Alakylä prosp | pect. Easting and northing according to the |
|--|---|
| Finnish national coordinate system KKJ zone 2. | |

In total 257 samples were assayed, of which 116 samples were below the detection limit (0.01 g/t Au) and 7 samples assayed over 1 g/t Au (max: 1m @ 10.8 g/t Au). A summary of the better intersections is in Table 28.

| Hole_id | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm | Grade*thickness |
|---------|-------------|-----------|-----------------|--------|--------|--------|-----------------|
| R469 | 59.75 | 62.10 | 2.35 | 3.87 | 486 | 222 | 9.1 |
| R477 | 70.80 | 71.80 | 1.00 | 2.66 | 1850 | 326 | 2.7 |
| R479 | 10.20 | 12.20 | 2.00 | 7.72 | 18 | 402 | 15.4 |
| R479 | 51.80 | 52.80 | 1.00 | 1.39 | 18 | 339 | 1.4 |

Table 28.Summary of significant historical drillhole intersections at Alakylä. True thickness is estimated to vary between 90-100 % of the interval.

6.7.3 Resources

No resource estimate has been calculated for the Alakylä Prospect

6.7.4 Production

There has been no historical production from the Alakylä prospect.

6.8 Sarjankylä Prospect

The first indication of gold in the region was from gold-rich boulders and outcrops found by a local farmer in 1939 - 1940. The actual Sarjankylä occurrence was (re-)discovered by the GTK in 1985, during an exploration campaign in the area (Sipilä 1990b). The mineralisation at Sarjankylä (Figure 14) is characterised by mineralised auriferous quartz veins and narrow shear zones forming two parallel lodes in plagioclase porphyry and diorite. Native gold occurs as inclusions and in fractures of arsenopyrite and loellingite and in silicates.

6.8.1 Title

Previous holders of the Sarjankylä Prospect were the GTK in the period 2004-2006. Belvedere Resources Finland Oy applied for a claim on 2nd December, 2010 and is still awaiting a decision. The claim will be transferred to BR Gold Mining Oy on approval.

6.8.2 Exploration

The GTK was active in the area in two main periods: 1985 and 1998 – 2003. During these periods they conducted bedrock mapping, and a program of regional till and bedrock surface geochemistry with percussion drilling down to bedrock surface. The results of this program are shown in Figure 15. In addition to the low altitude airborne geophysics covering the region, the GTK also conducted some ground geophysical surveys including ground magnetics (Figure 17) and an IP survey (Figure 18). In 2005, the GTK drilled 3 diamond drillholes totalling 310 metres. The details of the drilling and the results are provided in Table 29 and Table 30 respectively.

| Hole_id | Easting (m) | Northing (m) | Elevation (m.a.s.l.) | Depth (m) | Azimuth (degrees) | Dip (degrees) | Year |
|---------|----------------|-----------------|-------------------------|--------------|----------------------|------------------|------|
| R474 | 2554700 | 7105180 | 117 | 101.60 | 225 | 45 | 2005 |
| R475 | 2554470 | 7105140 | 113 | 93.60 | 225 | 45 | 2005 |
| R476 | 2554518 | 7105188 | 114 | 114.30 | 225 | 45 | 2005 |
| | | | | 309.50 | | | |

 Table 29.Details of historical drilling at the Sarjankylä prospect. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole_id | From (m) | To (m) | Interval (m) | Au ppm | As ppm | Cu ppm | Grade*thickness |
|---------|-------------|-----------|-----------------|--------|--------|--------|-----------------|
| R476 | 11.20 | 12.20 | 1.00 | 0.53 | 88 | 127 | 0.5 |
| R476 | 13.20 | 14.20 | 1.00 | 0.52 | 906 | 43 | 0.5 |
| R476 | 18.20 | 19.20 | 1.00 | 1.45 | 11600 | 206 | 1.5 |

 Table 30. Summary of significant historical drillhole intersections at the Sarjankylä prospect. Not enough information exists to estimate true thickness.



Figure 17. Ground magnetic survey (red = maximum) and drillhole locations at the Sarjankylä prospect. The Claim application is shown by the blue polygon. Easting and northing according to the Finnish national coordinate system KKJ zone 2.



Figure 18 IP survey (red = maximum) and drillhole locations at the Sarjankylä prospect. The Claim application is shown by the blue polygon. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

6.8.3 Resources

No resource estimate has been calculated for the Sarjankylä prospect.

6.8.4 Production

There has been no historical production from the Sarjankylä prospect.



Figure 19.Historical drillholes outside of the main prospect areas on the Kiimala property marked by round symbols. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

6.9 Other Areas

Within the Area of Interest, there are a large number of drillholes that have been drilled from outside the previously stated prospect areas. For the most part these are individual holes or small clusters of holes, scattered across the area (Figure 19).

6.9.1 Title

Many of the holes fall within the current BR Gold Mining Oy claim areas, and were thus previously held by Belvedere Resources Finland Oy, Endomines, and/or the GTK and Outokumpu Oy. However, a significant number of holes are not currently covered by claims. The title has been previously held by the GTK. At present neither Belvedere Resources Finland Oy nor BR Gold Mining Oy have any exclusive rights to the title of these areas.

6.9.2 Exploration

In total 50 holes were drilled for a total of 3076.44 metres of drilling. These holes have been split up into the holes that are currently within the BR Gold Mining Oy claim area (Table 31), and those outside of the area (Table 32).

| Hole_id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year |
|------------|---------|----------|------------|---------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| BELANG024 | 2546765 | 7113400 | 96 | 104.30 | 270 | 45 | 2010 |
| BELANG025 | 2546705 | 7113400 | 96 | 112.40 | 270 | 45 | 2010 |
| BELVESN001 | 2546955 | 7112500 | 100 | 50.70 | 270 | 45 | 2007 |
| BELVESN002 | 2547045 | 7112500 | 100 | 61.30 | 270 | 45 | 2007 |
| BELVESN003 | 2547240 | 7112600 | 100 | 64.30 | 270 | 45 | 2007 |
| R343 | 2546785 | 7111837 | 100.1 | 128.70 | 90 | 40 | 1987 |
| R344 | 2546794 | 7111905 | 100 | 108.20 | 90 | 40 | 1987 |
| R359 | 2546822 | 7111835 | 100.4 | 28.35 | 270 | 75 | 1987 |
| R360 | 2545950 | 7111350 | 100 | 30.20 | 270 | 70 | 1987 |
| R361 | 2546020 | 7111350 | 100 | 31.13 | 270 | 70 | 1987 |
| R362 | 2545510 | 7111785 | 100 | 30.05 | 270 | 70 | 1987 |
| R363 | 2545490 | 7111785 | 100 | 30.00 | 270 | 70 | 1987 |
| R364 | 2545460 | 7111850 | 100 | 30.00 | 270 | 70 | 1987 |
| R365 | 2545960 | 7111250 | 100 | 31.10 | 270 | 70 | 1987 |
| R366 | 2545980 | 7111250 | 100 | 31.60 | 270 | 70 | 1988 |
| R419 | 2546903 | 7113345 | 96.5 | 151.40 | 270 | 45 | 1989 |
| R420 | 2546801 | 7113295 | 96.5 | 100.00 | 270 | 45 | 1989 |
| R421 | 2546752 | 7113346 | 96.5 | 103.10 | 270 | 45 | 1989 |
| R422 | 2547041 | 7113295 | 97.6 | 100.00 | 90 | 45 | 1989 |
| R430 | 2547171 | 7113794 | 98.6 | 104.00 | 90 | 45 | 1989 |
| R431 | 2547123 | 7113794 | 98.2 | 150.00 | 90 | 45 | 1989 |
| R432 | 2547320 | 7113793 | 99.5 | 171.40 | 270 | 45 | 1989 |
| R433 | 2547213 | 7113793 | 98.9 | 143.90 | 270 | 45 | 1989 |
| R434 | 2547172 | 7113894 | 99.7 | 99.40 | 90 | 45 | 1989 |
| | | | | 1995.53 | | | |

Table 31.Details of historical drilling outside of the main prospects but currently under claim.Easting and northing according to the Finnish national coordinate system KKJ zone 2.

| Hole_id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year |
|------------|---------|----------|------------|---------|-----------|-----------|------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | |
| R201 | 2545250 | 7114640 | 93 | 108.04 | 360 | 45 | 1957 |
| R202 | 2545675 | 7114600 | 93 | 73.17 | 236 | 45 | 1957 |
| R301 | 2541195 | 7107505 | 100 | 30.85 | 270 | 45 | 1985 |
| R302 | 2541194 | 7107507 | 100 | 32.20 | 90 | 45 | 1985 |
| R303 | 2541240 | 7107450 | 100 | 30.00 | 270 | 45 | 1985 |
| R304 | 2541242 | 7107450 | 100 | 17.05 | 90 | 45 | 1985 |
| R328 | 2544010 | 7105285 | 98 | 80.00 | 315 | 40 | 1987 |
| R330 | 2547285 | 7105520 | 102 | 63.00 | 270 | 40 | 1987 |
| R331 | 2549505 | 7107305 | 100 | 86.10 | 90 | 40 | 1987 |
| R335 | 2547840 | 7115800 | 100 | 89.10 | 270 | 40 | 1987 |
| R358 | 2546870 | 7111610 | 99.6 | 30.00 | 270 | 75 | 1987 |
| R438 | 2544387 | 7116450 | 87 | 39.10 | 90 | 45 | 1992 |
| R439 | 2544410 | 7116500 | 87 | 9.00 | 90 | 45 | 1992 |
| R440 | 2544420 | 7116450 | 87 | 35.00 | 90 | 45 | 1992 |
| R441 | 2544440 | 7116450 | 87 | 11.00 | 90 | 45 | 1992 |
| R442 | 2544480 | 7116450 | 87 | 39.10 | 270 | 45 | 1992 |
| R443 | 2544415 | 7116450 | 87 | 16.60 | 270 | 45 | 1992 |
| R444 | 2544600 | 7116040 | 88 | 33.05 | 90 | 45 | 1992 |
| R445 | 2545980 | 7116696 | 97.5 | 32.60 | 90 | 45 | 1992 |
| R446 | 2546080 | 7116820 | 98 | 31.45 | 270 | 45 | 1992 |
| R447 | 2544260 | 7116660 | 88 | 42.85 | 270 | 45 | 1992 |
| R448 | 2544230 | 7116660 | 88 | 38.00 | 270 | 45 | 1992 |
| YV/PÖH-001 | 2545754 | 7109278 | 100 | 25.50 | 117 | 40 | 1985 |
| YV/PÖH-002 | 2545742 | 7109284 | 100 | 45.60 | 297 | 40 | 1985 |
| YV/PÖH-003 | 2545681 | 7109315 | 100 | 35.25 | 117 | 40 | 1985 |
| YV/PÖH-004 | 2545750 | 7109280 | 100 | 7.30 | 297 | 45 | 1985 |
| | | | | 1080.91 | | | |

Table 32 Details of historical drilling outside of the main prospect area not currently covered by claim. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

From the 50 drillholes, the database contains 465 assay samples. Table 33shows a summary of the best intervals, all of which are from holes within the current claim boundaries. Of the 465 samples, 11 samples had assay grades of >= 1 g/t Au and 27 samples had assay grades of >= 0.4 g/t Au (Table 34), of which all but one sample was from holes within the current claim boundaries.

| Hole_id | From | То | Interval | Au ppm | As ppm | Cu ppm | Grade*thickness |
|------------|--------|--------|----------|--------|--------|--------|-----------------|
| | (m) | (m) | (m) | | | | |
| BELANG024 | 51.48 | 52.99 | 1.51 | 0.50 | 1350 | 145 | 0.8 |
| BELVESN001 | 6.35 | 9.93 | 3.58 | 1.46 | 85 | 312 | 5.2 |
| R419 | 97.15 | 100.70 | 3.55 | 0.72 | 600 | 386 | 2.6 |
| R419 | 144.30 | 147.30 | 3.00 | 1.15 | 5100 | 558 | 3.5 |
| R430 | 63.60 | 72.20 | 8.60 | 0.92 | 16800 | 664 | 7.9 |
| R430 | 91.50 | 93.50 | 2.00 | 2.10 | 4100 | 1338 | 4.2 |
| R432 | 37.80 | 38.80 | 1.00 | 9.00 | 9600 | 1503 | 9.0 |
| R432 | 60.90 | 61.90 | 1.00 | 6.50 | 36000 | 4274 | 6.5 |

Table 33.Significant intersections from the historical drillings outside of the main prospects. Note that all of these are from drillholes within the current claim boundaries. Not enough information exists to estimate true thickness.

| Hole_id | From | То | Interval | Core | Au ppm | As_ppm | Cu_ppm |
|------------|--------|--------|----------|----------|--------|--------|--------|
| | (m) | (m) | (m) | Loss (m) | | | |
| BELANG024 | 30.33 | 31.71 | 1.38 | | 0.49 | 272 | 593 |
| BELANG024 | 48.62 | 49.92 | 1.3 | | 0.48 | 445 | 128 |
| BELANG024 | 51.48 | 52.99 | 1.51 | 0.13 | 0.50 | 1350 | 145 |
| BELANG025 | 23.36 | 24.25 | 0.89 | | 0.40 | 507 | 85 |
| BELANG025 | 94.24 | 95.1 | 0.86 | | 0.72 | 3570 | 224 |
| BELANG025 | 95.8 | 96.37 | 0.57 | | 0.44 | 5430 | 165 |
| BELVESN001 | 6.35 | 7.60 | 1.25 | | 3.50 | 85 | 559 |
| BELVESN001 | 8.82 | 9.93 | 1.11 | 0.04 | 0.63 | 24 | 157 |
| BELVESN002 | 12.44 | 13.35 | 0.91 | | 0.47 | 702 | 650 |
| BELVESN002 | 16.38 | 17.34 | 0.96 | | 0.70 | 92 | 372 |
| BELVESN002 | 19.65 | 20.43 | 0.78 | | 0.72 | 277 | 364 |
| BELVESN002 | 23.67 | 24.56 | 0.89 | | 0.86 | 183 | 218 |
| R419 | 87.60 | 88.20 | 0.60 | | 3.60 | 200 | 505 |
| R419 | 97.15 | 99.15 | 2.00 | | 0.51 | 600 | |
| R419 | 99.15 | 100.70 | 1.55 | | 1.00 | 7200 | 885 |
| R419 | 144.30 | 147.30 | 3.00 | | 1.15 | 5100 | 558 |
| R430 | 63.60 | 65.30 | 1.70 | | 0.65 | 16800 | 901 |
| R430 | 65.30 | 66.50 | 1.20 | | 1.05 | 4300 | 1272 |
| R430 | 67.25 | 68.25 | 1.00 | | 0.80 | 9900 | 620 |
| R430 | 68.25 | 68.80 | 0.55 | | 1.45 | 30300 | 223 |
| R430 | 68.80 | 70.00 | 1.20 | | 0.95 | 8400 | 184 |
| R430 | 70.00 | 71.20 | 1.20 | | 1.10 | 13800 | 631 |
| R430 | 71.20 | 72.20 | 1.00 | | 1.34 | 700 | 656 |
| R430 | 91.50 | 93.50 | 2.00 | | 2.10 | 4100 | 1338 |
| R432 | 37.80 | 38.80 | 1.00 | | 9.00 | 9600 | 1503 |
| R432 | 60.90 | 61.90 | 1.00 | | 6.50 | 36000 | 4274 |
| YV/PÖH-004 | 5.85 | 6 | 0.15 | | 0.41 | 1000 | 205 |

Table 34.Summary of individual samples with values > 0.4 g/t Au, from areas outside of the main prospects. Note that 26 out of these 27 samples are from holes drilled within the current claim boundaries. Not enough information exists to estimate true thickness.

6.9.3 Resources

No resource estimates have been calculated in relation to any of these drillholes.

6.9.4 Production

There has been no historical production from these other Kiimala Property areas.

7 Geological Setting

7.1 Geology of Finland

The Fennoscandian Shield is the largest (> 1 million km²) exposed area of Precambrian rocks in Europe, and similar to the famous Shield regions of Canada and Australia. The shield area constitutes large parts of Finland, north-westernmost Russia, Norway and Sweden. However, Precambrian rocks, covered by platform sediments, are known to continue to the south into the Baltic states of Estonia, Latvia and Lithuania, and southeast into Russia. In the west, the shield is bordered by the Caledonides and the reworking due to the Caledonian Orogeny is recorded in the western part of the Fennoscandian Shield. The bedrock can be subdivided into three broad domains that essentially comprise a Neoarchaean cratonic nucleus (Karelian, 3.2-2.7 Ga) flanked on both sides by Palaeoproterozoic mobile belts (see Figure 20). The Kola–Lapland domain, to the NE of the Karelian craton, records the amalgamation at around 1.9 Ga of several distinct crustal units of both Proterozoic and Archaean age, and is more characteristic of collisional tectonic processes. In contrast, the Svecofennian domain, to the SW of the Karelian craton, is entirely Palaeoproterozoic in age, and indicates relatively rapid formation and accretion of new crust between about 1.97–1.80 Ga. The geology of Finland and Fennoscandian Shield is well described by Lehtinen et al. (2005).

Archaean history of the Karelian Craton

The Karelian craton is characterised by narrow northerly trending greenstone belts surrounded by spatially more extensive granitoids and higher-grade gneiss domains. Although rocks up to 3.6 Ga are present throughout the craton, the earliest well-documented magmatic and metamorphic event seems to have taken place at around 2.84 Ga. The lower metamorphic grade greenstone sequences formed after this event, and were variably deformed and intruded by tonalitic to granitic magmas between 2.75–2.69 Ga. The Kuhmo and Suomussalmi greenstone belts are the most extensive well-preserved supracrustal units in the Archaean rocks of Finland, outcropping over a strike length of nearly 200 km, though seldom exceeding 10 km in width. They both contain abundant tholeiitic and komatiitic volcanic rocks, together with related intrusive and subvolcanic cumulates, and lesser felsic volcanic and volcanoclastic units.



Figure 20 Simplified geological map of the Fennoscandian Shield with major tectonostratigraphic units (Ojala et al. 2007). Map adapted from Koistinen et al. (2001), tectonic interpretation after Lahtinen et al. (2005). LGB = Lapland Greenstone Belt, CLGC = Central Lapland Granitoid Complex, BMB = Belomorian Mobile Belt, CKC = Central Karelian Complex, IC = Iisalmi Complex, PC = Pudasjärvi Complex, TKS = Tipasjärvi-Kuhmo-Suomussalmi greenstone complex.

The Hattu schist belt, near the SW margin of the craton, in easternmost Finland, represents a rather different kind of supracrustal sequence (compared to Kuhmo and Suomussalmi) that records rapid crustal growth and deformation between 2.75–2.72 Ga. Felsic volcanoclastic sediments in this belt, and lithofacies, as well as geochemistry of granitoids and some basalts are consistent with a collisional arc setting.

Only a smattering of nickel-copper sulphides and VMS-type deposits has been discovered thus far in the Archaean greenstone belts of the Fennoscandian Shield, whereas known orogenic gold deposits are more abundant and are part of an important global mineralising event at 2.7 Ga. The Archaean Siilinjärvi carbonatite, intruded in an anorogenic setting at 2.6 Ga, hosts a major apatite mine in central Finland.

Early Palaeoproterozoic Rifting of the Karelian Craton

The northern part of the Karelian craton, particularly in Finnish Lapland, records a prolonged and episodic history of sedimentation, rifting and magmatism throughout the Early Palaeoproterozoic. The Lapland greenstone belt is the largest mafic-dominated province preserved in the entire shield. Sequences of bimodal komatiitic and felsic volcanics dated at around 2.5 Ga unconformably overlie the Archaean basement and represent the onset of rifting. Continued rifting of the Archaean crust resulted in the widespread emplacement of gabbro-norite layered intrusions between 2.45–2.39 Ga. These intrusions host the world class Kemi chromite mine, and also contain widespread PGE-Ni-Cu enrichment, which now are under extensive feasibility studies.

Terrigenous clastic sediments discordantly overlie these layered intrusions with further episodes of mafic magmatism recorded as sporadic lavas and sills dated at around 2.2 Ga, 2.10 Ga, and 2.05 Ga. The latest stage includes the Keivitsa Ni-Cu-PGE deposit and coincided with rifting and subsidence of the Karelian craton margin, recorded by coarse clastic turbidites, carbonates, iron formations and finer-grained graphitic schists, the latter hosting the extensive, low grade Talvivaara nickel deposits. Mining started at Talvivaara in 2008, and by ore tonnage, it is now the largest mine in Finland.

Rifting culminated in extensive mafic and ultramafic volcanism and plutonism (2.4-2.0 Ga) in central Finnish Lapland and northwest Russia, resulting nickel-copper deposits from komatiite-type to ferropicritic (Pechenga) in composition and having numerous orogenic gold deposits.

Fragments of oceanic crust (1.97 Ga) were subsequently thrust back onto the Karelian craton as the Jormua and Outokumpu ophiolites, the latter being best known for its Cu-Co-Zn deposits.

Early Proterozoic Svecofennian Domain

The most voluminous crustal growth in the Fennoscandian Shield occurred in the Palaeoproterozoic age at about 1.92-1.80 Ga. This was controlled by the amalgamation of several micro-continents and island arcs (Savo arc, Keitele and Uusimaa in Figure 20) with the Archaean nuclei. This period of complex evolution, involving multiple orogenies, together constituting the "Svecofennian Orogeny", can be divided into a micro-continent accretion stage, a stage of large-scale extension of the accreted crust, and a continent-continent collision stage.

Northeast-vergent emplacement of the Outokumpu ophiolite onto the Karelian craton foreland is inferred to record the initial collision with Palaeoproterozoic micro continents and oceanic island arc(s), generating primitive tonalites from a low-K tholeiitic source. Continued volcanism within the arc(s) at 1.92–1.90 Ga led to the formation of volcanic-hosted massive sulphide deposits, including the Pyhäsalmi Zn-Cu mine. Reversal of subduction polarity following collision, or a further arc-arc collision is invoked to explain the most extensive phase of volcanism, magmatism and deformation in southern and western Finland between 1.89–1.86 Ga.

Ultramafic intrusions within reduced sedimentary sequences provided an important setting for nickel mineralisation, including the Vammala and Kotalahti nickel belts. The gold potential of this region is also being increasingly recognized, with the currently operating Orivesi mine possibly representing a metamorphosed high-sulphidation epithermal deposit, whereas other, vein-hosted gold occurrences go into the orogenic category, and are closely associated with major shear zones in the region.

Deep seismic studies in combination with geochemical and isotopic data indicate that extensional collapse and widespread intracrustal melting took place in the period 1.84–1.80 Ga. This is presently interpreted as a thermal and gravitational response to tectonic thickening of the lithosphere, although it is currently uncertain whether or not a mafic underplate was required as an additional heat source. A distinctly separate thermal input from the mantle is however invoked to account for later extension and rapakivi magmatism at 1.6 Ga.

7.2 Mining in Finland

Finland has a long history of mining. The Finnish metallic mining industry reached its peak in the 1970's with 17 active mines. Currently there are 10 active metallic mineral deposits being mined in Finland: Pyhäsalmi Cu-Zn mine producing 1.4 Mt of ore/year, Kemi chromite mine producing 1.4 Mt of ore/year, Talvivaara Ni-Zn-Co-Cu mine producing around 15 Mt of ore/year, Kittilä (Suurikuusikko) Au mine producing 1.1 Mt of ore/year, Orivesi Au mine producing 0.17 Mt of ore/year, Pahtavaara Au mine producing 0.47 Mt of ore/ year, Hitura Ni-Cu-Co mine producing 0.5 Mt of ore/year, Jokisivu Au mine producing 0.07 Mt of ore/year, Pampalo Au mine producing around 0.2 Mt of ore/year and Laiva Au mine just starting the production. Table 35 below shows the production statistics for all the active metal ore mines in Finland during the year 2010.

In addition, a number of advanced stage projects are currently being developed or evaluated including the Kylylahti Cu-Co-Ni-Au deposit, the Kevitsa Ni-Cu-PGE deposit and the Kolari Fe-(Au-Cu) deposits.

| Employment and Economy Ministry of Finland | | | | | | | |
|--|-----------|------------|------------------|------------|-------------|------------|--|
| Metallic ore production statistics of Finland during the year 2010 | | | | | | | |
| Mine | County | Metals | Holder | Total, | Ore, tonnes | Waste, | |
| | | | | tonnes | | tonnes | |
| Pyhäsalmi | Pyhäjärvi | Cu, Zn, S, | Pyhäsalmi Mine | 1,460,578 | 1,400,723 | 59,855 | |
| | | Ag, Au | Оу | | | | |
| Kemi | Keminmaa | Cr | Outokumpu | 2,052,901 | 1,382,509 | 670,392 | |
| | | | Chrome Oy | | | | |
| Pahtavaara | Sodankylä | Au | Lappland | 660,000 | 465,000 | 195,000 | |
| | | | Goldminers Oy | | | | |
| Hitura | Nivala | Ni, Cu | Belvedere Mining | 234,629 | 234,629 | 0 | |
| | | | Оу | | | | |
| | | | | | | | |
| Orivesi | Orivesi | Au | Polar Mining Oy | 257,082 | 171,003 | 86,079 | |
| Jokisivu | Huittinen | Au | Polar Mining Oy | 445,895 | 65,271 | 380,624 | |
| Suurikuusikko | Kittilä | Au | Agnico-Eagle Oy | 10,540,288 | 1,131,000 | 9,409,288 | |
| Pampalo | Ilomantsi | Au | Endomines Oy | 52,400 | 33,500 | 18,900 | |
| Talvivaara | Sotkamo | Ni, Cu, Zn | Talvivaara | 29,968,133 | 13,307,827 | 16,660,306 | |
| | | | Sotkamo Oy | | | | |
| Laiva | Raahe | Au | Nordic Mines | 110 000 | 0 | 110 000 | |
| | | | Marknad AB | | • | | |
| Total 10 mines | | | | 45,781,906 | 18,191,462 | 27,590,444 | |

Table 35.Statistical data showing metallic ore mining in Finland during the year 2010.

Figure 21shows the location of all of these deposits.



Figure 21. Active metal ore producing mines in Finland during the year 2010.

7.3 Gold in Finland

The FINGOLD database was first released in 1999 (Eilu 1999) and since that time the GTK has maintained and updated the database. Now the database has over 200 drilling-indicated gold occurrences which have at least one drill hole with a grade of 1 g/t Au over 1 m or 0.5 g/t Au over 5 m. Gold deposits in Finland (Figure 22 and Table 36) are principally described in Eilu (2007) and also in Ojala & Iljina (2008).

Archaean greenstone belts (Karelian cratonic nucleus)

In the Archaean domain of Finland, orogenic gold has been recognized in all greenstone belts. The largest number and the best-known examples are from the Ilomantsi greenstone belt in eastern Finland. The existence of gold deposits at Ilomantsi and in the Kuhmo and Suomussalmi greenstone belts has been known since the 1980s, whereas the first signs of gold mineralisation in the Oijärvi greenstone belt, in the westernmost part of the Finnish Archaean, were only discovered in 1996.

Nearly all occurrences in the Finnish Archaean are typical for the orogenic gold category (*sensu* Groves 1993): structurally controlled, gold-only, low-sulphur deposits hosted by the locally most competent lithological units, enriched in As, Au, Bi, CO₂, K, S, Te, and W, and characterised by carbonatisation, sericitisation and biotitisation. Mineralisation most probably took place during the D3 to D4 stages of the Archaean orogenesis at ca. 2.70–2.65 Ga.

Kylmäkangas, in the Oijärvi greenstone belt, forms an exception to the common style: it is an Ag-Au-Cu-Pb-Zn occurrence hosted by intensely silicified felsic metavolcanic rocks unrelated to quartz veining. The style of alteration, host rock type, siting of gold, and the metal association suggest that Kylmäkangas might be metamorphosed epithermal, not an orogenic, occurrence.



| Deposit type | Age group | Schist belt or other geological subExamples | | | | |
|-------------------------|--------------|---|----------------------------|--|--|--|
| | | area | | | | |
| Orogenic (= mesothermal | 2700 Ma | Archean: Ilomantsi, Kuhmo, | Kuikkapuro, Pampalo | | | |
| | | Suomussalmi, Oijärvi; | | | | |
| | 1900–1850 Ma | Proterozoic: Central Lapland, | Jokisivu, Laivakangas, | | | |
| | | Kuusamo*, Peräpohja, Ostrobothnia, | Osikonmäki, Pahtavaara, | | | |
| | | Savo, Tampere, Vammala | Saattopora, Suurikuusikko | | | |
| Metamorphosed | 2700 Ma | Oijärvi | Kylmäkangas | | | |
| epithermal* | 1900 Ma | Tampere | Kutemajärvi | | | |
| Skarn or Fe oxide-Cu-Au | (1880–) 1800 | Central Lapland, Peräpohja | Hannukainen, Kuervitikko, | | | |
| | Ma | | Vähäjoki | | | |
| Intrusion-related (non- | 1900–1800 Ma | Central Ostrobothnia | Jouhineva*, Hirsi*, Kopsa* | | | |
| skarn) | | | | | | |
| Massive sulphide | 1920–1870 Ma | Raahe–Ladoga Zone | Haveri*, Outokumpu, | | | |
| | | | Pyhäsalmi | | | |
| Palaeoplacer | 1900–1800 Ma | Central Lapland | Kaarestunturi, Outapää | | | |
| Placer | Tertiary– | Northern Lapland | Ivalojoki, Lemmenjoki | | | |
| | Quaternary | | | | | |

Table 36 Genetic types of gold mineralisation in Finland.

Note that there is some controversy regarding certain deposits or presence of deposit types. Such cases are marked by an asterisk (*). Massive sulphide deposits are included, as they have played a significant part in the production of gold in Finland, although gold has only been a by-product of these deposits, except for Haveri.

http://en.gtk.fi/ExplorationFinland/Commodities/Gold/genetic types of gold.html

Palaeoproterozoic greenstone and schist belts of Lapland

At present, 78 drilling-indicated gold occurrences have been discovered in the Palaeoproterozoic greenstone belts (orogenic belts) of northern Finland. Genetic deposit types detected in the region include, at least, the orogenic, iron oxide-copper-gold (IOCG) and Paleoplacer types. The orogenic type can be further divided into the gold-only and the atypical-metal-association subtypes.

Most of the features of gold occurrences in northern Finland are similar to those detected in Palaeoproterozoic greenstone belts globally. In all epigenetic occurrences in northern Finland, structure is the regionally most significant control for mineralisation. Locally, the two most significant controls are structure and rock type. Fluid compositions suggest variable, mixed, origins for volatiles and metals with no obvious indications of a local source. The orogenic gold-only type is characterised by carbonatisation with sericitisation or biotitisation; PT conditions at 300–450°C and 1–3 kbar with pyrite, pyrrhotite and arsenopyrite being the main ore minerals; consistent enrichment of Ag, Au, As, CO₂, K, Rb, S, Sb, and Te.

Orogenic gold occurrences with atypical metal association are similar to the gold-only type, except having significant chalcopyrite ± cobaltite, gersdorffite and/or uraninite contents and enrichment in Cu and in some cases in Co, LREE, Ni and/or U and intense albitisation predating the gold-related alteration.

The iron oxide-copper-gold (IOCG) occurrences are characterised by regional albitisation \pm scapolitisation, multi-stage local alteration, formation T at 400–600°C, main ore minerals of magnetite, pyrite, pyrrhotite, chalcopyrite \pm cobaltite and consistent enrichment in Ag, Au, Bi, Cu, Fe, S, and Te.

Timing of gold mineralisation in northern Finland is not well constrained. Most of the orogenic gold mineralisation apparently took place during the continental collision epoch of the evolution of the Fennoscandian shield, at 1.85–1.79 Ga, although some orogenic mineralisation may be related to the earlier compressional stage, the microcontinent accretion, at 1.91–1.87 Ga. For the IOCG type of mineralisation, both of the extensional epochs of the Palaeoproterozoic orogenic evolution seem to be possible: the occurrences could have been formed during the continental extension at 1.88–1.85 Ga, or orogenic collapse and stabilisation at 1.80–1.77 Ga, or both. For the IOCG deposits in the Kolari area, the ca. 1.80 Ga timing appears to be the most probable.

Palaeoproterozoic schist belts of Svecofennian domain

The Svecofennian domain contains the most variable styles of gold mineralisation in Finland. At least orogenic, granitoid-related non-skarn, porphyry, epithermal and VMS-styles of mineralisation have been suggested.

Orogenic gold mineralisation has been detected in all schist belts and it is the dominant style in nearly all areas, whereas the other genetic types show much more restricted presence. Most of the orogenic gold deposits are typical gold-only occurrences. Several occurrences in Southern Ostrobothnia differ from all the others with a prominent Sb content, and some occurrences in the Raahe–Haapajärvi and Southern Savo areas have high Cu concentrations. High Ag, Co, Cu or Zn contents have resulted in suggestions for orogenic gold mineralisation locally overprinting pre-metamorphic, VMS, SEDEX, porphyry or epithermal base metal mineralisation. Granitoid-related non-skarn Au-Cu and porphyry Au-Cu occurrences seem to be restricted to the Raahe–Haapajärvi area and the Central Finland granitoid complex. There, the deposits are, at least spatially, related to I-type calc-alkaline granitoid intrusions.



Figure 23.Geological setting of the Kiimala Property (yellow square) on the bedrock map of Finland. The Raahe-Ladoga suture zone is marked by the red area. Epithermal and gold-rich VMS deposits have been detected in the Raahe–Haapajärvi area, and Tampere, Häme and Uusimaa belts. Especially in the Uusimaa belt, the epithermal- and VMS-style occurrences seem to be closely related, and with the few data there exists, it is difficult to say into which genetic class an occurrence would go. Also there are occurrences, like Satulinmäki in the westernmost part of the Häme belt, where there are features indicating to orogenic, and other features suggesting metamorphosed epithermal style of mineralisation. Only for the Kutemajärvi (Orivesi) and lilijärvi deposits do almost all reported features indicate metamorphosed epithermal gold mineralisation without any significant later introduction of gold.

There are very few radiometric age data for gold mineralisation in the Svecofennian domain, and the timing must be constrained from indirect indications. The VMS and epithermal gold occurrences were probably formed during the early accretional, volcanic-arc stages of the Svecofennian orogeny, at ca. 1.92–1.89 Ga. Orogenic and intrusion-related occurrences may have had formed during the main collisional and compressional stages of the region, at 1.90–1.87 Ga or 1.85–1.79 Ga, or during both times.

7.4 Geology of the Deposit

The Kiimala Property area, including the Ängesneva deposit, belongs to the so-called Raahe-Ladoga zone (e.g. Korsman 1988, Ekdahl 1993), which runs parallel to the Archaean craton margin (Figure 23) and represents the product of complex Palaeoproterozoic subduction and collision processes (Gaál 1986 and 1990). The Raahe-Ladoga deformation zone is divided into different shear zones especially in the north western part of the zone and is the most important sulphide ore zone in Finland according to the amount of deposits and occurrences.

Central Ostrobothnia (Figure 24) consists of moderately to strongly metamorphosed, in places also intensively sheared Palaeoproterozoic rocks (Kousa et al. 2000). The supracrustals are mostly migmatised mica gneisses intercalated with minor quartz-feldspar gneisses, graphite and mica schists and amphibolites of volcanic origin and locally with some dolomite and skarn. Volcanic rocks (mainly felsic and mafic) have only limited extension, but host numerous massive sulphide deposits (Pyhäsalmi, Vihanti).



Figure 24. Gold deposits map of Finland showing the location of the Kiimala Property in Northern Ostro-Bothnia. GTK FINNGOLD database.

7.4.1 Geological Setting

The regional geology of the Kiimala Property area is composed of a supracrustal lithology typical for the Savo and Pohjanmaa schist belts, consisting of metaturbidites (mica schists) and volcano-sedimentary units metamorphosed to amphibolite facies conditions intruded by porphyritic units. The porphyries occur as subvolcanic sills or clearly intrusive masses and vary in texture from gabbroic to more or less porphyritic. Most of magnetic highs in the region of Sarjankylä and Pöhlölä-Kiimala are caused by magnetite bearing plagioclase porphyries. The supracrustal sequence has itself been intruded by Svecofennian synorogenic granitoids (1.87-1.90 Ga). These are non-magnetic and their composition varies from quartz diorite to granodiorite.



Figure 25 Location of the Ängesneva deposit (top left corner) in relation to the Sarjankylä-Kiimala shear zone belonging to the crustal scale Raahe-Ladoga suture zone. Map from Lestinen (2001)

There are many gold deposits and occurrences in the Ängesneva area (

Figure 25). These are all located near the Sarjankylä-Kiimala, as well as the Ruhaperä, shear zones. These shear zones are some of the main structures of the Raahe-Ladoga suture zone. The Ängesneva (K1) gold mineralisation (Figure 26) is hosted mainly in altered plagioclase porphyry-uralite gabbro, which is hypabyssal and intrusive in relation to the surrounding mica schists and volcano-sedimentary units. In the mica schist the original sedimentary structures are well preserved. The pelitic layers often contain andalusite porphyroblasts, whereas the sandy layers show greywacke like textures with clear bedding. The mica schists are interpreted as turbidites. Part of the mica and chlorite-sericite schists in the Ängesneva area are not, however, of sedimentary origin, but rather a result of shearing and hydrothermal alteration of plagioclase porphyries (Kojonen et al 1991).

The lithology and petrography of the Ängesneva region is described only in Sipilä (1990) and Lestinen & Mursu (2006 and 2007) and the following summary is based on those reports.



Figure 26. Geology of the Ängesneva region. Modified after Sipilä (1990).

1 = Gabbro, 2 = Diorite, 3 = Granodiorite, 4 = Plagioclase porphyry, 5 = Unakite, 6 = Quartz-feldspar schist, 7 = Intermediate/mafic, mainly volcanic, 8 = Intermediate/mafic porphyry, 9 = Plagioclase-uraliteporphyry, 10 = Silt stone, greywacke, 11 = Altered rocks, 12 = Gold mineralisation, 13 =
 Andalusite bearing schist



Figure 27 Geology of the Ängesneva area based on outcrop mapping, drilling and geophysical ground measurements. (Note: BELANG014 is the northernmost drillhole).
Volcano-Sedimentary Unit (VSU)

This is one of the main host units into which the porphyry intruded (the other main unit being the mica schist). The VSU occurs in the hanging wall and between different phases of porphyry stocks. The VSU has been logged as a major unit, but internally is quite variable, it consist mainly of intermediate volcanics and volcaniclastic sediments and tuffites with interbedded sediments. The main lithologies in this unitcomprise:

- Intermediate volcanics (IV): Dark grey coloured, medium to fine grained (grain size about 0.5-1mm) equigranular rock. Contains less or no visible mica on the outer surface of the core. There is no distinct foliation (unlike the mica schist). No obvious quartz, unlike the felsic volcanic (FV), which is much harder. The IV is coarsergrained than the FV and obviously equigranular. The texture is sometimes porphyritic, and can contain variable amounts of tuffaceous material and occasionally lapilli.
- 2. Volcaniclastics: The volcaniclasticsare essentially recognised as a textural variation of the intermediate volcanics, with a higher content of tuffaceous material and lapilli.
- 3. Metapelites: Fine grained, micaceous rocks that show no obvious foliation such as that developed in the mica schist unit. The metapelites are interbedded with the intermediate volcanic rocks.





Figure 28. Fairly homogenous intermediate volcanic (BELANG016: 72m)

Mica Schist

The mica schist consists of quartz, plagioclase and micas (biotite and muscovite) with accessories like chlorite, apatite, sphene, zircon and tourmaline. The more pelitic units contain andalusite porphyroblasts, whereas the sandier layers show greywacke like texture with clear bedding. The mica schist has a well developed foliation and deformed quartz veins which pre-date the mineralisation. The mica schist occurs on the footwall side of the

porphyry, and typically hosts relatively strong sulphide mineralisation along the contact with the porphyry.



Figure 29. Typical appearance of mica schist (BELANG016: 190m) with foliation and deformed quartz veinlets.

Plagioclase Porphyry (PP) and Amphibole Plagioclase Porphyry (AMPP)

The principal host rock for the Ängesneva gold mineralisation are the plagioclase porphyry and the amphibole plagioclase porphyry, depending on the composition of the phenocrysts. These are interpreted as subvolcanic intrusives. Historically, the GTK has called these units plagioclase porphyrites, uralite porphyries and occasionally uralite gabbro, where the texture is more gabbroic rather than porphyritic. The composition of the porphyry is clearly mafic. The main minerals are plagioclase (An₅₀₋₇₀) and hornblende with accessory apatite, zircon and sphene.

Texturally, the plagioclase porphyry is an intrusive rock with distinctive plagioclase phenocrysts up to 1cm in size, set in a dark grey, fine-grained groundmass. Grain sizes vary, possibly related to different rates of cooling and different phases of intrusion.



Figure 30. Plagioclase porphyry (BELANG015: 128m)



Figure 31. Plagioclase porphyry close up (BELANG008: 265.30 m)

The amphibole plagioclase porphyry comprises a mass of green amphibole and plagioclase phenocrysts. Textures ranges from porphyritic to equigranular.



Figure 32 Amphibole plagioclase porphyry (BELANG017: 146 m)

The amphibole plagioclase porphyry and the plagioclase porphyry occur as multiphase stocks that host gold mineralisation along the contact with the mica schist. A bluish-black fibrous mineral (possibly pyrolusite) occurs within the most strongly mineralised sections of porphyry. Where strong shearing occurs the porphyritic fabric is destroyed and the rock is fine grained with occasional remnant phenocrysts.

The Kiimala Property, Finland. NI 43-101 Technical Report



Figure 33. Sheared altered plagioclase porphyry (BELANG022: 250m)

Felsic Volcanic (FV)

The FV has a much more obvious quartz content, sometimes as fine-grained crystals, usually defined by hardness and glassy texture. Much finer grained than the intermediate volcanic rocks. The distinguishing features of this lithology are the equigranularity, very fine grain-size, with grains generally indistinguishable, and possibly visible quartz crystals on broken surfaces.

The FV is brittle, fractures and alters much more easily than the intermediate volcanic rocks and seems more amenable to brittle deformation, veining, quartz-welded brecciation, mylonite zones and silicification.

Mafic Unit (MU)

The mafic unit is typically a fine grained mafic volcanic (although possibly a mafic dyke), characterised by high specific gravity greater than 2.88. It is usually green coloured and fine grained, with strong chlorite and epidote alteration. It contains fine grained black mafic minerals.

7.4.3 Alteration

The rock types at Ängesneva display several styles of alteration. Chlorite alteration is pervasive throughout, and is most likely caused by retrograde alteration associated with the waning of peak metamorphism. Some chloritisation may also be associated with the mineralising event.

Epidote veining occurs outside of the mineralised zones and is particularly prevalent in proximity to the Kiimala fault. Hematite alteration caused by oxidising fluids is a weathering feature, and is hundreds of metres deep within the zone of the Kiimala fault but is only 30-40 metres deep away from the fault.

The hydrothermal alteration associated with the gold mineralisation is typically biotitisation, silicification and sericitisation, as well as saussuritisation of the feldspars. Quartz-sericite alteration is particularly strong in association with shear zones developed in the porphyry.

Potassic alteration is also prevalent, and is particularly visible in the plagioclase porphyry where plagioclase phenocrysts have been altered to potassic feldspar. Close to the Kiimala fault, where oxidising fluids have altered the rock, the feldspar phenocrysts, along with the groundmass, are commonly altered to a salmon-orange colour, this appears to be a red silica alteration, rather than potassic alteration.

7.4.4 Structure

The deposit is close to the northwest-trending Kiimala shear zone, which is one of the main structures of the Raahe–Ladoga suture zone. These crustal scale shear zones, and the related second level shear zones, have been important in controlling the location of mineralised bodies in the Kiimala region. The controlling structure of the Ängesneva deposit's gold mineralisation are a set of ductile-brittle shears focussed within near-vertical en-echelon mineralised lenses with quartz veins and massive sulphide breccia. On a deposit scale, the mineralised lenses plunge approximately40° to the north-east and dip steeply (70°-80°)to the south-east. Individual mineralised lenses display only minor variability in orientation, possibly controlled by the distribution of the competent porphyry bodies in relation to the shears.

7.4.5 Geological Interpretation

The Raahe-Ladoga suture zone (Figure 23) has experienced a range of metamorphic (subducting plate during convergence and/or thickening of the crust during collision, late thermal event) and magmatic (different phases of granitoid intrusion) processes that have contributed to generation and migration of gold-bearing fluids (Kontoniemi 1998). These fluids were particularly focussed into obliquely oriented dilational sites, and the role of relatively competent rock units (granitoids, plagioclase porphyry and coarse, quartz-rich sediments) was important in channelling fluids to higher crustal levels.

The Ängesneva gold project is situated close to one of the main structures of the Raahe-Ladoga suture zone, in a lithological setting offering a strong competency contrast between the relatively competent plagioclase porphyry and the metapelitic schists. The main host rock of the gold mineralisation is the plagioclase porphyry, which has been locally sheared and altered. Mineralisation extends into the footwall schists.

Ductile-brittle shears are focused within near-vertical en-echelon mineralised lenses and the orientation of the lenses broadly follows the strike of the shears. The mineralised lenses plunge about 40° to the north-east, and dip approximately 70°-80° to the south-east (Figure 27, Figure 34&Figure 35).

The deposit follows the distribution of the porphyry, and in particular the contact zone of the mica schists (metapelites) and plagioclase porphyries. There is very good potential that the mineralisation is hosted in other en echelon structures as indicated by the mineralised intersection in BELANG014 (19.17 metres at 1.37 g/t Au) but more drilling is required to determine possible extents.



Figure 34.Cross section (W-E) along profile N7114095 with histograms showing the distribution of gold. Histogram scale at top of picture.



Figure 35.Cross section (W-E) along profile N7113995 with histograms showing the distribution of gold.

8 Deposit Type

Ängesneva is defined as a Palaeoproterozoic orogenic gold deposit, comprising a set of en echelon shear zones (SW-NE direction) with quartz and sulphide bearing lodes and massive sulphide breccias. The mineralisation is hosted by a variably altered plagioclase porphyry and the enclosing mica-schist country rocks. The deposit is located along second order (SW-NE) en echelon shears, which run between parallel NW-SE trending crustal scale (>100 km) shear zones which form part of the Raahe–Ladoga suture zone. The deposit is clearly shear zone related and like typical orogenic deposits, hosts gold-only mineralisation.

9 Mineralisation

The strike length of the mineralisation has so far been defined to approximately 370 m, and extending to a depth of over 250 m at the NE end. The body strikes NE and dips at approximately 80° to the east and plunges 40° to the north, and has a true thickness of between 50 and 60 m.

9.1 Mineralogy and Paragenesis

The mineralisation at Ängesneva is primarily hosted by the plagioclase (+/- hornblende) porphyry unit, although in places it also extends into the footwall mica schists. Mineralisation is visibly recognised by the occurrence of disseminations, veins and blebs ofsulphides, or as sulphides associated with silicification, quartz veining and fracture filling. The typical sulphide assemblage is arsenopyrite, pyrrhotite, chalcopyrite and pyrite as the major ore minerals. Kojonen et al. (1991) also describe the presence of tetrahedrite, marcasite, sphalerite, löllingite, aurostibnite, metallic bismuth, bismuth telluride, hessite, emplectite and various sulphosalts.

The mineralisation at Ängesneva is related to secondary/conjugate "en echelon" shear zones striking in an approximate040° direction connecting primary NW-SE trending crustal scale shear zones. The mineralisation typically occurs as an interconnected quartz veins (carrying disseminated arsenopyrite) and sulphides in the plagioclase porphyry, which has been altered by the hydrothermal solutions, causing silicification, biotitisation, sericitisation, saussuritisation and chloritisation. The shear zones in the plagioclase porphyry can be recognised by the development of a strong fabric, associated with phenocrysts destruction, and alteration of the groundmass. However, the gold mineralisation is not confined solely to the plagioclase porphyry unit, but also in places extends "below" the porphyry into the footwall meta-greywacke mica-schists, thus cross-cutting the geological (intrusive) contact.

Kojonen et al. (1991) suggested that "the mafic host rock has offered a suitable Eh-pH environment for precipitation of the gold rich hydrothermal solutions, which came through the shear and fault zones". It is also likely that rheological contrasts between the more "rigid" porphyry and the more "plastic" mica-schist, created low-strain zones for the hydrothermal fluids to migrate into and precipitate the gold mineralisation.

9.1.1 Gold

Highergold grades are generally associated with sulphides (mainly arsenopyrite and chalcopyrite), which occur as veinlets, disseminations and blebs. The arsenopyrite and chalcopyrite (with or without pyrite and pyrrhotite) zones tend to occur as a gold-mineralised "core" of a much wider mineralised envelope containing pyrite and pyrhottite. There is a strong correlation between gold grade and arsenopyrite and chalcopyrite. Higher gold grades are obviously associated with quartz-sulphide veinlets especially containing arsenopyrite and chalcopyrite.

Gold itself occurs in the deposit as native gold, electrum, as inclusions in arsenopyrite and löllingite and as aurostibnite. Gold is also hidden in the lattice of arsenopyrite (average 0.185 wt. %), löllingite (0.190 wt. %), chalcopyrite (0.345 wt. %), tetrahedrite (0.107 wt. %) and other sulphosalts. Inclusions of native gold also occur in chalcopyrite and in the fractures and intergranular spaces of silicates (Kojonen et al. 1991).

Thus, gold seems to have precipitated in two phases:

1) with native bismuth, aurostibnite, joseite-B, bismuth, silver and gold tellurides in löllingite-arsenopyrite grains (Figure 36),

2) with native bismuth, sulfobismuthtelluride, emplectite, bismuth and silver tellurides between silicate grains (Kojonen et al. 1991).

The chemical composition of arsenopyrite with 33-33.9 atomic % As suggests a temperature of crystallization within 400-450°C (Kretschmar & Scott 1976). According to experimental results native bismuth melts at 271.5°C, hedleyite decomposes to Bi_2Te + melt at 312°C and aurostibnite melts at 460°C (Barton & Skinner 1967). This applies to the various inclusions in arsenopyrite-löllingite aggregates. These inclusions may be exsolution products of the "saturated" arsenopyrite grains, which have been acting as collectors of Au, Ag, Bi, Sb and Te. The paragenesis gold + emplectite + hessite + hedleyite + native bismuth suggests a temperature below 280°C. Bismuth + hedleyite melt at 266°C (Elliot 1965). Gold + hessite are stable within the temperature range 280-120°C (Cabri 1965), (Kojonen et al. 1991).



Figure 36 Gold (1), bismuth (2), Bi-telluride (3) and chalcopyrite (4) inclusions in arsenopyrite at Ängesneva. Field of view 0.26 mm. From Kojonen et al. (1991)

9.2 Geochemistry

The assay database contains 4,442 individual Au assays from all phases of drilling. Of these assays 642 were GTK assays (14%) and the rest were Belvedere assays. In January 2010 Belvedere undertook a resampling programme to infill the assay gaps from the GTK phase of drilling. In total 143 samples were taken from the drill core at the National drillcore repository in Loppi, and sent to the Labtium laboratory in Rovaniemi for assaying.

A statistical summary of the Au, As and Cu assays are produced in Table 37.

Of the 642 samples assayed by the GTK, 333 samples were assayed using method 519A (aqua regia leach at 20°c and Hg-coprecipiation; 1g subsamples. Elemental determination with FAAS), and 312 samples were assayed using method 522U (aqua regia leach at 20°c and Hg-coprecipiation; 20g subsamples. Elemental determination with GFAAS).

Control assaying by fire assay was made on 60 samples from three drillholes: R369, R384 and R385. The sample method was 704D, which is a lead fire assay preconcentration on a 50 g subsample, with a gravimetric analysis of Au. A comparison of the results between the fire assay and the GFAAS methods is shown in Figure 37, which illustrates the good correlation between the two methods, with a correlation coefficient of 0.9795.



Figure 37. Comparison of the GTK Au assay results from both GFAAS and Fire assay methods of analysis.

The average gold grade for all drilling within the modelled mineralised zone (using a 0.5 g/t cut-off grade) was 1.17 g/t Au. The average for Belvedere drilling was 1.22g/t Au, whereas for the GTK drilling it was 1.06g/t Au.

The likely reason for the higher average given by the Belvedere holes is that the GTK holes were drilled largely at the shallower southern end of the mineralisation, whereas the Belvedere holes extended the mineralisation deeper and to the north, where both grades and mineralised thicknesses increased.

Statistically gold correlates best with copper (Figure 38) and arsenic (Figure 39), which relate to the presence of chalcopyrite and arsenopyrite respectively.

The Kiimala Property, Finland. NI 43-101 Technical Report

| | | Ö | TK Assay | <u>/</u> | | Bel | vedere | Resour | ces Ass | avs | | A | ll Assay: | SI | |
|----------|-----|-------|----------|----------|-------------|----------|-----------|-------------|------------|-------------|-------|-------|-----------|-------|---------|
| | | | | | | All Sa | mples in | database | | | | | | | |
| | No | Mean | Median | Min | Max | No | Mean | Median | Min | Max | No | Mean | Median | Min | Max |
| Au (g/t) | 642 | 0.83 | 0.44 | <0.01 | 10.50 | 3,800 | 0.44 | 0.09 | <0.01 | 27.60 | 4,442 | 0.50 | 0.12 | <0.01 | 27.60 |
| As (ppm) | 573 | 2,991 | 1370 | <10 | 157,160 | 3,800 | 868 | 104 | Ŝ | 47,500 | 4,373 | 1,146 | 146 | <5 | 157,160 |
| Cu (ppm) | 360 | 1,115 | 903 | 44 | 6,510 | 3,800 | 646 | 343 | 2 | 36,500 | 4,160 | 686 | 383 | 2 | 36,500 |
| | | | | All Sam | ples withi | n the mo | delled mi | neralised : | shell (0.5 | g/t cut-of | f) | | 1 | | |
| | No | Mean | Median | Min | Мах | No | Mean | Median | Min | Мах | No | Mean | Median | Min | Max |
| Au (g/t) | 373 | 1.06 | 0.81 | 0.04 | 9.50 | 972 | 1.22 | 0.69 | <0.01 | 27.60 | 1,345 | 1.17 | 0.72 | <0.01 | 27.60 |
| As (ppm) | 342 | 3,474 | 2,000 | <10 | 39,300 | 972 | 2,350 | 1,365 | < 5 | 24,800 | 1,314 | 2,643 | 1,555 | < 5 | 39,300 |
| Cu (ppm) | 239 | 1,338 | 1,130 | 102 | 6,510 | 972 | 1,216 | 951 | 33 | 12,200 | 1,211 | 1,240 | 973 | 33 | 12,200 |
| | | | AI | l sample | s within th | ie model | led miner | alised she | ll and wi | th Au ≥ 0.: | 5 g/t | | , | | |
| | No | Mean | Median | Min | Max | No | Mean | Median | Min | Мах | No | Mean | Median | Min | Max |
| Au (g/t) | 274 | 1.34 | 1.05 | 0.5 | 9.50 | 619 | 1.76 | 1.06 | 0.5 | 27.60 | 893 | 1.63 | 1.06 | 0.5 | 27.60 |
| As (ppm) | 263 | 4,284 | 3,000 | <10 | 39,300 | 619 | 3,241 | 2,330 | 10 | 24,800 | 882 | 3,552 | 2,485 | <100 | 39,300 |
| Cu (ppm) | 180 | 1,527 | 1,285 | 169 | 6,510 | 619 | 1,511 | 1,170 | 66 | 12,200 | 799 | 1,515 | 1,200 | 99 | 12,200 |

Table 37.Summary statistics for Au, As and Cuassays in drill core samples



Figure 38. Scatterplot of Au versus Cu of all samples from within the modelled mineralised shell



Figure 39.Scatterplot of Au versus As of all samples from within the modelled mineralised shell

10 Exploration

Belvedere Resources has carried out diamond drilling in three phases since 2006. The aim of the drilling programme was to verify and infill the initial GTK drilling, and to define the mineralisation on a density sufficient for an Indicated Resource estimate.

During the first two phases of drilling, Belvedere drilled oriented core in order to be able to record detailed structural measurements of various features within the deposit. The purpose of this was to gain a better understanding of the controlling structures, and to confirm that drilling was in the most suitable orientation.

10.1 Structural Study

A macroscopic study of the structural features in the limited outcrops of Ängesneva deposit has not been carried out by Belvedere, as this was previously done by the GTK.The macroscopic structural features are discussed in the Regional Geology section of this report (Section 7.4).

The details of the methodology for taking structural measurements are described in Section12.3. This present section deals with the results of the structural measurements taken from drillholes and the establishment of the common trends. In total 3,375 structural measurements were recorded from 13 drillholes. The main structural features recorded are shear zones and vein sets (both with and without mineralisation).

Figure 40 and Figure 41 show the stereonets for the measured shear orientations, for all shears and for shears with Au > 1 g/t respectively. These indicate that the general shear direction strikes approximately north-south and dips moderately steeply (60°-65°) to the east. The fact that the average shear direction for the mineralised samples is similar to the direction for all the shears, suggests that it is most likely that the mineralised shears are not from a separate deformation event, or at the least, that if two events are present, that stress orientations were the same for both events.

Figure 42 and Figure 43show the stereonets for the measured vein orientations, for all veins and for veins with Au > 1 g/t respectively. These indicate that the general vein direction strikes approximately $015^{\circ}-020^{\circ}$ and dips steeply ($69^{\circ}-74^{\circ}$) to the east. As with the shears, the similarity between mineralised and unmineralised veins most likely suggests a similar event of formation. The veins, which indicate zones of dilation (low relative stress), are slightly oblique to the measured shear directions. This may indicate dilational jogs as the cause for the en echelon nature of the mineralised bodies.



Figure 40.Stereonet plot of poles to shear orientation (n=211). Mean orientation is 63° towards 087°



Figure 41. Stereonet plot of poles to shear orientation for shear zones with an associated gold grade greater than 1 g/t Au (n=50). Mean orientation is 61° towards 091°



Figure 42. Stereonet plot of poles to vein orientation (n=2200). Mean orientation is 69° towards 105°



Figure 43. Stereonet plot of poles to vein orientation, with veins having an associated gold grade greater than 1 g/t Au (n=410). Mean orientation is 74° towards 108°

10.2 Review of Previous Drilling

During the course of the various Belvedere drilling programmes and their subsequent phases of interpretation, it became apparent that there were inconsistencies in lithological logging between the various phases of drilling. Consequently, on completion of Belvedere's third phase of drilling, the old holes (by both the GTK and Belvedere) were checked, and where necessary, relogged, to ensure that rock units and descriptions were consistent throughout the database.

Whilst modelling the deposit, it became apparent that there were certain parts of the deposit with incomplete assay data intervals within the old GTK drilling that were never assayed. Consequently, the archived ½ core being stored at the GTK core repository in Loppi, was resampled, with ¼ core being cut by diamond saw, and the samples were sent to Labtium in Rovaniemi for analysis. In total 143 samples were sent for analysis, with the same QA/QC procedures used as for Belvedere samples (i.e. standards, blanks and duplicates). The data was then incorporated into the database.

11 Drilling

Belvedere Resources carried out three phases of drilling between September 2006 and January 2010. A total of 23 holes were drilled for a total of 5,609.77 down-hole metres (Table 38).Phase 1 consisted of 563.17 metres over 4 holes, Phase 2 consisted of 2,080.40 metres over 9 holes and Phase 3 consisted of 2,966.20 metres over 10 holes.

| Hole id | Easting | Northing | Elevation | Depth | Azimuth | Dip | Year | Core mm | 3D Survey |
|-----------|---------|----------|------------|--------|-----------|-----------|------|---------|-----------|
| | (m) | (m) | (m.a.s.l.) | (m) | (degrees) | (degrees) | | | |
| BELANG001 | 2546765 | 7113920 | 96.7 | 128.76 | 270 | 60 | 2006 | 57.5 | EMS |
| BELANG002 | 2546705 | 7113870 | 95.6 | 95.05 | 270 | 45 | 2006 | 57.5 | EMS |
| BELANG003 | 2546790 | 7113970 | 95.7 | 133.50 | 270 | 60 | 2006 | 57.5 | EMS |
| BELANG004 | 2546840 | 7114020 | 96.7 | 206.40 | 270 | 70 | 2006 | 57.5 | Gyro |
| BELANG005 | 2546886 | 7114070 | 96.7 | 233.50 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG006 | 2546940 | 7114070 | 96.7 | 284.55 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG007 | 2546910 | 7114095 | 96.7 | 245.20 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG008 | 2546965 | 7114095 | 96.7 | 349.50 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG009 | 2546895 | 7114045 | 99.2 | 232.80 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG010 | 2546838 | 7114045 | 98.2 | 158.35 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG011 | 2546810 | 7114020 | 95.9 | 135.25 | 270 | 50 | 2007 | 57.5 | EMS |
| BELANG012 | 2546915 | 7113995 | 97.0 | 294.25 | 270 | 60 | 2007 | 57.5 | Gyro |
| BELANG013 | 2546830 | 7114070 | 97.0 | 147.00 | 270 | 60 | 2007 | 57.5 | EMS |
| BELANG014 | 2547053 | 7114195 | 101.0 | 481.50 | 279 | 60 | 2009 | 39 | Gyro |
| BELANG015 | 2546875 | 7114095 | 100.0 | 205.60 | 270 | 60 | 2009 | 39 | Gyro |
| BELANG016 | 2546869 | 7113970 | 96.6 | 220.20 | 270 | 60 | 2009 | 39 | Deviflex |
| BELANG017 | 2546943 | 7114045 | 99.9 | 329.90 | 270 | 60 | 2009 | 39 | Gyro |
| BELANG018 | 2546798 | 7114070 | 96.3 | 60.20 | 270 | 50 | 2009 | 39 | Deviflex |
| BELANG019 | 2546884 | 7114070 | 99.9 | 180.10 | 270 | 50 | 2009 | 39 | Deviflex |
| BELANG020 | 2547030 | 7114095 | 96.9 | 422.50 | 270 | 64 | 2009 | 39 | Deviflex |
| BELANG021 | 2547026 | 7114120 | 99.5 | 407.60 | 270 | 60 | 2009 | 39 | Gyro |
| BELANG022 | 2546976 | 7114120 | 99.6 | 338.10 | 270 | 60 | 2009 | 39/28.8 | Gyro |
| BELANG023 | 2546965 | 7114045 | 99.9 | 320.50 | 270 | 60 | 2009 | 39 | Deviflex |

 Table 38.Summary of the Belvedere Resources diamond drilling at Ängesneva. Easting and northing according to the Finnish national coordinate system KKJ zone 2.

The results from Belvedere's phases of drilling are summarised below in Table 39.

| Hole id | From | То | Interval | Au ppm | As ppm | Grade*thickness |
|-----------|--------|--------|----------|--------|--------|-----------------|
| | (m) | (m) | (m) | | | (gm) |
| BELANG001 | 64.42 | 106.12 | 41.70 | 0.80 | 2197 | 33.41 |
| BELANG002 | 15.26 | 44.19 | 28.93 | 0.81 | 978 | 23.30 |
| BELANG003 | 21.16 | 23.22 | 2.06 | 1.67 | 39 | 3.43 |
| BELANG003 | 43.85 | 111.05 | 67.20 | 1.14 | 2785 | 76.57 |
| BELANG004 | 57.18 | 179.60 | 122.42 | 1.52 | 2239 | 185.71 |
| BELANG005 | 113.35 | 134.36 | 21.01 | 1.27 | 1408 | 26.76 |
| BELANG005 | 165.74 | 192.34 | 26.60 | 2.09 | 3869 | 55.55 |
| BELANG005 | 219.98 | 221.12 | 1.14 | 4.61 | 889 | 5.26 |
| BELANG006 | 194.39 | 224.34 | 29.95 | 1.27 | 2525 | 37.95 |
| BELANG006 | 238.65 | 243.02 | 4.37 | 0.82 | 2671 | 3.59 |
| BELANG006 | 248.75 | 280.76 | 32.01 | 1.07 | 4103 | 34.32 |
| BELANG007 | 102.16 | 105.22 | 3.06 | 2.09 | 7 | 6.38 |
| BELANG007 | 193.27 | 226.76 | 33.49 | 1.40 | 2279 | 46.91 |
| BELANG008 | 247.18 | 320.86 | 73.68 | 1.73 | 2261 | 127.55 |
| BELANG009 | 101.98 | 117.55 | 15.57 | 0.78 | 1400 | 12.15 |
| BELANG009 | 127.82 | 207.61 | 79.79 | 1.85 | 3244 | 147.70 |
| BELANG010 | 48.81 | 92.75 | 43.94 | 0.90 | 1193 | 39.45 |
| BELANG010 | 101.50 | 128.01 | 26.51 | 1.81 | 2800 | 47.88 |
| BELANG011 | 39.31 | 76.62 | 37.31 | 1.27 | 2238 | 47.47 |
| BELANG011 | 97.76 | 100.53 | 2.77 | 4.57 | 4942 | 12.65 |
| BELANG012 | 211.15 | 215.93 | 4.78 | 1.25 | 2853 | 5.96 |
| BELANG012 | 233.92 | 236.70 | 2.78 | 1.99 | 614 | 5.54 |
| BELANG012 | 256.58 | 276.01 | 19.43 | 0.94 | 2005 | 18.28 |
| BELANG013 | 106.38 | 108.90 | 2.52 | 4.35 | 4750 | 10.97 |
| BELANG014 | 405.45 | 424.62 | 19.17 | 1.37 | 4617 | 26.31 |
| BELANG016 | 51.16 | 53.34 | 2.18 | 1.05 | 1210 | 2.28 |
| BELANG016 | 172.34 | 176.88 | 4.54 | 0.70 | 605 | 3.16 |
| BELANG016 | 190.70 | 203.42 | 12.72 | 0.96 | 2921 | 12.22 |
| BELANG017 | 181.33 | 260.39 | 79.06 | 1.10 | 2760 | 86.94 |
| BELANG019 | 117.40 | 119.45 | 2.05 | 2.03 | 2764 | 4.16 |
| BELANG020 | 273.58 | 274.97 | 1.39 | 2.41 | 13766 | 3.34 |
| BELANG020 | 396.14 | 410.49 | 14.35 | 0.80 | 3707 | 11.42 |
| BELANG021 | 45.78 | 47.08 | 1.30 | 2.68 | 1 | 3.48 |
| BELANG021 | 325.67 | 328.42 | 2.75 | 0.89 | 9886 | 2.45 |
| BELANG021 | 396.03 | 399.63 | 3.60 | 0.95 | 3612 | 3.41 |
| BELANG022 | 218.85 | 226.33 | 7.48 | 3.14 | 6762 | 23.46 |
| BELANG022 | 266.99 | 271.95 | 4.96 | 0.71 | 1366 | 3.53 |
| BELANG022 | 281.09 | 287.44 | 6.35 | 0.53 | 200 | 3.39 |
| BELANG022 | 301.46 | 334.58 | 33.12 | 0.73 | 2861 | 24.14 |
| BELANG023 | 258.26 | 261.96 | 3.70 | 1.03 | 10781 | 3.80 |
| BELANG023 | 304.47 | 310.15 | 5.68 | 1.17 | 3107 | 6.65 |

Table 39.Highlights of Belvedere drilling results. Parameters for compositing were 0.5g/t Au cut-off, 7m at 0.0g/t Au internal dilution. No top cut. Intervals shown are those with grade*thickness greater than 2 gram.metres. True thickness is estimated to vary between 60-90 % of the interval.

11.1 Technical Specifications

11.1.1 Collar Locations

Holes were located using a handheld GPS, and the planned azimuth by using a number of foresights and backsights placed using a combination of GPS and a handheld compass. Final collar locations were surveyed by differential GPS at the end of the drilling programme.

11.1.2 Drilling Equipment

Phase 1: 28th September – 26th October, 2006

BELANG001 – BELANG004 were drilled by Suomen Malmi Oy (SMOY) using a Diamec 260 rig on rubber tracks. Drilling was done using wireline WL-76 diameter core barrels, roughly equivalent to HQ, producing a hole diameter of 76.3 mm and a core diameter of 57.5 mm. Collar casings were left in the holes to enable deepening of drill holes at later time or for further surveys (e.g. 3D deviations, geophysics) to be carried out.

Phase 2: 21st February – 19th June, 2007

BELANG005 – BELANG013 were drilled by SMOY/KATI using a Diamec 260 rig on rubber tracks. Drilling was done using wireline WL-76 diameter core barrels, roughly equivalent to HQ, producing a hole diameter of 76.3 mm and a core diameter of 57.5 mm. Collar casings were left in the holes to enable deepening of drill holes at later time or for further surveys (e.g. 3D deviations, geophysics) to be carried out.

Phase 3: 5th October 2009 – 12th January, 2010

BELANG0014 – BELANG023 were drilled by Oy KATI Ab using a Diamec 262 rig on rubber tracks. Drilling was done using wireline WL-56 diameter core barrels, roughly equivalent to BQ, producing a hole diameter of 56.8 mm and a core diameter of 39.0 mm. Caving problems in BELANG022, necessitated using WL-46 diameter core barrels from a depth of 229.90 m to the end of the hole. WL-46 produced a hole diameter of 47.0 mm and a core diameter of 28.8 mm.

Collar casings were left in the holes to enable deepening of drill holes at later time or for further surveys (e.g. 3D deviations, geophysics) to be carried out.

11.1.3 Downhole Deviation Surveys

For the first two phases of drilling (BELANG001 – BELANG013), on completion of the hole, the dip and azimuth deviation was measured by SMOY, using a Reflex EMS (Electronic Multi Shot) survey tool. This tool utilises variations in the magnetic field. If local magnetic effects become significant, the data produced can be incorrect.

For the third phase of drilling (BELANG0014 – BELANG023), the dip and azimuth variations were measured using non-magnetic survey tools. For holes BELANG016, 018, 019, 020 and 023 deviation surveys were measured with Devico's DeviFlex non-magnetic multishot survey tool.

For holes, BELANG017, 021 and 022, deviation surveys were measured using a Reflex Gyro.

BELANG004 and BELANG012 were also resurveyed using the Reflex Gyro, and although there was some variation in the measured deviations when compared to the EMS surveys, it was considered that the scale of the variations did not warrant resurveying the other Phase 1 and Phase 2 drillholes.

11.1.4 Core Orientation

In the first phase of drilling, core was oriented using the BallMark core orientation system. In the second phase of drilling the core was oriented using the Ezy-Mark core orientation system. Core was not oriented for the third phase of drilling.

11.1.5 Core Loss

In most places, core recovery was one hundred percent. Where core loss occurred it has been recorded into the assay database. Of the 3657 samples assayed from the Belvedere drilling (Phases 1 to 3), only 311 samples (8.5 % of Belvedere's samples) are recorded as having core loss. The average core loss is 0.23 metres relating to samples with an average interval of 1.24 metres.

Of the 311 samples with core loss only 31 have Au assay values greater than 0.5 g/t Au, 15 have Au assay values greater than 1 g/t Au, and only 2 samples have assays greater than 3 g/t.

As the amount of core loss in the mineralised samples is relatively minor, no dilution of the sample values has been applied to the intervals.

12 Sampling Method and Approach

The entire drill core was logged and processed by Belvedere Resources' geologists. The logging and sampling procedures as undertaken during the total tenure of Belvedere drilling has been summarised below.

12.1 Core Handling Procedures

At the drilling site, the drillers placed the core into wooden core boxes, with wooden blocks marking drill runs. If any core loss occurs in a drilling run, the extent of this is also marked at the end of each run. Following a brief examination of the core on site by a Belvedere geologist, the core was transported to the Company's secured core processing facilities in Pyhäsalmi, in central Finland.

On arrival, the core is photographed in the core boxes (both wet and dry), and the metre depths marked onto the core (and box) with a wax pencil. The core is then logged by geologists and the lithological, mineralogical, structural, geophysical and rock mechanical (SG, RQD) properties recorded as required. Samples are marked out for assaying (as described below), and cut using a diamond saw. One half was sent for assay, and the other half was retained for verification purposes. The entire remaining core is stored in the marked core boxes, on pallets, at the Company's premises in Pyhäsalmi.

12.2 Sampling Methodology

The main reason for selecting core for sampling was the presence and intensity of mineralisation, quartz veins, and shear zones. The mineralised portions of the drill cores were sampled regularly and continuously. Only a few check samples were collected from outside the zones containing significant visible mineralisation, veins or shear zones. Within the identified mineralised zones, the sample length was typically about 1 metre. The minimum sample length was 0.1 m.

No apparently high-grade mineralised intersection was sampled in conjunction with lowgrade mineralisation and sampling across lithological contacts was avoided.

The poorly-mineralised/macroscopically barren zones between two mineralised zones were sampled if the length of the zone did not exceed 10 m. In case of thicker, apparently barren zones above and below the mineralised zone, about 5 m in each zone was sampled.

The samples were clearly marked with wax pencils to indicate the beginning and ending of the samples. The sample boundaries and sample numbers were marked both on the remaining cut core as well as on the core boxes.

After the sampling was completed, macroscopic quantitative mineralogical assessment of the samples was carried out. This provides an estimate of the volume percent of the ore minerals and vein and free quartz in the sample. The assessment is carried out for all the samples. The method is based on the visual estimation of the total width occupied by a particular mineral of the sample across the diameter of the core in a sample interval. The total width is then divided by the sample length and multiplied by 100 to get the volume percentage of the mineral in the sample.

12.3 Structural Measurements

The oriented core was reconstructed on the logging table, and an orientation line drawn on the core marking "top of core". Structural features were recorded as apparent dip and azimuth data with reference to the "top of core". This data was converted into real space structural data, using the dips and azimuths of the boreholes in the 'Dips' software program.

Due to various reasons (poor mark on the core, broken core, fracture perpendicular to the core at the point of orientation mark, poor skill of the driller etc.) the confidence of the orientation mark varied. Sometimes the orientation line was based on a single mark and the line continued as long as the core matches. When this mark and the line could not be confirmed with the next or previous mark, the confidence was considered less than 100% (recommended confidence level in such cases may be 50 - 75%, depending on the degree of core matching). If the consecutive marks coincided, the confidence on the orientation line was considered as 100 %. In some cases, the marks differ by several degrees; in that case the confidence level decreases as the deviation increases.

12.4 Other Measurements

12.4.1 Specific Gravity

Measurements of specific gravity (SG) of representative samples were carried out for selected boreholes. SG was measured using 100-200 mm of intact drill core. The weight of the sample varied from 100 to 800 grams, depending on the size and composition of the sample. The measurement procedure used was the following:

- The weight of the sample was measured in air (Wa) with a scale capable of reading to an accuracy of 1 gram;
- The weight of the same sample was measured with the same scale by immersing the sample completely in water (Wb), by hanging it with a relatively weightless thread from the scale.

Attention was paid that the scale read zero grams before any measurement was taken. The specific gravity (SG) was calculated using the following formula:

A total of 1,605 density determinations were done at Ängesneva (Figure 44), giving an average density of 2.804 g/cm³ with a standard deviation of 0.147 g/cm³



Histogram for sg

Figure 44 Histogram of all specific gravity measurements from Angesneva

Of these, 285 samples were assayed from within the modelled mineralised zones, giving an average density of 2.840 g/cm³ and a standard deviation of 0.159 g/cm³. A histogram of the specific gravity measurements from within the 0.5 g/t Au mineralised shell is provided in Figure 45. It is apparent that there is an "outlier" with an SG of 4.88 g/cm³. This sample relates to a massive quartz-sulphide (arsenopyrite) breccia from BELANG009, and is real. However, this high value does raise the value of the mean. Consequently, it has been decided to use the median value of 2.83 g/cm³ for the density of the mineralised zone.





12.4.2 Rock Quality Designation

This quantitative index was used to differentiate broken and low-quality rock zones from intact rocks. RQD is calculated by measuring only pieces of core that are greater than 100 mm in length for a given interval and dividing by the total length of the interval. RQD is measured in the following way:

- A convenient interval was chosen, usually drill runs separated by core markers;
- The lengths of pieces of intact core were determined using a measuring tape. Any pieces of core greater than 100 mm in length for a given interval were added together and divided by the total length of the interval;
- The resultant figure was then multiplied by one hundred to give the RQD as a percentage.

13 Sample Preparation, Analyses and Security

13.1 Sample Preparation and Analysis

The drill core was split into two parts using a diamond saw and dried in ambient temperature (heated, if necessary, in rare cases) before sampling. Core was cut wherever possible, along the true vertical plane of the core. One half of the split samples were collected in a strong polyethylene sample bag marked with the sample number in permanent ink. A paper tag with the sample number was also put inside the sample bag. The sample bags were then packed in sacks (about ten samples per sack) for transport to the laboratory. The sacks were dispatched using a local transport Company either to the Labtium Oy laboratory at Rovaniemi in Northern Finland or to the Laboratory of ALS Chemex in Öjebyn, northern Sweden for assaying. Both of these laboratories are internationally accredited laboratories.

The assays from the first two phases of drilling were carried out at the ALS Chemex laboratories in Öjebyn, Sweden. Here, the samples were prepared using PREP-22 method which comprises "Log sample in tracking system, weigh, dry, coarse crush the entire sample and pulverize entire sample to better than 85% passing 75 micron." This is applicable to samples up to 3kg. The gold analysis was carried out using the method Au-AA25 gold fire assay, which envisages analysing ore grade Au (0.01-100ppm) by fire assay (30g nominal sample weight) with AAS finish. In addition, the trace elements were analysed with ME-ICP61 method, in whichthirty-three elements were analysed by HF-HNO₃-HClO₄ acid digestion, HCl leach, and ICP-AES. The method quantitatively dissolves nearly all elements for the majority of geological materials. Only the most resistive minerals, such as zircons, are only partially dissolved.

| | ALS C | hemex: | Analytes and Ran | ges for | Au-AA25 and ME- | ICP61 | |
|----|-----------------|--------|------------------|---------|-----------------|-------|-----------------|
| Au | 0.01 - 100 ppm | Со | 1 - 10,000 ppm | Мо | 1 - 10,000 ppm | Th | 20 - 10,000 ppm |
| Ag | 0.5 - 100 ppm | Cr | 1 - 10,000 ppm | Na | 0.01 - 10 % | Ті | 0.01 - 10 % |
| AI | 0.01 - 50 % | Cu | 1 - 10,000 ppm | Ni | 1 - 10,000 ppm | тι | 10 - 10,000 ppm |
| As | 5 - 10,000 ppm | Fe | 0.01 - 50 % | Р | 10 - 10,000 ppm | U | 10 - 10,000 ppm |
| Ва | 10 - 10,000 ppm | Ga | 10 - 10,000 ppm | Pb | 2 - 10,000 ppm | v | 1 - 10,000 ppm |
| Ве | 0.5 - 1,000 ppm | к | 0.01 - 10 % | S | 0.01 - 10 % | w | 10 - 10,000 ppm |
| Bi | 2 - 10,000 ppm | La | 10 - 10,000 ppm | Sb | 5 - 10,000 ppm | Zn | 2 - 10,000 ppm |
| Са | 0.01 - 50 % | Mg | 0.01 - 50 % | Sc | 1 - 10,000 ppm | | |
| Cd | 0.5 - 1,000 ppm | Mn | 5 - 100,000 ppm | Sr | 1 - 10,000 ppm | | |

Table 40.Elements and detection ranges for ALS Chemex assaying methods

The assays from the third phase of drilling were carried out at the Labtium laboratory at Rovaniemi in Northern Finland. Here the samples were prepared and assayed as follows. The split drill core (max. weight 10 kg) was dried at 70 °C (method code 10). The samples were

then prepared along the robotised sample preparation line (ROBO1), which includes: jaw crushing of the rock samples to >70% < 2mm (method 32) with compressed air cleaning of the jaws between samples. The crushed sample is then split in a rotary splitter (method 34) to provide a 0.8 - 1.5 kg sub-sample. The sub-sample is then pulverised with LM2 pulverising mill (method 52). The rest of the crushed reject is bagged and labelled and returned to Belvedere for storage. The pulverising puck and the bowl are cleaned with glass bead blasting after every sample to overcome cross contamination. After pulverising the pulp is split into further sub-samples for assaying and archiving (method 38)



Figure 46. Schematic of Labtium robotised sample preparation unit

One of the sub-samples is analysed for Au, using method 704P. A 25g subsample, is concentrated by a lead fire assay, and then analysed for Au with ICP-AES, and a detection range of 0.01 - 100 ppm Au. Another subsample is leached at 90 °C in Aqua Regia (method 511) and then analysed for 28 elements by ICP-AES (method 511P). This method is not a "total digestion" method, and hence the (non-gold) trace element data needs to be recognised accordingly.

| Lab | tium: Detec | tion Limits f | or Methods | 704P and 5 | 11P |
|-----|-------------|---------------|------------|------------|---------|
| Au | 10 ppb | Cr | 1 ppm | Pb | 10 ppm |
| Ag | 1 ppm | Cu | 1 ppm | S | 20 ppm |
| AI | 20 ppm | Fe | 50 ppm | Sb | 20 ppm |
| As | 10 ppm | К | 200 ppm | Sc | 0.5 ppm |
| В | 5 ppm | Mg | 50 ppm | Sr | 0.5 ppm |
| Ве | 0.5 ppm | Mn | 1 ppm | Ті | 1 ppm |
| Ва | 1 ppm | Мо | 2 ppm | v | 1 ppm |
| Са | 50 ppm | Na | 50 ppm | Υ | 0.5 ppm |
| Cd | 1 ppm | Ni | 3 ppm | Zn | 1 ppm |
| Со | 1 ppm | Ρ | 50 ppm | | |

Table 41. Elements and detection limits for Labtium assaying methods

13.2 Data Handling

Assay data was received from the laboratory as digital files. These were incorporated by Belvedere staff into the project database, and checked against the original sample information. Sample standards and blanks are at this time checked (see below). Any discrepancies with the expected data are reported to the laboratory for verification, and if required, reassaying.

13.3 QA/QC Procedures

The following QA/QC procedures were utilised to ensure the integrity and validity of the assay data.

During all handling of the core and samples under Belvedere's control (including drilling contractors and Company staff) no personnel were permitted to wear gold jewellery to minimise contamination. In addition the diamond saw was cleaned at the end of every shift by cutting a piece of brick or barren rock and water, to reduce the potential for cross contamination.

13.3.1 Blanks, Standards and Duplicates Procedures

The quality and accuracy of the assay data being received from the laboratories is routinely monitored by the use of blanks, standards and duplicates being inserted and assayed in the assay runs.

Belvedere inserts blank samples at the beginning, and in some cases also at the end, of every batch sent to the laboratory for assay. This serves to check that there is no contamination of Belvedere's samples from other (perhaps higher grade) samples being assayed at the Laboratory. Likewise the sample at the end of the batch (where included) indicates whether gold from Belvedere's samples is remaining in the preparation of the samples and thus not being assayed.

The use of standards provides a good idea on the accuracy and precision of the analyses. Belvedere inserts a reference sample (standard) with a known gold concentration every 20th sample. The actual standard used varies, but typically is one that contains a similar concentration of gold, as is expected from Belvedere's samples. The standards used by Belvedere were obtained from Activation Laboratories Ltd., Ontario, Canada. The values of these standards are provided (Table 42) with an acceptable range of values as defined by Activation Laboratories, or with a margin of +/- 10% of the defined values.

| Standards | Nominal Value | Accepted Range |
|-----------|---------------|----------------|
| | Au ppm | Or ± 10% |
| ST 10 | 0.82 | ± 0.08 |
| ST 10A | 9.78 | ± 0.53 |
| ST 11 | 3.40 | ± 0.34 |
| ST P7A | 0.77 | ± 0.06 |
| ST 3B | 3.47 | ± 0.26 |
| ST 12 | 9.98 | ± 1.00 |
| ST P8 | 0.78 | ± 0.08 |
| ST 3F | 3.10 | ± 0.31 |
| ST 10C | 9.71 | ± 0.97 |

Table 42 Standard Au values used for Ängesneva drill core assays

In addition, to the insertion of standards, it is typical for the laboratories to conduct a certain number of duplicate analyses of samples. This provides a further check on the precision of the analytical results.

Accredited laboratories are required to run their own QA/QC procedures including the use of a certain number of their own blanks, standards and duplicate analyses. This data is usually made available when the finalised assay results have been completed. Table 43 shows the total number of assays, blanks, standards and duplicates utilised for the QA/QC of gold assays for all three phases of Belvedere drilling.

| | | Labor | atory | B | elveder | е | | | Total | | |
|---------|--------|-------|-------|-------|---------|------|-------|------|-------|-----|-----|
| | Assays | Blank | Stds | Blank | Stds | Dupl | Blank | Stds | Dupl | All | |
| Phase 1 | 513 | 24 | 45 | 6 | 25 | 21 | 30 | 70 | 21 | 121 | 19% |
| Phase 2 | 1603 | 68 | 145 | 33 | 86 | 51 | 101 | 231 | 51 | 383 | 19% |
| Phase 3 | 1462 | 63 | 65 | 17 | 78 | 59 | 80 | 143 | 59 | 282 | 16% |
| Total | 3578 | 155 | 255 | 56 | 189 | 131 | 211 | 444 | 131 | 786 | 18% |

Table 43 Summary of QA/QC procedures utilised for Belvedere drilling

The results of the standard assays submitted by Belvedere for the 3 phases of drilling are in Figure 47Figure 49. These also show the acceptable ranges for analysis as detailed in Table 42. The data shows that, with only a few exceptions, the quality of the standard assays has been good. Figure 50 shows the results of the duplicate analyses sent for assay in the recent Phase 3 drilling. All except one of the duplicate assays plot within the dashed lines, which show the ± 5% range.

Standards from Belvedere Phase 1 Drilling



Figure 47.Standard assays and ranges from Belvedere Phase 1 Drilling



Standards from Belvedere Phase 2 Drilling

Figure 48. Standard assays and ranges from Belvedere Phase 2 Drilling

Standards from Belvedere Phase 3 Drilling



Figure 49. Standard assays and ranges from Belvedere Phase 3 Drilling

Belvedere Phase 3 Drilling: Duplicates



Figure 50. Duplicate sample assays from Belvedere Phase 3 Drilling. Dashed lines show ±5% range

No employee, officer, director or associate of the issuer of this report conducted any aspect of the sample preparation beyond that described. In the opinion of the Qualified Person for this report, the sample preparation, security and analytical procedures were adequately undertaken.

14 Data Verification

Geological, geotechnical and analytical information for the Ängesneva deposit consists of the data generated by both the GTK during the 1988-1989 drillings and by Belvedere Resources during it's 2006-2009 drilling programmes. The assays were received electronically from the laboratories, and imported directly into drill hole database spreadsheets in Excel.

The Qualified Person for the technical report June 2nd 2010 has relied wholly on information and data provided by Belvedere Resources to construct the geological model for the Ängesneva deposit. The Qualified Person did not conduct fieldwork, other than a short visit to inspect the property on March 3rd 2010, and did not independently drill any holes, log core or independently sample drill core or obtained commercial assays of check samples. The location of two drillhole casings, BELANG015 and BELANG019 were verified with a handheld GPS and found to be correctly entered into the database. The core for drillholesBELANG017 and BELANG022 was inspected and compared with assay sheets and core logs. The Qualified Person for this technical report did not conduct fieldwork, other than a short visit to inspect the property on September 26nd 2011, and did not independently drill any holes, log core or independently sample drill core or obtained commercial assays of check samples. At Ängesneva, the location of two drillhole casings, BELANG004 and BELANG015 were verified with a handheld GPS. At Vesiperä, the location of the drillhole casing BELVES001 was verified with a handheld GPS. Both at Ängesneva and at Vesiperä the outcrops within the mineralised area were visited. Structural features connected with the mineralisation (e.g. orientation and lineation of the rock vs. strike and plunge of the mineralisation) are visible at the outcrops.

No details are available for the exact QA/QC procedures employed by the GTK for their drilling in 1988 – 1989. However, the work was undertaken by professional personnel (competent persons) from the GTK, who undertook sampling of drill core in accordance with good and established industry practice. The assays were carried out by the GTK laboratory in Finland. The GTK laboratory (now Labtium Oy) was awarded an international accreditation by the Centre of Metrology and Accreditation (FINAS) on 2.11.1994. Prior to this date, the laboratory was run in accordance with good and established industry practice. Consequently, the Qualified Person for the technical report June 2nd 2010 considers the data to be reliable for resource estimation purposes. In addition the Qualified Person for this report concludes that the comparison between GTK GFAAS and fire assay gold contents shows that the GTK gold assays can be relied on.

The QA/QC procedures carried out during the Belvedere period of exploration are well documented. The assays were carried out in accredited laboratories, and certificates from the laboratories, stating the correctness of the assays are available.

The Qualified Person for this report has no reason to believe that any of the data or documentation provided is misleading in any way. However, no warranties regarding the source data provided by others can be given. It is the Qualified Person's opinion that the QA/QC procedures were adequate, and both the exploration companies (Belvedere

Resources and the Geological Survey of Finland (GTK)) are believed to have carried out the work to industry standards and the data is thus believed to be reliable.

The Qualified Person for the technical report June 2nd 2010 has validated the data only for obvious errors in original source records by plotting the geological and analytical data in plan and cross sections, and modelled it in three dimensions to ensure that the digital output fits with topographic, lithologic, mineralisation, and analytical and other constraints of the deposit. No significant errors were found in this validation procedure. The assay and geological databases are estimated to be suitable to support resource estimates. The Qualified Person for this report concurs with this.

15 Adjacent Properties

The developed properties and the existing mines in the same region as the Kiimala Property are Belvedere Resources Hitura Ni-Cu mine and Kopsa Au-Cu Project; the Laivakangas gold project owned by Nordic Mines, and Pyhäsalmi Zn-Cu-S owned by Inmet Mining Corporation (Figure 3, Figure 4, Figure 21 and Figure 24). The mineral licences and current licence applications in the Bothnia region are shown in Figure 2.

16 Mineral Processing and Metallurgical Testing

During August 2007, a suite of 142 samples were sent to the GTK Laboratory in Sodankylä (now owned by Labtium Oy) for assaying using a cyanide pressure acid leach (PAL) method. The samples were taken byBelvedere on drill core samples from a continuous mineralised interval from BELANG004. The tests were carried out on the coarse rejects. The objective was to determine an estimate for the amount of free (leachable) gold contained in the Ängesneva mineralisation, as compared to total gold measured by the fire assay method by ALS Chemex.

16.1 Method

The tests were carried out using a PAL1000 machine (GTK/Labtium method 236A), which enables simultaneously pulverizing and cyanide leaching of the sample. This ensures that the grain size of the pulp is extremely small and the leaching of metallic-Au is 100%. Five hundred grams of the sample was leached for 2 hours with a commercial LeachWELL-reagent containing sodium cyanide, sodium hydroxide and some patented accelerating chemicals. The chemicals were added as a tablet to 500ml slurry containing sample and water. The PAL1000 machine consists of steel cylinders with steel balls inside to agitate and pulverize the sample. The cylinders are tumbled head over head. After leaching, an aliquot was taken and analysed for cyanide leachable Au with Flame-AAS, with a detection limit of 0.1 ppm Au.

In addition, 9 samples were preselected for assaying the tailings (leach residue), providing a check for how much of the Au is non-leachable to cyanide, and providing an internal check on recoverabilities. The tailings were filtered off and washed to get rid of cyanide solution, dried, homogenized and assayed for Au with 50g Fire Assay and analysed with Flame-AAS (Labtium method 705A) for unrecoverable Au with a detection limit of 0.1 ppm Au.Six standards and six duplicates were inserted into the sample run by the GTK for QA/QC purposes.

16.2 Results

The detailed gold assay values for the nine samples which were preselected for tailings assays, are provided with other relevant data in Table 44. The results were provided by the GTK as an Excel table with a gold value for each of the 142 samples. The summary statistics for these, combined with the ALS Chemex fire assay data for the samples, are provided in Table 45.

16.3 Interpretation

16.3.1 Total Gold in Sample

In an ideal case, the gold value from the ALS Chemex fire assay should be exactly the same as the combined gold value from the leach and the tail assays. However, when these are compared in Table 44, it is apparent that there is some variation in values. The column "GTK vs ALS Au content" shows that in 7 out of 9 cases the GTK assays are slightly higher than the original ALS assays. Overall, the average variation for all 9 samples shows that the GTK (leach + tailings) returns 6% more gold than the original ALS fire assay.

Although this is only a small sample (n=9), and many explanations exist for this variation, it is possible, and perhaps even likely, that this variation is due to the "nugget effect" of the gold, and difference in overall sample sizes: 25 grams for the ALS Chemex fire assay versus 500 grams for the GTK leach tests.

16.3.2 Recoverable Gold (leach versus tailing)

The value of gold extracted by the leach compared to the total gold (as measured by leach + tailing) is a good estimate of the amount of free gold (i.e. recoverable by leaching) in the samples. The leach tests for the nine samples with tailings assays, gave a range of recoverability varying from 75.7% to 85.4%, with an average value of 80.2%.

16.3.3 Estimate of Recoverable Gold (leach versus ALS Chemex fire assays)

In the absence of tailings assays for most of the samples, the ratio between the GTK leach assay and the ALS Chemex assay, provides an estimate of the recoverability. However, this method fails to account for any variation in gold contents due to sample size (as described in Section 16.3.1).

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| Hole | From | То | Interval | Samp ID | Original | PAL1000 | Tailings | Total Au | GTK vs ALS | ALS vs PAL | PAL vs Tailings | Rock Type |
|-----------|--------|--------|----------|----------|----------|---------|----------|----------|------------|----------------|-----------------|---------------------------------|
| | | | | | ALS FA | GTK | GTK | GTK | Au content | Recoverability | Recoverability | |
| | | | | | Au ppm | Au ppm | Au ppm | Au ppm | | | | |
| BELANG004 | 57.18 | 58.13 | 0.95 | BANG0266 | 6.34 | 5.60 | 0.95 | 6.55 | 103% | 88.3% | 85.4% | Intermediate Porphyry |
| BELANG004 | 71.61 | 72.96 | 1.35 | BANG0279 | 1.29 | 1.17 | 0.28 | 1.45 | 112% | 90.7% | 80.8% | Intermediate Porphyry |
| BELANG004 | 99.33 | 100.03 | 0.70 | BANG0309 | 3.88 | 3.02 | 0.97 | 3.99 | 103% | 77.8% | 75.7% | Intermediate volcanic |
| BELANG004 | 100.03 | 101.15 | 1.12 | BANG0310 | 9.09 | 6.72 | 1.89 | 8.61 | 95% | 73.9% | 78.0% | Intermediate volcanic |
| BELANG004 | 112.08 | 113.06 | 0.98 | BANG0323 | 4.73 | 3.53 | 0.96 | 4.49 | 95% | 74.6% | 78.6% | Plagioclase porphyry |
| BELANG004 | 117.76 | 118.70 | 0.94 | BANG0329 | 9.07 | 7.42 | 1.64 | 90.6 | 100% | 81.8% | 81.9% | Plagioclase porphyry |
| BELANG004 | 166.40 | 167.37 | 0.97 | BANG0377 | 3.93 | 3.15 | 0.96 | 4.11 | 105% | 80.2% | 76.7% | Plagioclase porphyry |
| BELANG004 | 171.41 | 172.45 | 1.04 | BANG0383 | 1.29 | 1.26 | 0.25 | 1.51 | 117% | 97.7% | 83.6% | Intermediate volcanic sediments |
| BELANG004 | 175.55 | 176.70 | 1.15 | BANG0387 | 1.83 | 1.79 | 0.41 | 2.20 | 120% | 97.8% | 81.2% | Intermediate volcanic sediments |
| | | | | | | | | | | | | |
| | | | | | | | | Averages | 106% | 84.8% | 80.2% | |

Table 44. Detailed Cyanide Pressure Acid Leach (PAL1000) results for selected Ängesneva drill core samples

| | All sa | nples |) < STV |).5 g/t |
|------|--------|-----------|---------|-----------|
| | ALS FA | GTK Leach | ALS FA | GTK Leach |
| u | 142 | 142 | 16 | 91 |
| Мах | 60.6 | 7.42 | 60'6 | 7.42 |
| Min | 0.01 | 0.10 | 0.52 | 0.46 |
| Mean | 1.36 | 1.17 | 1.95 | 1.61 |
| SD | 1.60 | 1.27 | 1.74 | 1.36 |
| | | | | |

Table 45. Summary statistics of samples used for GTK PAL1000 leach tests
In the case of the nine samples with tailings assays, the range of recoverability (by comparing leach to ALS Chemex fire assay) varies between 73.9% and 97.8%, with an average of 84.8%. The greater range of values for recoverability, compared to those calculated from leach versus tailing assays, reflects the variations in total gold by the different assay methods. The higher recoverabilities (>90%) are due to the ALS Chemex assays *underestimating* totalgold contents when the gold tenor is low (below 2.0 g/t Au). The lower recoverabilities (<78%) are generally due to the ALS Chemex assays *overestimating* total gold contents when the gold tenor is high (above 3.5 g/t Au). This variation can be explained as a function of the nugget effect of gold.

| | All samples | ALS > 0.5 g/t | leach vs ALS | leach vs tail |
|------|-------------|---------------|--------------|---------------|
| n | 142 | 91 | 9 | 9 |
| Max | 167% | 102% | 98% | 85% |
| Min | 56% | 56% | 74% | 76% |
| Mean | 89% | 85% | 85% | 80% |
| SD | 14% | 9% | 9% | 3% |

Table 46. Summary recoverability statistics for Ängesneva leach tests

For the total of 142 samples that have leach values, there is a range of recoverabilities between 56% and 167%, with an average of 89%. However, these figures include samples with fire assay values that are close to, and in some cases lower, than the detection limit used by the GTK for the leach tests.

If only data which has ALS Chemex fire assays ≥ 0.5 g/t Au is considered, (which also better reflects the data within the mineralised shell used for the mineral resource estimation) then the statistics look better. The range of recoverabilities varies between 56% and 102% with an average of 85% and standard deviation of 9%. This is comparable to the recoverabilities for the nine selected samples, when they are compared to the ALS Chemex assays.

16.4 Summary

Based on the leach results discussed above, it is apparent that on average the "true" free gold content at Ängesneva is about 80%. However, when applied to the existing ALS Chemex fire assays, the free gold figure rises to 85%, due to generally underestimating the gold content in small 25g samples. This is a result of the nugget effect. It is possible to say that "*it is likely that up to 85% of the estimated gold content of the deposit may be amenable to leaching*"

Although this estimate of free gold can be used as an estimate for leach recoverability (as has been done here), it is important to note that this is only a very preliminary test on the metallurgical properties of the mineralisation. This method does not provide any information with regard to the variation in leachable gold as a function of grain size, nor of the time required to achieve the suggested recoveries in a commercial leach operation. Full metallurgical studies are required to provide better estimates of how potential ore will behave through various treatments.

17 Mineral Resource Estimates

A resource estimate for the Ängesneva deposit was constructed using geological and assay information from all 69 drill holes. The focus in this section of the report is on the methodology for estimating the gold resource. Raw assay data were composited and analyzed to determine their basic statistical and geostatistical properties. This information has been used in testing modelling algorithms which have been compared and checked for validity. The final resource has been categorised into indicated resources, compliant with the JORC Code.

The mineral resource presented in this section of the report was estimated by Mr. Thomas Lindholm of GeoVista AB, following the guidelines of the JORC Code.

17.1 Database for deposit model

The drill hole database, managed by Belvedere Resources Finland Oy, was delivered to the Qualified Person for the technical report June 2nd 2010 in digital format and was imported into Surpac Vision software. The used database contains all the information up to the end of the latest drilling and resampling campaign, which was completed in early February 2010. The data for the resource model was extracted from the database on 8th February, 2010.

The database contains information on 69 drill holes with a total length of 9,167.71 metres and 4,442 assays (average assay interval 1.19 m). The assay table contains the assays of 36 elements, although due to the numerous phases of drilling, not all sample intervals have assay measurements for all elements. The lithology table contains 844recorded intervals, which have been grouped into 12 genetically related main units. The database includes 1,605 density (specific gravity) measurements, made from the Belvedere phase of drilling (Section 12.4.1). Geotechnical rock quality determinations (2,456) have been done for all 23 Belvedere drill holes using the RQD method (Section 12.4.2). In addition a further 781 RQD measurements have been included from 10 holes from the historical GTK drilling.

The historical (GTK) drillholes that were used for the current resource estimate were drilled using T-46 core (diameter of 31.7 mm). The old drillcore is available for viewing and further sampling at the GTK national core repository at Loppi.

The Qualified Person for the technical report June 2nd 2010 has not validated the entire database for accuracy, but has compared randomly selected data entries in the database against the certified assay results provided by the laboratories. The Qualified Person for the technical report June 2nd 2010 has also ascertained that the database does not contain any duplicate records or overlapping sample intervals. Furthermore, collar elevations in the database appear to be within an acceptable margin of error when compared to topography. The Qualified Person for the technical report June 2nd 2010 is thus of the opinion that the database is suitable for the purpose of estimating a mineral resource. The Qualified Person for this technical report concurs with this.

17.2 Geological Model

The preliminary statistics does not indicate that any obvious breakpoint in the distribution of gold-grades exists, that will distinguish between mineralised rock and waste. The model is therefore based principally on a 0.5 g/t Au cut-off grade interpretation. This cut-off grade is considered to be a reasonable starting-point should Ängesneva be developed into an open pit mine. However this does not necessarily imply any economic feasibility at this time.

Shorter (<7 m true width) inclusions of lower grade were permitted to facilitate potential for internal waste dilution in the modelling. In two instances, un-analysed drillcore sections were included with the grade set to 0.00 g/t Au. These sample intervals (R387: 117.00 – 119.00; R418: 168.65 – 174.50) have not been included in the summary statistics of raw data, but have been included in the composites and for variography. No consideration was given to elements other than Au in the overall modelling. The geological model has been represented by one mineralised domain (Figure 51).

Thirteen sections were plotted normal to the deposit trend at nominal 25 metre spacing and grade interpretations were made to delineate the separate mineralised domains, enveloping each unit within an independent polygon.

After digitising all interpreted polygons, the wireframe solid was created. The solid was analyzed for errors such as overlaps or gaps and corrected. The wireframe was then split up on 10m horizontal benches and rechecked for consistency and then reconnected into a solid. The final wireframe was cut against the bedrock-overburden interface.

The overall strike length of the modelled mineralisations is approximately 370metres, the vertical extension has been extended down to about 400 metres depth, although the resource itself has not been reported for this depth (Section 17.8).



Figure 51Modelled mineralised domain at a 0.5 g/t Au cut-off at Ängesneva

17.3 Raw Assay Intervals

The database was coded for the mineralised domain as explained in section 17.2. Samples were extracted from the database for the domain. Basic statistical studies, as well as grade estimation, were carried out using only the samples within coded mineralised zone. The total number of assayed sectionswithin the modelled shell is 1,345.

Basic statistics were calculated for gold only. The results are presented in Table 47. The table shows classical statistical parameters for assays.

| Au raw assays | Minimum | Maximum | Mean | Median | Std Dev |
|---------------|---------|---------|-------|--------|---------|
| g/t | 0.005 | 27.6 | 1.175 | 0.720 | 1.843 |

Table 47 Basic statistics for raw assays of Au within the mineralised zone

A log histogram of the raw Au assays is also provided in Figure 52.



Log Histogram of Au within Mineralised Shell

Figure 52. Log histogram of raw (uncomposited) Au assays within the mineralised shell

The statistics are quite typical for a skewed distribution and what is expected for a gold deposit of this type.

17.4 Compositing and Top-cutting

Since the average sample length for all the samples is 1.25m with 78 % of the samples having a length of 1.50 m or less, it was decided to composite all samples to 1.5m length. This was done by using a best-fit method, whereby the composited sample intervals can vary slightly in length, so that they fill the entire intersection of the modelled domain.

Compositing is the first process of estimation. It is essential to check that the mean value does not change significantly due to compositing. This was done by comparing the mean of the original samples with the mean of the composited samples. The results of basic statistics after compositing are shown in Table 48.

| Au raw assays | Minimum | Maximum | Mean | Median | Std Dev |
|---------------|---------|---------|-------|--------|---------|
| g/t | 0.00 | 15.50 | 1.123 | 0.80 | 1.319 |

Table 48.. Basic statistics for 1.5 m best-fit composite assays of Au within the mineralised zone

We see that the mean value as well as the standard deviation drops as the data is composited. A log histogram plot of Au in the composites shows a smooth distribution (Figure 53.Log Histogram showing the distribution of Au for the 1.5 m best-fit composites). The few very low samples (< 0.01 g/t Au) are from the zero values assigned to the intervals in holes R387 and R418



Log Histogram of Au in 1.50m Composites

Figure 53.Log Histogram showing the distribution of Au for the 1.5 m best-fit composites

The distribution of gold requires that data are top-cut to avoid biased interpolation, a lognormal probability plot of the composites (Figure 54) show that data starts to break up somewhere above 10 g/t Au.

A mean and variance plot (Figure 55), which examines the impact on the mean and coefficient of variance with decreasing top cut, indicates that there is a significant inflection at about 9 g/t Au. In other words, decreasing the topcut beyond 9 g/t Au would significantly decrease the mean and CV of the population, so that not only the outliers have been cut, but also a legitimate part of a skewed population.

On this basis, the top-cut was selected to 9 g/t Au. This topcut is applied to the composited data prior to estimating grade.



Log Probability Plot for Au ppm

Figure 54. Lognormal probability plot for Au in 1.5 m best-fit composites



Mean and Variance Plot for Au ppm

Figure 55. Mean and Variance Plot of the 1.5 m best-fit composited data for Au

17.5 Variography

The present distribution of samples, with 25m between drill sections, has permitted reasonable quality variograms to be constructed and modelled (Figure 56Figure 60).For the variography study, the data has been transformed for Normal Scores (Gaussian) variograms, and the resulting models backtransformed prior to use in estimation. In addition the variograms have been standardised so that the total data variance equals 1. This has no impact on the estimation process and is purely designed to make the variograms easier to read.



Figure 56. Downhole variogram for Au in 1.5 m best-fit composites

The major and semi-major axes lie in a plane dipping 75° towards 125° (i.e. striking 035°) The major axis has been determined to be plunging 14° toward 040°, with the semi-major dipping 65° towards 163°. The minor axis is dipping 20° towards 305°.



Figure 57. Major axis variogram of 1.5 m best-fit Au composites within mineralised shell



(Semi-Major) -65-->163: Normal Scores for Au ppm

Figure 58. Semi-major axis variogram of 1.5 m best-fit Au composites within mineralised shell



Figure 59. Minor axis variogram of 1.5 m best-fit Au composites within mineralised shell

Once the Normal Scores (Gaussian) variogram models have been constructed they need to be back-transformed for use in the ore estimation process. The results of the backtransformed model are shown in Figure 60.



Figure 60. Backtransfomed variogram models for the 1.5 m best-fit Au composites within mineralised shell

17.6 Block Model

The Ängesneva block model utilised regular shaped blocks measuring (X) 2 m by (Y) 10 m by (Z) 10 m in height. This block size is considered the most appropriate shape considering the morphology of the mineralisation and the distribution of sample information. To better conform to the mineralisation contacts sub-blocking was used. The block model is rotated to an azimuth of N30^oW to better fit the geometry of the deposit. Block grades were estimated for parent cells and distributed to their sub-blocks. Block model grade interpolation for all estimated elements was performed using Ordinary Kriging with the following parameters:

| Parameter | Х | Y | Z |
|--------------------------|---------|---------|--------|
| Origin (Min Coordinates) | 2546500 | 7113700 | -310 |
| Max Coordinates | 2547000 | 7114300 | 90 |
| Block Size | 2 | 10 | 10 |
| Min Sub-Block size | 0.5 | 2.5 | 2.5 |
| | Bearing | Dip | Plunge |
| Rotation | 30 | 0 | 0 |

Table 49. Block Model Parameters

17.6.1 Estimation Parameters and Search Distances

The Variography analysis (Section 17.5) has enabled a model to be created and exported to Surpac, for use in Ordinary Kriging. The various parameters used for the grade estimation are detailed below in Table 50 and Table 51.

| Model | C Value | Range |
|----------------|---------|-------|
| C ₀ | 0.40 | |
| C ₁ | 0.47 | 38.0 |
| C ₂ | 0.13 | 225.0 |

Table 50. Parameters of the backtransformed and standardised variogram model

The angels of rotation and anisotropy factors of the anisotropy ellipsoid in Surpac ZXY LRL convention are as follows:

| ANGLES OF ROTATION – Surpac ZXY LRL | | | |
|-------------------------------------|--------|--|--|
| First Axis 40.00 | | | |
| Second Axis | -14.00 | | |
| Third Axis -69.00 | | | |
| ANISOTROPY FACTORS | | | |
| Semi-major ratio 2.50 | | | |
| Minor ratio 4.40 | | | |

Table 51. Modelled parameters of the anisotropy ellipsoid

The estimation procedure itself used Ordinary Kriging to estimate the values of the blocks. The value for each block has been determined by the average value of multiple estimations within the block (descretisation). For this estimate descretisation has been set to 3 x 3 x3 (i.e 27 points).

The estimation was undertaken using three interpolation passes, with the maximum search range for the first pass being set at 2/3 of the range from the variography. This search distance is doubled for each subsequent interpolation pass. The number of composites used for estimation along with other parameters utilised is tabulated in Table 52.

| Block Model Estimation Parameters – Ordinary Kriging | | | | | | |
|--|----------------|-----------------|------------|------------|--|--|
| Interpolation | Maximum Search | Maximum | Minimum | Maximum | | |
| pass | Radius (m) on | vertical search | Number of | Number of | | |
| | major axis | distance | Composites | Composites | | |
| First | 26 | 26 | 3 | 25 | | |
| Second | 52 | 52 | 3 | 25 | | |
| Third | 104 | 104 | 1 | 25 | | |

Table 52. Block model estimation parameters

An examination of the block distribution, at the nominal cut-off grade of 0.5 g/t Au, indicates that 8.6% of the blocks were populated in the 1^{st} pass, 63.6% in the 2^{nd} pass and the remainder of 27.7% were populated in the 3^{rd} pass.

17.6.2 Tonnage Calculations

The tonnages for each block have been calculated by multiplying the volume of the block by the specific gravity of the block. The specific gravity of all the blocks has been assigned as 2.83 g/cm³, as discussed in Section 12.4.1.

17.6.3 Block Model Validation

The block model validation includes a visual inspection of block grades versus composite values on vertical sections. This did not show any unusual problem when compared with drillhole grade across sections.

Another useful validation is to compare the global mean of the block model Au values to the global mean of the composites used for the estimation. The basic statistics of the Au grades estimated for the block model are shown in Table 53 and Figure 61. The block model has a mean of 1.116 g/t Au, which compares well with the composite mean of 1.123 g/t Au.

| Au raw assays | Minimum | Maximum | Mean | Median | Std Dev |
|---------------|---------|---------|-------|--------|---------|
| g/t | 0.074 | 7.779 | 1.116 | 0.950 | 0.658 |





Log Histogram for Au

Figure 61. Log Histogram showing the distribution of gold values in the block model

17.7 Mineral Resource Classification

Mineral resources were calculated following the guidelines of the Australasian Code for Reporting of Mineral Resources and Ore Reserves prepared by the Joint Ore Reserve Committee in 2004 (JORC Code, see http://www.jorc.org/). The mineral resources are summarised in Table 54. The following definitions were adopted for the categorisation of mineral resources:

17.7.1 Mineral Reserves

No part of the mineralisation has been classified as Mineral Reserves.

17.7.2 Measured Mineral Resources

No part of the mineralisation has been classified as Measured Mineral Resources.

17.7.3 Indicated Mineral Resources

Ängesneva can be classified as an Indicated mineral resource, as most of the block estimates were populated in either the first or second interpolation pass. In addition the Qualified Person for the technical report of June 2nd 2010 believes that sufficient confidence exists to assume both geological and grade continuity. Images of the block model are in Figure 62 and Figure 63.



Figure 62. Block model from ESE. Grey <0.5 g/t Au; Green 0.5 – 1.0; Yellow 1.0 – 1.5; Red 1.5 – 2.0; Magenta \ge 2.0 g/t Au



Figure 63. Block model from SE, showing the en echelon nature of the high grade mineralisation. Red 1.5 - 2.0 g/t Au; Magenta ≥ 2.0 g/t Au

17.7.4 Inferred Mineral Resources

No part of the mineralisation has been classified as Inferred Mineral Resources.

17.8 Mineral Resource Estimates

The author (Thomas Lindholm, Qualified Person for the technical report of June 2nd 2010) has considered the technical and economic criteria used to calculate a reasonable mineral resource cut-off grade for reporting mineral resources. The JORC Code definition of a mineral resource requires that "there are reasonable prospects for eventual economic extraction."

A reasonable cut-off grade for modelling and reporting the Ängesneva resources has been set to 0.5 g/t Au. As previously stated, this cut-off grade is considered to be a reasonable starting-point should Ängesneva be developed into an open pit mine. However this does not necessarily imply any economic feasibility at this time.

The Resource wireframe was cut against the interface surface between overburden and bedrock. In addition, a maximum vertical depth of z = -160 m was used, this is roughly equivalent to a vertical depth of 250 metres from the bedrock surface. Based on this, Ängesneva has an Indicated mineral resource of 3.85 Mt at a grade of 1.19 g/t Au (Table 54). A grade-tonnage curve and data is presented in Figure 64 and Table 55.

| Category | Tonnes | Au g/t | Troy Oz's |
|-----------|-----------|--------|-----------|
| Indicated | 3,850,000 | 1.19 | 147,000 |

Table 54. Mineral Resources at Ängesneva on June 2nd, 2010



Figure 64. Grade-tonnage curve for Ängesneva

| Cut-off (Au g/t) | Tonnage | Grade (Au g/t) | Ounces |
|------------------|-----------|----------------|---------|
| 0.5 | 3,850,074 | 1.19 | 147,054 |
| 0.6 | 3,618,500 | 1.23 | 142,862 |
| 0.7 | 3,238,811 | 1.30 | 134,849 |
| 0.8 | 2,785,994 | 1.38 | 123,967 |
| 0.9 | 2,358,947 | 1.48 | 112,322 |
| 1.0 | 1,956,202 | 1.59 | 100,000 |
| 1.1 | 1,576,054 | 1.72 | 87,155 |
| 1.2 | 1,260,526 | 1.86 | 75,502 |
| 1.3 | 1,037,708 | 2.00 | 66,559 |
| 1.4 | 865,538 | 2.12 | 59,106 |
| 1.5 | 725,647 | 2.25 | 52,563 |
| 2.0 | 337,433 | 2.89 | 31,309 |

Table 55 Grade-tonnage data for Ängesneva

The mineral resource estimate is based upon the following key inputs and assumptions:

- Mineral resources of Ängesneva gold deposit have been prepared and categorised for reporting purposes by Mr. Thomas Lindholm, MAusIMM, of GeoVista AB, following the guidelines of the JORC Code. Mr Lindholm is qualified to be a Competent Person as defined by the JORC Code on the basis of training and experience in the exploration, mining and estimation of mineral resources of ferrous deposits.
- 2. Ängesneva mineral resources are defined primarily by diamond core drilling. Drilling was conducted on a grid approximating25 m x 25 m.
- 3. Mineralisation was defined using a cut-off grade of 0.5 g/t Au, permitting the inclusion of up to 7m of waste.
- 4. The mineralisation was divided into 1 modelled domain.
- 5. Drill core samples were assayed for Au. Approximately 78 % of assays are from samples that are 1.5 m or shorter. All samples within the domain have been regularised to 1.5 m composites.
- 6. Block grades were interpolated for Au using Ordinary Kriging.
- 7. Bulk density of the mineralisation was based on actual data collected during exploration. The median density from the 285 samples from within the mineralised zone is 2.83 tonnes/m³.
- 8. No part of the mineral resources is classified as Measured.
- 9. The entire resource can be classified as Indicated mineral resources, as drill density on a nominal grid of 25 m x 25m is sufficient to assume continuity of geology and grade.
- 10. No part of the mineral resources is classified as Inferred.

17.9 Exploration Potential

The Ängesneva gold mineralisation as currently delineated has been largely closed off. However, potential exists for parallel en echelon structures with associated gold mineralisation to the northwest of the existing mineralisation. The intersection in hole BELANG014, is one of such possibilities and would warrant further drilling to determine its potential.

17.10 Mineral Reserve Estimate

Since no economic evaluation study has been completed to date on the Ängesneva deposit, no conversion of Resources to Reserves can be done at this stage.

18 Other Relevant Data and Information

Mining projects in Finland need a Mining Concession as well as an Environmental Permit, the latter including a permit to take and discharge water. A Mining Concession is granted by the Mining Inspector. The Environmental Permit is granted after a permitting process that includes the approval of an Environmental Impact Assessment and a legal process at the Environmental Court.

Once the permit is approved the supervision is carried out by the regional environmental center. An Environmental permit is normally re-negotiated after a few years of operation.

Belvedere has not applied for either of these two permits for Ängesneva.

19 Conclusions and Recommendations

This initial resource estimate for the Ängesneva gold deposit is based on a 0.5 g/t Au cut-off grade. Except in periods of very high gold prices, it is unlikely that the current scale of the resource would prove economic as a stand-alone mine, either as a low grade bulk tonnage operation, or as a higher grade operation. However, as Belvedere owns the nearby Hitura nickel mine (~40 km by road), it is possible that the Ängesneva project has potential to become economically feasible should a gold circuit be established at the Hitura plant.

It is apparent that further gold mineralisations occur in the vicinity of Ängesneva on Belvedere's Kiimala Property. These should be drilled further. Successful drilling (as has happened at Ängesneva) on the neighbouring gold prospects (e.g. K2 - K7) may lead to the delineation of further mineralised zones in close proximity, that together have the potential of reaching critical mass to become economic.

Drilling the other Kiimala property mineralisations and other ground geophysical targets would be recommended. It is suggested that 5,000 - 10,000 metres would be sufficient (all in cost of about 0.5 - 1.0 million) to test these targets, and to determine whether the potential exists to develop Kiimala any further, and whether the project would merit a feasibility study, and detailed metallurgical studies.

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21 Certificate of Qualified Person

CERTIFICATE OF AUTHOR – HANNU MAKKONEN

As one of the authors of this report on the KiimalaPropertyin Central Ostro Bothnia, Finland, of BR Gold Mining Oy, of Belvedere Resources Ltd., Canada and of REBgold Corporation, Canada, I, Hannu Makkonen do hereby certify that:

- I am employed by, and carried out this assignment for Geological Survey of Finland P.O.Box 77, FI-96101 Rovaniemi, Finland, tel. +358 20 550 4210, fax +358 20 550 14, e-mail <u>hannu.makkonen@gtk.fi</u>
- This certificate applies to the NI43-101 Technical Report: The Kiimala Property, Central Ostrobothnia, Finland, September 29^{th,} 2011.
- 3) I hold the following academic qualifications:

M.Sc. (Geology and Mineralogy) University of Oulu, Finland 1982Ph.lic. (Geology and Mineralogy) University of Oulu, Finland 1993Ph.D. (Geology and Mineralogy) University of Oulu, Finland 1996Docentship for applied ore geology, University of Oulu, Finland 2007

I belong to the Geological Society of Finland and to the Finnish Association of Mining and Metallurgical Engineers.

- 4) I hold the European Geologist Title, EurGeol, no 808;
- 5) I have worked in minerals exploration and mining for over 30 years;
- 6) I am familiar with NI 43-101 and, by reason of education, experience and professional registration I fulfil the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 28 years as an exploration geologist and project manager at the Geological Survey of Finland exploring for base metals and gold in Finland and three years for mining companies as chief geologist and as chief mining geologist in Finland responsible of exploration and mineral resources.
- 7) As of the date of this certificate to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this report not misleading.
- 8) I am independent of the parties involved in the transaction for which this report is required, other than providing consulting services.
- 9) My prior involvement with the Kiimala property includes field excursions during 1980's.
- I am responsible for the full contents of the Technical Report: The Kiimala Property, Central Ostrobothnia, Finland, September 29^{th,} 2011.
- 11) I have personally visited the Kiimala property on September 26, 2011.

12) I have read National Instrument 43-101 and the Technical Report and hereby certify that the Technical Report: The Kiimala Property, Central Ostrobothnia, Finland, September 29th, 2011, is compliant with the Instrument.

Dated this 2011-09-29

Hann Kathom

Hannu Makkonen, Ph.D., EurGeol Chief Geologist, Mineral Resources and Exploration Geological Survey of Finland