Press Release – November 13, 2012

## APPENDIX 1

## TESTWORK AND CONCEPTUAL FLOWSHEET DESIGN

### SAMPLE COLLECTION

An extensive, representative, metallurgical sampling program was initiated in Q1 2011 and which comprises, to date, some 218 meters of quarter PQ and HQ core for approximately 312 kilograms of sample. The samples have been collected from 20 diamond drill holes from the three deposits as follows:

- Bigar Hill: 8 holes (BHDD004, 005, 007, 011, 016, 017, 023 and BHDD029)
- Korkan: 9 holes (KODD01, 002, 005, 007, 009, 013, 015, 016 and KODD018)
- Kraku Pester: 3 holes (PEDD003, PEDD004 and PEDD010)

The samples were carefully chosen to represent the full range of mineralized lithologies, oxidation states, gold and sulphur contents. The table below summarizes the samples metallurgical collected to date.

**TIMOK GOLD PROJECT**
**Metallurgical Sample Summary**

| Sample No | Deposit | Hole ID | Lithology* | Oxidation | Weight (kg) | Intersection (m) | Au (g/t) | S (%) |
|---|---|---|---|---|---|---|---|---|
| 562035 | Kraku Pester | PEDD003 | Monzonite | Transitional | 5.8 | 3 | 1.14 | 4.87 |
| 562036 | Korkan | KODD001 | Basal Breccia | Fresh | 8.0 | 5 | 10.23 | 1.60 |
| 562037 | Korkan | KODD001 | Basal Breccia | Fresh | 5.1 | 4 | 3.98 | 0.09 |
| 562038 | Korkan | KODD001 | S1 | Fresh | 5.2 | 5 | 2.76 | 1.79 |
| 562039 | Korkan | KODD002 | Basal Breccia | Fresh | 4.9 | 5 | 3.62 | 0.79 |
| 562040 | Korkan | KODD005 | Basal Breccia | Fresh/Trans | 6.2 | 5 | 0.82 | 0.42 |
| 562041 | Korkan | KODD007 | S1 | Fresh/Trans | 5.0 | 5 | 2.63 | 4.75 |
| 562042 | Korkan | KODD009 | S1 | Fresh | 7.2 | 5 | 3.43 | 2.97 |
| 562043 | Korkan | KODD013 | S1 | Fresh | 4.0 | 5 | 1.03 | 1.02 |
| 562044 | Korkan | KODD015 | KST | Fresh | 7.2 | 5 | 1.25 | 2.27 |
| 562045 | Korkan | KODD016 | Basal Breccia | Transitional | 5.9 | 5 | 3.58 | 0.17 |
| 562046 | Korkan | KODD018 | Basal Breccia | Transitional | 6.8 | 5 | 1.81 | 1.20 |
| 562047 | Kraku Pester | PEDD003 | Hornfel S2 | Fresh | 4.9 | 2 | 4.36 | 9.39 |
| 562048 | Kraku Pester | PEDD003,4 | Volcs | Fresh | 5.1 | 2 | 2.85 | 4.84 |
| 562049 | Kraku Pester | PEDD004 | Hornfel S2 | Fresh | 4.3 | 2 | 18.44 | 8.43 |
| 562050 | Kraku Pester | PEDD004 | S2 | Fresh | 5.3 | 5 | 1.60 | 2.32 |
| 562051 | Bigar Hill | BHDD007 | Basal Breccia | Fresh | 15.7 | 10 | 2.14 | 2.53 |
| 562052 | Bigar Hill | BHDD011 | S2 | Fresh | 14.8 | 10 | 3.40 | 3.65 |
| 562053 | Bigar Hill | BHDD011 | S1 | Fresh | 14.7 | 10 | 1.49 | 0.41 |

| TIMOK GOLD PROJECT<br>Metallurgical Sample Summary | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Sample No** | **Deposit** | **Hole ID** | **Lithology*** | **Oxidation** | **Weight (kg)** | **Intersection (m)** | **Au (g/t)** | **S (%)** |
| 562054 | Bigar Hill | BHDD029 | S1 | Fresh | 14.8 | 10 | 1.59 | 0.43 |
| 562055 | Bigar hill | BHDD005 | S2 | Fresh | 14.6 | 10 | 2.05 | 4.61 |
| 562056 | Bigar Hill | BHDD023 | Basal Breccia | Fresh | 13.2 | 10 | 1.50 | 0.90 |
| 562057 | Bigar Hill | BHDD017 | S1 | Fresh | 13.3 | 10 | 3.03 | 0.57 |
| 562058 | Bigar Hill | BHDD016 | S1 | Oxide | 23.2 | 10 | 1.99 | 0.03 |
| 562059 | Bigar Hill | BHDD004 | S1 | Transitional | 11.4 | 10 | 1.34 | 0.46 |
| 562060 | Korkan | KODD009 | IB Breccia | Fresh | 9.2 | 10 | 2.02 | 3.12 |
| 562061 | Korkan | KODD009 | IB Breccia | Fresh | 17.8 | 10 | 1.91 | 1.14 |
| 562062 | Korkan | KODD016 | S1 | Transitional | 12.2 | 10 | 2.70 | 0.20 |
| 562063 | Korkan | KODD007 | IB Breccia | Fresh | 13.7 | 10 | 1.70 | 0.80 |
| 562064 | Kraku Pester | PEDD004 | S2 | Fresh | 22.9 | 10 | 2.52 | 4.93 |
| 562065 | Kraku Pester | PEDD010 | Monzonite | Fresh | 13.3 | 10 | 1.83 | 4.44 |

*(1) S1 and S2 refer to stratabound mineralization in the S1 and S2 sedimentary units.*
*(2) Basal Breccia: Brecciated contact between Jurassic or Cretaceous limestone and basal S1 sediments*
*(3) IB: Interbedded fine grained sediments. (sub-unit within S1)*
*(4) KST: Karst sediment infill*
*(5) Volcs: Andesitic volcanics overlying S1 and S2*
*(6) Hornfel S2: Contact metamorphosed S2 sediment*

Figure 1 shows the location of the Korkan, Bigar Hill and Kraku Pester deposits within the Timok Gold Project. Figures 2, 3 and 4 show the location of the drill holes used for metallurgical sampling for Korkan, Bigar Hill and Kraku Pester respectively.

The metallurgical samples have been used as the source material for the wide range of testwork that has been carried out by SGS and RDI.

## SGS TESTWORK

SGS has carried out an extensive range of metallurgical testwork including the following:

- Head assaying (50gm fire assay for gold and 50 element ICP).
- Carbon analysis.
- Flotation testwork.
- Gravity recovery testwork.
- Grinding studies.
- QEMScan, XRD and D-SIMS analyses.
- Mineralogical studies.
- Gold deportment studies.
- Gold liberation studies.

The gold head grades of the composites tested by SGS ranged between 0.5g/t to 3.3g/t. Sulphur assays varied from 0.1% to 2.3% No deleterious elements were noted in the ICP scan, with arsenic analyses ranging between 24ppm to 257ppm. Carbon assaying demonstrates that the great majority of carbon present is in the form of carbonate, with no evidence of 'preg-robbing' carbon.

QEMSCAN (quantitative electron microscopy-based mineralogical studies), x-ray diffraction (XRD) and mineralogical studies have shown the following:

- The sedimentary rocks are predominantly composed of quartz, calcite, moderate dolomite, minor ankerite, mica, kaolinite (a key alteration mineral) and minor sulphides. Quartz and carbonate grains form, on average, almost 90% of the rock mass.
- Pyrite is the dominant sulphide, with a minor component of arsenian pyrite.
- All minerals are fine grained, with the grain size range of the gangue minerals being, on average, 25 to 35 microns and for pyrite, between 25 to 30 microns.
- On average, approximately 65% to 95% of the pyrite grains are 'free' and show 'fast floating' characteristics in flotation testwork, while 5% to 35% of the pyrite grains are present as part of more complex aggregations with the gangue minerals and show 'slower floating' characteristics.
- Gold grains identified in the QEMScan and XRD studies have average dimensions of 8 to 15 microns. In addition, further Dynamic Secondary Ion Mass Spectrometry (D-SIMS) analysis of individual pyrite grains has shown that some gold also occurs as colloidal size gold or in solid solution with pyrite lattices. The study also suggested that a portion of the gold is located within the gangue mineral matrix and is not associated with sulphides.
- SGS gravity and flotation testwork has shown that there is a linear relationship between gold and sulphur recoveries and weight pull to concentrate. Flotation has been shown to be a more efficient concentration technique than gravity recovery. The initial SGS testwork showed that a mass pull of approximately 30% to 35% was required to collect greater than 75% of the gold into the flotation concentrate. In addition, the SGS testwork identified that optimization of the rougher flotation residence time and selectivity with respect to reagent dosing and primary grind size is required in order to optimize the flotation parameters and refine the mass pull to the concentrate. The results also confirmed that a proportion of the gold is associated with the non-sulphide gangue minerals. This finding has been followed up with diagnostic leach testwork and is discussed further below.
- Grinding testwork undertaken by SGS has included SAG Mill Power Index (SPI) and Modified Bond Ball Mill Work Index (MBWI). The SPI testwork indicates soft to moderate ores. The MBWI data reports moderate to hard ores, however, given the nature of the sediment-hosted mineralization, wherein the gold is hosted in the matrix of the sediments and not within pebbles and coarse detrital grains, there is an opportunity to separate and remove this barren material after initial crushing and disaggregation. Further work on this aspect of the milling circuit is planned.
- Gold deportment and liberation studies confirmed that gold exists as fine- to very fine-grained particles and also in colloidal or solid solution form. Although a significant proportion of the gold is associated with pyrite, a material proportion of the gold is associated with non-sulphide gangue minerals.

## RDI TESTWORK

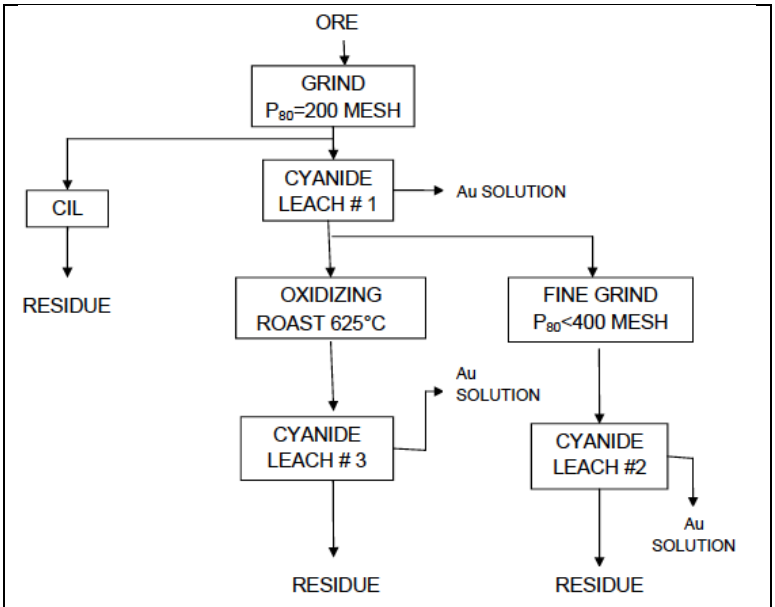
### Diagnostic Leach Testwork.

Diagnostic leach testwork has been carried out on 11 composite samples (samples 562055 to 562065 inclusive) in order to determine the gold deportment. Some 5 samples are from Bigar Hill, 4 from Korkan and 2 from Kraku Pester. Details are contained in the metallurgical summary table above. The majority of the samples are unoxidized.

Low to moderate levels of arsenic were confirmed, as is typical for the sediment-hosted gold mineralization, with arsenic contents ranging from 46ppm to 439ppm.

The diagnostic leach test protocol is shown in the figure below. The following leach tests were carried out:

- Direct cyanidation, with an initial leach test at a p80 of 75 microns, was conducted for 48 hours, with the solution being read at 6 hours and 24 hours. The test determines the amount of gold that is free milling.
- Carbon-in-leach test to determine if the ore exhibits any 'preg-robbing' properties.
- Cyanidation of finely ground (400 mesh or 37 microns) residue from the direct cyanidation leach test. The test provides information on the level of gold extraction based on particle size.
- Cyanidation of roasted residue from the direct cyanidation leach test. The test indicates potential recoveries for completely oxidised ore.




**RDI Diagnostic Leach Protocol Flowsheet**

The table below summarizes the results of the diagnostic leach tests. The majority of the gold in the oxidized sample from Bigar Hill and the transitional sample from Korkan is free milling and returned good gold recoveries. Carbon-in-leach provides a significant improvement in recovery compared to simple cyanidation for all samples tested (up to 30%), with the exception of Kraku Pester. For the sediments of Bigar Hill, Korkan and Kraku Pester, CIL provided an average recovery of approximately 61%, compared to 50% for simple cyanidation, an improvement of some 11%. Significant amounts of gold are associated with sulphides in the majority of samples. In summary, cyanidation followed by roasting/cyanidation of the initial leach residue gave a higher recovery than fine grinding/cyanide leaching of the initial leach residue.

| TIMOK GOLD PROJECT<br>Diagnostic Leach Testwork Results | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample No | Deposit | Oxidn | 48hr CY Leach (rcy%) | 48hr CIL Leach (rcy%) | Diff* CIL:CY Leach (rcy%) | 48hr CY Leach Residue | | Overall Recoveries | |
| | | | | | | Fine Grind CY Leach (rcy%) | Roast CY Leach (rcy%) | CY Free milling + fine grind CY | CY Free milling + Roast CY |
| 562055 | Bigar Hill | Fresh | 26.4 | 29.0 | 2.6 | 15.0 | 59.5 | 37.4 | 68.0 |
| 562056 | Bigar Hill | Fresh | 39.7 | 56.4 | 16.7 | 22.5 | 55.5 | 53.5 | 73.0 |
| 562057 | Bigar Hill | Fresh | 23.9 | 34.6 | 10.7 | 11.6 | 41.9 | 32.7 | 55.8 |
| 562058 | Bigar Hill | Oxide | 89.3 | 94.6 | 5.3 | 49.5 | 32.7 | 94.6 | 92.8 |
| 562059 | Bigar Hill | Trans | 60.6 | 78.5 | 17.9 | 22.2 | 46.3 | 69.5 | 78.8 |
| 562060 | Korkan | Fresh | 30.4 | 60.2 | 29.8 | 19.9 | 47.3 | 44.3 | 63.3 |
| 562061 | Korkan | Fresh | 62.4 | 79.2 | 16.8 | 39.3 | 18.8 | 77.2 | 69.5 |
| 562062 | Korkan | Trans | 74.4 | 77.5 | 3.1 | 26.7 | 54.4 | 71.2 | 88.3 |
| 562063 | Korkan | Fresh | 34.0 | 46.6 | 12.6 | 18.4 | 41.5 | 46.1 | 61.4 |
| 562064 | Kraku Pester | Fresh | 64.3 | 57.8 | -6.5 | 39.0 | 35.7 | 78.3 | 77.0 |
| 562065 | Kraku Pester | Fresh | 9.1 | 5.8 | -3.3 | 5.5 | 46.9 | 14.1 | 51.7 |

*(1) Diff CIL: CY Leach: The recovery difference between simple cyanidation and carbon-in-leach cyanidation.*

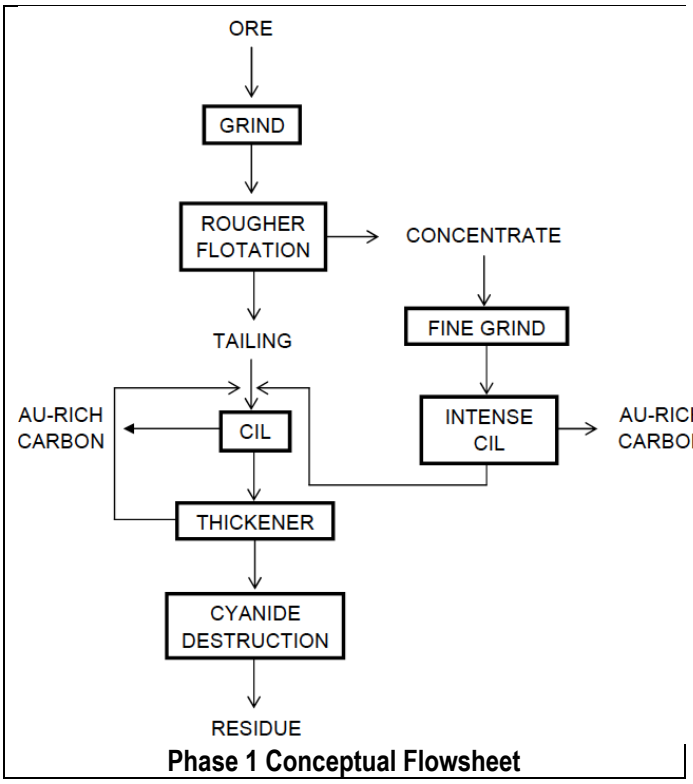
It is noted that, based on the diagnostic leach test, the gold mineralization in the monzonite at Kraku Pester can be considered refractory. The monzonite forms a very small volumetric proportion of the Timok Gold Project metal inventory.

**Scoping Flotation Testwork**

Scoping flotation testwork included flotation tests at grind sizes of 53 and 37 microns. Flotation tests on the two grind sizes returned similar results. Further optimization of reagents, flotation conditions and parameters are planned in 2013.

**Phase 1 Conceptual Flowsheet Testwork**

The initial conceptual flowsheet was based on a coarse grind size (150 microns), flotation of the milled product, followed by fine grinding and intense cyanidation of the finely ground flotation concentrate, and carbon-in-leach cyanidation of the flotation tailings along with the residue from the flotation concentrate leaching. The figure below summarizes the conceptual process flowsheet.



**Phase 1 Conceptual Flowsheet**

Six composites were prepared by RDI from the original quarter core composite samples for the Phase 1 conceptual flowsheet testwork, as shown in the table below.

| TIMOK GOLD PROJECT<br>RDI Phase 1 Conceptual Flowsheet Testwork Composites | | | | |
|---|---|---|---|---|
| **Composite Number** | **Samples** | **Deposit** | **Lithology** | **Oxidation** |
| 1 | 562058 | Bigar Hill | S1 | Oxide |
| 2 | 562059, 562062 | Bigar Hill/Korkan | S2 | Transitional |
| 3 | 562056, 562057, 562061 | Bigar Hill/Korkan | Basal Breccia | Fresh |
| 4 | 562055, 562064 | Bigar Hill/Kraku Pester | S2 | Fresh |
| 5 | 562065 | Kraku Pester | Monzonite | Fresh |
| 6 | 562060, 562063 | Korkan | Basal Breccia | Fresh |

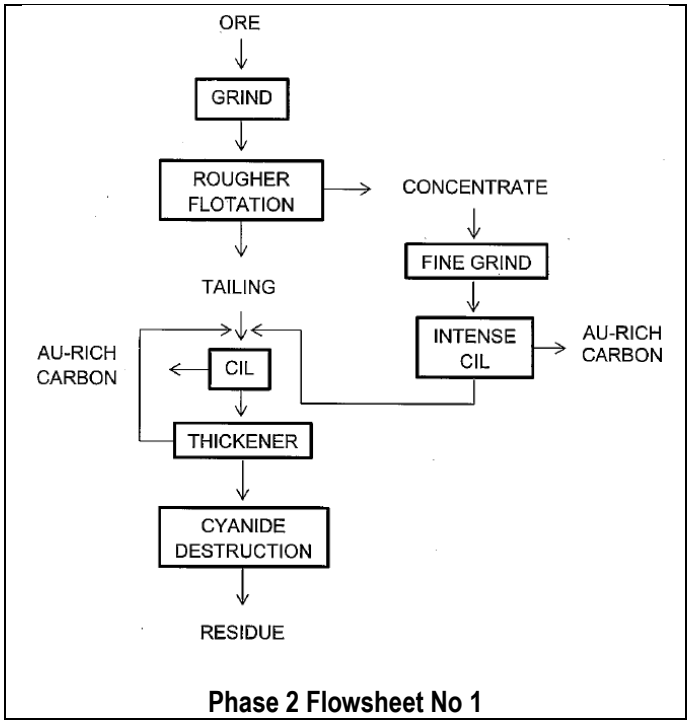
The testwork showed that a target recovery of greater than 80% could not be achieved at a coarse grind size. With the exception of composite 2 (Bigar Hill and Korkan partially oxidised material), which achieved an overall recovery of 78.5%, the remainder of the composites returned between 13.3% and 63.4% recoveries.

**Phase 2 Conceptual Flowsheet Testwork**

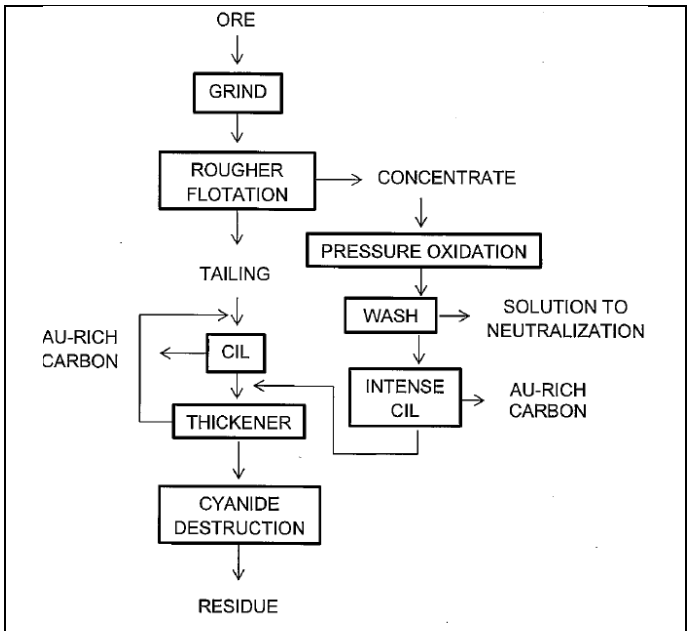
Following on from the Phase 1 conceptual flowsheet testwork, the following additional activities, for two alternative conceptual flowsheets, were carried out:

- Fine grinding of flotation tailings followed by CIL cyanidation.
- Production of flotation concentrates at a finer primary grind size with leaching of flotation concentrates and tailings.
- Pressure oxidation of flotation concentrate and cyanidation.
- Development of a combined conceptual process flowsheet.

The two conceptual flowsheets for the phase 2 testwork are displayed below. The overall gold extraction for the two conceptual flowsheets is summarized in the table below.




**Phase 2 Flowsheet No 1**




**Phase 2 Flowsheet No 2**

| TIMOK GOLD PROJECT<br>RDI Phase 2 Conceptual Flowsheet Testwork Results | | | | |
|---|---|---|---|---|
| **Composite Number** | **Flowsheet 1: Gold Recovery (%)** | | | |
| | **Flotation Process** | **Fine Grind Concentrate Leach** | **Flotation Tailing Leach** | **Overall** |
| 3 | 45.1 | 51.9 | 50.1 | 50.9 |
| 4 | 48.1 | 45.8 | 67.1 | 56.9 |
| 6 | 56.1 | 33.1 | 55.0 | 42.7 |
| **Composite Number** | **Flowsheet 2: Gold Recovery (%)** | | | |
| | **Flotation Process** | **POX/Cyanidation** | **Flotation Tailing Leach** | **Overall** |
| 3 | 45.1 | 89.8 | 50.1 | 68.0 |
| 4 | 48.1 | 87.2 | 67.1 | 76.8 |
| 6 | 56.1 | 92.5 | 55.0 | 76.0 |

For Flowsheet 1, fine grinding of flotation concentrate (to 25 microns) returned gold recoveries ranging from 33% to 52%, with the majority of the gold leaching between 6 to 24 hours. Fine grinding of the flotation tailings and subsequent cyanidation showed that gold extraction is independent of the grind size in the flotation tailings. Overall, a 50% to 67% gold recovery was achieved. The majority of the gold is leached within 24 hours. Based on a flotation-fine grinding-intense leaching processing route, overall recoveries ranged from 43% to 57%.

For Flowsheet 2, pressure oxidation of the flotation concentrate returned excellent results, with the gold recovery after 6 hours ranging from 87% to 93%. The overall recovery using Flowsheet 2 was significantly higher than Flowsheet 1, with gold recoveries of 68% to 77% returned.

**As the gold extraction of the POX material is significantly higher (approximately 90%), the overall gold extraction can be improved significantly by further optimization of the flotation process.**

**AVALA MINERALIZED PULP COMPOSITE COLLECTION PROGRAM**

**As a result of the discovery that a significant proportion of the gold in Bigar Hill, Korkan and Kraku Pester is free milling (averaging 63% recovery for CIL), Avala has collected over 11,800 five meter mineralized composites throughout the three deposits for a major bottle roll and residue assay programme.**

Avala's comprehensive pulp library has been used to prepare the composites, which have a particle size of p90 75 microns, based on the p90 particle size of Avala's standard sample preparation procedure. Completion of the bottle roll composite programme is planned for Q1 2013 and will form a critical, initial, part of a full geometallurgical model of the deposits, mapping in 3D the free milling response of the three deposits. The following number of 5 meter composites have been produced to date and shipped to SGS Welshpool in Australia for processing:

- **Bigar Hill:** 3,636
- **Korkan:** 7,179
- **Kraku Pester:** 1,003
- **Total:** 11,818

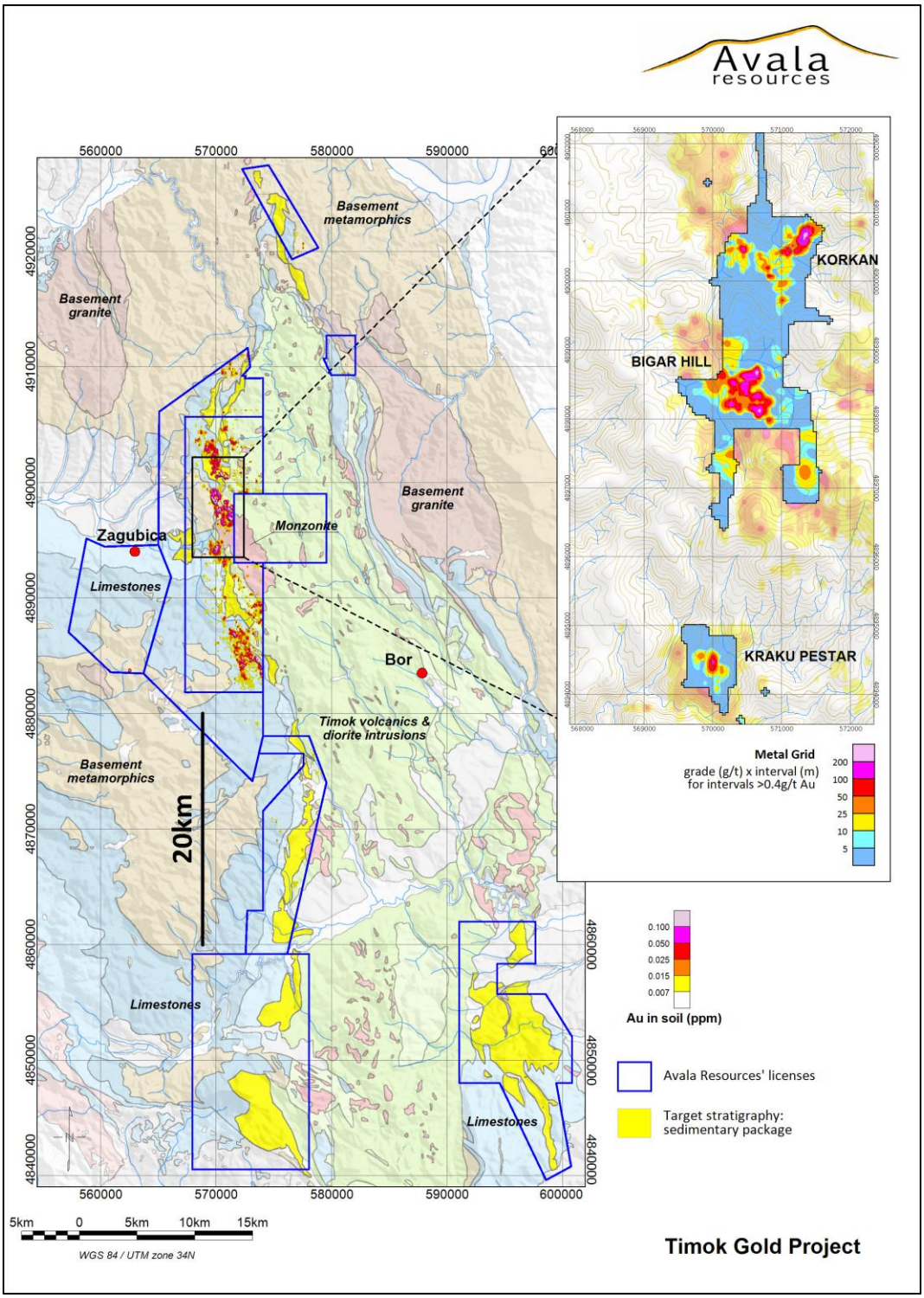



**Figure 1:** Location of the Korkan-Bigar trend and the Kraku Pester target area within the greater sediment-hosted gold belt, as defined in this image by mapped 'target stratigraphy' (yellow) and anomalous gold soil geochemistry within the Timok Gold Project. The total metal contour plots for Korkan, Bigar Hill and Kraku Pester have been superimposed on the sediment-hosted gold belt, as defined to date by drilling.

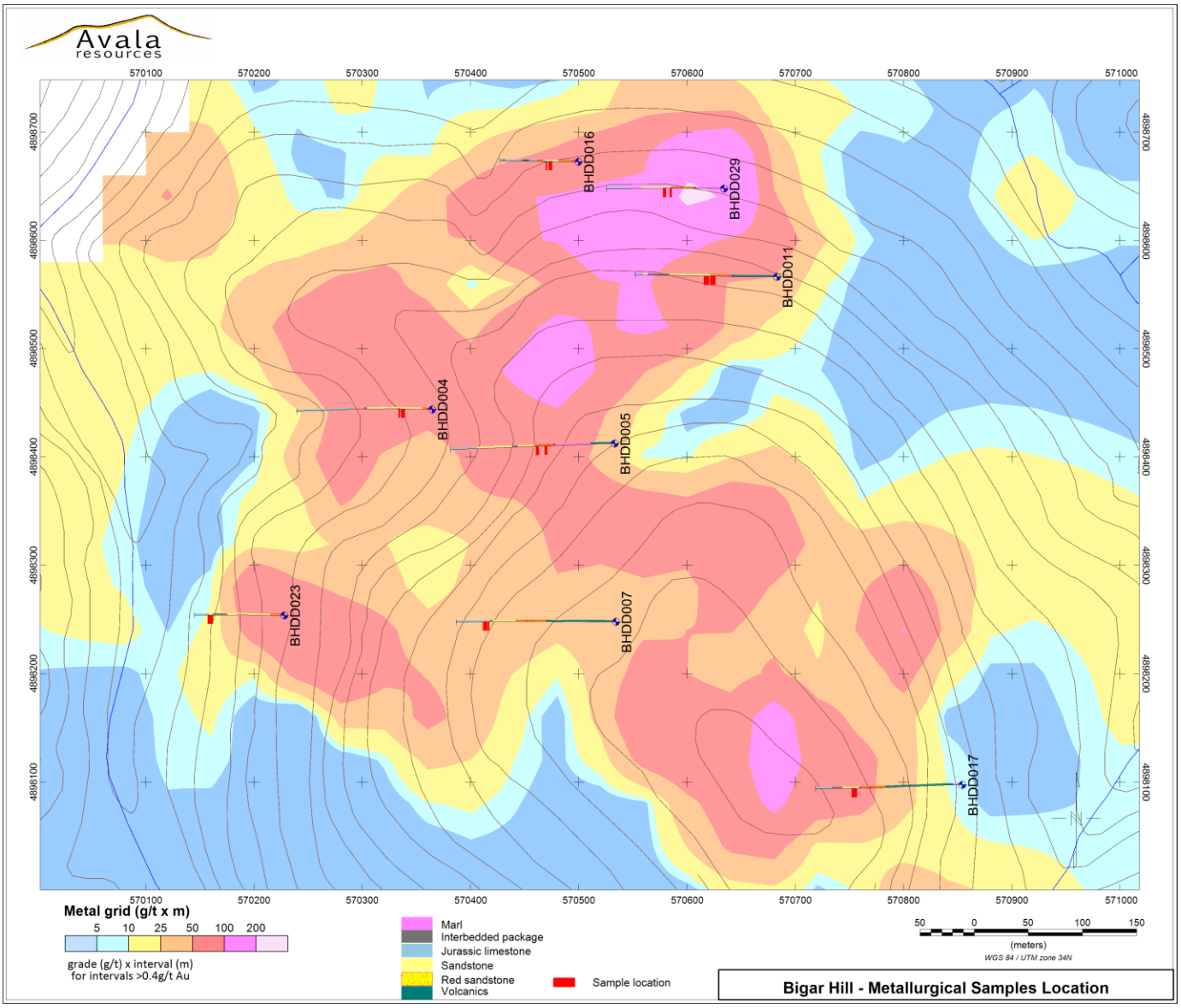



**Figure 2: Location of Bigar Hill diamond drill holes used for the metallurgical sampling program.** Gram-meter (intervals >0.4g/t Au x thickness) total metal contour plot of all drilling to date superimposed on topography.

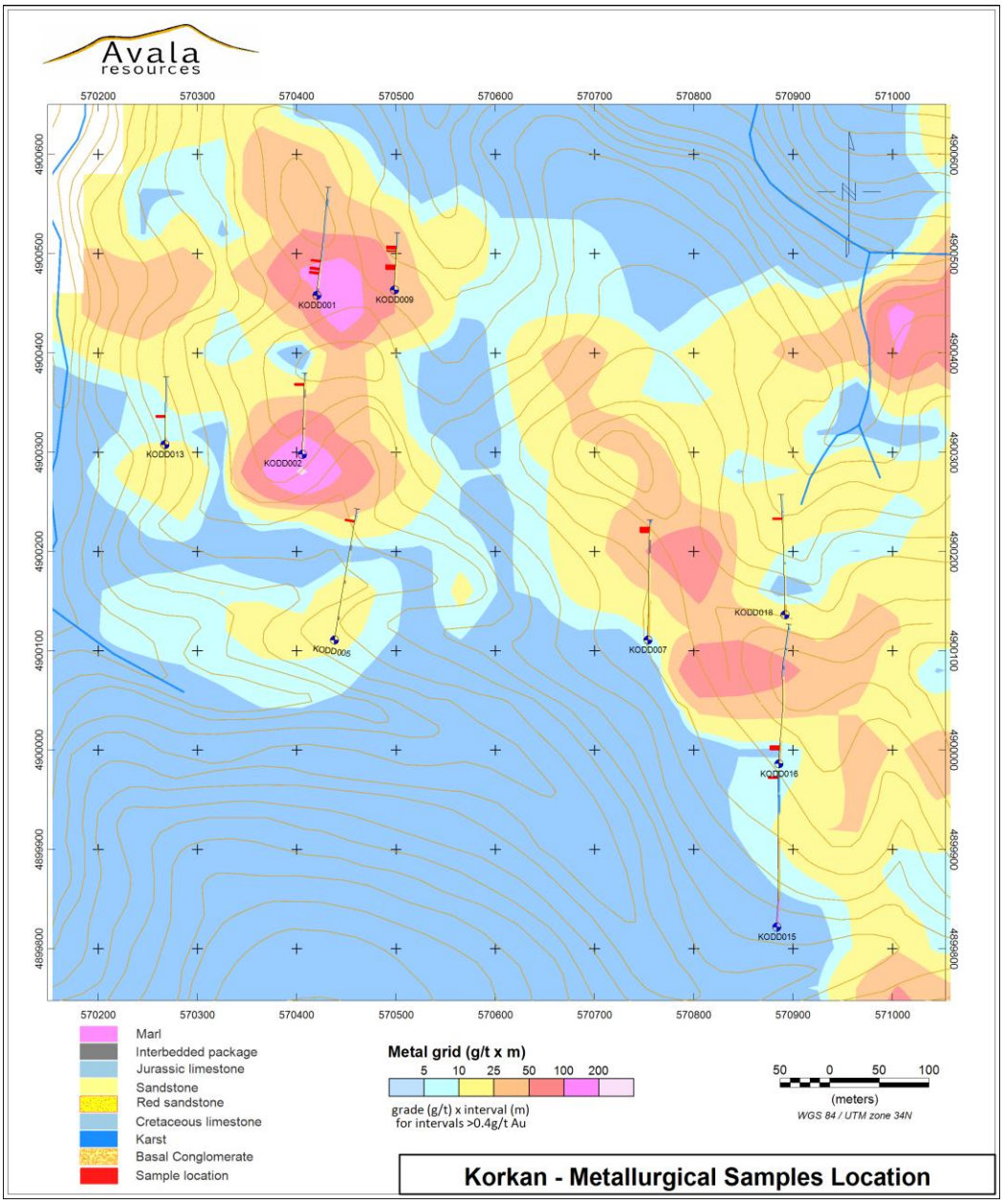



**Figure 3: Location of Korkan diamond drill holes used for the metallurgical sampling program.** Gram-meter (intervals >0.4g/t Au x thickness) total metal contour plot of all drilling to date superimposed on topography.

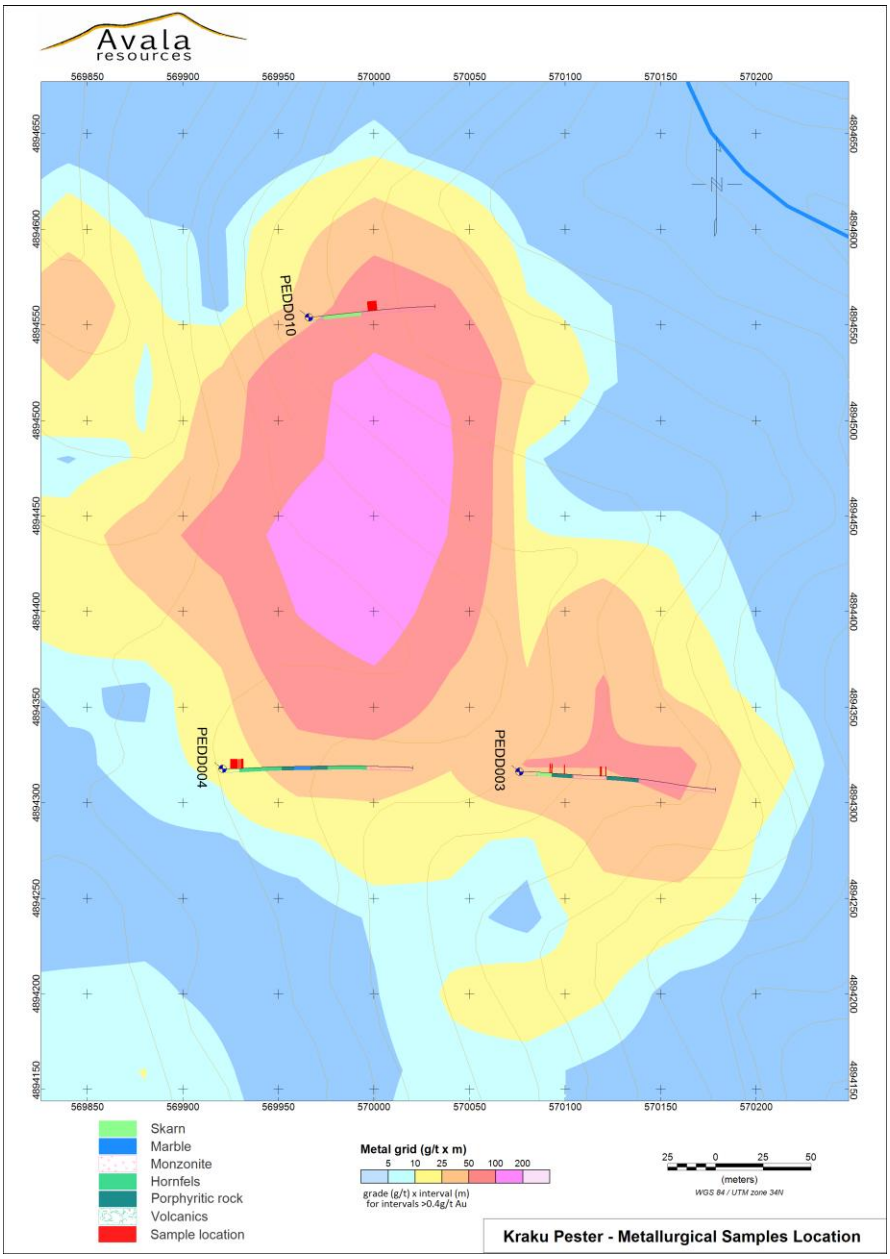



**Figure 4: Location of Kraku Pester diamond drill holes used for the metallurgical sampling program.** Grammeter (intervals >0.4g/t Au x thickness) total metal contour plot of all drilling to date superimposed on topography.