BEHRE DOLBEAR

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# GLOBAL GOLD CORPORATION

## INDEPENDENT TECHNICAL REPORT ON TOUKHMANUK MINE PROJECT AND GETIK PROSPECT, ARMENIA, IN CONFORMANCE WITH NI 43-101 GUIDELINES

**October 17th, 2011**


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# 1.0 SUMMARY

Armenia straddles a WNW-ESE Cenozoic Caucasian orogenic belt, which is over a collision zone between the Eurasian and Arabian tectonic plates, marked by fault structures and extrusive volcanic and intrusive sub-volcanic and granitic activity. The fault activity continues to the present, with localised hot springs and earthquakes. Volcanic breccias host Cu-Au mineralization and, associated with porphyritic phases of the granitic intrusives, there is Cu-Mo-Au-Ag mineralization.

Global Gold Corporation ("Global Gold" or "the Company") is engaged in the exploration for, and development and mining of, gold, silver and other minerals in Armenia and Chile. Its subsidiaries maintain offices and staff in Yerevan, Armenia, and Santiago, Chile. The Company's stock is publicly traded. It employs approximately 100 people globally on a year-round basis and an additional 200 people on a seasonal basis.

In Armenia, Global Gold's focus is primarily on the exploration, development and production of gold and silver at its Toukhmanuk property in Central Armenia where Global Gold now operates a mine and processing plant. In addition, the Company is exploring and developing other sites in Armenia, including the Getik property. The Company also holds royalty and participation rights on other properties in the country, through affiliates and subsidiaries. The Toukhmanuk and Getik properties are joint-ventured with Consolidated Resources Armenia, a minerals-and-metals investing and operating company.

Through Global Gold Mining LLC, in August 2005, Global Gold acquired 51% of an Armenian company Mego-Gold, LLC, licensee of the Toukhmanuk mining property, with seven surrounding exploration sites. In August 2006, the Company secured the remaining 49% interest of Mego-Gold, consolidating its tenements in a gold belt in the Aparan region. A Central Area at Toukhmanuk, covering 2.2 $km^2$ within a licence area of 53.76 $km^2$, contains numerous quartz veins with gold and polymetallic mineralization, hosted predominantly by Jurassic volcanic rocks and Cretaceous intrusive rocks, which have undergone tectonism and are in NW-SE fault-contact against leucocratic granite. The volcanic rocks comprise andesites and dacites and the intrusive rocks are dominantly granitic with porphyritic phases, minor granitic gneiss and amphibolite. Parts have a covering of Tertiary volcanic, including obsidian and perlite, and a surface layer of conglomeritic Quarternary alluvium.

Global Gold has delineated Measured, Indicated and Inferred Mineral Resources, totalling 39.228 Mt at a grade of 2.07 g/t Au and 14.07 g/t Ag in approximately 20% of the 2.2 $km^2$ Central Area of the 53.76 $km^2$ Toukhmanuk licences. Global Gold used a cut-off grade of 0.6 g/t Au and applied a rock specific gravity of 2.6 to give the following results:

| *Resource category* | *Tonnage: Mt* | *Gold: g/t* | *Silver: g/t* | *Contained Gold: Moz* | *Contained Silver: Moz* |
|---|---|---|---|---|---|
| Measured | 6.043 | 3.10 | 23.83 | 0.602 | 4.630 |
| Indicated | 18.767 | 1.99 | 13.09 | 1.200 | 7.907 |
| Measured and Indicated | 24.810 | 2.26 | 15.71 | 1.802 | 12.537 |
| Inferred | 14.418 | 1.73 | 11.26 | 0.804 | 5.233 |
| Total | 39.228 | 2.07 | 14.07 | 2.606 | 17.769 |

Estimated Measured and Indicated (M&I) resources total 24.81 Mt at 2.26 g/t Au and 15.71 g/t Ag for 1.8 Moz of gold and 12.5 Moz of silver. Inferred resources total 14.418 Mt at 1.73 g/t Au and 11.26 g/t Ag for 0.804 Moz of gold and 5.233 Moz of silver. The resource remains largely unexplored and is open along strike and at depth.

In response to a submission by Global Gold of resource estimates in a two-stage open-pit contour (cf Appendix 6) to the Republic of Armenia's State Natural Resources Commission (RA SNRC), on

October 27, 2009, Global Gold received GKZ (State Committee on Reserves) approval (cf Appendix 4) for 35.6 t, (1.145 Moz) of gold and 107 t, (3.440 Moz) of silver contained in C1 and C2 reserve categories in the Central Area of Toukhmanuk. The approval contained a statement that the approved reserves entirely correspond to requirements for Measured and Indicated Resources under International Standards. The RA SNRC has since confirmed an additional Inferred category resource of 35 t, (1.125 Moz) in the Central Area of Toukhmanuk, bringing the total GKZ approved resources in the equivalent Measured, Indicated and Inferred categories to approximately 2.270 Moz of gold, applying a cut-off grade of 0.8 g/t Au. This endorsement of over two million ounces of gold in the deposit, applying a higher cut-off than that used by Global Gold is encouraging. The deposit has been drilled only over 20% of the vein corridor in the Central Area, leaving potential to considerably exceed these resource figures.

During 2011, Global Gold conducted an additional 4,000 meters of diamond drilling outside the Central Area, bringing total diamond drilling to date to 24,064 meters. Further assaying of drill cores is underway. In addition, Global Gold has uncovered significant unanticipated gold-silver vein zones during pre-mining stripping within the Central Area, in a region where the known vein-sets splay and diverge. Progress is being made with a technical review of the new discoveries.

Results of test mining, diamond drilling and surface sampling of Nos 1 and 15 vein zones, indicate that there are at least 18 identifiable vein zones in a 150 m to 200 m wide ENE-WSW trending corridor of altered rocks extending from the Central Area. The mineralized vein zones explored to date are 5 m to 25 m wide, extend more than 300 m along strike and to more than 150 m depth. Assay results from surface sampling show values range from 1 g/t to 280 g/t Au, and from 8 g/t to 520 g/t Ag. Gold mineralization is often associated with coarse-grained sulphide minerals and, in places, as distinct veins, with surrounding kaolinitic alteration.

To date, Global Gold has tested only part of the Central Area, which is interpreted to extend as a corridor more than 1.5 km along strike, containing similar target-vein zones not yet fully tested. Recent results have encouraged new resource estimates and mine planning is currently underway applying open-pit extraction in the Central Area. 20,364 tonnes of ore at an average grade of 3.6 g/t Au were mined and stockpiled near the plant for processing through the winter of 2010-2011. Recoveries for both gravitation and flotation concentrates being produced are reported to have averaged over 80%.

Global Gold is currently expanding the capacity of the Toukhmanuk plant. Present plant throughput has run-of-mine grades between 2 g/t and 3 g/t Au and production has been derived from selective mining of the most important veins; Nos 1 and 15. The plant is in the process of upgrading production to 300,000 t/y of ore (15,000 oz of Au) during 2011, followed by further expansion currently anticipated to be to 1.5 Mt/y of ore (77,000 oz of Au), subject to a pit optimisation study, while maintaining an average cash cost of approximately US$ 400 /oz. This will be modified by a change in mining strategy towards bulk mining at lower grades, whilst the gold price remains high.

Since July 2010, mining production has steadily increased to about 1,100 t/d in early September 2011. New mills and flotation equipment are being installed to increase plant production and recoveries. Two of the new mills are on their mountings, ready for commissioning, while two new additional mills and an expanded flotation circuit are to be installed later in the year. The plant will then have a capacity substantially exceeding 300,000 t/y. The plant is operating with three working shifts per day while two shifts per day are worked at the mine. The existing gravity concentration plant has been reconditioned and upgraded to capacity, with a new drive motor for the second mill and additional tailings recirculation to improve recovery. A new tailings dam was constructed in 2007 and further expansion is underway in 2011, with construction of an additional tailings dam.

A fully functional sample-preparation facility has been installed with standard analytical equipment including AAS analysis capability for plant and grade control samples. The Company has received international ISO certification for its laboratory at Toukhmanuk, and, recently, the Armenian Ministry of Economy also accredited Global Gold's laboratory as one of those authorized to provide results for the Armenian government.

A shipment of 60 t of gold-silver concentrate, containing approximately 112 oz of gold, was delivered and invoiced in October 2010 and additional shipments are anticipated this year. Pursuant to an off-take agreement, the gold and silver concentrate produced from the Toukhmanuk plant is sold on the basis of 85% of LBMA (London market) closing price, less treatment and refining charges. A discount to 80% of LBMA has been allowed for recent customers with advanced payments.

Local artisan labour is available from Melikgyugh village and neighbouring hamlets, or from Aparan. A power line is alongside the highway and there are opportunities for Global Gold to integrate a small hydro-generating station into the project to assure a sustainable power supply for the mill, making it and the mine independent of rising diesel fuel costs.

Villagers have private plots for vegetables, fruit and animal feed alongside the river, where there is water for irrigation. Elsewhere, on the slopes of Toukhmanuk mountain and other ridges, south-facing Alpine grassland is used as common-grazing land for Yezidi cattle and sheep.

Global Gold routinely monitors air and water quality and, in 2007, partnered with the World Bank in building a new, independent, dedicated well-water supply system for Melikgyugh village residents. The concentrator has been established without recourse to use of cyanide reagents, which ensures that the plant meets stringent waste and tailings quality benchmarks. It is reputed to be the leading Armenian company in pursuit of sustainable mining and processing practices.

In 2006, to supplement resources in Northern Armenia, Global Gold acquired 80% of the Getik gold exploration property covering about 27 $km^2$, 80km east of Toukhmanuk. Here, in 1999, surface sampling programmes discovered gold grades of 4.0 to 5.0 g/t in bleached and crackle-brecciated rhyodacitic lavas, with disseminated pyrite, below a shallow oxidized near-surface zone. In May 2007, Global Gold acquired the remaining 20% interest in Getik Mining Company, LLC. There is potential for an open-pittable deposit and plans to sample and probe the pyritic lavas are in place.

On April 27, 2011, Global Gold and Consolidated Resources Armenia announced that they had concluded a joint-venture agreement to fund and expand production at the Toukhmanuk open pit mine and also progress exploration activities for gold and silver at Toukhmanuk and Getik. As part of the agreement, Consolidated Resources Armenia is providing funding to support the development of the two properties, which will enable Global Gold to complete its current Toukhmanuk mine plant expansion to process 300,000 t/y in 2011 and consolidate its position as a leading Armenian gold producer.

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

Global Gold [(1)] is engaged in the exploration for, and development and mining of, gold, silver and other minerals in Armenia and Chile. Its subsidiaries maintain offices and staff in Yerevan, Armenia and Santiago, Chile. The Company's stock is publicly traded and it employs approximately 100 people globally on a year-round basis and an additional 200 people on a seasonal basis.

In Armenia, Global Gold Mining (GGM)'s focus is on the exploration, development and production of gold and silver at its Toukhmanuk property in Central Armenia. The Company is also exploring and developing other sites in Armenia, including the Getik property and holds royalty and participation rights on other properties in the country through affiliates and subsidiaries. The Toukhmanuk and Getik properties are joint-ventured with Consolidated Resources Armenia, a minerals and metals investing and operating company.

On August 1, 2005, GGM acquired 51% of an Armenian limited liability company; Mego-Gold, LLC, (Mego), which is licensee for the Toukhmanuk mining property and seven surrounding exploration sites. On August 2, 2006, GGM acquired the remaining 49% interest of Mego-Gold, LLC.

Separately, on January 31, 2006, GGM acquired 80% of an Armenian company, Athelea Investments, Close Joint Stock Company (CJSC) re-named Getik Mining Company LLC (GMC) and its gold-uranium exploration licence in north-east Geghargunik province, about 80 km east of Toukhmanuk. On May 30, 2007, GGM acquired the remaining 20% interest in GMC.

On March 26, 2010, Global Gold, through its wholly-owned subsidiary Mego, entered into a credit-line agreement amounting to one billion Armenian Drams (AMD) (equivalent to about US$2,500,000) with Armbusinessbank CJSC in Yerevan. The credit-line included a grace period on re-payment until April 20, 2011, was not revolving, could be pre-paid at any time and was to be drawn down towards equipment purchases, construction, and expansion of existing plant and operations at the Toukhmanuk mine. The loan was for a period of five years until March 20, 2015, bearing interest at 14% for amounts borrowed, and at 2% for the amount available but not borrowed. The loan was made and payable in local AMD currency, with, as security, 100% of the Mego shares as well as a mining right certified by the Mining Licence Agreement # 287, with Purpose of Sub-Surface Exploitation and a Mining License # HA-L-14/356 issued on August 5, 2005.

Global Gold engaged Behre Dolbear International Ltd in May 2011 to prepare an Independent Technical Report in conformity with standards of the Canadian Securities Administration (CSA) as expressed in Canadian National Instrument 43-101. Topics in this report are discussed in the order mandated by CSA Form 43-101F1, including insertion at appropriate places of additional topics required of section 25, with regard to development and production stage projects. In addition, in August 2011, Global Gold engaged Behre Dolbear, to prepare a CIM-compliant mineral resource estimate and, together with Gemcom Software Europe Limited, a new Surpac resource block model.

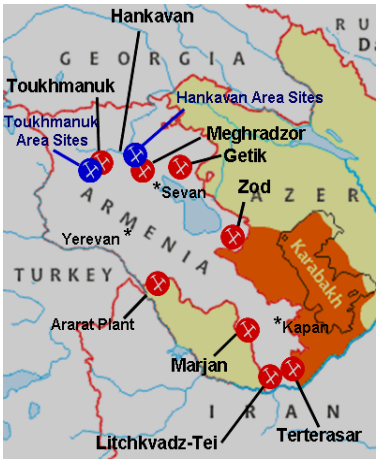
This report embodies findings related to the projects in a transparent and full progress report as of the date written, which can be provided to interested investors and regulators in various jurisdictions. It should not be misinterpreted as constituting a scoping or feasibility study.

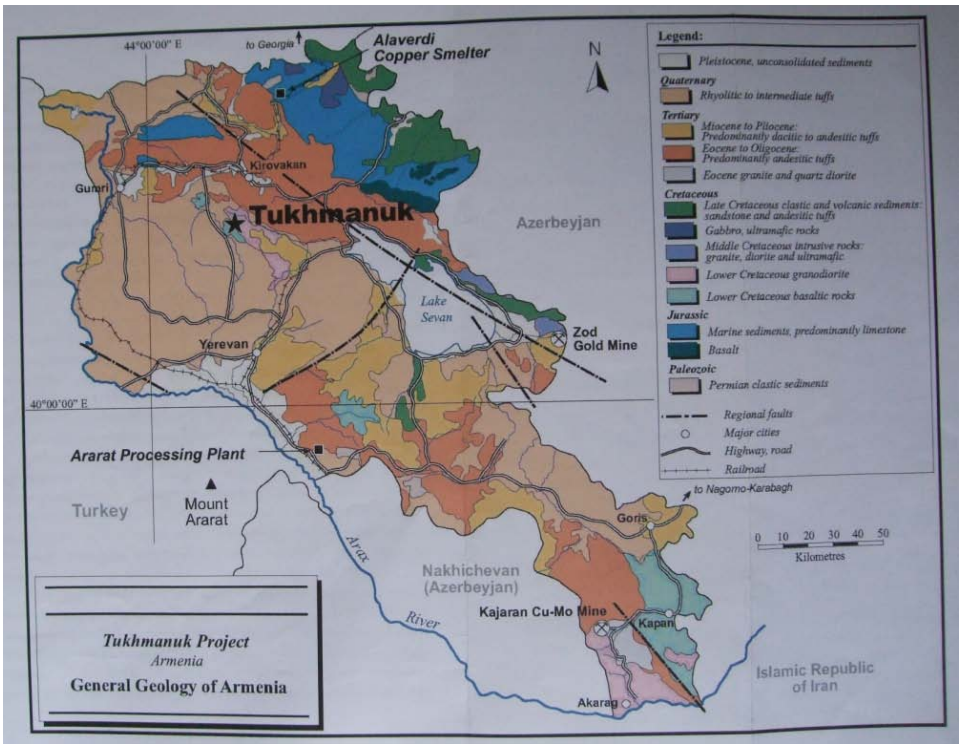
## 2.1 EXPLORATION LICENCES

The Toukhmanuk property consists of two mineral licences, about 60 km north of Yerevan, covering a total area of 53.76 km$^2$. The registered licence holder is Mego-Gold LLC (Mego) (Figure 1[(2)]).

The western licence is in Arakadzodn province and the eastern licence is in Kotayk province. Global Gold, through Getik Mining Company LLC (GMC), also has a 27 km$^2$ exploration licence in north-east Geghargunik province, about 80 km east of Toukhmanuk (Figure 1).

**Figure 1** **Location of Global Gold areas of interest, Armenia**
With geological setting below



## 2.2 BASIS AND SCOPE OF REPORT

This report is based on:

- Site visits and review meetings undertaken by the author.
- Technical data, documents, reports and information supplied by Global Gold and Gemcom Software Europe Ltd.
- Previous Behre Dolbear experience with mining and exploration activities in the region added to published papers and data on Armenian and surrounding geology and mineral deposits.

In compiling the report the author first met with relevant Global Gold staff in Yerevan on May 31. Prospect-specific visits were as follows: the Toukhmanuk mine, plant and exploration area on June 1 and 2, with further visits on September 1 and 5. Assay Laboratory on June 1 and September 1, and the Getik licence area on June 3 and 4, all in 2011

## 2.3 RELIANCE ON OTHER EXPERTS

Behre Dolbear has reviewed historical technical data, as well as reports and studies produced by others, in particular, Gemcom Software Europe Ltd and RPA Associates Inc. This report was compiled on a reasonableness basis. Behre Dolbear has relied upon the information provided and assumed that it has been accurate. Behre Dolbear has not carried out any independent exploration work, drilled any holes, carried out sampling or analyses on any of the prospects and assumes no liability for the accuracy of the information provided by the client. Achievability of life-of-mine plans, budgets and forecasts is uncertain, consequently actual results may be significantly more or less favourable.

This report includes technical information, which requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Behre Dolbear assumes no liability for the accuracy of the information produced herein and retains the right to change or modify conclusions as further information becomes available.

All photographs, unless otherwise referenced, were taken by the author, who gratefully acknowledges full co-operation from Global Gold's management, staff and contractors, all of whom made any and all data requested available and responded openly and helpfully to all questions and requests. A large number of the figures and tables presented were supplied by Global Gold.

# 3.0 DISCLAIMER

Behre Dolbear International Ltd does not accept any liability other than the statutory liability to any individual, organization, or company and takes no responsibility for any loss or damage arising from the use of this report or information, data, or assumptions contained therein.

With respect to the Behre Dolbear report and its use thereof by Global Gold Corporation, their owners, affiliates or subsidiaries, each entity does agree to indemnify and hold harmless Behre Dolbear, their shareholders, directors, officers, and associates from any and all losses, claims, damages, liabilities, or actions, to which they or any of them may become subject under any securities act, statute, or common law and will reimburse them on a current basis for any legal or other expenses incurred by them in connection with investigating any claims or defending any actions.

Full legal verification and due diligence of licence documents was not undertaken.

## 4.0 DESCRIPTION AND LOCATION OF THE PROPERTIES

Armenia is a land-locked country (cf Figure 1), with a population of just over three million, of whom about one million live in the capital Yerevan which is accessible by scheduled airlines from most major European cities, Russia, the Middle East and India.

Topography ranges from 400 m to 4,060 m above mean sea-level (amsl), with the country experiencing a highland continental climate, sub-Alpine to Alpine in the mountainous parts, with long, cold winters and short, hot summers.

Major metalled roads connect the principal cities, but in the more rural areas gravel road and track conditions may be poor. Land-line telephone communication outside the larger towns and cities can be difficult, but cellular telephone communications are good, even from the most remote parts of the country.

Power comes from atomic, natural gas, thermal and hydro sources, whilst recent completion of a 141 km gas pipeline from Iran will help the country's energy needs. The pipeline is operated by Arm-RosGazprom.

Armenia is committed to return 3 kW of electricity to Iran for every cubic metre of gas received and the intention is to take 450 $Mm^3$ of gas per year. There are incentives for independent power generation facilities that can feed into the national grid. A high-voltage power line runs alongside the road connecting Yerevan to Aparan and power is available at Melikgyugh, which is linked to the national grid. Water is available from rivers and streams within the property and, in Behre Dolbear's opinion, there is untapped potential for hydro-power and possibly wind-turbine power from the streams and sites on the higher mountain ridges.

Both Toukhmanuk and Getik properties are north of Yerevan. The most advanced one, Toukhmanuk, is about 60 km north of Yerevan, close to the town of Aparan, which has a population of about 6,000, and some 75 km by road from a copper smelter at Alaverdi in northern Armenia.

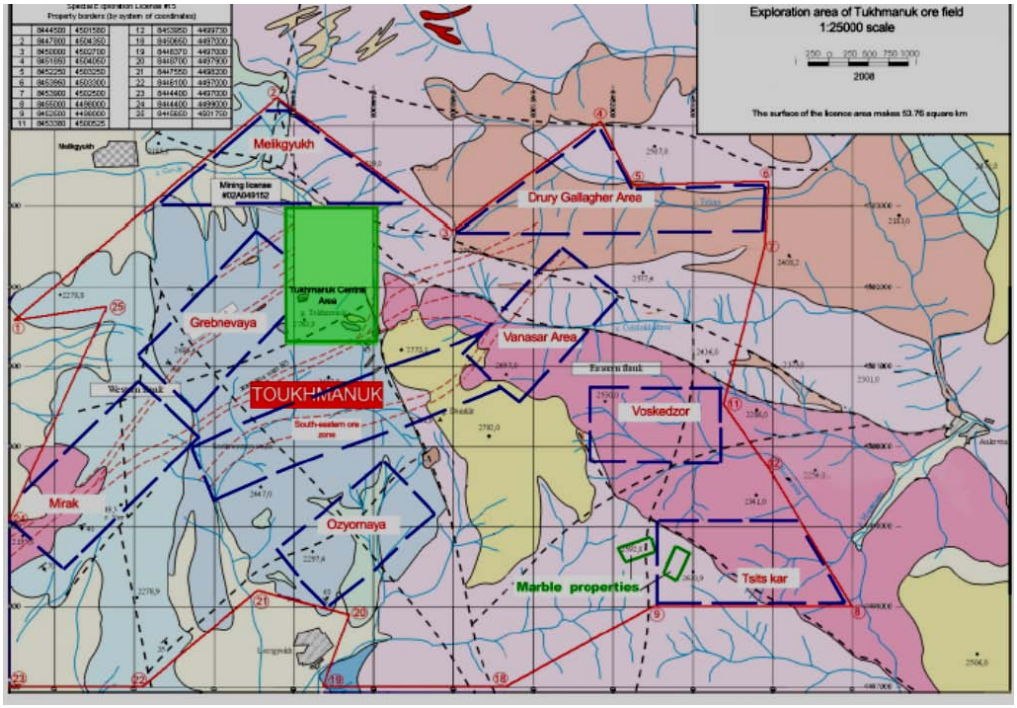
Mining equipment and personnel are available in cities, such as Gyumri, Vanadzor, or at Alaverdi, where an open-pit Cu-Mo project is being developed. Mining equipment and personnel are also available in Yerevan.

**Accessibility, climate, local resources, infrastructure and physiography**

Access to the Toukhmanuk project licences is by paved road to north of Aparan followed by about 15 km, by gravel road, to Melikgyugh village, where about 1,000 people live.

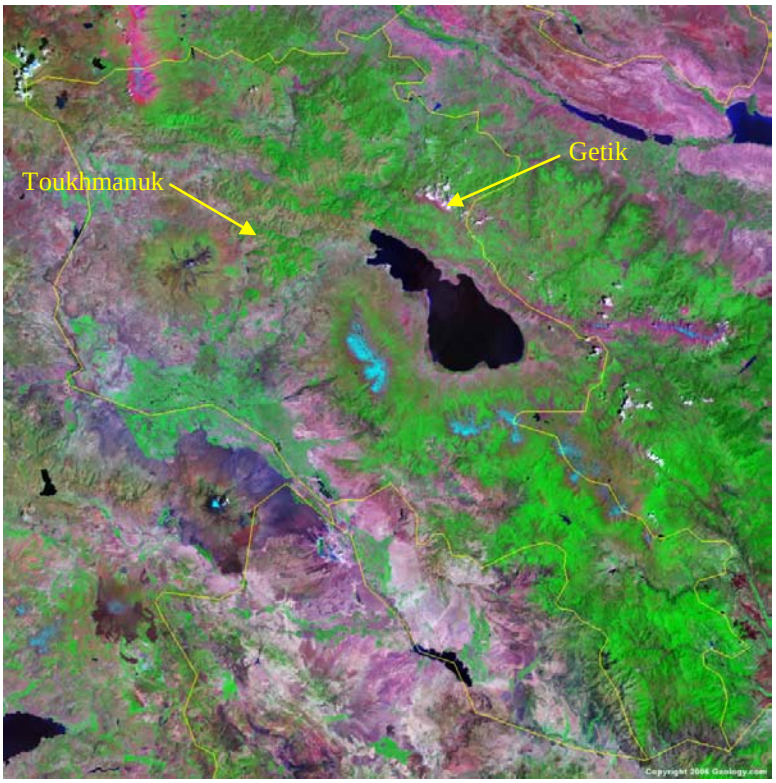
Figure 2 is from an investor presentation of February, 2011[(1)].

**Figure 2** **Toukhmanuk licence, with areas of interest**
Geological map, with Melikgyugh village at top left.




The region is mountainous and alpine grassland meadows provide fodder for sheep and cattle, topped by rocky ridges, as shown on the satellite image (Figure 3).

**Figure 3** **Armenia, satellite image in spring-time**



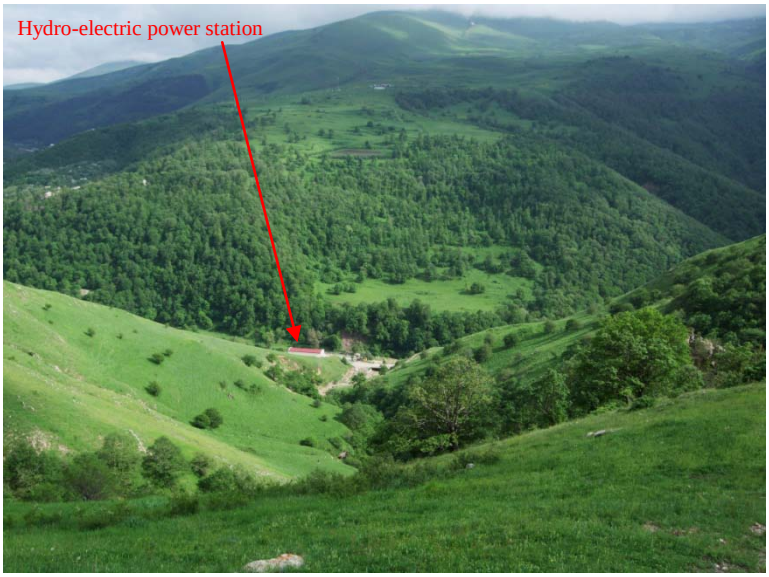

(North to top of image which is approximately 300 km wide)

Elevations range from 2,100 m to 2,800 m amsl (Figure 4), with U-shaped valleys. The relative height of watersheds above the valley bottom is 1,000 m to 1,200 m. The fauna and flora are sub-Alpine to Alpine, with average precipitation of 800 mm/y and temperatures ranging from +14 °C to -17 °C.

**Figure 4** **Toukhmanuk mine, looking north-west, Melikgyugh village in the distance**
View from south of main vein corridor, with open pit, tailings dams, office and camp accommodation facilities visible.


The Getik licence is in Geghargunik province, NE of Lake Sevan and about 110 km NE of Yerevan (cf Figure 1). Access is along the paved M14 highway to 16 km north of Dilijan, onto a minor paved road leading through the hamlets of Goshavank and Dzoravank to Getik village where there is a population of about 500. High-tension electric power lines cross the licence and there is a US$3 million, newly-constructed, privately-owned 3 MW hydro-electric power station on the southern licence boundary (Figure 5), with Chinese-manufactured generating turbines. The climate is similar to Toukhmanuk, while fauna and flora are also sub-Alpine to Alpine.

**Figure 5** **Topography and infrastructure, Getik licence, looking south**
Ancient oak, pine and hornbeam forest on distant north-facing slopes, outside Global Gold's licence area, rising to 2,000 m amsl, with partly cultivated common-land on south-facing foreground slopes.

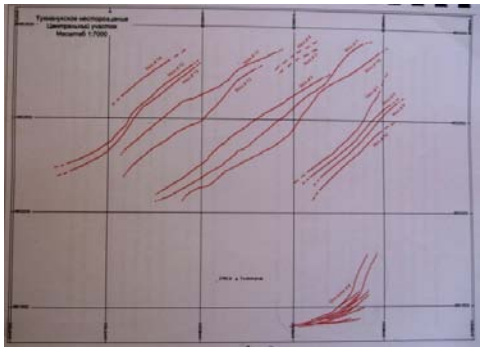


A gas line runs alongside the valley roadway at about 1,500 m elevation and surrounding mountains rise to over 2,000 m amsl. The higher parts are open summer pastures, with north-facing land below 1,850m elevation covered by oak, beech and hornbeam forest, whereas farms and small-holding agriculture exist over common-land on south-facing valley sides (Figure 3).

## 4.1 EXPLORATION HISTORY

Systematic exploration for a vein-type gold deposit began in the 1960s, with detailed prospecting, mapping, trenching sampling and analysis. By 1983, 15 vein-sets had been discovered in the Toukhmanuk area (Figure 6 [(2)]).

**Figure 6 Toukhmanuk vein sets**



(North to top, with 500m grid)

Between the late 1980s and 1997, detailed surface and underground work included diamond drilling, underground adit development and vein sampling. Metallurgical test-work was also undertaken. Estimation of Armenian GKZ-style C1 and C2 reserves in the two principal veins, by the State Geological Agency (Table 1[(3)]) in 1995, indicated a cumulative total of 317,900 oz Au and 3.53 million ounces (Moz) Ag.

**Table 1 Armenian GKZ-style 1995, non-compliant, reserves at Toukhmanuk**

| Vein | Category | Tonnes | g/t Au | g/t Ag | Ounces Au | Ounces Ag |
|---|---|---|---|---|---|---|
| 1 | C1 | 98,600 | 5.80 | 42.60 | 18,400 | 135,000 |
| 15 | C1 | 320,500 | 10.03 | 146.02 | 103,400 | 1,504,700 |
| **Subtotal** | C1 | 419,100 | 9.03 | 121.70 | 121,800 | 1,639,700 |
| 1 | C2 | 421,000 | 5.39 | 28.27 | 73,000 | 382,600 |
| 15 | C2 | 529,600 | 7.23 | 88.75 | 123,100 | 1,511,100 |
| **Subtotal** | C2 | 950,600 | 6.41 | 61.96 | 196,100 | 1,893,700 |
| | | | | | | |

**Source: Mego Gold, 2003.**

In 1995, Mego-Gold LLC (Mego) acquired the property. In 2001 Mego built a small mineral processing plant and began open-pit mining on the central part of Vein 15. About 6,600 t were processed, with run-of-mine ore averaging 2.9 g/t Au and 51 g/t Ag. Recovery of the gold was reported to be 72% [(3)].

The property was then put on care-and-maintenance for 30 months. A new reserve estimate was prepared by the Armenian Ministry of Natural Resources in 2004 indicating lower grades and aggregate gold and silver contents. However, the deposit was still considered to be a high-grade vein-mining proposition (Table 2 [(3)]).

**Table 2 Armenian GKZ-style 2004, non-compliant, reserves at Toukhmanuk**

| Vein | Category | Tonnes | g/t Au | g/t Ag | Ounces Au | Ounces Ag |
|---|---|---|---|---|---|---|
| 1 | C1 | 83,700 | 5.46 | 27.48 | 14,700 | 321,500 |
| 15 | C1 | 264,300 | 8.27 | 62.81 | 70,250 | 533,700 |
| **Subtotal** | **C1** | **348,000** | **7.59** | **54.31** | **84,950** | **855,200** |
| 1 | C2 | 461,100 | 5.41 | 25.47 | 72,400 | 340,800 |
| 15 | C2 | 495,300 | 6.28 | 30.69 | 100,100 | 488,700 |
| **Subtotal** | **C2** | **956,400** | **5.61** | **26.98** | **172,500** | **729,500** |
| | | | | | | |

Source: Sabonjyan and Sookiasyan, 2004.

In August 2005, Global Gold acquired 51% of Mego's Toukhmanuk property, with seven surrounding exploration sites, and, in August 2006, secured the remaining 49% of the property, consolidating its tenements. The mineralized vein zones pin-pointed on historical maps were confirmed by field mapping and surface sampling at 1:10,000 scale.

Historical GKZ (State Committee on Reserves) estimates in C1, C2 and P1, categories indicated 12.1 Mt of reserves, averaging 6.74 g/t Au and 30.79 g/t Ag, containing 2.6 Moz gold and 11.9 Moz silver.

A mining plan was submitted and approved by the relevant Armenian Governmental authorities for mining and processing about 150,000 t of oxide material over a two-year period.

Two Caterpillar 325 excavators, a Caterpillar D9R bulldozer, two 20 t GRAZ trucks and a grader, with additional equipment, listed in Appendix 8, was purchased for open-pit mining of the oxide zone above the Armenian State approved unoxidized C1/C2 category reserves.

Exploration, mining and initial mineral processing work in a preliminary open pit, shown on Figure 7 [(2)], with the village of Melikgyugh in the distance, have uncovered significant additional gold and silver resources in the Central Area.

**Figure 7 Open-pit on Central Area of veining and alteration, Toukhmanuk mine**

Results of test mining, diamond drilling of 20,064 m and surface sampling around Nos. 1 and 15 vein zones indicate that there are at least eighteen identifiable vein zones in a 150 m to 200 m-wide ENE-WSW trending corridor of altered rocks cutting through the Central Area, which have potential for bulk mining.

On October 27, 2009, Global Gold announced further GKZ approval of reserve estimates of 35.6 t, (1,145,000 oz) of gold and 107 t, (3,440,000 oz) of silver contained in C1 and C2 categories at Toukhmanuk. In its approval, the Republic of Armenia's State Natural Resources Agency stated that the "approved reserves entirely correspond to the requirements for Measured and Indicated Resources under International Standards" and the Agency has since confirmed an additional gold resource in the inferred category of 35 t, (1,125,000) oz, bringing the total approved resources in the equivalent of Measured, Indicated and Inferred categories to 2.27 Moz of gold, applying a cut-off grade of 0.8 g/t Au.

Subsequent drilling results encouraged new resource estimates and mine planning by Global Gold to apply open-pit, bulk mining extraction in the Central Area. 20,364 t of ore at an average grade of 3.6 g/t Au was selectively mined and stockpiled near the plant for processing through the recent winter. Recoveries for both gravitation and flotation concentrates being produced averaged over 80%.

## 4.2 GEOLOGICAL SETTING

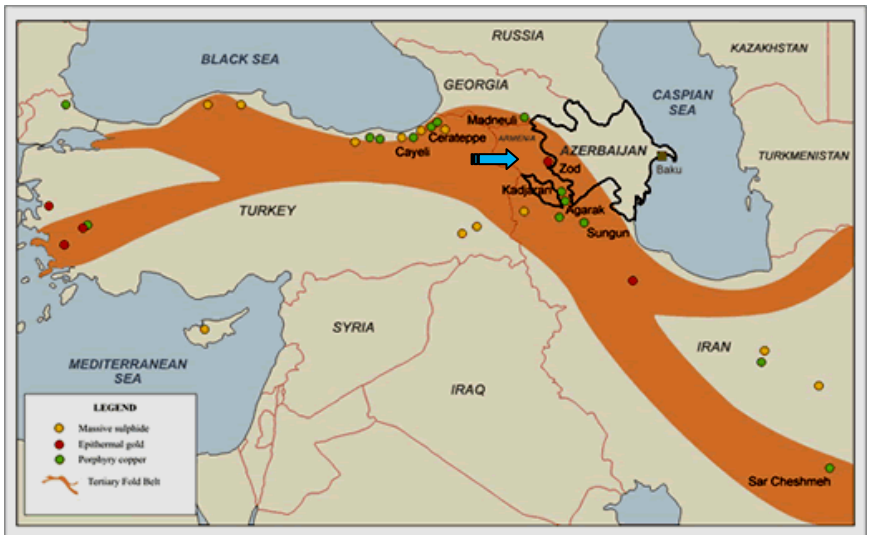
Armenia straddles a WNW-ESE Cenozoic Caucasian orogenic belt, which is over a collision zone between the Eurasian and Arabian tectonic plates, marked by fault structures and extrusive volcanic and intrusive sub-volcanic and granitic activity. The fault activity continues to the present, with hot springs and earthquakes.

Volcanic lavas and breccias host polymetallic gold-silver mineralization, which is often also associated with porphyritic phases of later granitic intrusives.

## 4.3 DEPOSIT TYPES

Deposits are steeply dipping vein and porphyry-type stockwork mineralization and minor, associated stratiform layers, which are often near-surface oxide zones.

**Figure 8 Middle-East Cenozoic porphyry copper-molybdenum-gold belt**




Examples of deposits in the Cenozoic porphyry Cu-Mo-Au belt (Figure 8 [4]), with approximate resource tonnages and grades, are:

Skouries; 191 Mt at 0.55% Cu, 0.82 g/t Au [5].
Madneuli; 23 Mt at 1.03 g/t Au [6].
Zod; 4.3 Mt at 7.3 g/t Au [4 and 27].

Tekhout; 454 Mt at 0.36% Cu, 0.02% Mo [6].
Deno; 49 Mt at 1.4 g/t Au, 19 /t Ag, 0.73 %Zn, 0.19 %Cu [26].
Kajaran; 400 Mt at 0.27% Cu, 0.055% Mo, 0.03 g/t Au [4].
Agarak; 45 Mt at 0.46% Cu, 0.027% Mo [4], 0.025 g/t Au.
Sar Cheshmeh; 1.2 billion tonnes (Bnt) at 0.8% Cu, 0.02% Mo, 0.3 g/t Au and
Sungun; 500 Mt at 0.75% Cu, 0.01% Mo [7].

Kajaran is being mined by Zangezur Copper-Molybdenum CJSC at a rate of 12.8 Mt/y, and processes all its molybdenum concentrate in Armenia, primarily at Armenian Pure Iron Works (API) and Armenian Molybdenum Production CJSC (AMP). API produced about 3,000 t of FeMo in 2005.

Cronimet Mining GmbH, which owns 60% of Zangezur and 51% of API, was the principal buyer of finished molybdenum products.

Value of Armenian mineral production in 2005 was about US$ 180 M, amounting to almost 5% of GDP. 50% of exports, by value, are mineral products [8, 9, 10 and 15].

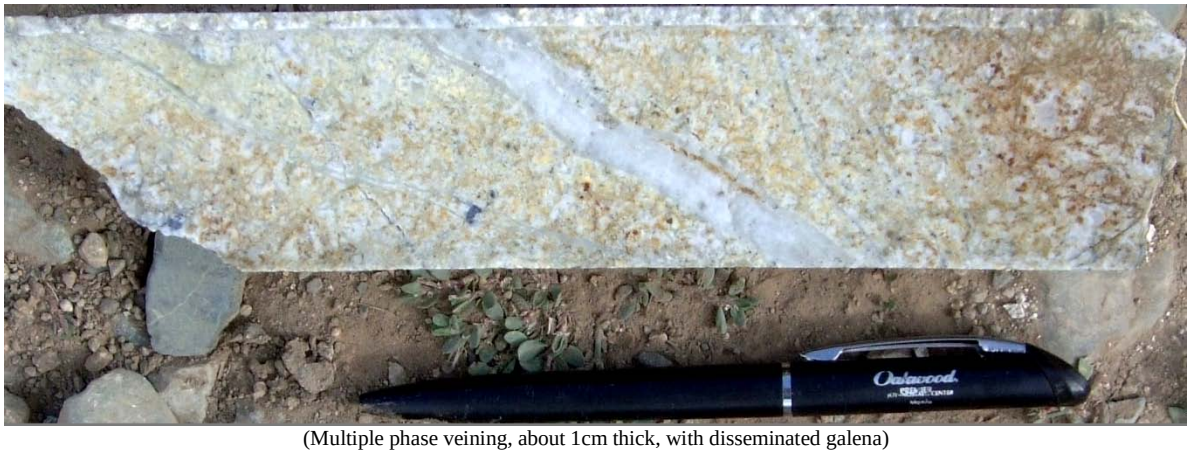
## 4.4 MINERALIZATION

The mineralized vein zones at Toukhmanuk are 5 m to 25 m wide, extend more than 300 m along strike and to more than 150 m depth. Assay results from surface sampling show values range from 1 g/t to 280 g/t Au, and from 8 g/t to 520 g/t Ag. From all drill-hole intercepts maximum values are 100 g/t Au and 560 g/t Ag [2 and 3]. Gold mineralization is often associated with coarse-grained sulphide minerals and, in places, as distinct veins with surrounding kaolinitic and sericitic alteration (Figure 9).

**Figure 9** **Quartz-sphalerite-galena-arsenopyrite-pyrite-chalcopyrite veins**
In bleached granodioritic quartz-eye porphyry, Toukhmanuk pit, with representative veins from core samples overleaf

(Sample measures 25cm across)

(Central vein is about 1cm thick, with late-stage galena)



(Multiple phase veining, about 1cm thick, with disseminated galena)

(Multiple phase veining, about 1cm thick, with disseminated galena, viewed from reverse side to image above, note galena at left)

## 5.0 TOUKHMANUK MINE PROJECT

The Toukhmanuk property is a vein-and-stockwork gold deposit which is being mined using an open-pit method. Global Gold has one National exploration licence #15, as extended, covering 10,915 acres for sub-surface exploitation of gold.

The Company also has one National mining license #HA-L-14/356, for 25 years, which covers a Central Area of 446 acres for mining gold and silver.

The Company is required to pay annual governmental fees equivalent to about $32,000. The Company is also required to spend approximately $1,200,000/y on exploration work and mining 80,000 t/y of mineralized rock at the property, as submitted and approved in its mining plan, to maintain the licences in good standing. The exploration licence area is defined by the coordinates in Appendix 2.

The Toukhmanuk licences, in central Armenia, straddle the boundary between Aragatsotn and Kotayk provinces, about 60 km north of Yerevan, close to the town of Aparan.

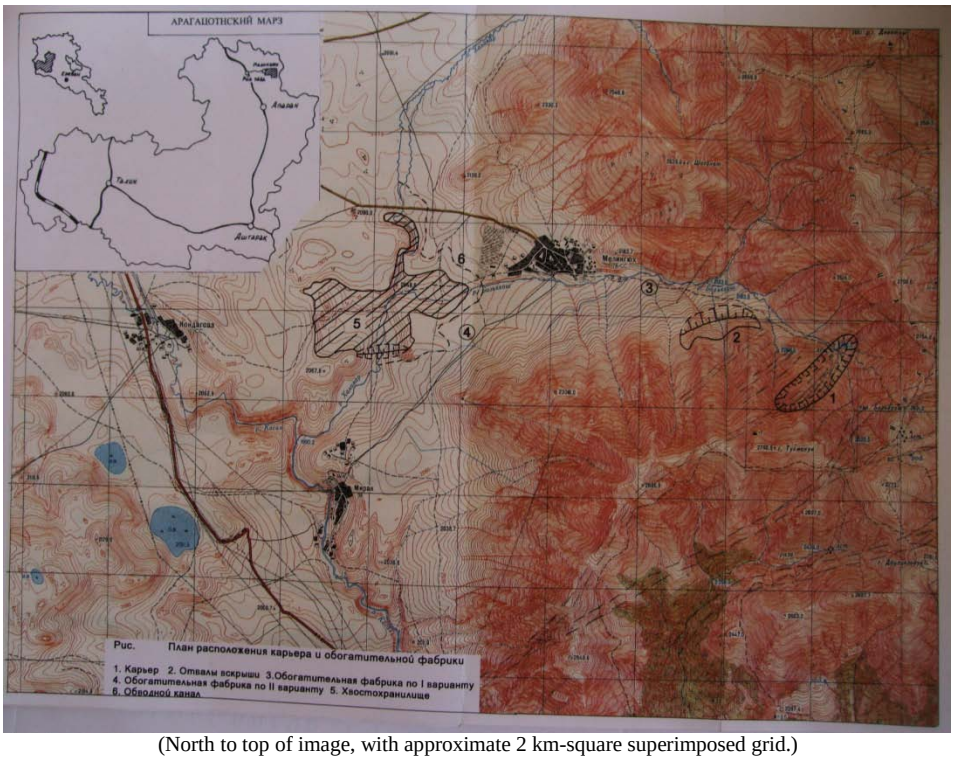
Access is by paved road to a turn-off north of Aparan, with about 15 km by dirt road, via Mirak hamlet, to Melikgyugh, a village 2.5 km north-west of the open-pit workings (Figure 10).

**Figure 10 Melikgyugh village, looking north-west from the mine camp**

Infrastructure at the site includes electrical power, cell-phone network and road-building equipment. Power, is available at the Toukhmanuk site, and at Melikgyugh village, which is linked by a 10 KV line to the Armenian power grid. Water is available as there are rivers flowing from the mountains, with a drop of over 1,000 m to the valley floors (Figure 11), which could be used to generate hydro-electricity for Global Gold's operations and the surrounding communities. There also appears to be potential for wind-powered generators on the mountain ridges.

In 2007, Global Gold partnered with the World Bank in building a new, independent, dedicated, well-water supply system for the Melikgyugh village residents.

**Figure 11** **Topography and infrastructure, Toukhmanuk region**
Aparan-Yerevan highway on left, with power line, Mirak hamlet and Melikgyugh village in centre, with valley leading to processing plant and open pit on right.



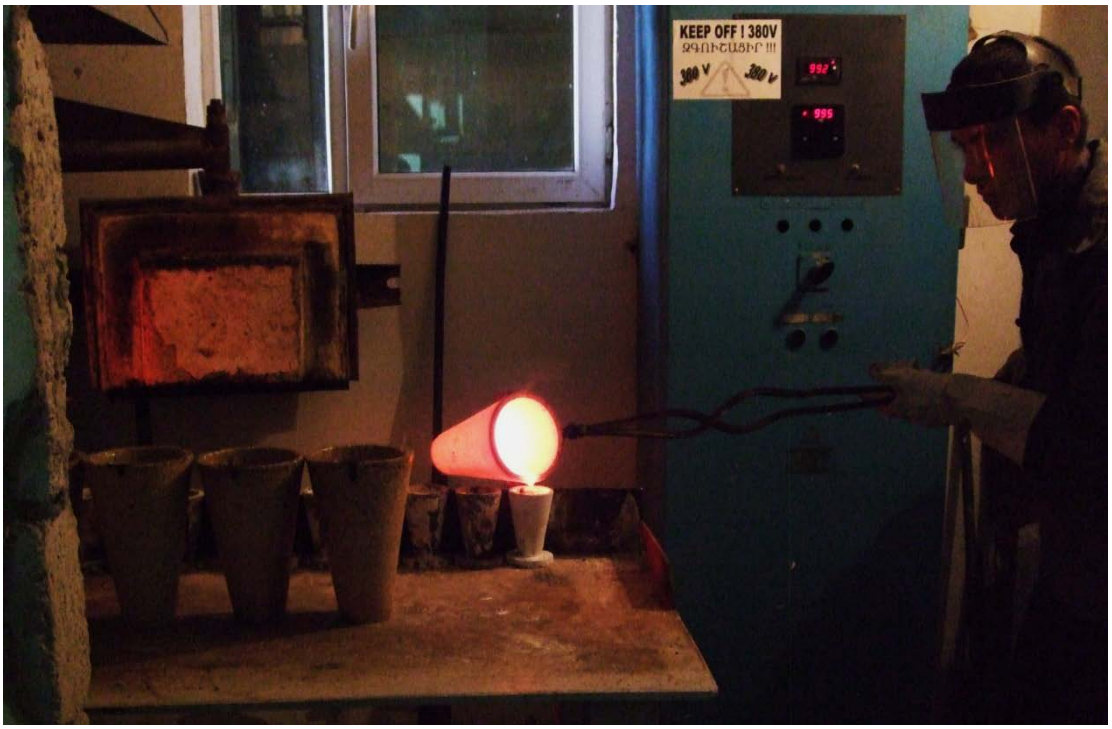
(North to top of image, with approximate 2 km-square superimposed grid.)

In addition to the licences, the acquisition included a 200,000 t/y capacity plant, in which crushers, mills, and gravitation circuits have been kept in good condition, while also adding a hydro-cyclone and flotation cells, as well as building a new tailings dam. Other assets at the property include several bulldozers, excavators and a tracked excavator, which are in good condition (Figure 12 and listed in Appendix 8).

**Figure 12** **Toukhmanuk mine area**
Looking east, mining equipment in foreground, tailings dam impoundment berms and mill in the middle distance, trenches on slope of Toukhmanuk mountain to right.

The property also includes temporary housing units and hangars, which are used to store core samples, as well as to contain a gold room and an ISO-certified laboratory (Figure 13).

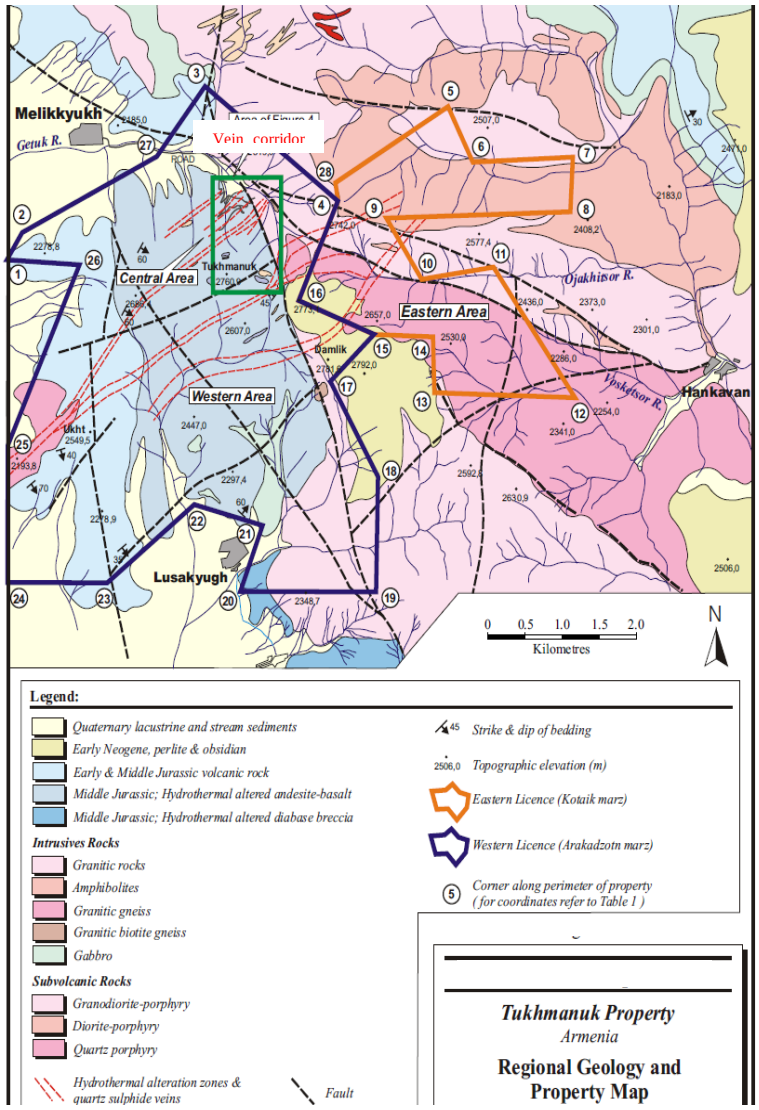
**Figure 13 Toukhmanuk mine laboratory gold room, with fire assay furnace**




## 5.1 EXPLORATION

The Central Area at Toukhmanuk, covers 2.2 km$^2$ within a licence area of 53.76 km$^2$ and hosts numerous NE-SW trending steeply dipping quartz veins with gold and polymetallic mineralization, shown by red dashed lines in Figure 14, which are cut by a NW-SE Hankavan-Melikgyugh fracture, traceable through Toukhmanuk pass and north of Melikgyugh village.

**Figure 14 Regional geology map, Toukhmanuk, with out-dated property boundaries**




The area is underlain predominantly by Jurassic volcanic rocks and Cretaceous intrusive rocks, which have undergone tectonism and are in NW-SE fault-contact against leucocratic granite (Figure 14[3]). The volcanic rocks comprise andesites and dacites and the intrusive rocks are dominantly granitic with porphyritic phases, minor granitic gneiss and amphibolite. Parts have a covering of Tertiary volcanic including obsidian and perlite and a surface layer of conglomeritic Quarternary alluvium.

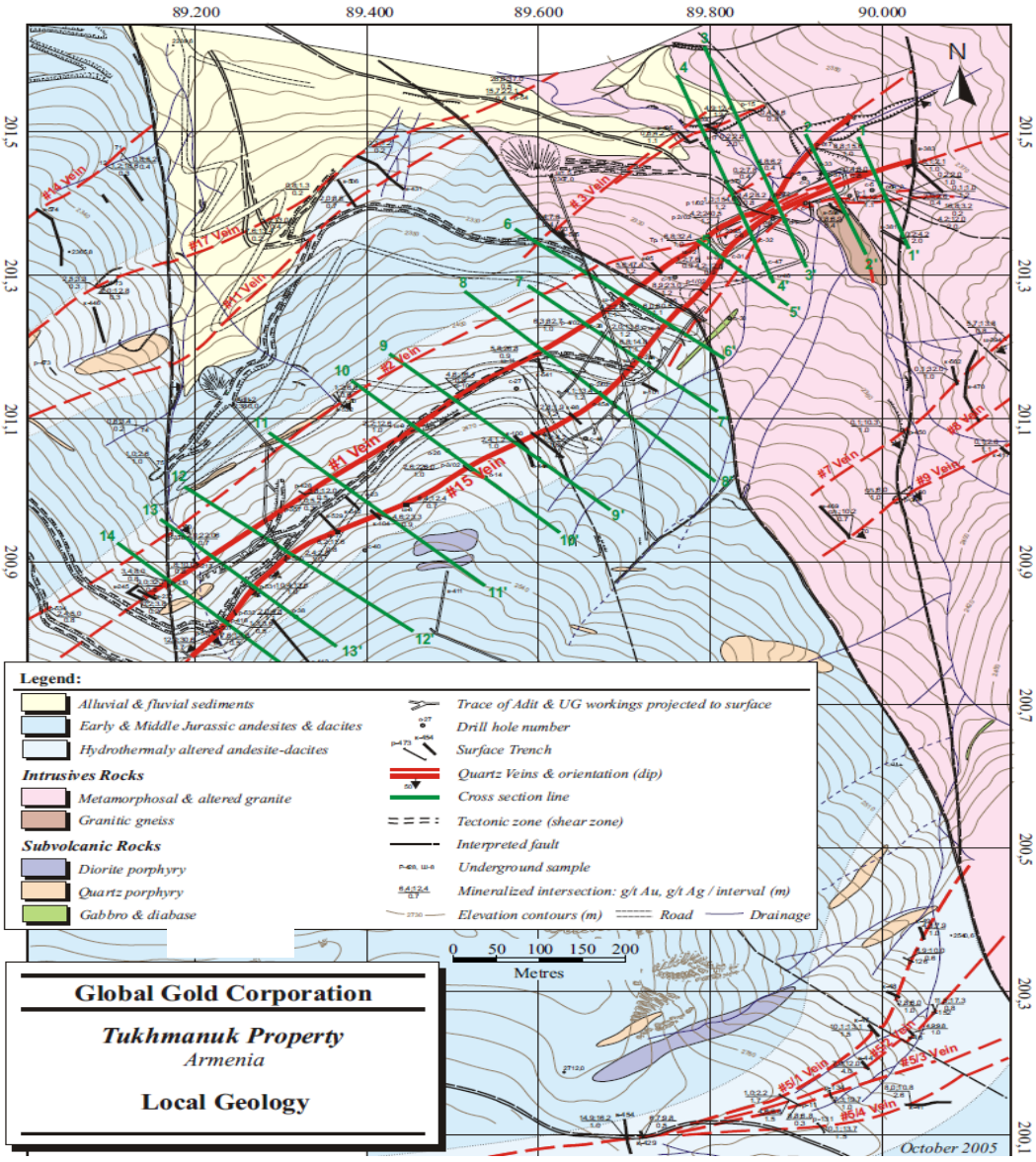
Vein and stockwork gold mineralization in the Toukhmanuk area consists of quartz-sphalerite-pyrite-galena-arsenopyrite veins and disseminations hosted by hydrothermally altered Jurassic and Cretaceous volcanic and intrusive rocks.

Gold grain-size ranges from 5 microns (µm) to 50 µm. Field studies have been interpreted to indicate a genetic connection between major NW-SE trending faults and the NE-SW trending veins at Toukhmanuk [3], but in Behre Dolbear's opinion it is more likely that the source is a granodioritic quartz-porphyry intrusive phase (cf. Figure 9).

## Mapping, trenching, drilling and underground adit development

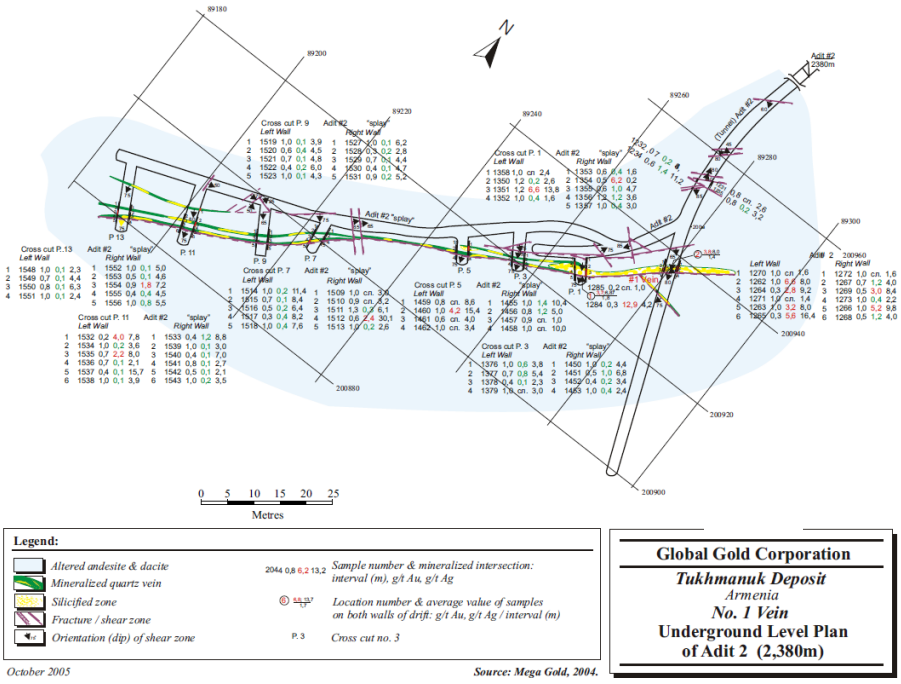
Work has outlined a 200 m-wide prospective corridor extending from the Central Area of the licences, which contains hydrothermally altered rocks hosting veins 1, 2 and 15, which all trend NE-SW and dip steeply south-east (Figure 15[3]). Details on these and other, major, veins follow below.

**Figure 15** **Project geology map, Toukhmanuk, with vein traces**
Topography, access tracks, cross-section locations and adit development in plan.




**No. 1 Vein** occurs within a broad zone of kaolinitic alteration, with a NE-SW trend, dips 65° to 75° SE and contains about 40% of the estimated Armenian GKZ-style mineral reserves. It extends more than 4 km along strike, but only about 1 km of this extent has been tested so far by 18 surface trenching cuts, diamond drilling, underground adit development and sampling (Figure 16), through 2,330 m to 2,480 m elevation.

**Figure 16** **No. 1 Vein, underground level plan of Adit 2 at 2,380 m level**




The spacing of intersections in the eastern part of the vein is 20 m to 40 m apart, while in the western part they are spaced from 60 m to 100 m apart. The vein is intersected at depth by adit 2, at 2,380-metre level (mL) and adit 5 at 2,310 mL (Figure 15), as well as by 13 drill holes, spaced 30 m to 110 m apart down to 2,190 mL and by the trial open pit at 2,295 mL. Mineralization in this vein has reported grades of 1 g/t to 23 g/t Au and 10 g/t to 240 g/t Ag [(3)].

**No. 15 Vein** also occurs within a wide zone of kaolinitic alteration, has a NE-SW trend, dips 65° to 80° SE and contains some 60% of estimated Armenian GKZ-style mineral reserves. It also includes a splay-vein off the principal vein structure. It extends more than 5 km along strike, but only about 1 km of this extent has been tested so far by surface trenching, diamond drilling, underground adit development and sampling. It has been traced on surface by 19 workings over a distance of 1,100 m, between 2,520 m and 2,330 m amsl, with the spacing of drill collars at surface varying from 10 m to 80 m apart (Figure 17).

**Figure 17** **Surface exposure of No. 15 vein, cutting andesitic volcanics**
Dips in volcanics on extreme left are shallower than dip of the iron-stained oxide veins, with vein zone at this level, almost 8 m thick.
Close-up of oxidized vein at right.

The vein is intercepted in depth by adit 5 at 2,310 mL, 16 drill holes down to a level of 2,200 m and the open pit at a level of 2,295 m amsl. The distance between the drill-hole intercepts is from 30 m to 110 m apart and the vein can be continuously traced by underground workings for a distance of 400 m along strike [2] (Figures 18 and 19 [3]). The vein, from drilling, extends some 200 m below surface [3]. Mineralization in this vein has reported grades of 1g/t to 20 g/t Au and 5 g/t to 200 g/t Ag.

**Figure 18 No. 15 Vein, eastern half, underground level plan of Adit 5, at 2,307 m level**

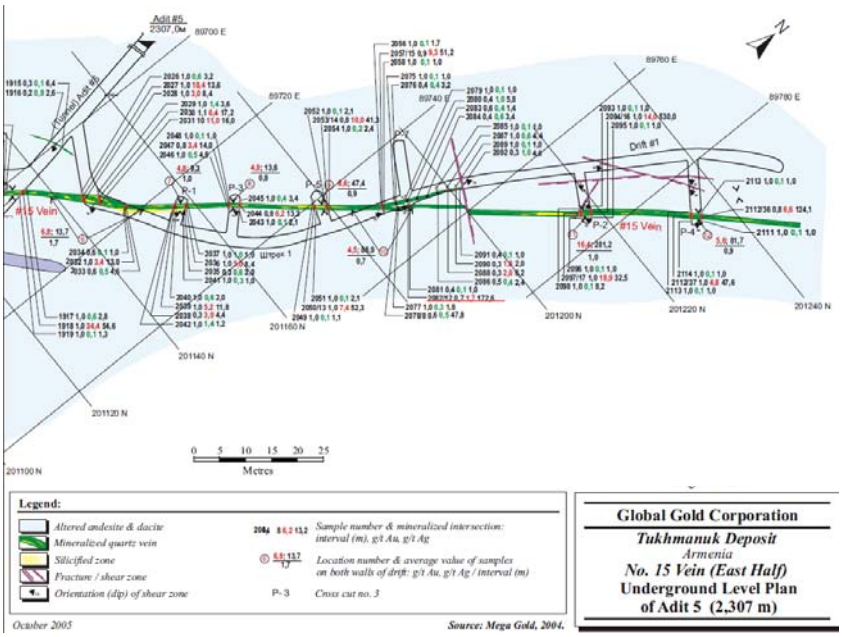
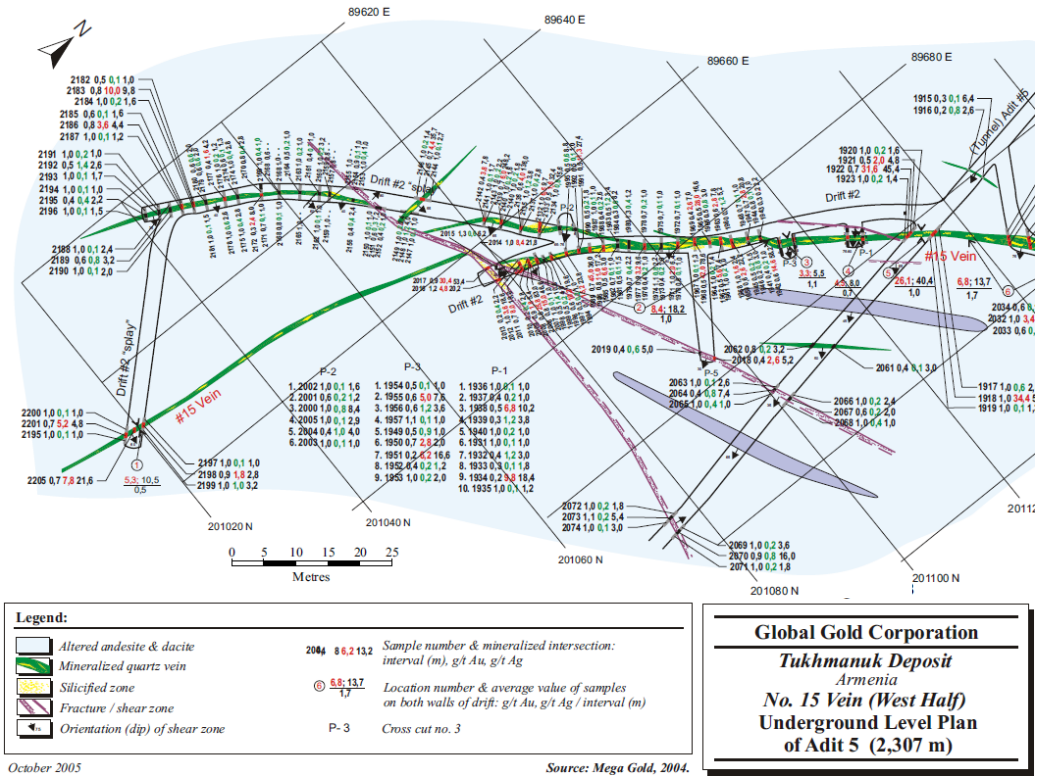


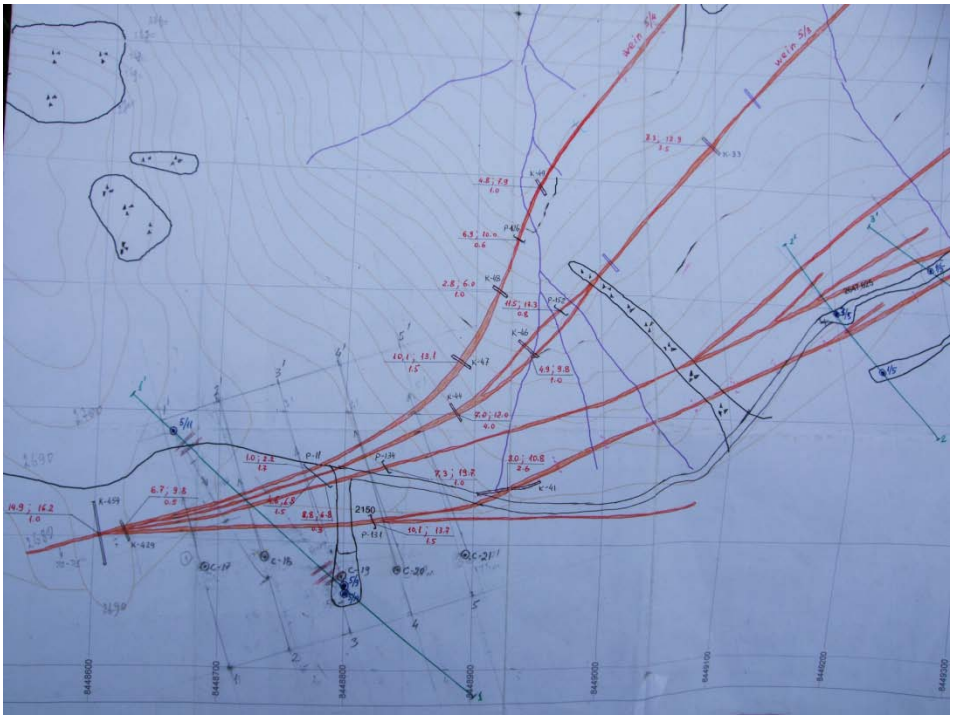

**Figure 19 No. 15 Vein, western half, underground level plan of Adit 5, at 2,307 m level**



**No. 5 Vein swarm** (cf Figure 15) is 500 m to 600 m SE of vein zone 15, with thickness varying from 50 m to more than 200 m and a lateral extent of about 5 km. Four NE-SW quartz-carbonate-sulphide splayed veins, described below, are separated by weakly ochreous and silicified hydro-thermally altered rocks, and traces of ancient mining exist at the south-western edge of the zone (Figures 20 and 21).

**Figure 20** **No 5 Vein area, 2,700 m amsl, with former access tracks and drill platforms**
Looking east.

**Figure 21** **Plan of No 5 Vein area**
Vein traces, trenches and drill hole locations, with access tracks



(Grid lines spaced 100m apart)

- Vein zone 5/1 passes at the south-eastern border of the zone aligned north-easterly. At surface, the zone has been sampled by trenching and soil removal on 16 sections over a length of 1,280 m. The vein has a quartz-carbonate core, with a 60° SW to vertical dip. The gold grade varies from 2.2 g/t to 14.4 g/t, averaging 7.0 g/t, while silver values range from 2.9 g/t to 18.3 g/t. From 53 m to 55.5 m, at the north-eastern flank, the vein has been intersected by drill hole 15, over a horizontal thickness of 1.0 m, with 7.5 g/t Au and 7.2 g/t Ag [(3)].
- Vein zone 5/2 is 5 m to 50 m north-east of vein zone 5/1 and is largely unexplored, as it is concealed below a thick covering of acid lavas in the central part. At surface, the vein has been exposed by three surface clearings and extends over a length of 1,100 m. It has a quartz-carbonate core, with impregnation of pyrite and galena. It strikes NE with south-western dips of 65° to 80°. The gold grade varies from 7.2 g/t to 8.8 g/t, while silver values range from 8.8 g/t to 10.5 g/t [(3)]. The vein has been cut by drill hole 16 from 52.4 m to 55.3 m, where it is represented by a quartz-chalcedony, with disseminated pyrite, galena and, minor chalcopyrite, with a grade of 3.4 g/t Au and 1.3 g/t Ag over a horizontal thickness of 1.2 m [(3)].
- Vein zone 5/3 passes 10 m to 30 m NE of vein zone 5/2 and it is explored on surface by 11 diggings over a length of about 1,170 m. The vein zone consists of quartz, carbonate, chalcedonic quartz, with ochre and kaolin having disseminated pyrite, galena and minor chalcopyrite. The vein zone dips SE at 60° to 80°. The grade varies from 1.6 g/t to 11.7 g/t Au, with an average of 5.7 g/t Au, from 5.9 g/t to 19.2 g/t Ag, with an average of 10.5 g/t Ag. At a depth of 47 m to 49.4 m the vein is intersected by drill hole 17 with a grade of 5.5 g/t Au and 8.6 g/t Ag [(3)].
- Vein zone 5/4 has a curved form and passes the north-eastern contact of vein 5/3. At surface, it is traced for around 1,400 m by trenches and soil clearings. It is represented by a quartz-carbonate or quartz-chalcedony vein, with disseminated pyrite, galena and chalcopyrite mineralization having grades of 1.0 g/t to 17.4 g/t Au and from 2.2 g/t to 20.2 g/t Ag. The vein dips SE at angles of 70° to 85°. On the north-eastern flank, the vein zone is intersected by drill hole 18 at 52 m to 54.4m down-hole, with 7.4 g/t Au and 14.2 g/t Ag [(3)].

**No. 17 Vein** is 20 m to 50 m NW of No.11 vein and 300 m NW of No 1 vein (cf. Figure 15) on the border of the corridor of hydro-thermally altered rocks. It consists of a quartz vein, with disseminated and vein-type pyritic and base metal mineralization containing higher grades of gold and silver than other veins [(3)]. Ancient trench diggings occur along the 1,100 m explored length of the vein zone, making up a total trench-length of about 400 m. The vein has a dip of 70° to 85° SE. More than 10 veins are exposed by shallow trench No 9 and they consist of quartz-carbonate veins with disseminated pyrite and galena. Four of them have from 2.6 g/t to 12.6 g/t Au over a total thickness of 9.5 m [(3)]. To the NE, the vein zone is exposed in the gorge of a tributary of the Marmarik River. Here, two veins have been sampled: one has a grade of 8.1 g/t Au and 10.2 g/t Ag, while the other is 13.0 g/t Au and 15.0 g/t Ag [(3)]. The vein filling mainly consists of macro-crystalline quartz with voids likely to have formed from weathered ankerite [(3)].

Air-photo interpretation shows that, in the east, No 17 vein zone trends towards geochemical anomalies in the Talma river basin for more than 4 km, and in the south-west it outcrops in Demidzor ravine, where quartz veins with total thickness of around 10 m occur. There is a carbonated mineral-water spring near the river's edge, evidence of recent hydrothermal activity. Sampling of the mineralized zone gave the following average values: 4.9 g/t Au, 6.3 g/t Au [(3)].

**No. 2 Vein** is about 60 m NW of No. 1 vein (cf. Figure 15). It was explored in the central part by surface diggings and test-pit exploitation benches. It was also intersected by adit 2, at 2,380 mL, and in adit 5, at 2,307 mL, as well as being cut by drill hole 9 at 68.5 m to 70 m depth, where grades were 15.6 g/t Au and 159.0 g/t Ag [(3)]. The vein has a proven extent of 1,100 m along strike and consists of hydro-thermally altered, ochreous rocks with quartz-sulphide stringers, which continue at depth from

results in drill holes 2 and 5. The margins of the vein are marked by black clay gouge. Sample analyses indicate low grades: from trace to 2.4 g/t Au, and from 5.0 g/t to 22.6 g/t Ag [(3)].

**No. 7 Vein** is 340m SE of No 1 vein (cf. Figure 15) and is hosted by quartz porphyries. It was explored by four trenches, which showed persistence for around 600 m along strike. It consists of a zone of broken, kaolinized rocks intersected by numerous thin quartz-sulphide stringers with average grade of 4.0 g/t Au and 2.5 g/t to 32.0 g/t Ag [(3)].

**No. 8 Vein** is 25 m SE of No 7 vein (cf. Figure 15). It was explored on surface by four trenches over a length of 160 m. The zone is represented by broken, kaolinized, chloritized rocks cut by quartz-sulphide stringers with grades from 0.4 g/t to 5.2 g/t Au and 0 to 22.6 g/t Ag [(3)].

**No. 11 Vein** is 250m NW of No 1 vein (cf. Figure 15). It can be traced along strike for 700 m by six trenches. The zone is hydro-thermally altered, mineralized, silicified rock, with 3.5 g/t Au and 7.6 g/t to 10.0 g/t Ag [(3)].

**No. 12 Vein** is about 650 m NW of No 1 vein, outside the boundary of Figure 15 and traceable on surface by diggings for 1,150 m NE along strike. It dips at 60° to 65° SE and consists of hydro-thermally altered, pyritized, kaolinized, fractured rocks with stringers of quartz-sulphide minerals. Average grades intercepted were 3.5 g/t Au and 20 g/t Ag [(3)].

**No. 13 Vein**, alongside No 12, vein, also strikes NE-SW and can be traced by eight surface workings for 1,300 m. It has a 55° to 60° dip SE, and is a zone of broken, schistose, pyritized rocks, cross-cut by small quartz-sulphide stringers. Pyrite, chalcopyrite and (rare) galena occur. Analyses indicate grades reach 300 g/t Ag, while the average gold grade is 3.5 g/t Au [(3)]. The vein's contacts are marked by black clay gouge.

**Sampling method and approach**

Initial exploration at Toukhmanuk included 25 surface diamond drill holes, 23 underground vein samples and 42 surface trenches. Systematic outlining of the gold-bearing zones was begun with drill holes spaced 50 m to 100 m apart.

This was followed by driving two tunnels, Adits 2 and 5, and drifting along the Nos 1 and 15 veins, respectively, which included more than 1,175 m of underground excavation; 120 m of drifting and 172 m of cross-cuts (cf. Figures 16 to 19, and Table 3, below [(3)]).

**Table 3 Exploration work statistics to 2005 at Toukhmanuk**

| Vein | Adit | Elev. (m) | Tunnelling (m) | Drifting (m) | X-cuts (m) | Diamond Drilling | | U/G Sampling | Channel Samples* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No. holes | (m) | | |
| 1 | 2 | 2,380 | 225 | - | 57 | 10 | 1,075 | 8 | 19 |
| 15 | 5 | 2,307 | 660 | 120 | 115 | 15 | 1,210 | 15 | 23 |
| **Totals** | | | **885** | **120** | **172** | **25** | **2,285** | **23** | **42** |
| | | | | | | | | | |

Note* Channel samples are from surface trenches.
Source: Mego Gold, 2004.

After the deposit's transfer to Global Gold and excluding the 2011 drilling programme, further exploration was carried out, with total meterage of 20,064 m, including 92 holes for 13,342 m drilled within the Central Area and 8,248 m drilled outside the Central Area. Core recovery was reported generally 95%, or above, as evidenced by archived core photographs, but field checks by Behre Dolbear concluded that selected core recoveries were lower, especially where oxide material and kaolinized vein material were intercepted. Core samples have been photographed wet and dry, before

being marked for sampling at 1 m intervals and sawed by diamond disk along the long axis. Half of the core was marked and stored as a duplicate; the other half was sent for fire assay for determination of gold and silver grades. Drill-hole collars and inclinations were surveyed. Core logging was carried out prior to 2005 by Armenian State Geological Survey geologists and afterwards by Global Gold staff. This included recording core size, percentage core recovery, marking lithological contacts, recording descriptive geology, core angles, true thickness calculations on vein intercepts, and preparing a graphic log with all down-hole data including assay values following Armenian Ministry of Natural Resources protocols, embedded in Global Gold's field and assay procedures [24 and 25], with an estimation of the rock quality designation percentage (RQD %), on some holes, from 2008 onwards.

**Sample preparation, analyses and security**

Until 2005 sampling was carried out on selected mineralized intersections in all surface drill holes, generally at 1 m intervals down-the-hole, with results recorded on graphic logs.

Fire assaying was carried out on core samples from all of the 25 drill holes intersecting the Nos 1 and 15 veins, with historical assays carried out at the assay laboratory of the "Analitic" Laboratories of State Closed Joint Stock Company (SCJSC) of the Republic of Armenia Ministry of Nature Protection in Yerevan.

Assays from the Global Gold drilling programme were completed in the Toukhmanuk-site ISO-certified laboratory applying fire-assay techniques in which an aliquot of powdered sample is mixed with soda ash (sodium carbonate), borax (sodium borate), litharge (PbO), flour (baking flour is used to add carbon as a reductant), silica, and possible nitre (potassium nitrate). To this mixture, silver as a collector can be added in solution or as a foil. The well-mixed material is fired at temperatures ranging from 1100 $^{o}$C to 1200 $^{o}$C. As the Pb and Ag in the melt settle to the bottom of the crucible, they scavenge the gold from the melt. The lead button is cupelled at 950 $^{o}$C in a magnesia cupel (Figure 22). As an alternative, a small silver bead which contains Au, Pt and Pd can be dissolved and analyzed by atomic absorption spectrophotometry (AAS); or, the Ag can be dissolved out leaving a tiny Au flake, which can also be weighed gravimetrically.

**Figure 22 Cupels cooling after removal from the gold room furnace, Toukhmanuk**

Mego inserted routine samples of blanks and standards with each shipment of samples as check assays. Results from check assays indicated, in general, good agreement between the two sets of data.

Core samples were taken from the drill holes. In the case of drilling diameters of 110 mm and more, half core, which was split along its long axis, was sampled; while in the case of smaller drilling diameters, the entire core was sampled. Samples weighing from 200 g to 500 g were crushed and ground to 200 mesh size, with analysis carried out on 50 g sub-samples.

After weighing, the samples were subjected to fire assay and, when sulphide veins were identified, AAS analyses were carried out for associated metals. Composite samples were prepared from duplicate ordinary samples, and the grades of associated elements were determined: lead, zinc, and copper, as well as of deleterious components arsenic and antimony. During fire assay, cupelling at 650 $^{o}$C, after adding soda, was followed by determination of gold and silver content by gravimetry.

258 samples were assayed at the laboratory of Mining Metallurgical Institute by a combined method: successively by fire and AAS assays of the same sample for 31 drill holes, 704 samples were assayed by Analytic laboratory of the Ministry of Environment, which, under the ROA Government's decision, is recognized as a control laboratory.

The comparison of laboratories' data showed satisfactory precision of analyses without systematic inaccuracy and in addition analytical quality was controlled by Canadian SOS standards, with deviations not exceeding two to three standard deviations from the mean.

**Data verification**

Check assays and quality control, quality assurance procedures (QA/QC) at the Analitic SCJSC were comparable to those used at Western commercial laboratories at that time. Procedures, reagents and apparatus used for the assays were in accordance with guidelines published by the Armenian Ministry of Geology (Sakaryan 1990, in (3)) and the results of check assays on various standards from 2001 to 2003 are in Appendix 4. These checks showed that agreement with the original assays was good for gold and silver values.

Roscoe Postle and Associates Inc (RPA), in 2005, collected 15 samples from the open pit and crushed rejects from old diamond drill-hole intercepts as well as from a collection of samples from underground openings for analysis by SGS Laboratories in Don Mills, Ontario for independent gold, silver, copper, zinc and lead analysis.

Results (cf Appendix 4) show that earlier assays might have been underestimated, and suggest that rocks between the veins might contain low gold values in the preliminary pit area.

During the 1990's drilling campaign, data verification and QA/QC was carried out by personnel from the Council for Favourable Mineral Resources of the Ministry of Natural Resources of the Republic of Armenia (AMNR-FRC).

**Density determinations**

Prior to 2005, density measurements were carried out by the Armenian Geological Survey and the average value applied in mineral resource estimation was 2.86 t/m$^3$ (Sabonjyan, 2004 in (3)).

For the preliminary pit design and mine plan in January 2009, a specific gravity of 2.6 was applied to estimate Armenian GKZ-style reserves, which Behre Dolbear considers conservative, particularly considering the mined rock contains about 5% disseminated pyrite and is compact, with reasonable rock characteristics, as found in the pit (Figure 23) and in drill core.

**Figure 23 Toukhmanuk pit, NE slope, with lava xenoliths**
In stockworked competent granodiorite porphyry

**Database management and integrity**

Hard and soft copy of the drill-hole data and sections used in resource and reserve estimates is available. RPA noted that data entry was of good quality and validation of gold and silver value data on cross-sections (Figures 26 to 30) was checked by Behre Dolbear and found to be satisfactory.

All data - survey, hole-collar, sample assay, geotechnical and density data - is checked by the Senior Geologist. All numerical data should be routinely checked for errors and those identified be immediately corrected. If assays are outside a 3 σ variance limit, repeat analyses should be requested from the laboratory. Behre Dolbear has had sight of quality control monitoring results from the 2006 to 2010 drilling programme and regards them as reasonable, but recommends that check samples from the sample-stream be assayed at a certified laboratory outside Armenia on a regular basis. In addition, as the amount of data increases, with further drill-core analytical data, it may be advisable to consider using the acQuire data model [(12)] or, a similar product and moving to Tablet-PC-assisted logging. All assay-data loading and QA/QC could still be managed by Global Gold personnel.

**Infrastructure and environmental aspects**

Local artisan labour is available from Melikgyugh village, as well as neighbouring hamlets, or Aparan. A power line is alongside the highway and there are opportunities for Global Gold to integrate a small hydro-generating station into the project to assure a sustainable power supply for the mill making it and the mine independent of rising diesel fuel costs.

Villagers have private plots for vegetables, fruit and animal feed alongside the river, where there is water for irrigation. Elsewhere, on the slopes of Toukhmanuk mountain and other ridges, south-facing Alpine grassland is used as common-grazing land for Yezidi cattle and sheep.

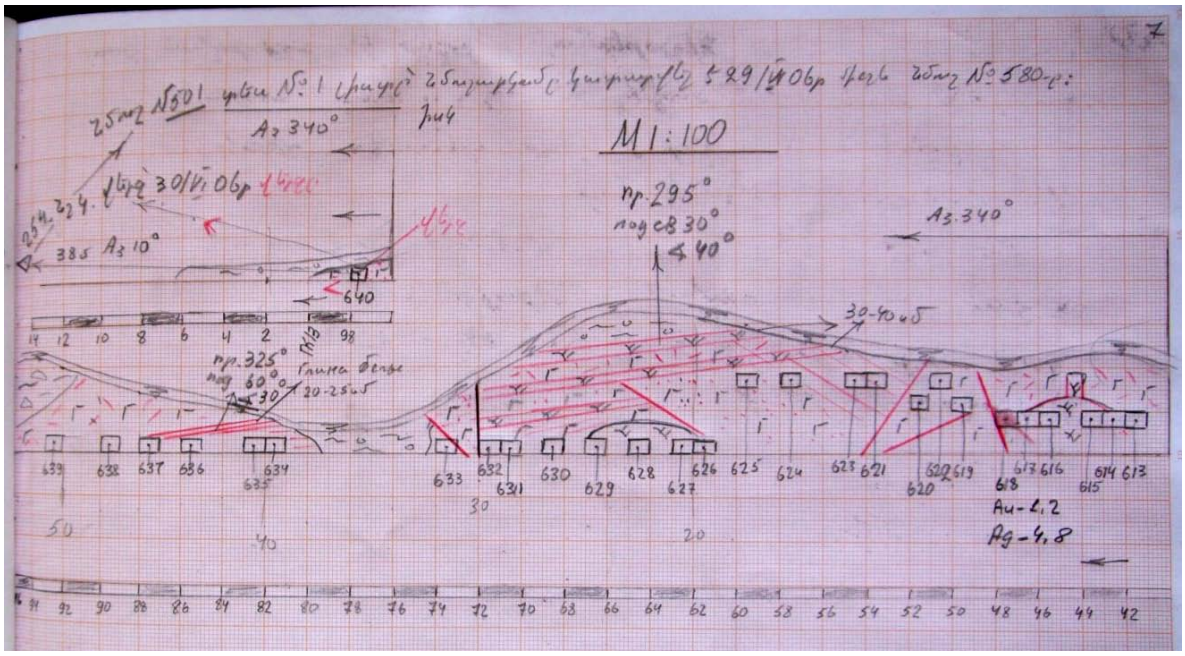
Global Gold routinely monitors air and water quality and in 2007 partnered with the World Bank in building a new independent, dedicated well-water supply system for Melikgyugh village residents. The concentrator has been established without recourse to use of cyanide reagents, which ensures that

the plant meets stringent waste and tailings quality benchmarks. It is reputed to be the leading Armenian company in the pursuit of sustainable mining and processing practices.

**Resource estimation**

The vein and stockwork mineralization in the Central Area of Toukhmanuk is at 2,100 m to 2,760 m amsl and all exploration data gathered prior to January 1, 2009 has been used in the most recent reserve estimate by Global Gold. More than 200 samples were sampled and assayed from No.1 vein and its selvages, with 71 of them being included in the estimation. More than 350 samples were analysed from No. 15 vein and 147 samples were in a reserves estimate completed before 2005, with roadside samples collected from detailed surface mapping and sampling during road construction in 2006-2010 (Figure 24).

**Figure 24 Example of roadside mapping and sampling log, Toukhmanuk mine**




After the deposit's transfer to Global Gold, further exploration was carried out through cored diamond drill holes, with total meterage of 20,064 m, including 92 holes for 13,342 m, drilled on a 30 m to 50 m hole-spacing, including 70 drill holes within the preliminary pit outline. Drill holes were drilled to 150 m to 200 m depths. The core recovery was stated to be high, generally 95%, or above, but evidence from a review of stored cores from the Toukhmanuk core shed seen by Behre Dolbear indicated a disparity between logging records and retained core, which suggest that re-logging of core is required to validate the records.

Core samples were photographed and marked for sampling at 1-m intervals, before being sawed by diamond disk along the long axis. Half of the core was marked and stored as a duplicate; the other half was sent for fire assay for determination of gold and silver grades.

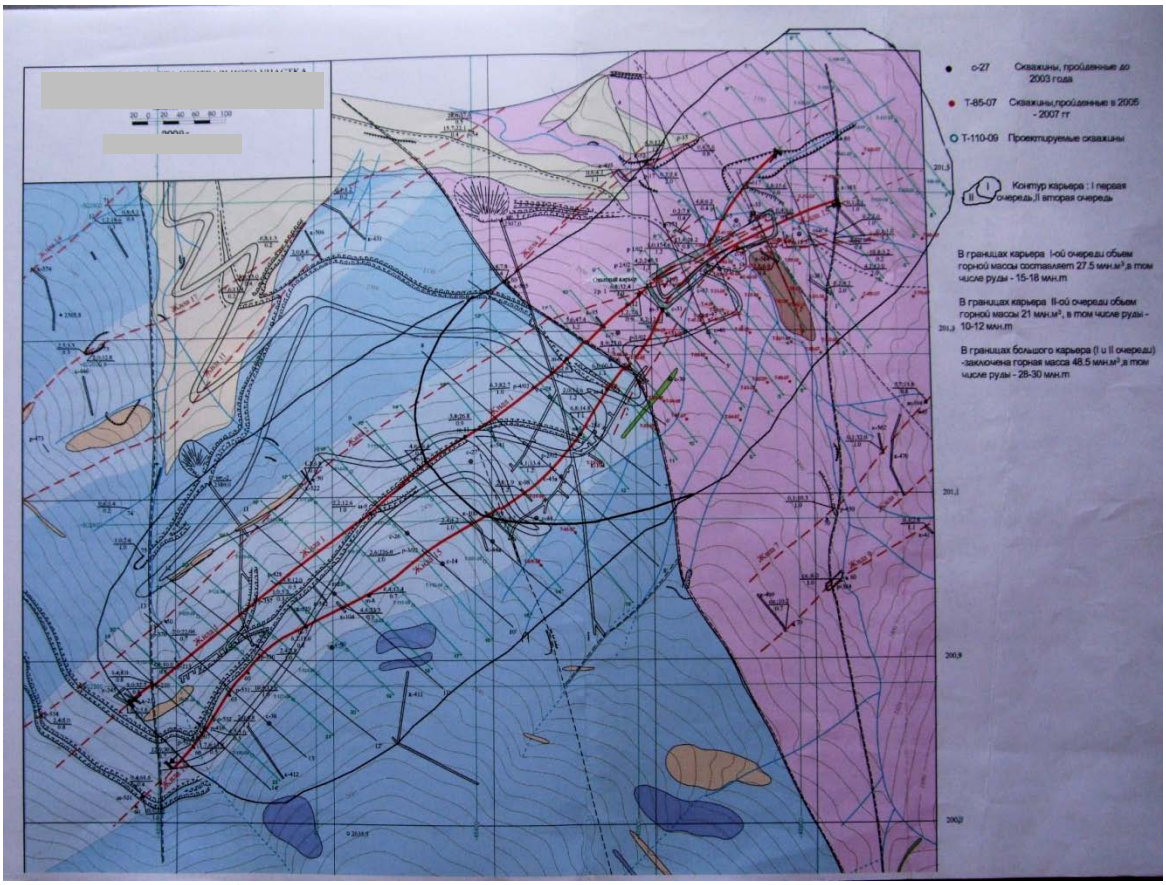
Drill holes were drilled in hanging wall of the hydro-thermal zone in a north-western direction, with dip angles of 55° to 65°. Complete drill-hole logs are archived. According to data from down-hole surveys, there was little deviation in the drill holes.

258 samples were assayed at the laboratory of Mining Metallurgical Institute by a combined method: successively by fire and AAS assays of the same sample for 31 drill holes. 704 samples were assayed by Analytic laboratory of the Ministry of Environment, which, under the ROA Government's decision, is recognized as a control laboratory.

Comparison of laboratories' data showed satisfactory precision of analyses without systematic inaccuracy. Besides, the analyses' quality was controlled by SOS (Canadian standards), with deviations below three standard deviations from the mean (3δ). However, comparative samples should also be sent to a certified laboratory outside Armenia in accordance with JORC and NI 43-101 standards.

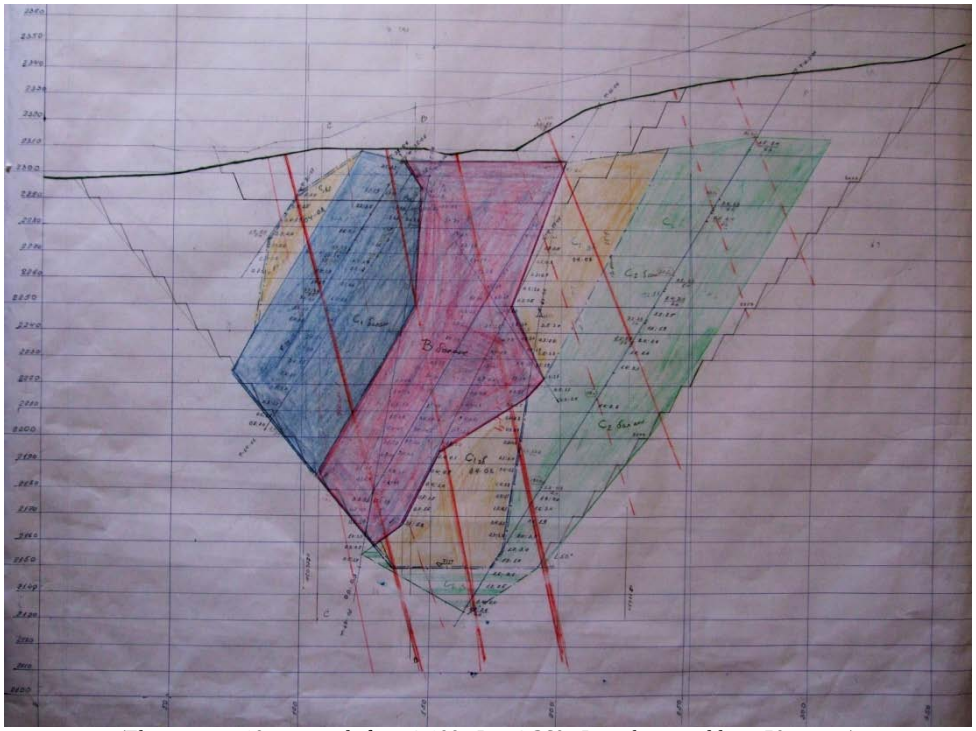
Analytical data from Mego-Gold and Global Gold surface trench samples, drill holes and underground channel samples was plotted on 14, 1:2000 scale, NW-SE cross-sections spaced at 50 m to 100 m intervals along strike, as well as on a plan, to provide a basis for geological interpretation and estimation of average grades of resource blocks [(3)], shown with ore-reserve block outlines and preliminary pit outlines on Figures 26 to 30. Roadside and blast hole samples should also be integrated in future geological block models.

**Figure 25 Central Area, Toukhmanuk, with preliminary and ultimate pit outline**
Vein corridor between vein nos. 2 and 15.



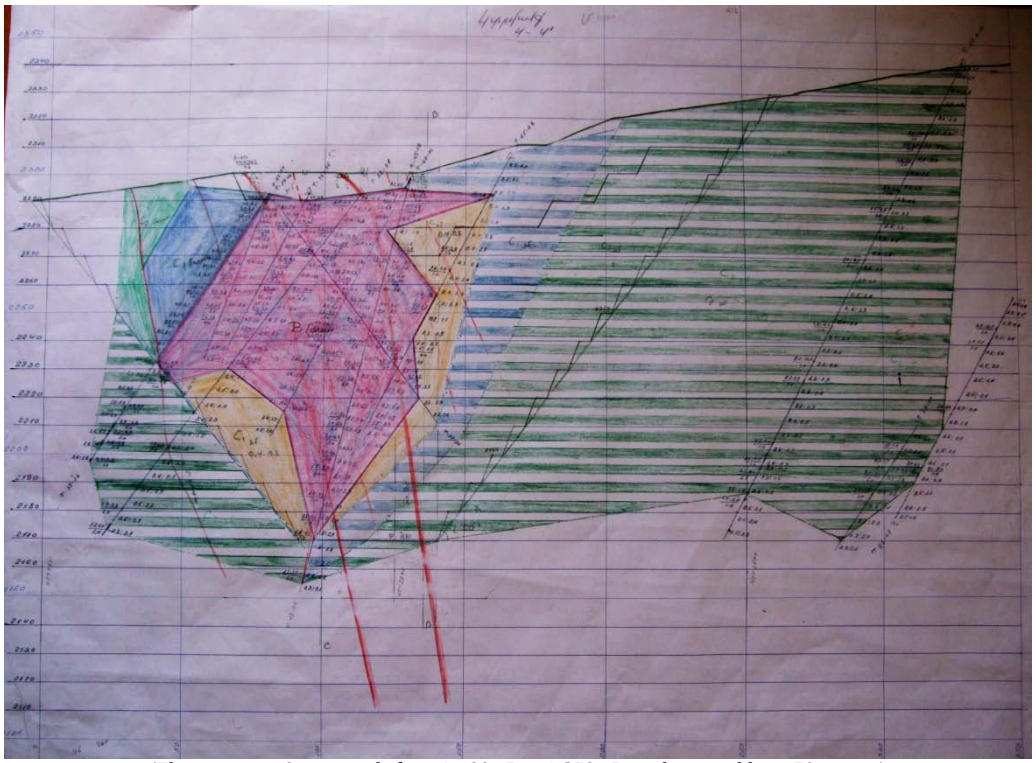
(Elevations in 10m intervals from 2,100 to 2,360m, with vertical lines 50m apart showing two local grids; Mego Gold's and Global Gold's)

**Figure 26** **Section 2-2', across Toukhmanuk vein corridor**
Drill-hole traces, assay values, vein intercepts and categorised reserve blocks



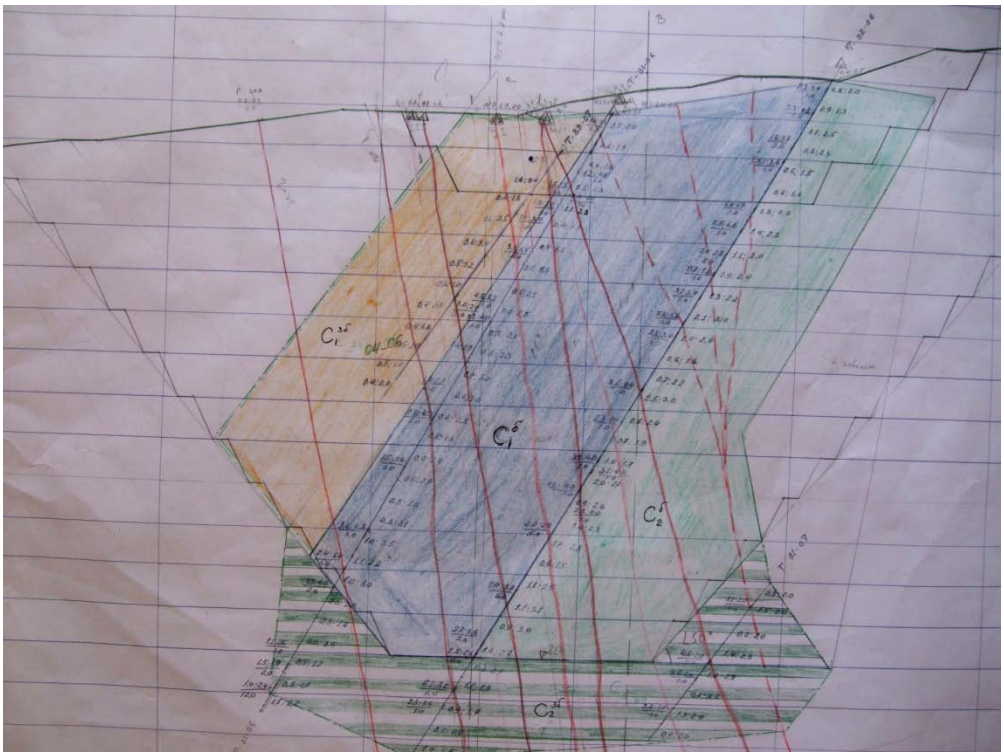
(Elevations in 10m intervals from 2,100mL to 2,360mL, with vertical lines 50m apart)
(Looking north-east. Reserves: B category red, C1 blue and orange, C2 green)

**Figure 27** **Section 4-4', across Toukhmanuk vein corridor**
Drill hole traces, assay values, vein intercepts and categorised reserve blocks



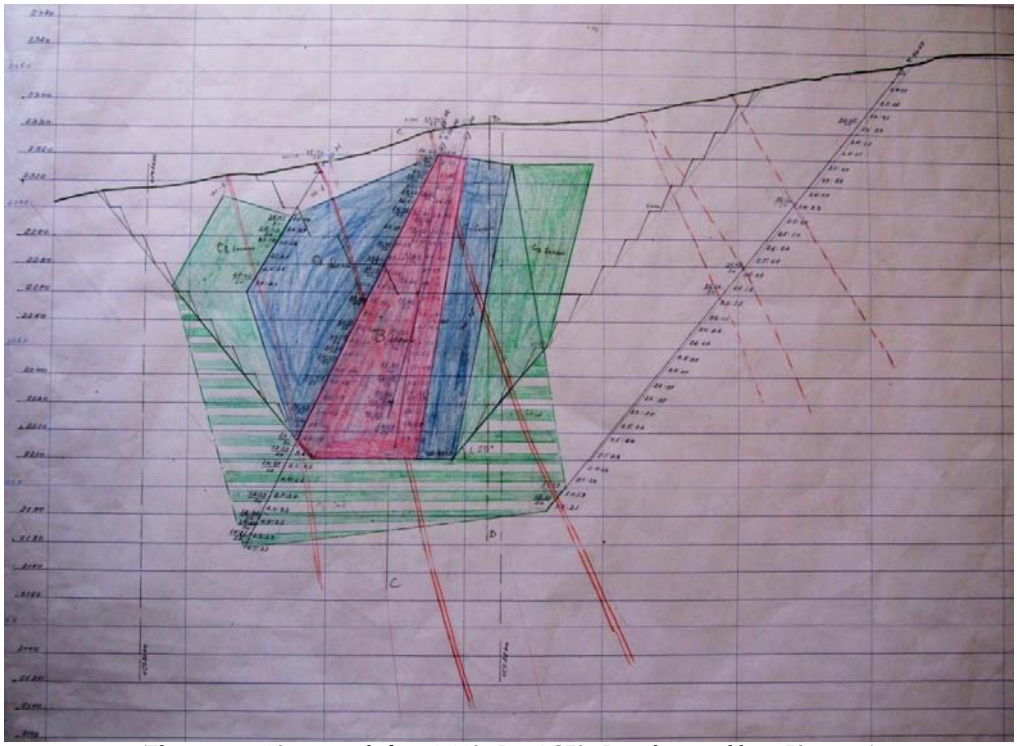
(Elevations in 10m intervals from 2,100mL to 2,350mL, with vertical lines 50m apart)
(Looking north-east. Reserves: B category red, C1 blue and orange, C2 green

**Figure 28** **Section 5-5', across Toukhmanuk vein corridor**
Drill hole traces, assay values, vein intercepts and categorised reserve blocks



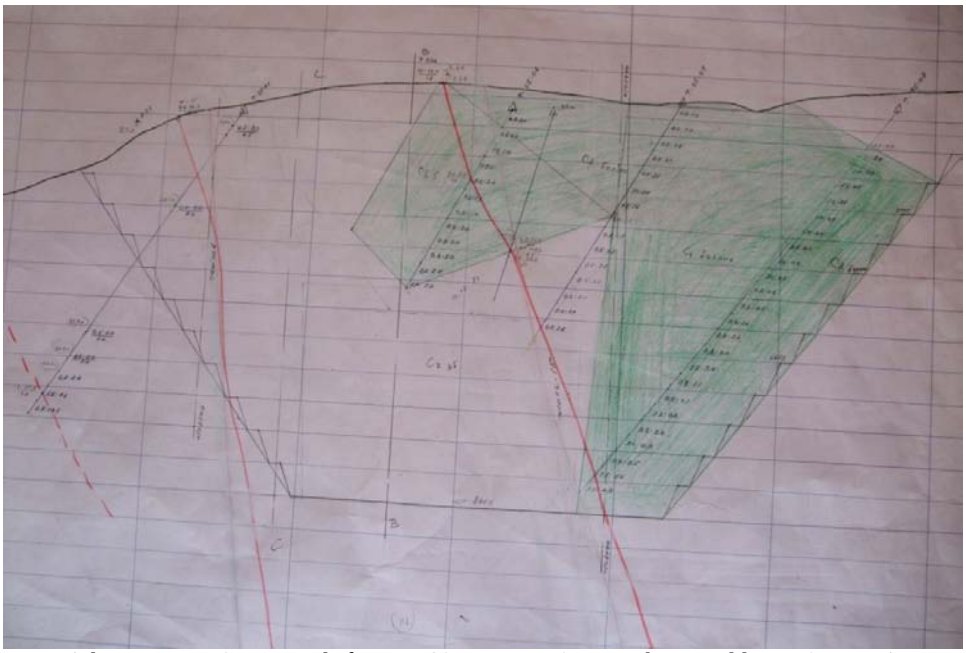
(Elevations in 10m intervals from 2,150mL to 2,330mL, with vertical lines 50m apart)
(Looking north-east. Reserves: C1 category blue and orange, C2 green)

**Figure 29** **Section 9-9', across Toukhmanuk vein corridor**
Drill hole traces, assay values, vein intercepts and categorised reserve blocks



(Elevations in 10m intervals from 2,110mL to 2,370mL, with vertical lines 50m apart)
(Looking north-east. Reserves: B category red, C1 blue and C2 green)

**Figure 30** **Section 13-13', across Toukhmanuk vein corridor**
Drill hole traces, assay values, vein intercepts and categorised reserve blocks



(Elevations in 10m intervals from 2,280mL to 2,450mL, with vertical lines 50m apart)
(Looking north-east. Reserves: C2 category green, notice wide drill-hole spacing, which requires in-fill holes recommended in Appendix 9)

**Cutting assay values**

Weakly mineralized rocks with a gold grade of up to 0.6 g/t make up 7.4% of the ore mass within the preliminary open-pit design and they are referred to by Global Gold as inter-ore dilution, with the remaining 92.6% being commercial ore. Also, around 20% of the ore mass is represented by cut-off grade and 11% is characterized by the average gold grade in the reserve. The remaining 62% of the reserve has grade that is above the deposit's average grade. 11.6% of these assays show an average gold grade of 32.8 g/t; these have been considered for cutting.

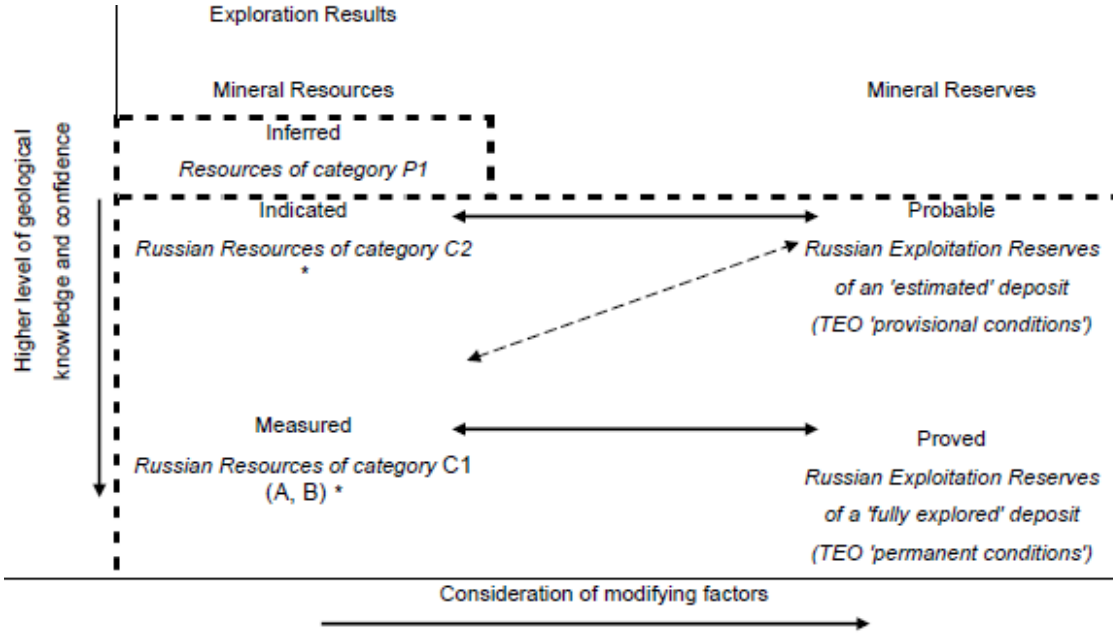
Based on statistical analysis of gold distribution of reserve data, Global Gold has shown that the upper level of normal grade is about 24 g/t Au, with a confidence level of 90%. Values above 25 g/t Au have been cut-back to 25 g/t Au. The average gold grade in reserves, without cutting high values, is 2.0 g/t Au and, if cutting is applied, the average gold grade decreases to 1.86 g/t, that is by 10%. Silver grades above 112 g/t Ag have been cut-back to 112 g/t Ag. In Behre Dolbear's opinion, this approach is valid and avoids undue weight being given to anomalously high assay values.

**Resource categorisation**

Against a background of JORC, CIM, UN Framework Classifications, CRIRSCO and Russian Federation standards [(28)], resources at Toukhmanuk were categorised according to their confidence level as follows:

- B (Probable Reserves): Drill-hole intercepts at 30 m to 40 m intervals, added to trench and adit sampling data, with recent trial mining ore bench sampling.
- C1 (Measured Resources): Drill-hole intercepts at 40 m to 50 m intervals.
- C2 (Indicated Resources): Isolated drill-hole intercepts, with corroboration from trench and other geological data.

This is illustrated in the diagram below [28]




The sampling interval was 1 m in all workings and drill holes from 2005-2007, while it varied from 1.0 m to 2.0 m for drill holes drilled earlier and also 2 m intervals in pit bench blast holes (Figure 31).

**Figure 31 Bench blast holes completed in advance of mining in Toukhmanuk pit**

The reserves were estimated manually using a traditional, polygonal method based on horizontal plans at 20-m vertical intervals derived from vertical cross-sections. The reserves' borders are determined for each horizontal section through joining of intervals of "balance mineralization", above a cut-off of 0.6 g/t Au, in each polygonal block.

The upper limit of reserves is determined with reference to surface workings and data from mining benches. The lower limit is established by joining the base of intercepts in drill holes. The borders of reserves at intermediate levels incorporated sampling data from the adit workings.

Zones of mineralization are interpolated for a distance of 25 m to 30 m from the last drill-hole intercept, or, for half the distance between an intercept above cut-off and off-balance "waste" rock. Reserves of C2 (indicated) category within the preliminary open pit's contour are also outlined (Figures 26 to 30).

The average grades of blocks, except for the drill holes drilled before 2003, are determined by the method of arithmetic mean, while average grades for drill holes drilled before 2003 were determined by weighing of relevant intervals for length.

Ore reserves were determined applying a specific gravity of 2.6 t/m$^3$, and a cut-off grade of 0.6 g/t Au. Outlining of the preliminary ore zone with balance and off-balance reserves is illustrated on horizontal plans and cross-sections (cf Figures 26 to 30).

**Resource tonnage and grade**

In the context of then-current gold and silver prices, resource estimates from 1995 to 2004 focused on Nos 1 and 15 veins, assuming they were an underground mining target. Contained gold was estimated at 257,450 oz in C1 and C2 categories in 2004 (cf. Table 2).

Historical GKZ (State Committee on Reserves) estimates in more wide-ranging C1, C2 and P1, categories, however, showed 12.1 Mt of reserves, averaging 6.74 g/t Au and 30.79 g/t Ag, containing 2.6 Moz gold and 11.9 Moz silver, indicating that the mineralized corridor has bulk-mining possibilities.

In an NI 43-101 report on Toukhmanuk in 2005 [(3)], assuming underground vein mining and applying a cut-off grade of 2.5 g/t Au and a 1.25 m minimum horizontal vein thickness for mineralization, resources in Nos 1 and 15 veins were estimated at 138,000 t of Indicated mineral resources at an average grade of 7.09 g/t Au and 54.47 g/t Ag, with 405,000 t of Inferred mineral resources at an average grade of 6.26 g/t Au and 92.68 g/t Ag, implying a content of 102,457 oz gold. A drilling programme to raise prognostic reserves to a higher category was recommended.

As part of the broader drilling program, 13,342 m of drilling in 92 holes was completed on a 30 m to 50 m hole spacing with 70 holes in preliminary pit outlines. Reserves estimated by Global Gold at January 1, 2009 are in Tables 4 and 5, as shown in a document with resources calculated at January 1, 2009 [(2)]:

**Table 4 Estimated reserves for first stage preliminary open pit, Toukhmanuk**

| | | | |
|---|---|---|---|
| Balance reserves within the open pit contour | | | |
| 1 | Ore reserves in sub-surface | mln t | 18.8 |
| 2 | Gold reserves in sub-surface | kg/ounces | 39100/121630 |
| 3 | Silver reserves in sub-surface | t/thous. ounces | 300.8/9356 |
| Average metal grades in balance reserves | | | |
| 1 | Gold in sub-surface | gr/t | 2.08 |
| 2 | Silver in sub-surface | gr/t | 16 |
| Off-balance ores within the open pit contour | | | |
| 1 | Reserves in sub-surface | mln t | 18.4 |
| 2 | Gold reserves in sub-surface | t | 8.5 |
| 3 | Silver reserves in sub-surface | t | 43.6 |
| Average metal grades in off-balance reserves | | | |
| 1 | Gold in sub-surface | gr/t | 0.46 |
| 2 | Silver in sub-surface | gr/t | 2.37 |

**Table 5 Estimated reserves for second stage preliminary open pit, Toukhmanuk**

| | | | |
|---|---|---|---|
| Balance reserves within the open pit contour | | | |
| 1 | Ore reserves in sub-surface | mln t | 21.5 |
| 2 | Gold reserves in sub-surface | kg/ounce | 44075/1417060 |
| 3 | Silver reserves in sub-surface | t/thous. ounces | 264.4/8224 |
| Average metal grades in balance reserves | | | |
| 1 | Gold in sub-surface | gr/t | 2.05 |
| 2 | Silver in sub-surface | gr/t | 12.3 |
| Total within borders of the big open pit (of first and second stages) | | | |
| 1 | Ore reserves in sub-surface | mln t | 40.3 |
| 2 | Gold reserves in sub-surface | kg/ounce | 83390/2674170 |
| 3 | Silver reserves in sub-surface | t/thous. ounces | 565.2/1758.0 |
| Metal grades | | | |
| 1 | Gold grade | gr/t | 2.07 |
| 2 | Silver grade | gr/t | 14 |

Reserves within borders of the 2nd stage open pit will be mined after 2020, if a decision on increase of the annual production capacity of the ore processing plant is not adopted.

The Republic of Armenia's State Natural Resources Agency (the "Agency") issued a certificate based on the proposal of the Agency's State Geological Expert Commission made during its October 23, 2009 session (Appendix 4). The total ore reserve approved was roughly 21,900,000 t, at an average gold grade of 1.62 g/t Au and an average grade of 4.88 g/t Ag, applying a cut-off grade of 0.8 g/t Au. Total approved reserves in the C1 and C2 categories are roughly 35.614 t (or 1,145,000 oz) of gold and 107 t (or 3,440,000 oz) of silver. In its approval, the Agency added that the "approved reserves entirely correspond to the requirements for Measured and Indicated reserves under International Standards." The approved gold resource in the Inferred category is 35 t (or 1.125 Moz), which together with the earlier approved 1.145 Moz of reserves marks a sharp increase from the 8.0 t approved under GKZ decision N28 of January, 26, 2004.

Global Gold has delineated Measured, Indicated and Inferred Mineral Resources, totalling 39.228 Mt at a grade of 2.07 g/t Au and 14.07 g/t Ag in approximately 20% of the 2.2 $km^2$ Central Area of the 53.76 $km^2$ Toukhmanuk deposit. Global Gold used a cut-off of 0.6 g/t Au and applied a rock density of 2.6 as follows:

| *Resource category* | *Tonnage: Mt* | *Gold: g/t* | *Silver: g/t* | *Contained Gold: Moz* | *Contained Silver: Moz* |
|---|---|---|---|---|---|
| Measured | 6.043 | 3.10 | 23.83 | 0.602 | 4.630 |
| Indicated | 18.767 | 1.99 | 13.09 | 1.200 | 7.907 |
| Measured and Indicated | 24.810 | 2.26 | 15.71 | 1.802 | 12.537 |
| Inferred | 14.418 | 1.73 | 11.26 | 0.804 | 5.233 |
| Total | 39.228 | 2.07 | 14.07 | 2.606 | 17.769 |

Estimated Measured and Indicated (M&I) resources total 24.810 Mt at 2.26 g/t Au and 15.71 g/t Ag for 1.8 Moz of gold and 12.5 Moz of silver. Inferred resources total 14.418 Mt at 1.73 g/t Au and 11.26 g/t Ag for 0.804 Moz of gold and 5.23 Moz of silver. The resource remains largely unexplored and is open along strike and at depth.

In response to a submission by Global Gold of resource estimates in a two-stage open-pit contour (cf Appendix 6) to the Republic of Armenia's State Natural Resources Commission (RA SNRC), on October 27, 2009, Global Gold received GKZ approval (cf Appendix 4) for 35.6 t of gold and 107 t, of silver contained in C1 and C2 reserve categories in the Central Area of Toukhmanuk. The approval contained a statement that the approved reserves entirely correspond to requirements for Measured and Indicated Resources under International Standards. The RA SNRC has since confirmed an additional Inferred category resource of 35 t, in the Central Area of Toukhmanuk,

bringing the total GKZ approved resources in the equivalent Measured, Indicated and Inferred categories to 2.270 Moz of gold, applying a cut-off grade of 0.8 g/t Au. This endorsement of over two million ounces of gold in the deposit, applying a higher cut-off than that used by Global Gold is encouraging. The deposit has been drilled only over 20% of the vein corridor in the Central Area, leaving potential to considerably exceed these resource figures.

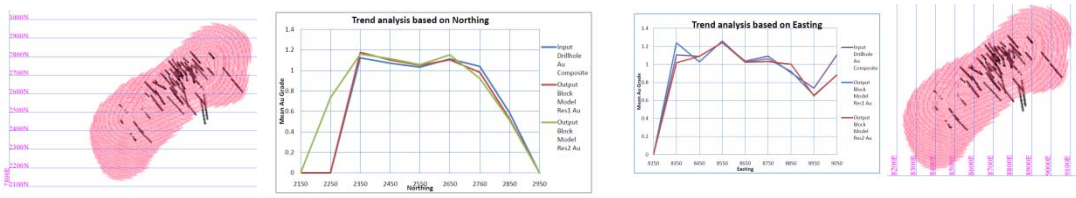
A two-stage preliminary pit outline has been designed to date (cf Figure 25). Within the stage one outline, there are estimated to be 18.75 Mt of ore, at an average grade of 2.01 g/t Au and 16.02 g/t Ag; in stage two, 20.47 Mt at 2.05 g/t Au and 12.03 g/t Ag. This implies contained gold in the two stages of 2.6 Moz in only vein systems 1 and 15.

*Cautionary note: These mineral resources quoted above were estimated using a manual polygonal estimating technique applying a cut-off of 0.6 g/t Au and a specific gravity of 2.6, which is considered conservative, in particular for un-oxidized vein and host-rock material. Figures have been rounded to reflect the fact that the estimate is an approximation. Mineral resources that are not mineral reserves do not have demonstrated economic viability and the estimates of mineral resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.*

## 5.2 VALIDATION OF GLOBAL DATAMINE BLOCK MODELS BY GEMCOM

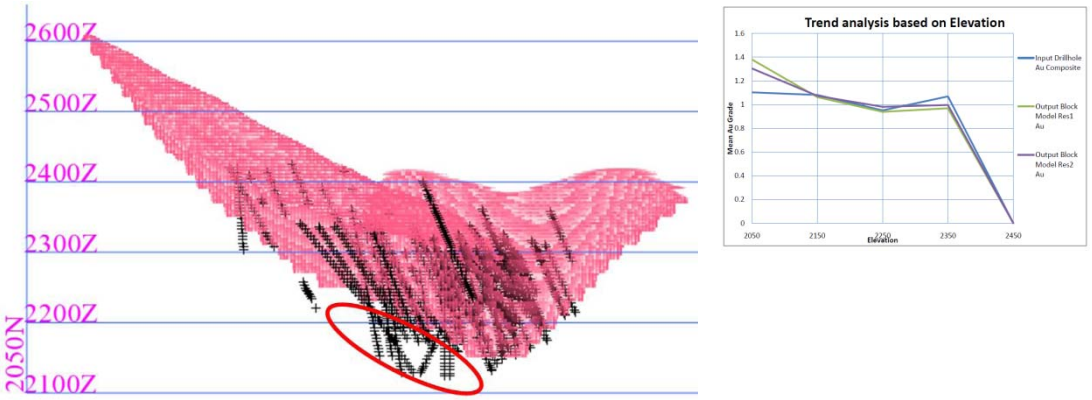
Two block models (Resmodel 1 and 2) generated by Global Gold underwent validation by Gemcom Software Europe Ltd [23] applying trend analysis interrogation along east-west and north-south grid lanes (Figure 32) and comparing input and output statistics. The mean grade of the input and output shows a good correlation.

**Figure 32 Two-directional trend analysis Toukhmanuk conceptual open-pit**




Sections were then cut on vertical axes through the pit outline and interrogated (Figure 33 [23])

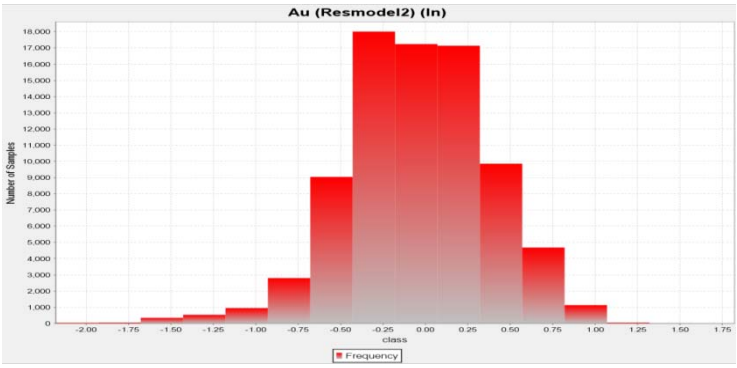
**Figure 33 Plan vertical view of sections projected on 2050N, with trend analysis**




These showed that a number of intercepts occur outside the modelled initial pit outline suggesting that there may be additional resources outside the presently conceived pit outline.

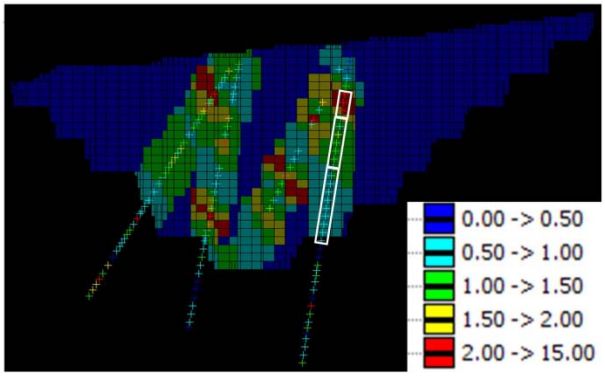
Logarithmic histograms of the first model were satisfactory, but histograms of the second model gave a polymodal distribution (Figure 34), which showed the variance had reduced to a level below that acceptable for resource estimation [23].

**Figure 34 Logarithmic histograms of Resmodel 2**



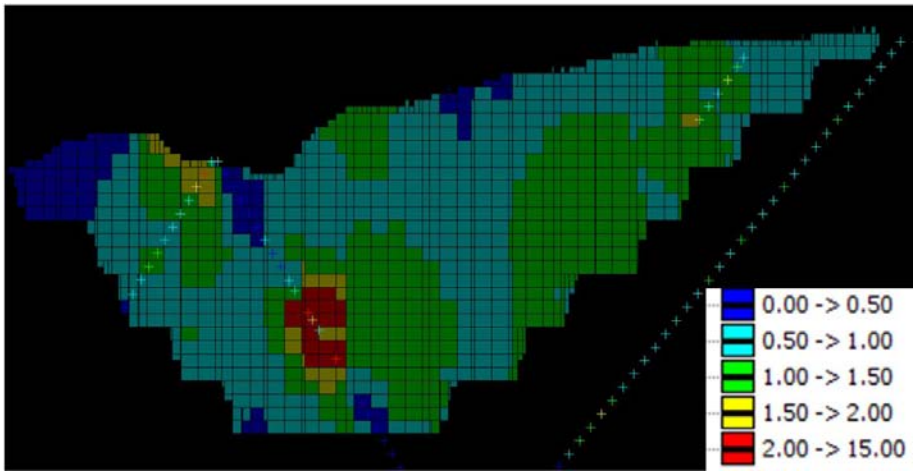

Visual validation between generated block-model sections and original drill-hole assay data gives good correlation for model 1 (Figure 35 [23])

**Figure 35 Representative vertical section through Resmodel 1, with drill holes**



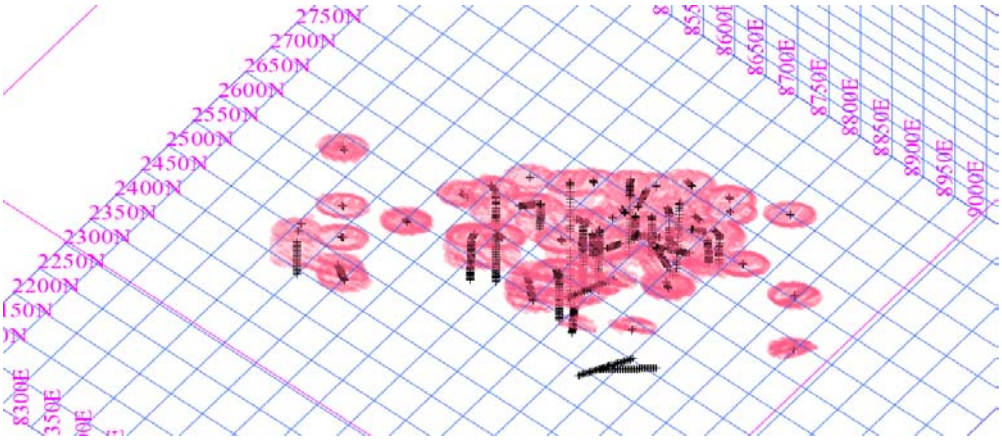

Model 2 shows good correlation as well, but a larger search ellipse has diluted some input grades, which will impact on the model average grade (Figure 36 [23]).

**Figure 36 Representative vertical section through Resmodel 2, with drill holes**



Whilst both models are considered to be statistically valid, neither was created based on geological criteria to ensure that they were geologically realistic. Grades were assigned to all blocks in an ellipsoid around a drill hole, without factoring-in any geological control on mineralization (Figure 37 [23]).

**Figure 37 Oblique view showing drill hole traces and ellipsoid influence**

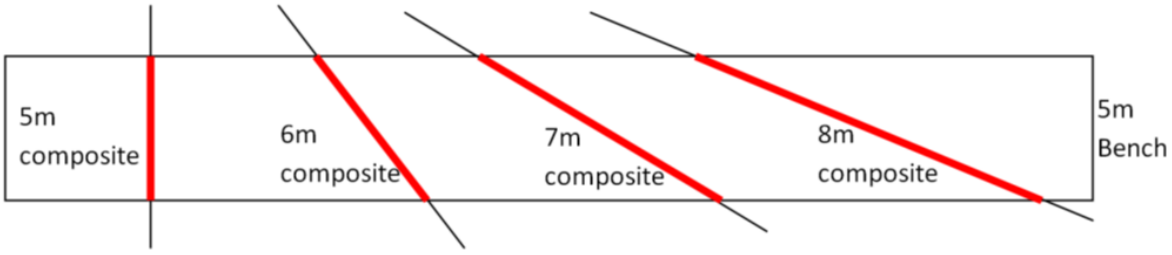



Applying this methodology, with no modelling of the geology and morphology of the mineralization, (using surface mapping, drill-hole sections and knowledge of the deposit to interpret the geology) will result in the same output from vein, porphyry or alluvial gold deposits, which is unsatisfactory.

Greater confidence in the resource estimation could be achieved by applying geology logged in drill holes and surface trenches to constrain the interpretation within a geological wireframe (or domain). By doing so, blocks of waste outside of the wireframe would not be incorrectly assigned to ore in the block model; this will create a more coherent resource estimation and enable a robust mine plan.

The compositing method used was based on 5m benches, as Figure 38 [23] below illustrates. This could lead to inconsistent lengths of samples and, by assigning the same weight to different sample lengths, make the input data not truly representative.

**Figure 38 Representative illustration of bench compositing method used by Global Gold**




The two block models, Resmodel 1 and 2 represent different confidence levels in the estimated grade based on the search range and the density of data across that area, resulting in different classifications. Resmodel 1: interpolated by 10x30x20m ellipse defines Measured and Indicated resource.

Resmodel 2: interpolated by 20x60x40m ellipse defines Inferred resource. These are illustrated by representative sections overleaf.

**Figure 39 Representative cross-sections through Block-model 1 and 2**

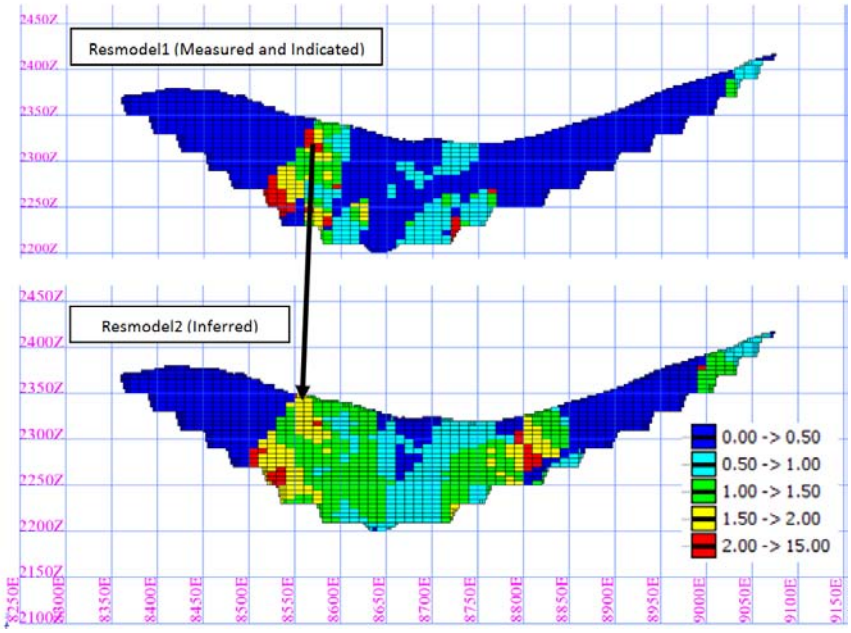



Figure 36 above, shows that blocks assigned in the Resmodel 1 (the model with higher confidence level) have been overwritten (and diluted) in Resmodel 2. This does not apply the principles of resource estimation classification, as the classification is chosen based on the confidence in the data and specific criteria, such as data density. An area that can be classified as Measured should not also be covered by an Inferred classification. The Inferred classification should cover the part of the block model that is not of sufficient confidence. This means that the resources shown in Appendix 7, of 0.56 Moz gold contained in Resmodel 1 and 1.26 Moz gold contained in Resmodel 2 will have to be re-estimated applying new geological information before they fully conform to the JORC code and CIM classifications. This will be possible as all drill core is safely stored in a shed at Toukhmanuk mine site and can be re-logged and those sections recorded as below detection re-assayed by halving remaining core as illustrated, below.

**Figure 40 Representative stored drill core, hole T 32, drilled in 2006**
159.8 m to 167.5 m depth, with examples of mineralized veins in quartz porphyry.

Global Gold is currently working on a CIM compliant mineral resource estimate to include all assay results from 4,000 m of recent diamond drilling at Toukhmanuk in 2011.

## 5.3 SURROUNDING MINERAL DEPOSITS

Armenian Copper Programme (ACP), a closed joint stock company, owns and operates the Alaverdi copper smelter with up to 18,000 t/y blister capacity. ACP's main activity is the processing of ore and concentrate to produce blister copper for export to European refineries. In 2005 ACP processed 47,000 t of concentrate and produced 9,900 t of blister (versus 40,000 t and 9,500 t, respectively, in 2004, with ACP's major copper concentrate suppliers being Zangezur CMC and the Agarak CMC.

In 2001, the company obtained 25-year licences for the exploitation of Alaverdi copper and Teghut copper-molybdenum deposits. The company is also involved in the acquisition, exploration and development of mining properties in Armenia: Hankadzor (c 1.6 % Cu), Hagvi (c 1.8 % Cu); and small gold deposits: Margahovit, Karaberd, Tandzut and Marts-Dzaghidzor.

Currently ACP is engaged in development of the Teghout Cu-Mo deposit, which is estimated to contain 454 Mt of reserves at an average grade of 0.36% Cu and 0.022% Mo, containing more than 1.6 Mt of copper and about 100,000 t of molybdenum. The project is planned to mine 8 Mt/y grading 0.41% Cu and 0.012% Mo to produce some 98,000 t copper concentrate at Cu 28% and a molybdenum trioxide concentrate with 54% Mo. In a first stage ACP plans to produce about 30,000 t of copper and 1,000 t of molybdenum annually, processing 7 Mt of ore through a smelter reconstructed in collaboration with Lurgi Metallurgie and Norddeutsche Affinerie of Germany. The product is to be transported by rail to the port of Poti in neighbouring Georgia. A few kilometers upstream, along the river which runs through the plant, is an operating hydro power station with 24 MW installed capacity. The first stage of the development project requires investment of US$ 280 M and ACP has already invested US$30 M in the project.

## 5.4 METALLURGICAL TESTING AND MINERAL PROCESSING

As part of a programme to evaluate the potential of the Central Area at Toukhmanuk [(2)], Mego-Gold, in 2004, collected a 120 kg sample from No 15 vein with a grade of 5.8 g/t Au and 10.4 g/t Ag and had metallurgical test-work carried out at the State Technological Laboratories in Yerevan (Table 6).

**Table 6 Gold distribution in No 5 vein sample collected by Mego-Gold, Toukhmanuk**

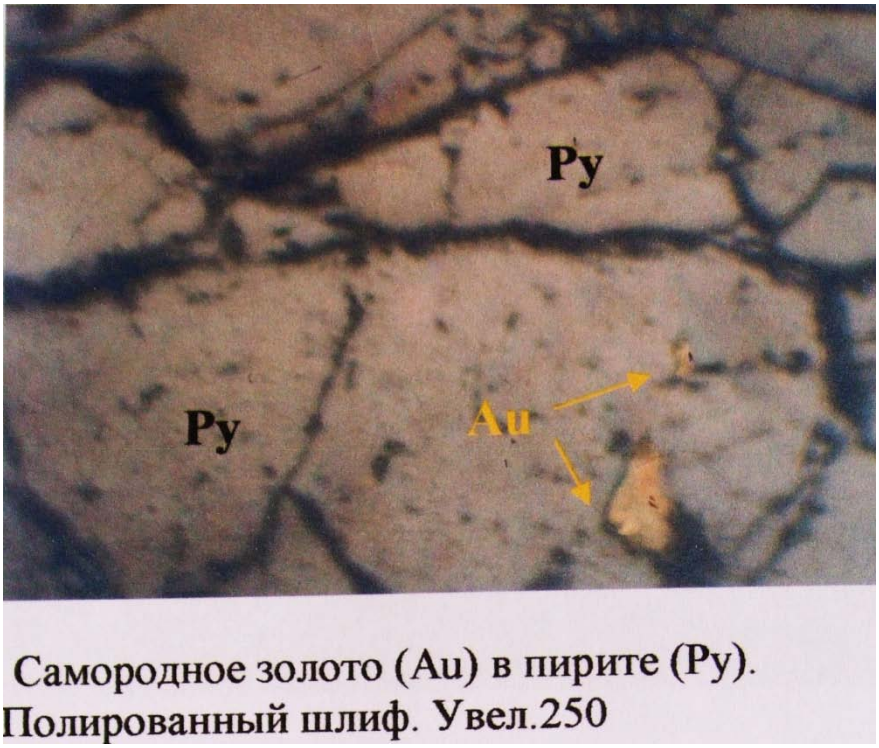
| Gold Occurrence | Grade (g/t Au) | % Content |
|---|---|---|
| "Free" | 3.0 | 51.7 |
| Rusty | 0.7 | 12.1 |
| Within sulphide minerals | 1.9 | 32.8 |
| With gangue minerals | 0.2 | 3.4 |
| Total | 5.8 | 100.0 |
| | | |

Source: Sabonjyan and Sookiasyan, 2004.

In 2008, two further samples; MT 1, of sulphide and MT 2, of oxide, were submitted for mineralogical analysis. MT-1 was light grey, brecciated, with low-grade quartz stockwork-stringer mineralization in a sericitic quartzite. Sulphides make up around 5% or 6% and there are 2% hydroxides of iron. Pyrite is the major sulphide, while arsenopyrite, sphalerite and galena are minor, chalcopyrite occurs as single grains and there are also iron hydroxides.

Pyrite occurs as idiomorphic crystal aggregates and fractured grains up to 7mm in size (Figure 41), cross-cut by stringers of sphalerite, galena and chalcopyrite and with captured gold grains. Pyrite is closely associated with arsenopyrite and streaky aggregates of quartz-pyrite-sphalerite-arsenopyrite from 2 mm to less than 0.005 mm in size.

**Figure 41 Brecciated pyrite grains, with encapsulated gold, Toukhmanuk**

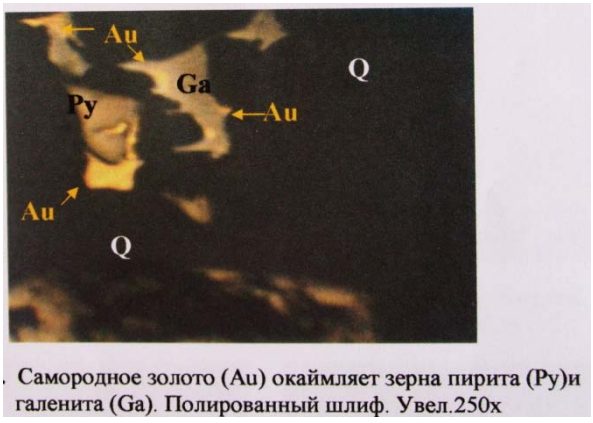



Arsenopyrite occurs as xenomorphic aggregates with pyrite up to 2 mm to 3 mm in size and also as separate individual rhombic grains up to 0.1 mm in size.

Sphalerite occurs as 2 mm to 3 mm segregations with quartz, closely associated with galena and chalcopyrite. It invades pyrite and pyrite-arsenopyrite aggregates and often contains an emulsion of chalcopyrite blebs.

Galena is represented by 2 mm to 3 mm crystal aggregates and thin stringers and segregations in quartz, pyrite and sphalerite (Figure 42). It often corrodes shattered grains of pyrite and is observed in close association with sphalerite and chalcopyrite in oxide and tennantite in sulphide.

**Figure 42 Gold, galena and pyrite encapsulated in quartz, Toukhmanuk**
With chalcopyrite corroding silver-bearing tennantite and galena on right image



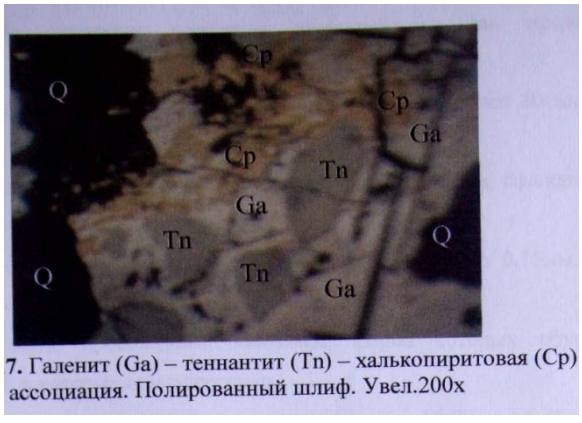
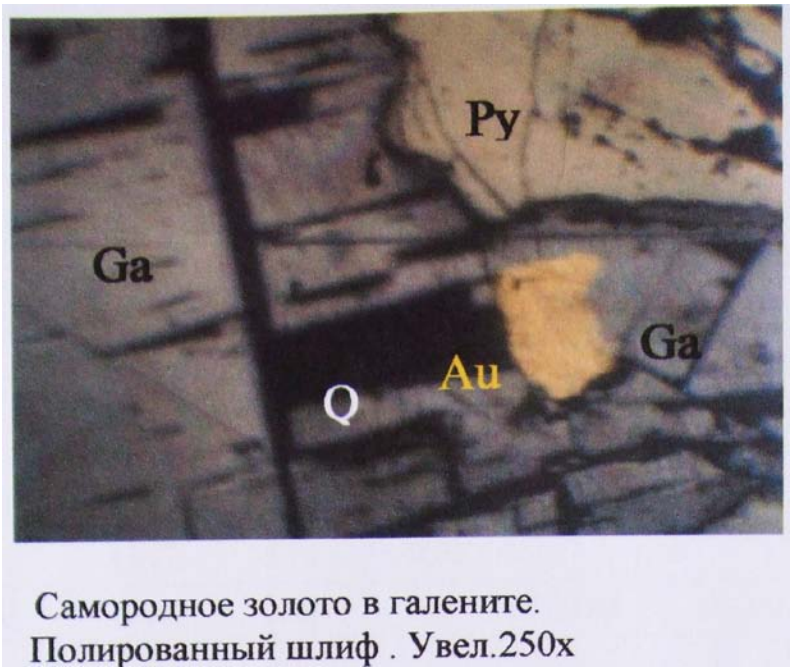
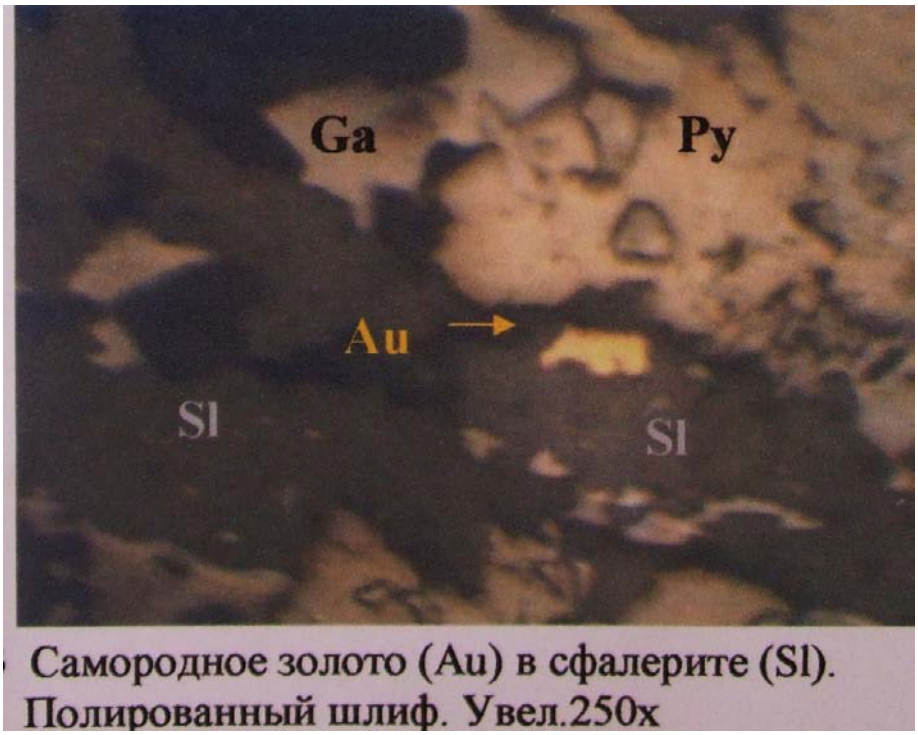



**Figure 43 Galena, containing quartz and gold, corroding pyrite grain, Toukhmanuk**




Chalcopyrite occurs as small, rare, xenomorphic segregations, about 0.05 mm in size, associated with sphalerite and galena, often also as an emulsion of blebs in sphalerite. Oxide contains tennantite as segregations and stringers associated with galena, chalcopyrite and sphalerite (Figure 44).

**Figure 44 Sphalerite with encapsulated gold corroding pyrite and galena, Toukhmanuk**




The following tables [(2)] show the metallurgical data reported, indicating that iron, sulphur, zinc, lead and arsenic are the main impurities likely to exist in any concentrate. No analyses have been done on composites for mercury. These should be carried out to establish levels of that element.

**Table 7 Fire assays of metallurgical samples, Toukhmanuk**

| Batch/weight | Grade, gr/t | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | MT-1 | | MT-2 | | MT-3 | | MT-4 | |
| | Au | Ag | Au | Ag | Au | Ag | Au | Ag |
| Batch/weight 1 | 1.13 | 18.07 | 2.53 | 8.07 | 12.68 | 59.72 | 4.67 | 10.93 |
| Batch/weight 2 | 1.18 | 19.32 | 2.51 | 11.89 | 11.82 | 61.38 | 5.38 | 11.02 |
| Batch/weight 3 | 1.03 | 13.37 | 2.75 | 9.65 | | | | |
| **Average:** | **1.11** | **16.92** | **2.60** | **9.87** | **12.25** | **60.55** | **5.03** | **10.98** |

**Table 8 Chemical composition of metallurgical samples, Toukhmanuk**

| *Sample* | Grade, % | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Cu* | *Fe* | *S* | *Pb* | *Zn* | *As* | *Sb* | *Bi* | *Se* |
| **MT-1** | 0.024 | 3.250 | 2.576 | 0.27 | 0.29 | 0.19 | 0.0005 | 0.0025 | Is not revealed |
| **MT -2** | 0.016 | 8.330 | 0.267 | 0.056 | 0.055 | 0.52 | 0.0004 | Is not revealed | Is not revealed |
| **MT -3** | 0.032 | 4.26 | 4.60 | 1.56 | 0.45 | 0.049 | 0.003 | 0.009 | Is not revealed |
| **MT -4** | 0.013 | 7.68 | 0.36 | 0.15 | 0.053 | 0.70 | 0.002 | Is not revealed | Is not revealed |

**Table 9 Mineral proportions: % in metallurgical samples, Toukhmanuk**

| *Sample* | *Pyrite* | *Blende* | *Arsenopyrite* | *Galenite* | *Chalcopyrite* | *Hydroxides of iror* |
|---|---|---|---|---|---|---|
| **MT -1** | 4.0-4.5 | 0.4-0.5 | 0.4 | 0.3 | sing. grains | 2.0 |
| **MT -2** | 0.3-0.5 | sing. grains | sing. grains | sing. grains | sing. grains | 12-13 |

**Table 10 Silicate composition of metallurgical samples, Toukhmanuk**

| *Sample* | Grade, % | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | $SiO_2$ | $Al_2O_3$ | $CaO$ | $MgO$ | $TiO_2$ | $P_2O_5$ | $Fe_2O_3$ | $nnn+H_2O$ |
| **MT-1** | 65.90 | 15.10 | 1.45 | 0.60 | 0.45 | 0.35 | 4.65 | 4.46 |
| **MT -2** | 58.10 | 15.76 | 1.23 | 0.95 | 1.00 | 0.85 | 11.91 | 6.52 |

**Table 11 Site of major metals and sulphur in metallurgical samples, Toukhmanuk**

| *Sample* | Grade, % | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Cu* | | | | *Fe* | | | | *S* | | | |
| | *total* | *sulphide* | *oxide* | *% oxid.* | *total* | *Sulphid.* | *oxide+ pyrrhotine* | *% oxid.* | *total* | *sulphid.* | *sulphat.* | *% oxid.* |
| **MT-1** | **0.0241** | 0.024 | 0.0001 | 0.41 | **3.25** | 2.22 | 1.03 | 31.69 | **2.576** | 2.52 | 0.056 | 2.17 |
| **MT -2** | **0.016** | 0.014 | 0.002 | 12.50 | **8.33** | 0.25 | 8.08 | 97.00 | **0.267** | 0.17 | 0.097 | 36.33 |

Gravitational tests were undertaken at differing grind sizes on a shaking table, as shown on Table 12, overleaf [(2)].

## Table 12 Shaking table tests on differing grind sizes, Toukhmanuk

| Sample | Ore grinding fineness | Product of enrichment | Outcome, % | Grade, gr/t | | Recovery, % | |
|---|---|---|---|---|---|---|---|
| | | | | Au | Ag | Au | Ag |
| MT-1 | 80% -0.5mm | Gravitation concentrate | 3.32 | 17.50 | 293.50 | 45.47 | 49.02 |
| | | Tails of gravitation | 96.68 | 0.72 | 10.47 | 54.53 | 50.98 |
| | | Ore | 100.0 | 1.28 | 19.86 | 100.0 | 100.0 |
| | 80% -0.071mm | Gravitation concentrate | 2.78 | 24.60 | 329.02 | 58.48 | 49.40 |
| | | Tails of gravitation | 97.22 | 0.50 | 9.65 | 41.52 | 50.60 |
| | | Ore | 100.0 | 1.17 | 18.54 | 100.0 | 100.0 |
| MT-2 | 80% -0.5mm | Gravitation concentrate | 0.59 | 34.41 | 49.34 | 8.75 | 3.00 |
| | | Tails of gravitation | 99.41 | 2.13 | 9.47 | 91.25 | 97.00 |
| | | Ore | 100.0 | 2.32 | 9.71 | 100.0 | 100.0 |
| | 80% -0.071mm | Gravitation concentrate | 0.74 | 39.75 | 57.75 | 9.99 | 4.05 |
| | | Tails of gravitation | 99.26 | 2.67 | 10.20 | 90.01 | 95.95 |
| | | Ore | 100.0 | 2.94 | 10.55 | 100.0 | 100.0 |

Based on the studies' results, the following regime for flotation of mixture of low and high gold grade sulphide and oxide ores was developed and implemented:

- Ore grinding fineness–65% -0.071mm;
- Basic flotation duration–30min;
- Control flotation duration–30min;
- Preliminary concentrate's aeration duration–30min;
- Duration of concentrate's first refining–10min;
- Duration of the second refining–6min;
- Reagent regime,gr/t:

  - into grinding:

    *sulfur natrium – 100*

    *butyl xanthogenate of natrium – 120*

  - for the basic flotation:

    *butyl xanthogenate of natrium – 0/20*

    *pine oil – 60/100*

  - for the control flotation:

    *butyl xanthogenate of natrium – 80*

    *pine oil – 40*

  - for the aeration:

    *lime – 1250/1500*

  - for the first refining:

    *lime – 250/0*

**The technological scheme** of the operating plant includes crushing in a jaw crusher, two-stage grinding in ball mills—in an open cycle at the first stage of grinding with unloading in a sump, which is common with the mill of the second stage, and in a closed cycle at the second stage with hydrocyclone, sands of which are the feeding of the mill of the second stage grinding, while the hydrocyclone's discharge is the feeding of the gravitation unit (pic. 11.) The gravitation enrichment unit consists from the operation of the primary gravitation, which is implemented on two concentration tables SKO-22, from control operation of the gravitation tails of the primary gravitation on concentration table SKO-15, final concentration of commercial products of the primary gravitation on table SKO-15 and from final concentration of the primary gravitation concentrate on table SKO-7.5 with the return of the industrial product of final concentration into the hydrocyclone's sump.

Tails of gravitation enrichment are pumped into the intermediary thickener and after the thickening up to 35-40% of solid they go to the conditioner, the feeding unit of flotation enrichment, which consists from the operations of basic and control flotation. The control flotation's concentrate goes to the head of the basic flotation, while the basic flotation's concentrate goes for the aeration in a lime environment in two cells of flotator NF-2.8. The preliminary concentrate of flotation is sent for the first refining after the aeration, while the industrial product—into the basic operation's head. The industrial product of the second refining is returned to the head of the first refining, and the concentrate is sent to the concentrate's thickener, the thickened product of which goes to the drum vacuum-filter, the cake of which is the marketable flotation concentrate.

The flowsheet forming the basis of the existing Toukhmanouk plant seen by Behre Dolbear is shown on Figure 45.

**Figure 45 Mineral processing plant flowsheet, Toukhmanuk**


**Figure 46 Hopper above primary jaw crusher, feeding ball mils, Toukhmanuk**

**Figure 47 Three tiers of gravity tables, Toukhmanuk mineral processing plant**

**Figure 48** **Installation of new mills to permit expansion of mill production**
Mills, outside existing mill building, on mountings ready for commissioning during October 2011 (Photos courtesy of A. Boghossian).

## 5.5 TAILINGS DISPOSAL

**Figure 49** **Tailings ponds, with discharge point**
Mine camp accommodation and laboratory/core shed buildings in middle distance, with pipeline route for village irrigation water supply on hillside to right.

## 5.6 CONVERSION OF MINERAL RESOURCES TO MINERAL RESERVES

**Metal price and operating assumptions**

Gold and silver extraction at Toukhmanuk will be implemented from an open pit. The pit's ultimate length is estimated at 1,200 m, its width 400 m and depth 160 m. Overburden will be stored 2 km south-west of the pit. Care should be taken to preserve top-soil as this contains valuable indigenous seeds in their original habitat, which can be used as a part of rehabilitation at the end of mine life.

According to Global Gold's estimation, there is 18 Mt of ore within the Stage-one pit outline, with an average grade of 2.01 g/t Au, applying a cut-off of 0.6 g/t Au.

It is clear that pit optimization studies are required to reach a satisfactory extraction scheme, because at present grades of 2 g/t to 3 g/t Au are being processed and the veins are being selectively exploited; not as envisaged in a bulk mining operation, which is feasible given precious metal prices today.

Three years will be required for completing the construction of the pit, the expanded processing plant, ground infrastructure and capital stripping works. Increased ore mining will begin from the third year of the works schedule and estimated capacity of mining and processing will average 1.5 Mt/y run-of-mine ore. In total, during the operation of the Stage-one mining and processing enterprise, 27 $Mm^3$ of rock, around 55 Mt, will be mined from a first-stage pit, out of which 18 Mt of ore will be processed, giving a waste to ore ratio of close to 3:1. Operational in-pit cut-off grades are taken to be 0.6 g/t Au and 10 g/t Ag and reserves have only been estimated down to 2,150 mL.

Ore reserves considered by Global Gold considerably exceed ROA GKZ reserves and suggest a mine life of more than 12 years at 1.5 M/y, with production of 12 t to15 t of gold [(2)]. Recent Gemcom data adds support to that and work is continuing to define a fully compliant mineral resource estimate. Behre Dolbear considers that more detailed geological limits to the block models and pit optimization studies are needed to underpin a robust mining plan. Selective mining, inconsistent with pit optimization plans, will result in a reduced mine life.

## 5.7 OTHER MINE DEVELOPMENT AND PRODUCTION INFORMATION

### Test mining

From 2006 to 2008, ore extraction was implemented on geologically documented levels between 2280 mL and 2380 mL, as can be seen on Figure 50.

**Figure 50 Pit mine benches between 2,280mL and 2,380mL, Toukhmanuk**

The Company mined about 52,000 t in 2006 with a grade of 1.27 g/t Au and 6.37 g/t Ag, no mining took place in 2007, about 82,000 t was mined in 2008 with a grade of 1.85 g/t Au and 5.21 g/t Ag, in 2009 there was no mining and in 2010 about 21,000 t was mined with a grade of 2.08 g/t Au and 5.68 g/t Ag.

**Figure 51** **Blast hole rig drilling at 2m-spacing on a mine bench prior to blasting**
Cf. Figure 28 to see hole-spacing

**Figure 52** **Tracked shovel loading truck in Toukhmanuk pit**
Notice shallow soil profile behind shovel arm this is reported to be stockpiled for use in later mine rehabilitation


As of this report date, Global Gold had spent approximately $25 M on mining and exploration activities at this property and Getik.

Recently, a high-grade silver pocket has been intersected at a splay from one of the main veins, illustrated by Figure 53.

**Figure 53** **Silver-rich altered, kaolinized feldspar porphyry and dacitic volcanic rocks**
Looking NE along the strike on the left, and looking SW on the right image. Also notice a steep SE dip of the veins and altered rocks, well-shown on the right image.

**Recoverability**

Recoveries for both gravitation and flotation concentrates being produced by Mego-Gold were 72%, but with Global Gold, after renovations, recoveries are reported to have averaged over 80% for gold.

**Marketing and sales**

Sales were about US$6,000 in 2006, US$10,400 in 2007, nothing in 2008, US$136,600 in 2009, and US$358,400 in 2010 [(1)]. The sales in 2006 were for 41.11 t of gold and silver concentrate with content of about 33 g/t Au and 290 g/t Ag. The sales in 2007 were for 47.23 t of gold and silver concentrate with content of approximately 21 g/t Au and 117 g/t Ag [(1)]. The sales in 2009 were for 109.98 t of gold and silver concentrate with content of approximately 54 g/t Au and 216 g/t Ag. The sales in 2010 were for 226.62 t of gold and silver concentrate with content of about 53 g/t Au and 200 g/t Ag [(1)].

**Contracts**

On March 24, 2009, the Company signed a supply contract agreement with Industrial Minerals SA (IM), a Swiss Company. The agreement is for IM to purchase all of the gold and silver concentrate produced at the Company's Toukhmanuk facility at 85% of LBMA less certain treatment and refining charges.

On February 25, 2010, the Company, through its wholly owned subsidiary Mego-Gold, LLC (Mego) entered into an agreement with IM to provide Mego with an advance of US$450,000 from IM against future sales of gold and silver concentrate. The advance was provided by IM on February 26, 2010. Key terms include; that Mego provides IM with an exclusive off-take agreement for its gold and silver concentrate in Armenia through December 31, 2012; for 2009 and until February 25, 2010, the price

IM paid Mego for gold and silver concentrate was calculated based on 85% of the London am/pm Gold Fixation and London Silver Spot, until Mego delivers 2,250 Mt of concentrate the 85% is reduced to 80%, after 2,250 Mt have been delivered the price will revert to 85% of London Rates; Mego provides IM with a security interest in its current ore stockpile in Armenia and the Company provides for a corporate guarantee for repayment of the advance.

**Environmental considerations**

Behre Dolbear has not reviewed the environmental impact statements relating to Toukhmanuk mine development project, but during the site visit and subsequent discussions the following issues emerged as important for the enterprise:

- Utilizing water as a source of energy for the enterprise
- Stockpiling as much top-soil as possible during overburden stripping and
- Putting protective measures in place to minimise disruptive effects of winter snowfall and spring melt waters on mining benches; such as hurdles to hold back snow.

**Taxes**

A résumé of tax legislation in relation to mining ventures is in Appendix 1. In summary Armenia currently has [(15)]:

- Favourable and stable tax policies and treatment;
- Taxation calculated and paid quarterly;
- 1.5% royalty tax (which is also a deductible expense);
- 20% profit tax on taxable profit.

If taxable profit is >25% of sales then a further 12.5% profit tax is levied but only on the taxable profit in excess of 25% (ie, marginal tax rate is 32.5% on taxable returns of over 25%). Mego-Gold has accumulated a significant tax credit which may be called to account as revenues flow from Toukhmanuk mine.

Armenia is a World Trade Organisation (WTO) member.

**Potential Mine Life**

This section of an NI 43-101 report is for deposits that have undergone an intensive feasibility study, or are in actual production. The Toukhmanuk property is in small-scale production and the resource remains open along-strike and at-depth. There is yet insufficient information available to the author about predicted mine feasibility to endorse the predicated mine life, or likely profitability.

**Economic Analyses**

The present resource estimates suggest that grades encountered to date are higher than the average grade of the resource, but mining has focussed on the most prospective part of the mineralized vein corridor.

For purposes of illustration only, assuming a long-term gold price of US$1,200.00 per ounce ($38.58 per gram), 70% gold recovery, and a rather high operating cost of US$10.00 per tonne, the implied cut-off grade would be 0.42 g/t Au.

**Payback**

Payback cannot be estimated at this time.

**Exploration Potential**

More drilling at Toukhmanuk, within the boundaries of the preliminary pit outline is required to raise further resources to Measured and Indicated status and confirm grades in rocks between the major veins. In addition, continuing determinations of rock density should be carried out to monitor the average density for annual reserve revisions and reconciliations. Exploration and discovery of additional resources within the vein zone corridor is considered likely by Behre Dolbear and would increase the mine life and the economic viability of the operation.

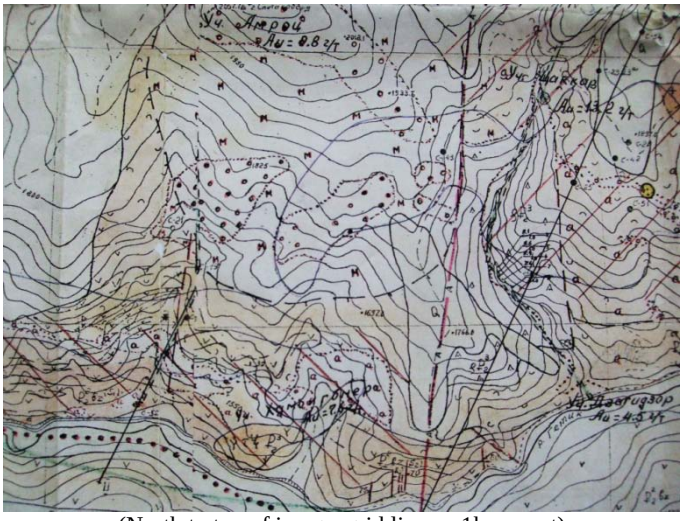
**Other Relevant Data and Information**

No additional data or relevant information bearing directly on the Toukhmanuk deposit is known to Behre Dolbear, at the present time.

## 6.0 GETIK LICENCE

Getik is an early-stage project in an area which has seen exploration activity from the 1920s to 1997, when results of sampling and mapping highlighted the area as prospective for gold (Figure 54).

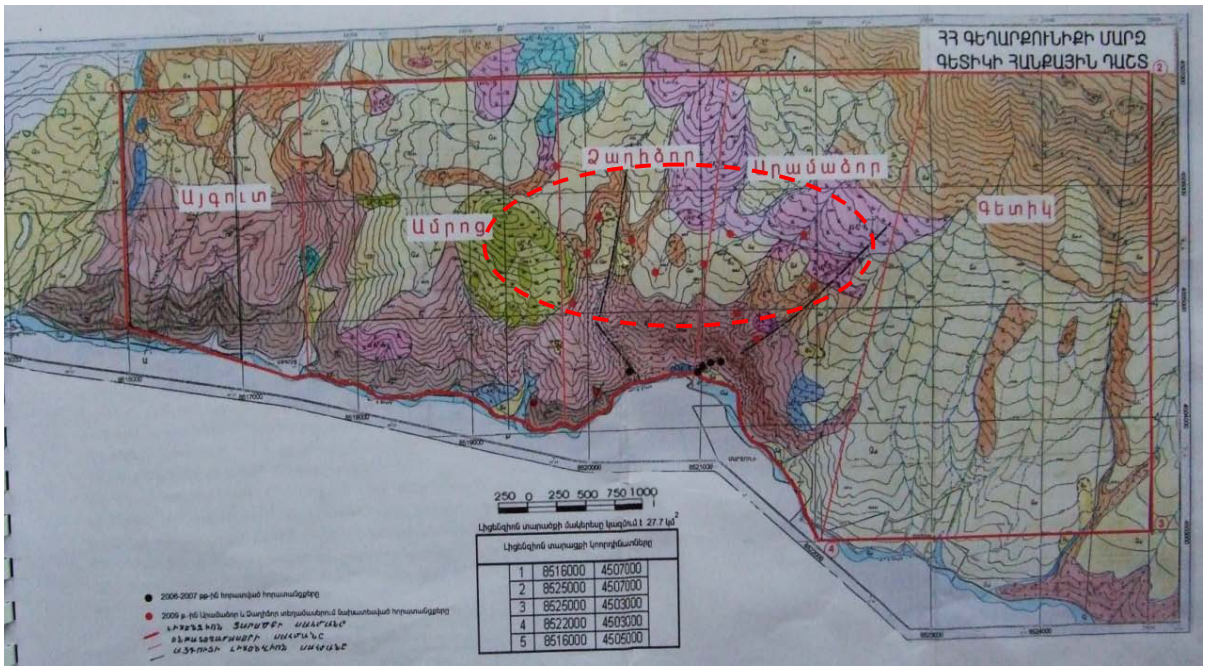
**Figure 54 Fragment of geological map of 1996 with encouraging gold sample values**



(North to top of image, grid lines ~ 1km apart)

On January 31, 2006, Global Gold acquired 80% of an Armenian company, Athelea Investments, CJSC (renamed "Getik Mining Company, LLC") and its 27 km$^2$ Getik gold/uranium exploration licence in the Geghargunik province (Figure 39). On May 30, 2007, Global Gold acquired the remaining 20% interest in Getik Mining Company, LLC [(1)]. On December 10, 2008, a new special exploration license expiring December 10, 2013 was issued (Figure 55).

**Figure 55** **Getik licence boundary and coordinates on geological map**
Main area of initial interest circled in red. Black dots on prior drill hole locations. West to East are the Aygut, Amrots, Dzaghidzor Aramadzor and Getik sub-areas.



(North to top of image, grid lines ~ 1km apart)

The property is north-east of Lake Sevan and 110 km north-east of Yerevan, accessible by car or truck over existing paved and dirt roads (Figure 56) and is outside the specially regulated Lake Sevan basin watershed.

**Figure 56 Topography and infrastructure, Central Getik licence area**


(North to top of image, with 1 km-square superimposed grid.)

Gas and electric power are available.

Most local people are occupied with farming and bee-keeping.

**Figure 57** **View looking towards Getik village from the Aramadzor block**
Sub-Alpine topography with farmland and wooded areas, road and river in valley

Field labourers, tractors and horses can be found in Getik village to assist prospecting. Global Gold had no facilities or material equipment at the property during Behre Dolbear's field visit. All exploration equipment was brought to the site on a need basis from the Company's other properties or supplied by contractors.

As part of the Soviet Union, the "Getik mineralized zone" was targeted for studies after regional exploration identified structural features interpreted as having potential for hosting economic mineralization. Initial exploration involved detailed geochemical and geophysical sampling resulting in a series of anomalies considered to be prospective. Exploration was discontinued after the dissolution of the Soviet Union. In 1999, a series of surface sampling programs was conducted primarily targeting gold potential. Results of the work were reportedly not submitted for official approval but field maps indicate isolated rock-chip sample values averaging 4.0 g/t to 5.0 g/t Au.

In the 1970s, during geochemical sampling and geological mapping, petrographic and petrochemical studies were undertaken to identify underlying bedrock, concluding that the region was prospective for radioactive elements, including uranium. Radiometric and gamma spectra methods were employed on closely spaced grids over the whole region. Peaks in the interpretation were sampled and reportedly showed anomalous radioactivity south of the present Global Gold licence area in a zone close to regional fault lines, suggesting a possible radon source.

**Geology, mineralization and resources**

The property is in the Alaverdi-Kapan metallogenic zone on the edge of the Sevan suture zone in an area characterized by volcanogenic sedimentary rocks of Jurassic and Eocene age. A series of granitoid intrusives varying from ganodiorite to rhyolite composition have been identified in the area, which Behre Dolbear considers may be part of a volcanic dome complex.

Recent mapping and sampling by Global Gold has highlighted bleached, crackle-brecciated pyritic rhyodacitic lava as a prospective horizon with historic rock-chip samples averaging 4.6 g/t Au and chalcopyrite has also been observed in altered rocks indicating a polymetallic mineralization may exist in the lavas and porphyries.

## Exploration

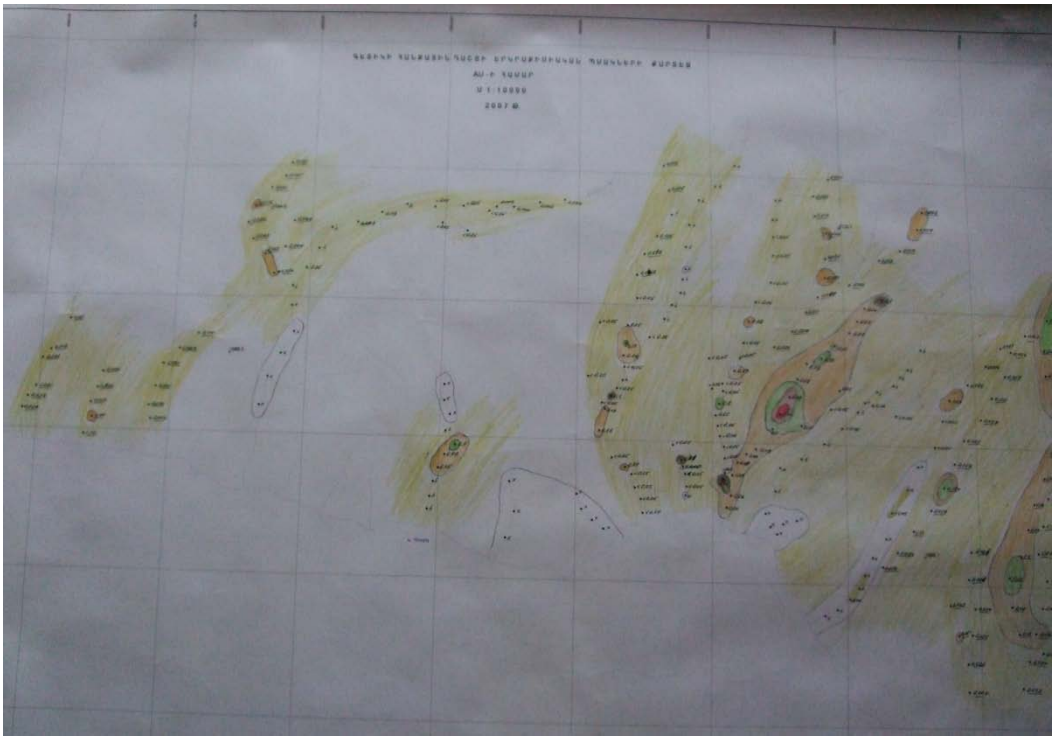
Global Gold has undertaken geological mapping, ground geophysical surveys, trenching and diamond-drill testing at Getik. Hydrothermally altered rocks are exposed in south-draining riverbeds. The river water is strongly iron-stained from dissolution of pyrite contained in a rhyodacitic lava, which is strongly argillized in parts (Figure 58) and is overlain by a later, spongy, conglomeratic, siliceous cap-rock, which may represent an erosion surface product. This cap-rock forms the so-called Amrots circle-structure, which is about 0.8 km in diameter.

**Figure 58 Iron-stained borders to river draining pyritic rhyodacitic lava unit, Getik**

## Geochemistry

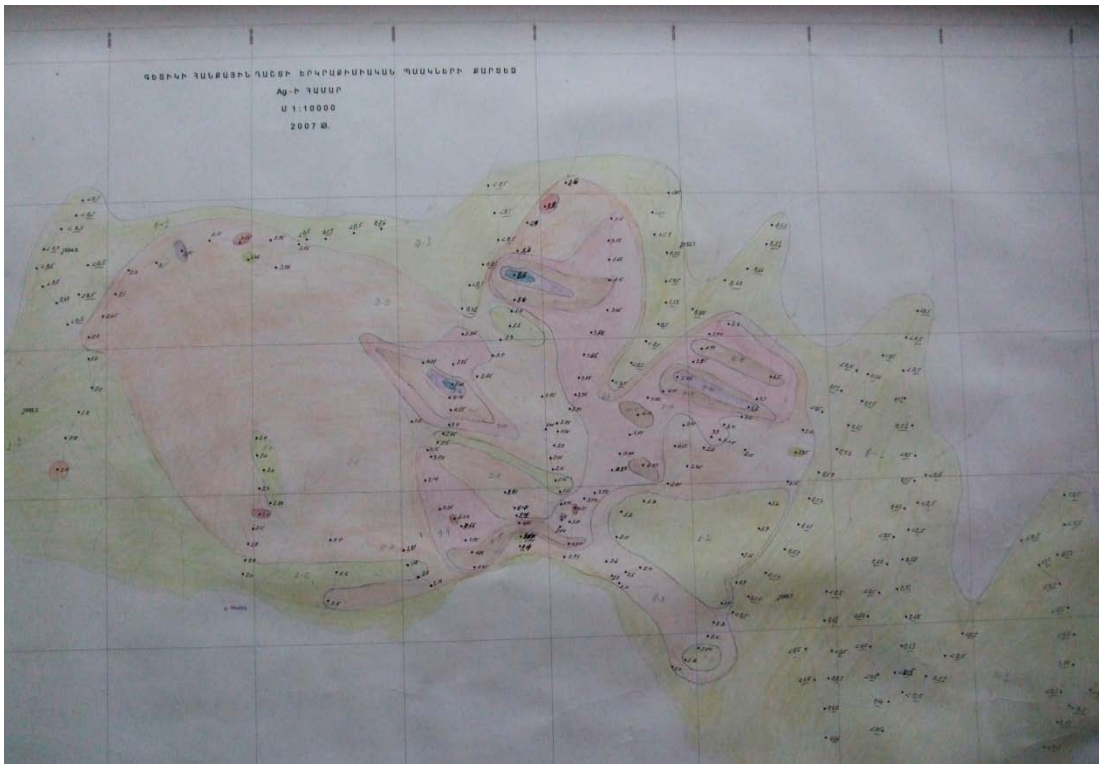
A geochemical stream sediment sampling survey throughout the whole licensed territory was carried out in 2007 [13 and 14], to discover the nature and form of mineralization and its relation to host rocks. The average distance between the samples has been 150 m to 200 m, and samples were analysed for Au, Ag, Cu, Pb and Zn. Results for gold and silver are in Figures 59 and 60; results for Cu, Pb and Zn failed to highlight any significant anomalous areas.

**Figure 59 Gold stream sediment sampling results, Getik licence**



(Vertical and horizontal grid lines 1km apart)

**Figure 60 Silver stream sediment sampling results, Getik licence**




(Vertical and horizontal grid lines 1km apart)

Results highlight the zone of hydrothermally altered rocks indicated on Figure 55 above. This area was covered by further sampling and trenching in 2007 (Figure 61 [14]).

**Figure 61 Shallow surface trench sampling of altered volcanic, Aramadzor**

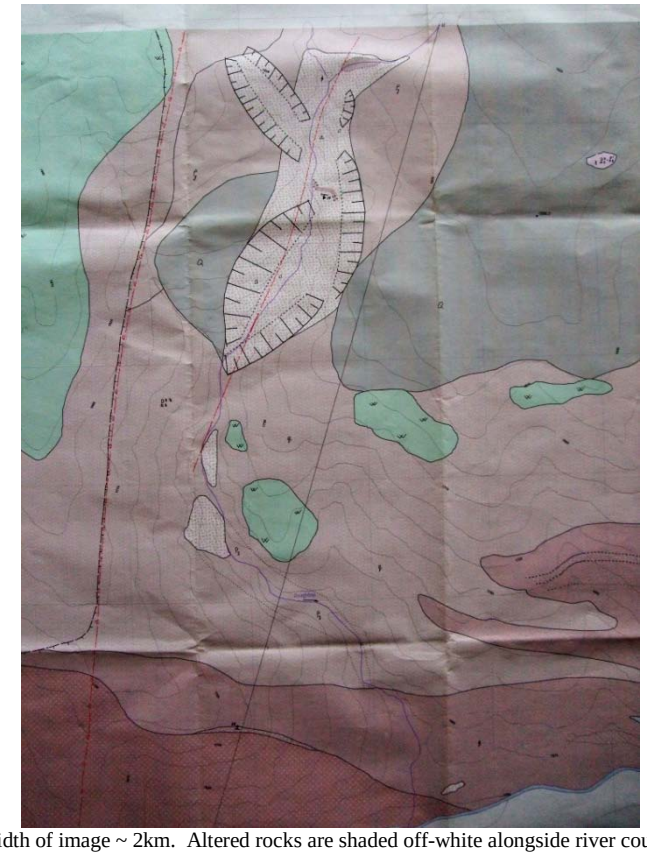
A 1:10000 scale geological map of the entire licence was prepared in 2006, with location of 1,000 samples which were sent to Canada and the Toukhmanuk laboratory for analysis. Results showed up to 1.4 g/t Au, but, as most samples were from weathered surface rock, they may have underestimated the gold content in fresh rock. It is recommended that rock-chip sampling of unaltered rocks be carried out to determine whether gold exists in the unaltered volcanics. Existing road-cuts supply excellent exposures of unaltered rocks below the zone of weathering (Figure 62).

**Figure 62 Road-cut with fresh pyritic rhyodacitic lava below zone of weathering**


Work was continued in 2007 [(14)], with 2,780 $m^3$ of shallow trenching. 8,018 samples were taken for analysis by AAS in the Toukhmanuk laboratory, but results were disappointing.

The zone from Dzaghidzor to Aramadzor, covering about 360 acres is the most prospective, containing evidence of hydrothermal alteration zones. A detailed, 1:2,000-scale geological map has been compiled by Global Gold of this zone and a fragment of this work is in Figure 63.

**Figure 63 Fragment of geological map of Dzaghidzor stream valley alteration zone**



(North to top and width of image ~ 2km. Altered rocks are shaded off-white alongside river course and at headwater)

**Drilling**

Seven short drill holes were drilled close to the road alongside the river forming the southern licence boundary in 2006, with a 274 m overall length. The drill-hole locations are shown with black dots on Figure 63 above. 264 samples at 1 m intervals down-hole showed a maximum value of 1.5 g/t Au.

A further hole in the same area was drilled to 149 m depth in 2007. Results do not have sufficient continuity to permit estimation of any resource at present.

**Future programme**

A programme of 1,600 m drilling has been proposed for 2011 to 2013 at the Getik licence [(13)], to probe the hydrothermally altered rocks along strike between the river exposures, with drill-hole locations suggested in red dots on Figure 55 above. In Behre Dolbear's opinion this amount of drilling is not warranted from the results obtained to date. Definite drill sites should only be chosen after receipt of results from rock-chip sampling of unaltered lavas has returned encouraging values.

It is understood that Global Gold is required to spend a significant amount annually on exploration work in order to maintain the licence in good standing, but that expenditure can be negotiated annually with the licence-granting authority on the basis of results. As of December 31, 2010, the Company has spent approximately $650,000 on exploration activities at this property, excluding acquisition and capital costs.

# 7.0 BUSINESS ENVIRONMENT

## Political and economic situation

Armenia, at the cross-roads of Europe and Asia, has a long, complex history. The country was part of the Soviet Union until independence in 1991 and it is now a constitutional democracy and enjoys good relations with Russia, the United States and neighbouring Iran. Disputes with neighbours Turkey and Azerbaijan have closed borders and there was a devastating earthquake in 1988. The Metsamor nuclear plant, west of Yerevan was closed in 1988, following the earthquake, but re-opened in 1995 for economic reasons. The country is heavily reliant on it for electricity and there is concern over its safety, hence a recent law guaranteeing government purchase of power from any private source. At present, Armenia receives most of its gas supply from Russia and has had to face a doubling of the price from Gazprom. The gas arrives via a pipeline running through Georgia.

Conflict over the predominantly Armenian-populated region in Azerbaijan overshadowed Armenia's return to independence in 1991. Full-scale war broke out the same year as ethnic Armenians in Karabakh fought for independence, supported by troops and resources from Armenia proper. A ceasefire in place since 1994 has failed to deliver any lasting solution. Unemployment and poverty remain widespread, with Armenia's economic problems aggravated by a trade blockade, imposed by neighbouring Turkey and Azerbaijan, since the dispute over Nagorno-Karabakh.

Despite these set-backs, economic reforms have facilitated economic progress since 1995. GDP growth has been over 10% annually, making it one of the fastest growing economies in the world until the economic crisis in 2008. Armenia became a member of the Council of Europe in 2001; it is a member of the World Trade Organization and relationships with Turkey have recently improved.

Armenia has a large diaspora and has always experienced waves of emigration, but a recent exodus has caused real alarm. It is estimated that Armenia has lost up to a quarter of its population since independence, as young families seek a better life abroad.

The country has great potential as a tourist destination and recent figures indicate that some success is being achieved in attracting visitors.

## Competitor activity

During the past year there have been few new entrants to the mining business in Armenia, there are signs, however that a re-bound in metal prices, specifically for gold, is stimulating a resurgence of activity. In particular, about 100 km north of Sisian, at Amulsar, Lydian International Ltd (Lydian)[(15)] has drilled 52,000 m since 2006 and spent US$4.6 M in delineation drilling and feasibility study work, in 2010, on a district where they have announced a global resource of 80.7 Mt at 1.0 g/t Au, containing 2.5 M oz gold [(15)]. Using a rock specific gravity of 2.37, Indicated resources have been estimated at 32.4 Mt grading 1.1 g/t Au, containing 1.1 Moz gold, and Inferred resources at 48.3 Mt grading 0.9 g/t Au, containing 1.4 Moz gold.

In addition, Lydian report that 98% of the gold is less than 106 microns in size and scoping metallurgical bottle-roll tests have given above 90% recoveries, with low cyanide consumption on oxide material. Lydian has commenced an additional 30,000 m exploration drilling programme and is currently advancing Amulsar towards bankable feasibility by the first half of 2012, with production planned in the first half of 2014 [(15)].

Anglo-African Minerals (AAM) Plc's 2 $km^2$ Azatek licence area is in the valley of the Arpa River near the town of Vayk in the Vayots Dzor Marz administrative district, about 130 km from Yerevan [(17)]. The licence area has been extensively drilled and sampled and hosts a vein system with a C1+C2 reserve of 560,000 oz gold and 12.65 Moz of silver, plus base-metal credits and antimony. On a gold-equivalent basis, this equates to about 1.7 Moz gold. The mining licence has a C1+C2 ore

reserve of 6.8 Mt, with average grades of 2.6 g/t gold, 55.43 g/t silver, 0.19% Cu, 0.55% Pb and 0.28% Zn.

Four distinct ore types have been identified by AAM [17]. Antimony grades of about 2% occur in two of the ore bodies. Metallurgical test work has indicated recoveries of about 84% for gold, 90% for silver and 97% for antimony. The economic viability of producing a base metals concentrate is to be evaluated.

An initial capital estimate for the proposed 1Mt/y processing plant is some US$40 M. Based on a preliminary metallurgical assessment, it is envisaged that a twin stream plant will be constructed, possibly on a modular basis.

## 8.0 RECOMMENDATIONS

Exploration and mine development at Toukhmanuk to date has resulted in a sound knowledge of the vein systems and their occurrence, but it is recommended that all previous drill core be reviewed with an objective of firming up information on vein density and mineralization. Intersections which were reported as below detection should be re-assayed, in particular, drill hole T 29. Check assays should also be carried out at a certified laboratory outside Armenia, so that future data is conformable with CIM and JORC standards. All previous sampling data including roadside sampling and underground adit sampling should be integrated into the recently generated Surpac database.

Resources at Toukhmanuk need to be better defined with further drilling within the preliminary pit outline and a feasibility study carried out on immediate mine development which can be applied to raise funds for sustainable longer-term production. The cost of such a study and associated exploration would be in the region of US$2 million and it could be accomplished in nine months, whilst additional drilling, as suggested in Appendix 9, would be designed to raise sufficient resources to reserves to underwrite at least five years production and ensure payback on the investment.

Engagement of a plant metallurgist should be considered to optimize the Toukhmanuk plant processing scheme and to investigate whether it would be advantageous to install Falcon concentrators in the mill to give improved gold recovery.

Barriers (hurdles) should be erected on the margins of the Toukhmanuk open pit, before the onset of this winter's snowfall, to limit snow-melt causing sloughing into the workings during the spring thaw.

Investigation into the feasibility of generating power from hydro and wind sources should be undertaken to protect the project from future escalation in the cost of power at Toukhmanuk mine.

At Getik, definite drill sites should only be chosen after receipt of results from rock-chip sampling of unaltered lavas has returned encouraging values.

## 9.0 CONCLUSIONS

Vein and stockwork gold mineralization in the Toukhmanuk mineralized corridor consists of quartz-sphalerite-pyrite-galena-arsenopyrite veins and disseminations hosted by hydrothermally altered Jurassic and Cretacious volcanic and intrusive rocks. Gold grain-size ranges from 5 µ to 50 µ.

Field relationships have been interpreted to indicate a genetic connection between major NW-SE trending faults and the NE-SW trending veins at Toukhmanuk [3], but in Behre Dolbear's opinion it is more likely the source is a granodioritic quartz-porphyry intrusive phase.

Global Gold has delineated Measured, Indicated and Inferred Mineral Resources, totalling 39.228 Mt at a grade of 2.07 g/t Au and 14.07 g/t Ag in approximately 20% of the 2.2 $km^2$ Central Area of the 53.76 $km^2$ Toukhmanuk deposit. Global Gold used a cut-off of 0.6 g/t Au and applied a rock density of 2.6, to produce resource estimates as follows:

| *Resource category* | *Tonnage: Mt* | *Gold: g/t* | *Silver: g/t* | *Contained Gold: Moz* | *Contained Silver: Moz* |
|---|---|---|---|---|---|
| Measured | 6.043 | 3.10 | 23.83 | 0.602 | 4.630 |
| Indicated | 18.767 | 1.99 | 13.09 | 1.200 | 7.907 |
| Measured and Indicated | 24.810 | 2.26 | 15.71 | 1.802 | 12.537 |
| Inferred | 14.418 | 1.73 | 11.26 | 0.804 | 5.233 |
| Total | 39.228 | 2.07 | 14.07 | 2.606 | 17.769 |

Estimated Measured and Indicated (M&I) resources total 24.810 Mt at 2.26 g/t Au and 15.71 g/t Ag for 1.802 Moz of gold and 12.537 Moz of silver. Inferred resources total 14.418 Mt at 1.73 g/t Au and 11.26 g/t Ag for 0.804 Moz of gold and 5.233 Moz of silver. The resource remains largely unexplored and is open along strike and at depth.

Global Gold is currently working on a CIM compliant mineral resource estimate (MRE) to include all assay results from 4,000 m of recent diamond drilling at Toukhmanuk in 2011. As this MRE is underway Global Gold does not want to refer to an incomplete model and dataset at this time.

Overburden will be stored 2 km south-west of the pit. Care should be taken to preserve top-soil as this contains valuable indigenous seeds in their original habitat which can be used to speed vegetation re-growth during rehabilitation at the end of mine life.

Water is available, as there are rivers flowing from the mountains, with a drop of over 1,000 m to the valley floors, which could be used to generate hydro-electricity for Global Gold's operations and the surrounding communities.

The resource is open along strike in the mineralized vein corridor and at depth. Expansion of the mill is underway and contracts for marketing concentrate are in place. Results from recent drilling on outlying vein systems suggest promise for multiple open pits in due course. Mine and plant optimization is recommended to take account of current precious metal prices.

At Getik, previous, widely separated, reconnaissance rock-chip samples taken by Soviet teams, shown on a 1:10,000-scale map of 1996, returned values between 0.8 and 13.2 g/t gold, with an average value of 4.6 g/t Au from only six samples of altered volcanics. This shows there is gold in the volcanics. Unanswered questions are whether there is any continuity between the values and what the silver content is. Field observations by Behre Dolbear indicated about 5% pyrite in the prospective volcanics, which are cut by fractures that may host gold-silver contents. Only follow-up sampling will give a more comprehensive answer. There may be a significant thickness of barren cover-rock overlying the volcanics, which initial reconnaissance drilling would investigate.

The stream sediment values for gold and silver at Getik are difficult to interpret, so a suggestion is to carry out a rock-chip sampling programme of fresh mineralized lavas, followed by analysis of gold and silver contents. Results will enable more accurate positioning of drill holes and Behre Dolbear recommends drilling no more than 1,000 m in an initial drilling programme, rather than 1,600m proposed in the plan. Once encouragement is obtained from the drill-core analyses, further drilling could be done.

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# 11.0 GLOSSARY

| Abbreviations | Meaning | Abbreviations | Meaning |
|---|---|---|---|
| AAS | Atomic Absorption Spectrometry | Global Gold | Global Gold Corporation |
| ACP | Armenian Copper Programme | GMC | Getik Mining Company LLC |
| AMP | Armenian Molybdenum Production CJSC | IM | Industrial Minerals SA |
| | | Mego Gold | Mego-Gold LLC |
| Amsl | Above mean sea level | mL | Mine elevation |
| API | Armenian Pure Iron Works | NI 43-101 | Canadian Securites Administration National Instrument for disclosing mineral resources and reserves |
| B, C1/ C2, P1 | GKZ-style mineral reserve categories | | |
| CJSC | Close Joint Stock Company | | |
| FeMo | Ferrimolybdate | | |
| GGA | Global Gold Armenia LLC | N,E,S,W | North, East, South and West |
| GGM | Global Gold Mining LLC | QA/QC | Quality Assurance / Control |
| GKZ | Armenian State Commission on Mineral Reserves | 3σ | Three standard deviations |
| | | SG | Rock density : $g/cm^3$ |

| Units | Meaning | Units | Meaning |
|---|---|---|---|
| Bnt | Billion tonnes ($10^9$) | µ | Micron ($10^{-9}$m) |
| ° | Degree of inclination from horizontal | M | Million |
| | | m | Metre |
| °C | Degree celsius | $Mm^3$ | Million cubic metre |
| cm | Centimetre | mm | Millimetre ($10^{-3}$ m) |
| $g/cm^3$ | Density | Mt | Million tonnes ($10^6$) |
| g | Gram | Mt/y | Million tonnes per year |
| g/t | Gram per tonne | MW | Megawatt |
| km | Kilometre | oz | Troy ounce (= 31.103 g) |
| $km^2$ | Square kilometre | % | Percent |
| kW | Kilowatt | t | Tonne |
| M | Million | t/m | Tonnes per month |
| | | t/y | Tonnes per year |

| Chemical Symbols | Meaning | Chemical Symbols | Meaning |
|---|---|---|---|
| Ag | Silver | Mo | Molybdenum |
| As | Arsenic | O | Oxygen |
| Au | Gold | Pb | Lead |
| Ba | Barium | S | Sulphur |
| Cu | Copper | Sb | Antimony |
| Fe | Iron | Si | Silicon |
| Hg | Mercury | Zn | Zinc |

| Minerals | Composition | Minerals | Composition |
|---|---|---|---|
| Ankerite | $Ca(Fe,Mg,Mn)(CO_3)_2$ | Limonite | $FeO(OH).nH_2O$ |
| Arsenopyrite | $Cu_3(CO_3)_2(OH)_2$: (36% Cu) | Quartz | $SiO_2$ (Chalcedony) |
| Bornite (bn) | $Cu_5FeS_4$: (64% Cu) | Malachite | $Cu_2CO_3(OH)_2$: (57% Cu) |
| Chalcopyrite (cp) | $Cu_2S•Fe_2S_2$: (34% Cu) | Molybdenite | $MoS_2$ |
| Galena | PbS | Pyrite (py) | $FeS_2$ |
| Kaolinite | $Al_2(Si_2O_5)(OH)_4$ | Sphalerite (sl) | ZnS |
| Sericite | $KAl_2(AlSi_3O_{10})(OH)_2$ | Tennantite | $(Cu,Fe,Zn,Ag)_{13}\ As_4\ S_{13}$ |

## 12.0 CERTIFICATE OF AUTHOR

Christopher J.V. Wheatley
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Tel: +44 1233 650405 Fax: +44 1233 666828 E-mail: cjvwheatley@yahoo.co.uk

CERTIFICATE of AUTHOR

I, Christopher John Varley Wheatley, MIMMM, SME, do hereby certify that:

I am a Senior Geological Associate with Behre Dolbear International Limited, International House, Dover Place, Suite 5 and 6, 3rd Floor, Ashford, Kent, TN24 1HU, United Kingdom.

1. I graduated with a BSc degree in Geology, with honours, from Kings College London, U.K in 1964 and in addition I obtained a Diploma in Mineral Exploration and Ph.D in Mining Geology from Imperial College London, in 1965 and 1971, respectively.
2. I am a member of the Institute of Materials, Minerals and Mining (Membership No. 450553) and a member of the Society for Mining, Metallurgy and Exploration (Membership No. 3455250).
3. I have worked as a geologist for a total of 47 years since graduation from university.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a Professional Association, as defined in NI 43-101 and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101.
5. I am responsible for the preparation of all sections of the technical report titled: 'INDEPENDENT TECHNICAL REPORT ON TOUKHMANUK MINE AND GETIK PROSPECT, ARMENIA IN CONFORMANCE WITH NI 43-101 GUIDELINES' and dated October 17, 2011 (the "Technical Report"). In 2011, I visited Global Gold Corporation offices in Yerevan on May 31, September 1, 2, 3 and 4, Toukhmanuk mine on June 1, 2 and September 1, Getik prospect on June 2 to 4 and Assay Laboratory facilities at Toukhmanuk on June 1 and September 1.
6. I have not had prior involvement with the properties that are the subject of the Technical Report.
7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am independent of the issuer applying all of the tests in section 1.5 of Canadian Securities Administrators National Instrument 43-101.
9. I have read *National Instrument 43-101 Standards of Disclosure for Mineral Projects* of the Canadian Securities Administrators and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange or other regulatory authority and publication by them for regulatory purposes, including electronic publication in public company files on their websites, where the Technical Report is accessible by the public.

Dated this 17th day of October, 2011,

Signature of Qualified Person
Christopher J.V. Wheatley, Ph.D., MIMMM, SME

**APPENDIX 1.0**

**MINERALS LEGISLATION AND COMPANY PROFITS TAX, ARMENIA**

## APPENDIX 1: MINERALS LEGISLATION AND COMPANY PROFITS TAX, ARMENIA

A new mining law in Armenia came into force in April, 2003, with an amendment in December the same year, when the country was awarded London Mining Journal's Outstanding Achievements Award for its mining law, which was recognized as the most favourable in Central Asia and the Caucasus at that time.

The law was significantly modified in January, 2007, when the National Assembly classified all metallic minerals as strategic and introduced an auction, or tender, process for all prospecting and mining licences. There is a five-year assurance on foreign investments wherein the investor can choose for that period to operate under previous, or, current legislation.

Exploration licences are exclusive; granted for a term of three years without extension and are activated by execution of a Concession Contract which regulates the licensee's activities under the law.

If exploration results prove positive and if there is an indication of economically significant resources, the exploration licence must be converted within its term to a Special Exploration Licence. A special exploration licence can be obtained for three years, or, a maximum of five years. Based on an application for a special exploration licence, the Authorized Body is entitled to extend the deadline of the licence for two two-year periods, linked to each other (each period for not longer than two years). As such, the exploration licence can be worked for nine full years to establish the resource/reserve potential.

On application for a Special Exploration Licence the licensee must conclude a Stability Contract, which is a written agreement with the Republic of Armenia regulating the licensee's advanced exploration activities under the law.

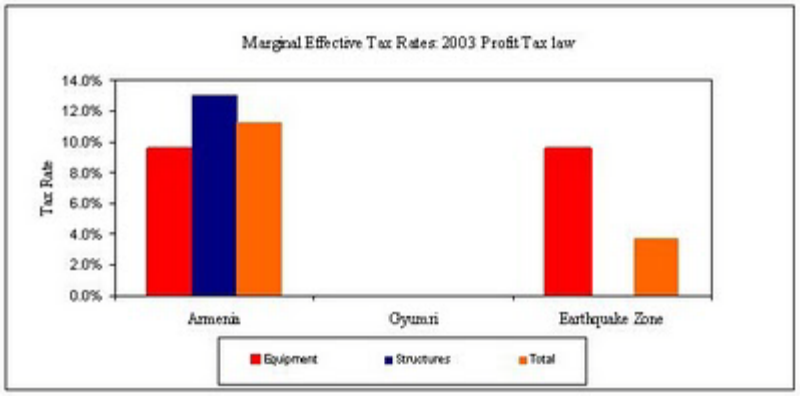
Application for a Special Mining Licence can be submitted at any time, but usually follows granting of a special exploration licence and conclusion of a Stabilizing Contract. Special exploration licences convert to special mining licences on application by the licensee, after justifying the exploration results and resource/reserve potential to a nominated board: GKZ General Committee of Resources, as nominated by law.

Special mining licences are current for a period from twelve years to maximum of twenty five years.

Under the 2007 regulations the exploration licence stage has been annulled for newly awarded ground and only special exploration licenses, current over five-year terms, are granted at auction. The execution of a Concession Contract is still required.

In Armenia, a royalty is charged at the rate of 1% of the aggregate net value of sales of metallic minerals, with an additional royalty of 0.1% on a sliding scale to 0.8%, in cases where the profitability of the project exceeds 25%.

Company profits in Armenia are taxed at a flat tax rate of 20%, except for firms engaged in agriculture, which are exempt. Generous depreciation allowances further reduce the effective tax rate that businesses face. Hotels, for instance, are depreciated over 10 years; 20 years for other buildings. Computers are expensed, and so are investments in structures in the earthquake zone, as well as all investments in Gyumri, Armenia's second largest city which is also in the earthquake zone. These allowances reduce the effective tax rate on normal profits to zero in Gyumri, and generally to much less than 20% for the rest of the country as illustrated overleaf [(21)].




Source: *Taxes, Investment Incentives, and the Cost of Capital in Armenia*

There are no limits or restrictions on repatriation of funds.

**APPENDIX 2.0**

**COORDINATES OF TOUKHMANUK LICENCE**

## APPENDIX 2: CORNER CO-ORDINATES OF TOUKHMANUK LICENCES

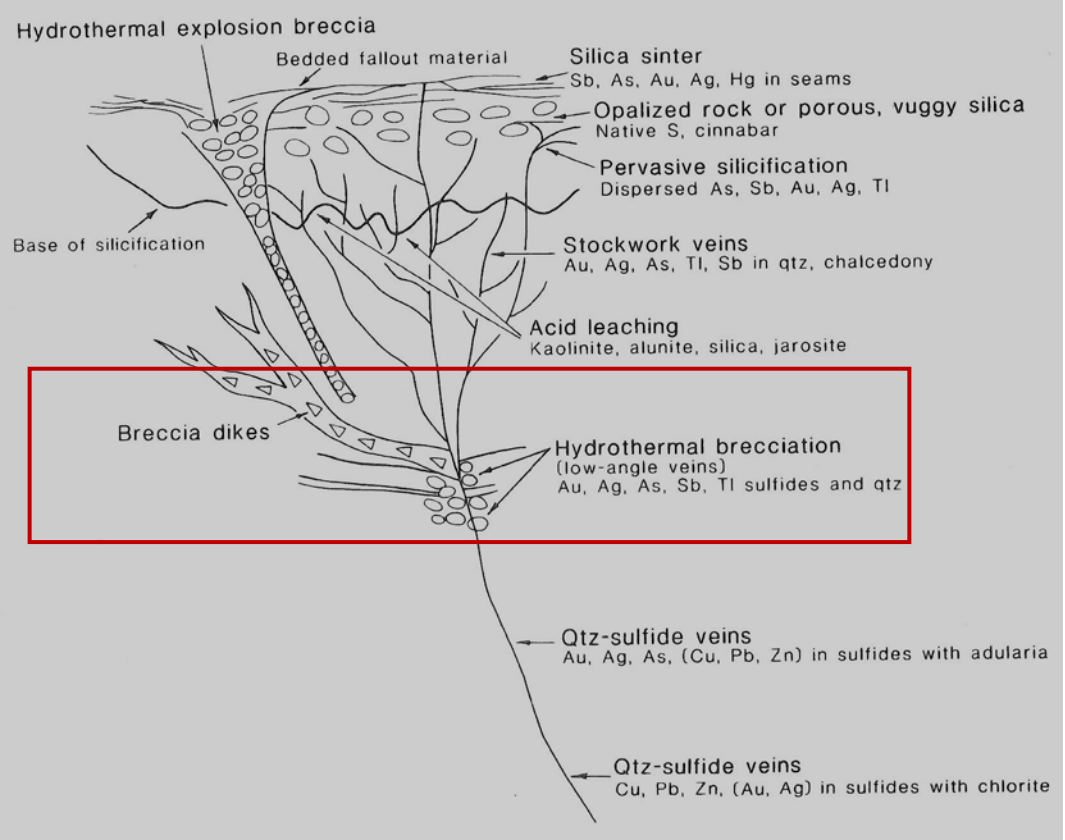
| Corner | Easting (X) | Northing (Y) |
|---|---|---|
| 1 | 4501580 | 8444500 |
| 2 | 4504350 | 8447800 |
| 3 | 4502700 | 8450000 |
| 4 | 4504050 | 8451850 |
| 5 | 4503250 | 8452250 |
| 6 | 4503300 | 8453950 |
| 7 | 4502500 | 8453900 |
| 8 | 4502400 | 8450850 |
| 9 | 4501950 | 8451350 |
| 10 | 4501680 | 8452550 |
| 11 | 4500525 | 8453380 |
| 12 | 4499730 | 8453950 |
| 13 | 4499800 | 8451600 |
| 14 | 4500650 | 8451550 |
| 15 | 4500700 | 8450600 |
| 16 | 4500000 | 8449870 |
| 17 | 4498550 | 8450700 |
| 18 | 4497000 | 8450650 |
| 19 | 4497000 | 8448370 |
| 20 | 4497900 | 8448700 |
| 21 | 4498200 | 8447550 |
| 22 | 4497000 | 8446100 |
| 23 | 4497000 | 8444400 |
| 24 | 4499000 | 8444400 |
| 25 | 4491750 | 8445650 |

Co-ordinates of the Getik licence are shown on Figure 55.

# APPENDIX 3.0

# CONCEPTUAL MODEL OF EPITHERMAL PRECIOUS METAL DEPOSITS

**APPENDIX 3:**
**CONCEPTUAL MODEL OF EPITHERMAL PRECIOUS METAL DEPOSITS** (13)



**APPENDIX 4.0**

**GLOBAL GOLD RESOURCE APPROVAL STATEMENT**
**(Translation)**

## APPENDIX 4: GLOBAL GOLD RESOURCE APPROVAL STATEMENT (Translation)

THE STAFF OF THE REPUBLIC OF ARMENIA MINISTRY OF ENERGY AND NATURAL RESOURCES (RANAR) AGENCY FOR NATURAL RESOURCES

Reference: 020-N/7G
Date: October 27, 2009

### REFERENCE

I hereby inform that based on the propositions made by the RA Natural Resources Agency's State Geological Expert Commission made during October 23, 2009 session, the Agency made a decision to approve the currently explored reserves of the Central Area of Toukhmanuk mine in the RA Aragatsotn province, as per the table provided below:

| Reserve Categories | Type of Mineralization | Ore tonnes (x1,000) | Metal Average Grades | | Metal Reserves, kg | |
|---|---|---|---|---|---|---|
| | | | Au, g/t | Ag, g/t | Au | Ag |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| $C_1$ | Vein | 359.8 | 5.88 | 33.19 | 2114.21 | 11942 |
| | Stockwork | 3744.5 | 1.46 | 3.73 | 5474.02 | 13949 |
| | Total | 4104.3 | 1.85 | 6.31 | 7588.23 | 25891 |
| $C_2$ | Vein | 1026.3 | 5.48 | 23.43 | 5622.52 | 24045 |
| | Stockwork | 16787.7 | 1.33 | 3.4 | 22403.18 | 57073 |
| | Total | 17814 | 1.57 | 4.55 | 28025.7 | 81118 |
| $C_1 + C_2$ | Vein | 1386.1 | 5.58 | 25.96 | 7736.73 | 35987 |
| | Stockwork | 20532.2 | 1.36 | 3.46 | 27877.2 | 71022 |
| | Total | 21918.3 | 1.62 | 4.88 | 35613.93 | 107009 |

It is the opinion of the Commission members that about 16,0 to 16,5 million tonnes of ore out of the approved overall reserves are at the average grade of 2 g/t Au, and that this quantity is recommended to be included in the first stage open pit for mining.

Approved reserves entirely correspond to the requirements for Measured & Indicated reserves under International Standards.

Chairman of RA State Natural Reserve Agency : Kh. Saponjian
/seal, signature/

**APPENDIX 5.0**

**HISTORICAL CHECK ANALYSES, TOUKMANUK PROJECT**

# APPENDIX 5: HISTORICAL CHECK ANALYSES, TOUKHMANUK PROSPECT

## 5.1 ON INTERNATIONAL STANDARDS, BY MINERS CORP.

| Standard | Expected Value | | Check Assay Results | |
|---|---|---|---|---|
| | g/t Au | g/t Ag | g/t Au | g/t Ag |
| ПЗК-2 ГСО, N4332-88 | 15.8 | 0.23 | 15.4 | 0.20 |
| (Outside Standard) | | | 15.9 | 0.24 |
| | | | 16.1 | 0.25 |
| Average for standard | 15.8 | 0.23 | 15.8 | 0.23 |
| СОП 5-9 | 5.8 | 517.7 | 5.6 | 516.8 |
| (Laboratory Standard) | | | 5.7 | 517.9 |
| | | | 5.4 | 516.4 |
| | | | 5.8 | 516.6 |
| | | | 5.5 | 517.1 |
| | | | 5.9 | 518.9 |
| | | | 5.6 | 517.2 |
| | | | 6.0 | 519.6 |
| | | | 5.8 | 517.2 |
| Average for standard | 5.8 | 517.7 | 5.7 | 517.5 |
| СОП 6-90 | 3.3 | 27.5 | 30 | 28.2 |
| (Laboratory Standard) | | | 3.6 | 28.6 |
| | | | 3.4 | 27.0 |
| | | | 3.2 | 27.4 |
| | | | 3.4 | 27.6 |
| | | | 3.2 | 28.2 |
| Average for standard | 3.3 | 27.5 | 3.3 | 27.3 |
| СОП 10-90 | 18.2 | 322.0 | 18.6 | 324.4 |
| (Laboratory Standard) | | | 18.0 | 326.2 |
| | | | 18.4 | 320.0 |
| | | | 18.2 | 321.6 |
| | | | 18.6 | 322.2 |
| | | | 18.4 | 324.6 |
| | | | 18.0 | 328.0 |
| | | | 17.8 | 318.8 |
| Average for standard | 18.2 | 322.0 | 18.2 | 323.2 |
| СОП 14-90 | 9.8 | 59.8 | 10.2 | 58.4 |
| (Laboratory Standard) | | | 10.0 | 58.8 |
| | | | 9.8 | 60.2 |
| | | | 9.6 | 61.6 |
| | | | 9.6 | 62.0 |
| | | | 10.0 | 59.6 |
| Average for standard | 9.8 | 59.8 | 9.9 | 60.1 |
| СОП 15-90 | 49.0 | 295.2 | 49.2 | 297.4 |
| (Laboratory Standard) | | | 49.4 | 298.2 |
| | | | 49.0 | 292.4 |
| | | | 49.6 | 293.6 |
| **Average for standard** | **49.0** | **295.2** | **49.3** | **295.4** |
| **Source: Khachatryan and Sarkisyan, 2003** | | | | |

## 5.2 INDEPENDENT SAMPLING BY ROSCOE, POSTLE ASSOCIATES INC.

| Earlier Sample No. | RPA Sample No. | From (m) | To (m) | Interval (m) | Earlier Results | | RPA Results | | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | g/t Au | g/t Ag | g/t Au | g/t Ag | |
| | M619118 | | | | | | 0.35 | 2.4 | Grab sample (1) at small open pit |
| | M619119 | | | | | | <0.03 | 1.2 | Grab sample (2) at small open pit |
| | M619120 | | | | | | 0.37 | <0.3 | Grab sample (3) at small open pit |
| | M619121 | | | | | | 51.14 | 314.8 | Grab sample of concentrate at plant |
| | M619122 | | | | | | 27.62 | 198.4 | Grab sample of small underground stock pile |
| 80 | M619123 | 5.0 | 6.5 | 1.5 | 13.10 | 122.8 | 14.51 | 142.6 | Underground channel sample |
| 117 | M619124 | 6.5 | 11.5 | 5.0 | 12.80 | 180.6 | 18.10 | 188.3 | Underground channel sample |
| 3 | M619125 | | | 1.0 | 3.40 | 187.9 | 8.29 | 109.5 | Surface channel sample |
| 207 | M619126 | 57.6 | 61.2 | 3.6 | 3.60 | 246.6 | 4.15 | 185.6 | Drill hole No. 44A |
| 183 | M619127 | 48.2 | 50.6 | 2.4 | 5.40 | 41.8 | 2.64 | 218.7 | Drill hole No. 32 |
| 203 | M619128 | 52.4 | 58.0 | 5.6 | 33.10 | 471.0 | 26.11 | 44.4 | Drill hole No. 47 |
| 236 | M619129 | 58.0 | 60.0 | 2.0 | 1.40 | 24.4 | 13.78 | 465.9 | Drill hole No. 47 |
| 218 | M619130 | | | 1.0 | 14.00 | 530.0 | 73.96 | 435.4 | 2310 m level, drift No. 5, X-cut 1/2 |
| 219 | M619131 | 68.2 | 72.0 | 3.8 | 6.20 | 225.8 | 11.02 | 232.9 | Drill hole No. 44 |
| 219 | M619132 | | | 1.0 | 18.90 | 32.5 | 61.50 | 432.2 | 2310 m level, drift No. 5, X-cut 1/2 |

**Note: Samples M619123 to M619132 are rejects from earlier sampling**

**APPENDIX 6.0**

**GLOBAL GOLD RESERVES FOR PRELIMINARY OPEN PIT PLAN**

## APPENDIX 6: GLOBAL GOLD RESERVES FOR PRELIMINARY OPEN PIT PLAN

### Stage 1 Open Pit

| N | Bench | Reserves of balance ore by categories, thous. t | | | Average grade by categories gr/t | | | | | | Metal reserves by categories, t | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | B | | $C_1$ | | $C_2$ | | B | | $C_1$ | | $C_2$ | |
| | | B | $C_1$ | $C_2$ | Au | Ag | Au | Ag | Au | Ag | Au | Ag | Au | Ag | Au | Ag |
| 1 | 2150 | 50.8 | 42.6 | 29.5 | 3.13 | 25.20 | 1.92 | 10.68 | 1.21 | 10.15 | 1.16 | 1.28 | 0.08 | 0.45 | 0.04 | 0.30 |
| 2 | 2170 | 104.3 | 115,5 | 80.2 | 3.06 | 20.87 | 1.66 | 12.59 | 1.28 | 9.80 | 0.32 | 2.18 | 0.19 | 1.45 | 0.10 | 0.78 |
| 3 | 2190 | 268.0 | 235.2 | 163.2 | 3.10 | 22.34 | 1.60 | 14.28 | 1.13 | 8.48 | 0.83 | 6.00 | 0.38 | 3.36 | 0.18 | 1.38 |
| 4 | 2210 | 572.8 | 324.8 | 300.6 | 2.89 | 28.10 | 1.79 | 13.65 | 1.07 | 7.60 | 1.66 | 16.10 | 0.58 | 4.43 | 0.32 | 2.28 |
| 5 | 2230 | 796.3 | 504.3 | 622.3 | 2.92 | 23.75 | 1.86 | 15.20 | 1.18 | 6.94 | 2.32 | 18.91 | 0.94 | 7.67 | 0.73 | 4.32 |
| 6 | 2250 | 1203.8 | 619.8 | 688.3 | 3.08 | 21.68 | 1.72 | 11.34 | 1.22 | 7.81 | 3.71 | 26.10 | 1.07 | 7.03 | 0.84 | 5.38 |
| 7 | 2270 | 1877.8 | 778.9 | 865.0 | 3.36 | 26.19 | 1.62 | 13.10 | 1.04 | 9.70 | 6.31 | 49.18 | 1.26 | 10.20 | 0.90 | 8.39 |
| 8 | 2290 | 943.4 | 945.0 | 874.6 | 2.91 | 20.76 | 1.83 | 14.71 | 1.02 | 9.35 | 2.74 | 19.56 | 1.73 | 13.90 | 0.89 | 8.18 |
| 9 | 2310 | 226.8 | 593.7 | 549.5 | 2.89 | 20.74 | 1.58 | 15.65 | 1.45 | 11.40 | 0.66 | 4.70 | 0.94 | 9.29 | 0.80 | 6.26 |
| 10 | 2330 | - | 497.9 | 460.8 | - | - | 1.73 | 11.08 | 1.51 | 7.20 | - | - | 0.86 | 5.52 | 0.70 | 3.32 |
| 11 | 2350 | - | 423.2 | 391.7 | - | - | 1.39 | 10.98 | 1.23 | 6.85 | - | - | 0.59 | 4.65 | 0.48 | 2.68 |
| 12 | 2370 | - | 350.0 | 323.9 | - | - | 2.09 | 16.40 | 0.70 | 8.43 | - | - | 0.73 | 5.74 | 0.23 | 2.73 |
| 13 | 2390 | - | 451.0 | 278.3 | - | - | 2.13 | 16.48 | 0.60 | 8.35 | - | - | 0.96 | 7.43 | 0.17 | 2.32 |
| 14 | Above 2390 | | 600.0 | 600.0 | | | 3.08 | 22.8 | 3.08 | 22.8 | | | 1.84 | 13.7 | 1.84 | 13.7 |
| | **Total** | 6043 | 6482 | 6228 | 3.10 | 23.83 | 1.87 | 14.6 | 1.31 | 9.9 | 18.71 | 144.01 | 12.15 | 94.82 | 8.22 | 62.02 |

Ore reserves within the 1st stage open pit contour by B+ $C_1$+ $C_2$—18.8mln t
Gold– 39.1t
Silver – 300.8t
Average grade, gr/t
Gold – 2.01
Silver – 16.02

### Stage 2 Open Pit

| N | Bench | Reserves of balance ore by categories, thous. t | | Average grade by categories gr/t | | | | Metal reserves by categories, kg | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $C_1$ | | $C_2$ | | $C_1$ | | $C_2$ | |
| | | $C_1$ | $C_2$ | Au | Ag | Au | Ag | Au, kg | Ag, kg | Au, kg | Ag, kg |
| 1 | **2290** | 483.7 | 322.5 | 2.05 | 12.3 | 2.05 | 12.3 | 991.6 | 5949.5 | 661.1 | 3966.8 |
| 2 | 2310 | 640.7 | 427.1 | 2.05 | 12.3 | 2.05 | 12.3 | 1313.4 | 7880.6 | 875.6 | 5253.3 |
| 3 | 2330 | 771.2 | 514.0 | 2.05 | 12.3 | 2.05 | 12.3 | 1581.0 | 9485.8 | 1053.7 | 6322.2 |
| 4 | 2350 | 891.7 | 594.5 | 2.05 | 12.3 | 2.05 | 12.3 | 1828.0 | 10967.9 | 1218.7 | 7312.4 |
| 5 | 2370 | 1014.4 | 676.3 | 2.05 | 12.3 | 2.05 | 12.3 | 2079.5 | 12477.1 | 1386.4 | 8318.5 |
| 6 | 2390 | 1110.7 | 740.4 | 2.05 | 12.3 | 2.05 | 12.3 | 2277.0 | 13661.6 | 1517.8 | 9106.9 |
| 7 | 2410 | 1116.5 | 744.3 | 2.05 | 12.3 | 2.05 | 12.3 | 2288.8 | 13733.0 | 1525.8 | 9154.9 |
| 8 | 2430 | 1021.6 | 681.1 | 2.05 | 12.3 | 2.05 | 12.3 | 2094.3 | 12565.7 | 1396.3 | 8377.5 |
| 9 | 2450 | 927.1 | 618.0 | 2.05 | 12.3 | 2.05 | 12.3 | 1900.6 | 11403.3 | 1266.9 | 7601.4 |
| 10 | 2470 | 901.7 | 601.2 | 2.05 | 12.3 | 2.05 | 12.3 | 1848.5 | 11090.9 | 1232.5 | 7394.8 |
| 11 | 2490 | 860.5 | 573.7 | 2.05 | 12.3 | 2.05 | 12.3 | 1764.0 | 10584.2 | 1176.1 | 7056.5 |
| 12 | 2510 | 833.4 | 555.6 | 2.05 | 12.3 | 2.05 | 12.3 | 1708.5 | 10250.8 | 1139.0 | 6833.9 |
| 13 | 2530 | 781.5 | 521.0 | 2.05 | 12.3 | 2.05 | 12.3 | 1602.1 | 9612.4 | 1068.0 | 6408.3 |
| 14 | 2550 | 391.3 | 260.9 | 2.05 | 12.3 | 2.05 | 12.3 | 802.2 | 4813.0 | 534.8 | 3209.1 |
| 15 | 2570 | 259.4 | 172.9 | 2.05 | 12.3 | 2.05 | 12.3 | 531.8 | 3190.6 | 354.4 | 2126.7 |
| 16 | 2590 | 150.1 | 100.0 | 2.05 | 12.3 | 2.05 | 12.3 | 307.7 | 1846.2 | 205.0 | 1230.0 |
| 17 | 2610 | 129.4 | 86.3 | 2.05 | 12.3 | 2.05 | 12.3 | 265.3 | 1591.6 | 176.9 | 1061.5 |
| | **Total** | 12284.9 | 8189.8 | | | | | 25184.3 | 151104.2 | 16789.0 | 100734.7 |

Stage 2 C1 Reserves of 12.284 Mt at 2.05 g/t Au and 12.3 g/t Ag, with C2 Reserves of 8.189 Mt at 2.05 g/t Au and 12.3 g/t Ag, giving an estimate of Total Reserves in Stage 2, to be implemented after about 2020, are: 20.475 Mt at 2.05 g/t Au and 12.3 g/t Ag, containing 41,973 kg Au and 251,839 kg Ag.

Contained gold in reserves within an ultimate pit outline, applying a cut-off of 0.6 g/t Au are: 81.05 t Au, or 2.6 Moz, which is only Measured and Indicated resources without Inferred and can be considered in relation to the 2.27 Moz approved by GKZ in 2009 considering an underground vein-type mining operation, with 552,689 Kg silver, or 17.8 Moz.

**APPENDIX 7.0**
**TONNAGE AND GRADE COMPARISONS BETWEEN TWO BLOCK MODELS, TOUKHMANUK MINE**

## APPENDIX 7: TONNAGE AND GRADE COMPARISONS BETWEEN TWO BLOCK MODELS, TOUKHMANUK MINE (23)

In the Resmodel2, due to the larger search ellipsoid, more samples have been included in the estimation for a single block, further diluting the grades and resulting in the over smoothing of the original data. Gemcom consider that perhaps a 'maximum number of informing samples' was not applied, which would have limited the degree of smoothing. For example, if set to 15 informing samples, only the 15 closest samples would be used to inform the block, regardless of the size of the search ellipsoid; this can significantly reduce the smoothing effect during the estimation.

A comparison of grade and tonnage indicates that there are no grades higher than 6.5 g/t in Resmodel2. The dilution of extreme grades is a result of the over smoothing. Furthermore, when looking at the global resource (*Measured*, *Indicated* and *Inferred*), the average grade is the same; this would be expected to be higher if the *Inferred* resource had not overwritten the other classification categories.

| **Block model report RESMODEL 1.dm**<br><br>Constraints used<br>a. NOT = BLOCK au 0 | | | | **Block model report RESMODEL2.dm**<br><br>Constraints used<br>a. NOT = BLOCK au 0 | | | |
|---|---|---|---|---|---|---|---|
| Au | Volume | Tonnes | Au | Au | Volume | Tonnes | Au |
| 0.0 -> 0.5 | 643,328 | 1,672,653 | 0.38 | 0.0 -> 0.5 | 702,734 | 1,827,109 | 0.37 |
| 0.5 -> 1.0 | 2,961,359 | 7,699,534 | 0.77 | 0.5 -> 1.0 | 6,360,672 | 16,537,746 | 0.77 |
| 1.0 -> 1.5 | 1,759,031 | 4,573,481 | 1.22 | 1.0 -> 1.5 | 4,919,250 | 12,790,050 | 1.21 |
| 1.5 -> 2.0 | 760,656 | 1,977,706 | 1.7 | 1.5 -> 2.0 | 1,550,031 | 4,030,081 | 1.69 |
| 2.0 -> 2.5 | 297,938 | 774,637 | 2.21 | 2.0 -> 2.5 | 603,281 | 1,568,531 | 2.22 |
| 2.5 -> 3.0 | 70,625 | 183,625 | 2.71 | 2.5 -> 3.0 | 34,063 | 88,562 | 2.66 |
| 3.0 -> 3.5 | 16,234 | 42,209 | 3.18 | 3.0 -> 3.5 | 6,438 | 16,737 | 3.22 |
| 3.5 -> 4.0 | 10,016 | 26,041 | 3.78 | 3.5 -> 4.0 | 2,563 | 6,662 | 3.72 |
| 4.0 -> 4.5 | 5,250 | 13,650 | 4.26 | 4.0 -> 4.5 | 1,000 | 2,600 | 4.24 |
| 4.5 -> 5.0 | 3,750 | 9,750 | 4.75 | 4.5 -> 5.0 | 2,000 | 5,200 | 4.72 |
| 5.0 -> 5.5 | 4,000 | 10,400 | 5.24 | 5.0 -> 5.5 | 250 | 650 | 5.04 |
| 5.5 -> 6.0 | 2,500 | 6,500 | 5.76 | 6.0 -> 6.5 | 250 | 650 | 6.31 |
| 6.0 -> 6.5 | 1,750 | 4,550 | 6.3 | | | | |
| 6.5 -> 7.0 | 750 | 1,950 | 6.73 | | | | |
| 7.5 -> 8.0 | 250 | 650 | 7.79 | | | | |
| 9.0 -> 9.5 | 3,000 | 7,800 | 9.3 | | | | |
| Grand Total | 6,540,438 | 17,005,137 | 1.07 | Grand Total | 14,182,531 | 36,874,580 | 1.07 |

**APPENDIX 8.0**
**GLOBAL GOLD EQUIPMENT ASSETS AT TOUKHMANUK MINE**

## APPENDIX 8: GLOBAL GOLD ASSETS AT TOUKHMANUK MINE

Mining and Transport Department equipment

| Property of Mego Gold | | | |
|---|---|---|---|
| # | Name | Type | Quantity |
| 1 | Caterpillar D-9 | Bulldozer | 1 |
| 2 | Caterpillar | Excavator | 2 |
| 3 | T-170 | Bulldozer | 1 |
| 4 | KRAZ | Truck | 2 |
| 5 | Niva | SUV | 2 |
| 6 | UAZ | 4*4 Van | 1 |
| 7 | Grader | Opening roadways | 1 |

| Rented by Mego Gold | | | |
|---|---|---|---|
| # | Name | Type | Quantity |
| 1 | Komatsu 355 | Bulldozer | 1 |
| 2 | Komatsu 200 | Excavator | 1 |
| 3 | Volvo | Excavator | 1 |
| 4 | Caterpillar D-8 | Bulldozer | 1 |
| | **Trucking** | | |
| 6 | KAMAZ | | 20 |
| 7 | KRAZ | | 1 |
| | **Blasting** | | |
| 8 | T-170 | BTS | 2 |
| 9 | | Compressor | 2 |

Exploration Department equipment

| # | Name | Type | Quantity |
|---|---|---|---|
| 1 | Ural Drilling mach. | SKB4 | 3 |
| 2 | Generator | 75kw | 3 |
| 3 | Gaz 66 | 4*4 Van | 1 |
| 4 | Uaz | 4*4 Van | 1 |
| 5 | Uaz468 | 4*4 Van | 1 |
| 6 | Trencher | | 1 |

# APPENDIX 9.0
# RECOMMENDED FUTURE EXPLORATION ACTIVITIES IN THE TOUKHMANUK LICENCES

During the author's most recent visit to Armenia, which involved a rapid review of 2011 exploration activities at Toukhmanuk mine, two matters of interest emerged, which it was felt should be included as an appendix to this report.

**a) ADDITIONAL DRILLING RECOMMENDED AT TOUKHMANUK MINE TO RAISE NEAR-SURFACE INDICATED RESOURCE BLOCKS TO A HIGHER CATEGORY**

In near-surface resources, planned for exploitation during initial years of development of the first-stage conceptual pit, there are several barren gaps which could be explored at little cost before the onset of the coming winter. A proposed programme of shallow drill holes to probe those areas is laid out below, with further holes to in-fill additional areas, to be mined early-on in the second-stage pit.

| *Hole #* | *Distance southeast on Global Gold Sections lodged in Yerevan office* | *Z; m amsl** | *Azimuth, Northwesterly, on line of section ("NW")* | *Dip° from horizontal* | *Depth m ** |
|---|---|---|---|---|---|
| A - A' - 1 | 280 S | 2352 | NW | 60 | 50 |
| A - A' - 2 | 175 S | 2380 | NW | 60 | 45 |
| A - A' - 3 | 110 S | 2320 | NW | 60 | 50 |
| 1 - 1' - 1 | 275 S | 2345 | NW | 60 | 60 |
| 1 - 1' - 2 | 225 S | 2335 | NW | 60 | 50 |
| 1 - 1' - 3 | 160 S | 2325 | NW | 60 | 60 |
| 2 - 2' - 1 | 250 S | 2337 | NW | 60 | 60 |
| 2 - 2' - 2 | 75 S | 2305 | NW | 60 | 50 |
| 3 - 3' - 1 | 180 S | 2313 | NW | 60 | 60 |
| 3 - 3' - 2 | 75 S | 2304 | NW | 60 | 50 |
| 4 - 4' - 1 | 210 S | 2321 | NW | 60 | 60 |
| 4 - 4' - 2 | 60 S | 2298 | NW | 60 | 40 |
| 5 - 5' - 1 | 240 S | 2320 | NW | 60 | 50 |
| 5 - 5' - 2 | 180 S | 2307 | NW | 60 | 60 |
| 5 - 5' - 3 | 120 S | 2298 | NW | 60 | 50 |
| 6 - 6' - 1 | 230 S | 2325 | NW | 60 | 40 |
| 6 - 6' - 2 | 95 S | 2297 | NW | 60 | 60 |
| 7 - 7' - 1 | 220 S | 2326 | NW | 60 | 60 |
| 7 - 7' - 2 | 175 S | 2321 | NW | 60 | 60 |
| 8 - 8' - 1 | 300 S | 2349 | NW | 60 | 60 |
| 8 - 8' - 2 | 150 S | 2320 | NW | 60 | 40 |
| 9 - 9' - 1 | 260 S | 2346 | NW | 60 | 60 |
| 9 - 9' - 2 | 200 S | 2334 | NW | 60 | 60 |
| 9 - 9' - 3 | 60 S | 2312 | NW | 60 | 40 |
| 10 - 10' - 1 | 250 S | 2356 | NW | 60 | 60 |
| 10 - 10' - 2 | 190 S | 2354 | NW | 60 | 60 |
| 10 - 10' - 3 | 115 S | 2344 | NW | 60 | 60 |
| 11 - 11' - 1 | 280 S | 2367 | NW | 60 | 60 |
| 11 - 11' - 2 | 215 S | 2370 | NW | 60 | 60 |
| 11 - 11' - 3 | 140 S | 2361 | NW | 60 | 50 |
| 12 - 12' - 1 | 270 S | 2398 | NW | 60 | 70 |
| 12 - 12' - 2 | 185 S | 2397 | NW | 60 | 60 |
| 12 - 12' - 3 | 150 S | 2395 | NW | 60 | 50 |
| 13 - 13' - 1 | 300 S | 2433 | NW | 60 | 60 |
| 13 - 13' - 2 | 240 S | 2431 | NW | 60 | 50 |
| 13 - 13' - 3 | 165 S | 2432 | NW | 60 | 50 |

* Approximate figures, which should be adapted to suit ground conditions.

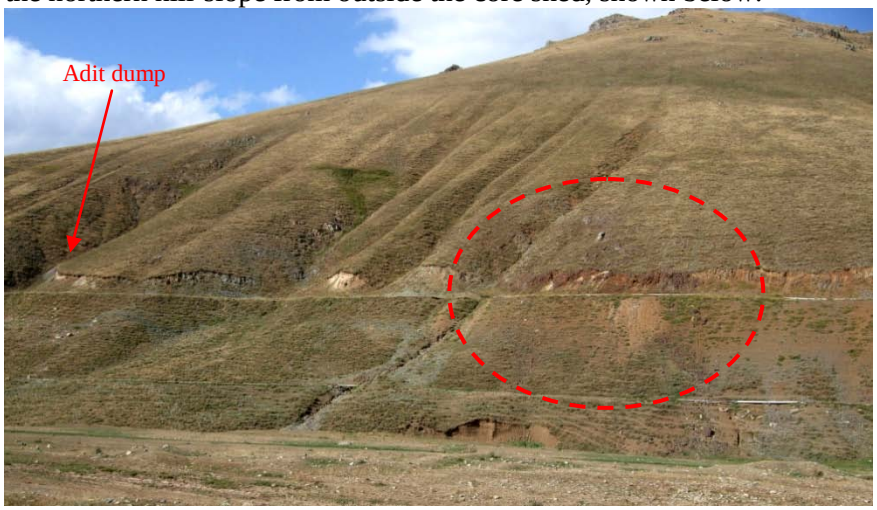
This plan is sub-divided into two parts, shown by different colours. The most important part covers the first stage conceptual open pit design and probes areas which are under-explored and have potential to add indicated resources to the mine plan. This part cumulates to 1,050 m core drilling.

The second part, with blue background, is laid out to make the initial part of the second-stage conceptual pit more robust and enable a better delineation of the pit margins and reduce waste:ore ratios. This part cumulates to 880 m of diamond drilling.

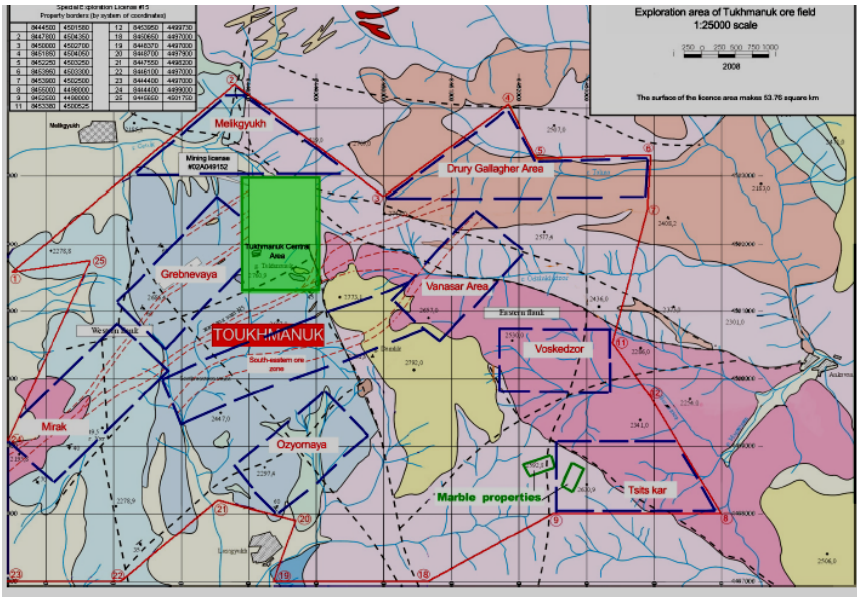
The two-part programme totals 1,930 m diamond drilling and the first part, at least, could be completed before the onset of severe winter weather in 2011, or, early in 2012.

### b) MELIKGYUGH PROSPECT

The second was recognition of a zone of iron-staining and kaolinitic alteration with veining, visible on the northern hill-slope from outside the core shed, shown below.




This zone is well-known to Global Gold geological staff as Melikgyugh, near the north-western limit of the licenced area, about 2 km east of the village of the same name and only 300 m north of the mine mill, across a river, above water pipelines, shown on the map below right.




Behre Dolbear considers that, rather than probing the south-western limits of the Central Area corridor to beyond 100 m depth, within long-term, conceptual pit limits, it would be more effective to screen the Melikgyugh vein zone which occurs at surface, as it might provide early mill-feed, at lower elevation and involve less costly ore transport.

Review of data from a historic adit, shown above and previous exploration at Melikgyugh prospect, which is understood to be already in Global Gold's hands, should be followed by two or three strategic drill holes, amounting to only 200 m of drilling, to indicate whether the zone has potential, or, not. In Behre Dolbear's view the Melikgyugh area has higher exploration potential than sites at Mirak, about 3 km south-west of the current mining area, where access was being laid out during early September 2011.