

Sterlite Gold Ltd

Mineral Resources

of the

Zod Gold Mine, Armenia

Stanley C. Bartlett, PGeo.
Senior Economic Geologist,
Micon International Co Limited.

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1.0 SUMMARY

Micon International Co Limited (Micon) has been retained by Ararat Gold Recovery Company (AGRC) to act as an independent engineer and to manage a Pre-Feasibility study for the Zod Mine. AGRC is a wholly owned Armenian subsidiary of Sterlite Gold Ltd.

The Zod deposit is located in the area of the Little Caucasus in the Vardenis region of the Gegharkounik Province of the Republic of Armenia in Northwest Asia. This region lies on the southeast side of Sevan Lake and embraces the Sevan and Eastern Sevan ridges. From the north the orebody is bordered by the Sejdler River, from the south by the Zod River. The central part of the deposit is located 2 km northwest from the Zod Pass at an altitude of 2,180 m to 2,550 m. Geographical coordinates of the deposit: range from latitude 40°13'30"N to 40°14'20"N, and from longitude 45°52'30"E to 45°58'30"E.

The site is accessed by an all weather asphalt road and railway and is serviced by a major high tension power transmission line capable of supporting a mine and processing complex.

In 1999 AGRC was granted land rights for total of 1,368 hectares in and around the Zod Mine. There have been changes to Armenian legislation concerning State Registration of Property and Land and AGRC is in the process of applying for State Registration of its Property and land as per legislation. The property is also in the process of being surveyed.

Mineral rights have been granted as follows:

- a) A Special Mining License for the Zod Deposit was issued to AGRC for a period of 25 years expiring on 10th of September 2023.
- b) A Mining Agreement for the Zod deposit was signed between AGRC and the Ministry of Natural Protection of the Republic of Armenia on 13th March 1999 for a period of 25 years.
- c) Mineral Rights (Mine Allocation) are valid for Zod Deposit under the name of Armgold to which AGRC is the legal successor.

The mineral rights are subject a royalty payment to the Government of Armenia at 1% of gross revenue based on the average spot price of gold. This is calculated on gold mined rather than gold recovered. An additional royalty is payable if gross profits exceed 25% of revenue at the rate of 0.1% for each 0.8% of profit in excess of 25%.

The Zod deposits are hosted within sedimentary rocks and intrusive units related to a phase of regional volcanism which commenced during the early Tertiary. This volcanism relates to the closure of the Tethys Sea and the development of a major north-west striking suture zone through the Armenian land mass. Consequently there is a very strong regional structural fabric generated as a result of this tectonic margin.

This zone has been a regional focus for high-level intrusions which, in turn, have generated an extensive regional heat flow. The highly sheared environment has given rise to the ideal structural and depositional conditions for the epithermal and mesothermal mineralisation at Zod. The intrusive and ultrabasic lithologies have provided the host materials for mineralisation, and may also have been source rocks at depth. Regional uplift and

differential erosion have since led to extensive exposure of the deeper portions of these systems.

The northern border of the Zod deposit is near the axis of the Karaiman-Zod anticline and the southern border is defined by the occurrence of volcanic rocks. The anticline extends for more than 10 km in length and has a width of 4.5 km to 5 km. Its southern limb dips at angles between 50° and 65°. Basement Precambrian schists are present in the hinge of the anticline, and they are overlain by Upper Cretaceous (Turonian-Lower Senonian) volcano-sedimentary rocks. Alluvium up to 10 m in thickness overlies the older materials.

Most of the deposit is hosted by intrusions, including ultrabasic (mostly peridotite and serpentinite) and gabbro. These are variably altered to carbonate and quartz-carbonate assemblages. The ultrabasic gabbro complex includes minor pyroxenite, as well as quartz-diorites and plagiogranite. Sheared zones where plagioclase is altered to epidote and carbonate are frequently observed.

Pre-dyke dislocations are characterised by approximately east-west trending shear and breccia zones which extend along the axis of the anticline. They dip steeply (65° to 85°) and cross-cut the volcano-sedimentary and intrusive rocks of Mesozoic age. Hydrothermal alteration is developed within these dislocations. Individually altered zones range in thickness from 10 m to 20 m and may coalesce at depth where total thickness may be tens or even hundreds of metres. The boundaries between altered and unaltered rock are variable, being sharp and sheared in some areas, to gradual in others. The latter is particularly true adjacent to gabbros.

There has been a long history of gold production from the vicinity of the Zod Mine. There is evidence in the mine area of early alluvial mining and old workings uncovered in the open pit which may be centuries old. The recent history of exploration and development of the Zod area dates back to 1951 when Soviet geologists re-discovered gold deposits in the vicinity of Zod. Exploration continued until 1955 when the Zod Geological Survey Expedition of the Administration of Armenia was established. In 1966 the Geological Survey Expedition of the Armenian SSR was formed to accelerate exploration and development activities.

Exploration work completed during the period 1955 to 1965 totalled 51 km of underground development and 13,500 m of percussion and core drilling. The data collected was used to generate mineral reserve estimates that were confirmed by the USSR State Commission on Mineral Reserves (GKZ) in 1965.

Following the confirmation of these mineral reserves, a decision was taken to build a mine at Zod. In 1972 mine construction and development commenced by a Soviet entity called Armgold. Initial plans called for production of 250,000 tpa of ore from an open pit and 500,000 tpa of ore from an underground mine. The ore was to be transported to a centrally located processing plant. The location of the plant was intended to facilitate the development of additional gold reserves within Armenia.

Mine production commenced in 1976 and ore was transported to a 1 Mtpa processing constructed at Ararat some 285 km distance from the mine. The Ararat plant produced flotation concentrate that was processed at smelters in Russia. Production continued from the mine declining during the final years until 1997 when the infrastructure closed as a result of a lack of maintenance and capital investment. A total of 7 Mt of ore were produced from the

open pit and underground mines. Precious metal production reached approximately 700,000 oz of gold.

Exploration and development continued at Zod between 1965 and 1980 and an additional 74 km of underground drifting and 97,000 m of drilling were completed.

Following the collapse of the Soviet Union the Armenian government sought foreign investors to revitalise its mining industry. In 1996 Armgold and Global Gold Corporation, a subsidiary of First Dynasty Mines (FDM) signed a joint venture agreement. Armgold agreed to put the Ararat tailings pond and related infrastructure into a new company to be known as Ararat Gold Recovery Company (AGRC). A plant was designed and installed to treat the 11 Mt of tailings that had accumulated over the previous 20 years. In February of 1998 production began through a new \$12 million processing facility at a rate of 1.5 Mtpa.

In 1998 an amendment to the agreement was signed under which Armgold folded all its remaining assets into AGRC including the Zod Mine and related facilities. Concurrent with this new agreement, the Government signed various agreements recognising the AGRC joint venture and giving it authority to export gold.

At the same time the partners commissioned a feasibility study to determine if Zod could be brought into production. The study was completed in 1998 and concluded that the project was technically and economically attractive. It showed that an open pit at Zod could produce operate economically utilising the Ararat Treatment facility.

For a number of reasons, production at Zod did not commence immediately. In 2002 a small scale operation began. It processed 300,000 t of ore and produced 28,000 ounces of gold. This was deemed a success and a Phase II pit was inaugurated in mid 2003. This Phase II pit was planned to mine approximately 2 Mt of ore at a grade of 5.2 g/t Au. It was expected that production from this pit would be completed by early 2005.

In 2002 an opportunity was afforded to FDM to purchase Armgold's remaining 50% stake in AGRC from the Government of Armenia thereby increasing its stake in the Zod mine and related facilities to 100%. An accompanying Implementation Agreement restated the guarantees given under the previous agreements and provided for additional guarantees. In particular FDM was given an exclusive right to explore, develop, mine and extract any mineral deposits discovered within a 20 km radius of Zod. In July 2002 First Dynasty Mines changed its name to Sterlite Gold Limited.

Exploration continued at Zod during the period 2002 to 2004 focussing on resources of the Central zone. The total amount of surface and underground drilling completed during the two year period exceeded 45 km. Exploration drilling by AGRC was carried out from surface as well as underground levels. Drilling was undertaken on a regular grid with north south cross sections at 40 m spacing. Drilling has been a mix of diamond and reverse circulation methods utilising both company owned equipment and crews and local and international contractors. As a result of this drilling programme AGRC completed a new mineral resource estimate in October 2004 which is detailed within this report.

Drilling so far has only tested part of the area for which Soviet era reserves have been defined. In addition only the main ore bodies were tested together with a limited portion of the Gabbro Massif. Drilling is required to test the remaining areas of known mineralisation,

firstly in the Central block and then adjoining areas to the south and west where Soviet era reserves have previously been indicated.

AGRC is currently carrying out a Pre-Feasibility Study to determine the most effective methods to potentially exploit the mineral resources so far defined. It is expected that this Study will be completed early in 2005. Exploration is currently ongoing and is planned to continue throughout 2005.

AGRC has estimated Zod gold mineral resources as part of the Zod Pre-feasibility Study. The mineral resource model has been prepared to a high industry standard and mineral resources have been categorised following the guidelines provided in the JORC Code. For details and comments regarding reconciliation with the CIM Code see Section 17.8. Micon has been closely involved in the creation of the block model and endorses the mineral resources presented in Table 1.

**Table 1: Zod Mineral Resources at 1st January 2005
(Corrected for Planned Mining to 31st December 2004)**

Cut-Off (g/t Au)	Measured		Indicated		Inferred		Measured + Indicated	
	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
0.0	1,729	4.34	17,564	3.34	2,494	1.95	19,293	3.43
0.6	1,597	4.67	15,415	3.76	1,769	2.60	17,013	3.85
0.9	1,501	4.92	13,881	4.09	1,392	3.10	15,382	4.18
1.5	1,286	5.54	11,542	4.68	924	4.07	12,828	4.77

Micon has reviewed the exploration plans and the development concepts for the Zod area and believes that further work is currently justified.

2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 Introduction

Micon International Co Limited (Micon) has been retained by Ararat Gold Recovery Company (AGRC), a wholly owned Armenian subsidiary of Sterlite Gold Ltd, to manage a pre-feasibility study for the Zod Gold Mine. The study includes mineral resource estimation, development of mineral reserves and initial mining plans, and preparation of processing options for a one million tonne per year operation. Operating and Capital costs are being developed that meet pre-feasibility standards. The engineering input to the pre-feasibility study is being prepared and designed to meet both Armenian and International standards, whichever is the most stringent.

AGRC has published mineral resources for the Zod Gold Mine. This report is intended to provide a summary of the data and mineral resource estimation methods employed.

Micon has worked closely with AGRC personnel in the preparation of the Zod mineral resource estimate. Stanley C. Bartlett, PGeo., has visited the project twice; during the period 5th – 7th February 2004 and 9th – 12th August 2004. While at site open pit and underground operations were inspected, production control and reconciliation were reviewed and mineral resource estimation parameters were reviewed. In addition, Mr DK Mukhopadhyay, Head Exploration Geologist at Zod worked at Micon's Norwich, UK offices during 6th – 10th September 2004 and 5th – 6th October 2004.

Micon gratefully acknowledges the excellent cooperation it has enjoyed in working with AGRC. In particular Micon wishes to express its gratitude for the efforts of Mike Mracek, General Manager, Trevor Jones, Consulting Geologist and DK Mukhopadhyay in compiling this report. Micon gratefully acknowledges the excellent cooperation and kind hospitality of Sanjay Dalmia, President and CEO of Sterlite Gold Ltd.

2.2 Abbreviations

All currency amounts are stated in US dollars (US\$), as specified, with costs typically expressed in US\$ and commodity prices in US dollars. Quantities are generally stated in SI units, the Canadian and international practice. Precious metal grades are expressed in grams per tonne (g/t) and their quantities may also be reported in troy ounces (oz), a common practice in the Western mining industry. Armenian practice is to report resources in terms of kilograms or tonnes of global contained metal. These numbers have been converted where necessary to ounces of gold.

Commonly used abbreviations are listed below.

Abbreviation	Unit or Term
%	percent
°	degree of longitude, latitude, compass bearing or gradient
>	greater than
<	less than
AA	atomic absorption
Ag	silver
Au	gold
°C	degree Celsius
2-D	two dimensional
3-D	three dimensional
CIL	carbon in leach
cm	centimetre(s)
cm ³	cubic centimetre(s)
g	grams
Ga	billion years
g/cm ³	grams per cubic centimetre
g/t	grams per tonne
GKZ	Gosudarstvennaya Komissia po Zapasam (State Commission on Mineral Reserves)
GPS	global positioning system
ha	hectare(s)
ICP	Inductively coupled plasma
in	inch(es)
kg	kilogram(s)
koz	thousand ounces
kg/t	kilograms per tonne
k	kilometre(s)
kV	kilovolt
M	million(s)
m	metre(s)
m/s	metres per second
m ³	cubic metre(s)
m ³ /sec	Cubic metres per second
masl	metres above sea level
mm	millimetres
Mt	million tonnes
Mtpa	million tonnes per annum
N	north
oz	ounces
ppb	parts per billion
ppm	parts per million
RC	reverse circulation
S	south
s	second
SG	specific gravity
t	tonne(s)
t/m ³	tonnes per cubic metre
US	United States
US\$	United States dollar(s)
US\$/oz	United States dollars per ounce
W	west

3.0 DISCLAIMER

Micon has reviewed and analysed data provided by AGRC, and has drawn its own conclusions therefrom, augmented by its direct field examination. Micon has not carried out any independent exploration work or drilled any holes. Micon was able to inspect gold mineralisation in the open pit and enter the adits which had been developed during the Soviet era exploration programme to sample and map certain deposits at Zod. Micon was also able to observe mineral processing operations at the Ararat gold plant and confirm that gold is currently produced.

While exercising all reasonable diligence in checking, confirming and testing it, Micon has relied upon the data presented by these parties in formulating its opinion.

The various agreements under which AGRC holds title to the mineral concessions for this project and the detailed terms of the Implementation Agreement have not been investigated or confirmed by Micon. While it has seen copies of the supporting legal documentation for the mining lease, Micon offers no opinion as to the validity of the mineral title claimed. A description of the property, and ownership thereof, is provided here for general information purposes only.

The geological, mineralisation and exploration descriptions used in this report are taken from reports prepared by AGRC or their contracted consultants, or from publicly available scientific literature.

Micon is pleased to acknowledge the helpful cooperation of the AGRC management, staff and technical consultants, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

4.0 SITE DESCRIPTION AND LOCATION

The Sotk (Zod) gold deposit is located in the Vardenis District of the Marz (Province) of Gegharkounik, Armenia. Gegharkounik is one of the eleven provinces of the Republic of Armenia. Property coordinates are 40° north, 46° west. The mine site is some 150 km to the east from Yerevan, the state capital of the Republic of Armenia. Figure 4.1 indicates the geographical position of Armenia while Figure 4.2 shows the location of the Zod Gold Mine.

Figure 4.1: The Caucasus Region



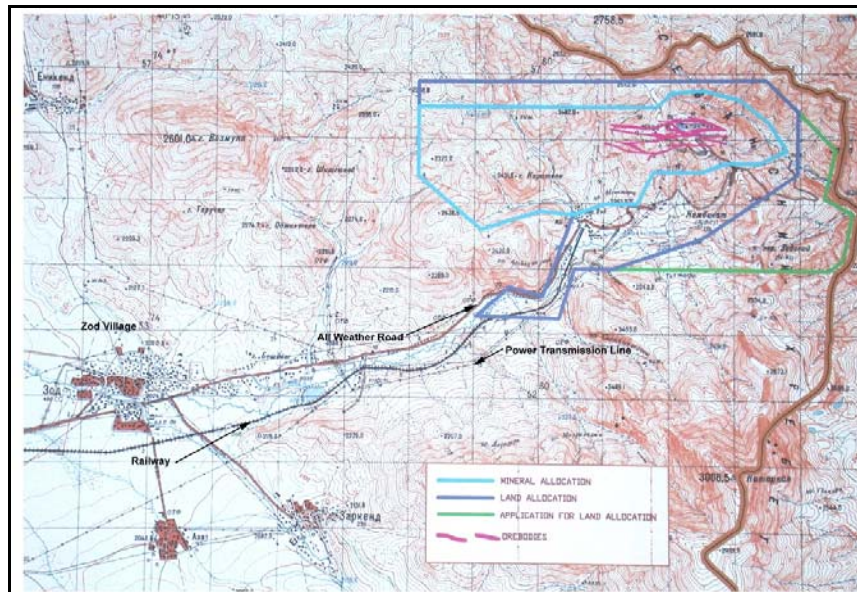
Figure 4.2: Zod Property Location Map



4.1 Mineral Property

All mineral and surface rights belonging to “Armgold” (Armzoloto) were transferred to Ararat Gold Recovery Company (AGRC), now a wholly owned subsidiary of Sterlite Gold. The transfer of mineral and surface rights was reiterated in the implementation agreement signed by the government in 2002. Surface and mineral lease boundaries are presented in Figure 4.3.

Figure 4.3: Land and Mineral Leases



4.2 Surface Rights

In 1999 AGRC was granted surface rights for total of 1,368 ha covering the Zod Mine. There have been changes to Armenian legislation concerning State registration of property and land and AGRC is in the process of applying for State registration of its property and land as per the legislation. A property survey is underway at the time of writing.

4.3 Mineral Rights

Mineral rights include a Special Mining License, a Mining Agreement, and an Allocation of Mineral Property (Mine Allocation) and are described below.

1. The Special Mining License for Zod deposit has been issued for duration of 25 years, expiring on 10th of September 2023.
2. The Mining Agreement for the Zod deposit was signed between AGRC and Republic of Armenia Ministry of Natural Protection on 13th of March 1999 for 25 years.
3. The Mineral Property agreement (Mine Allocation) is valid for the Zod deposit under the name of Armgold. This right has been transferred to AGRC within the boundaries previously allocated to Armgold State Enterprise, to which AGRC is legal successor. When the mineral reserves for the Phase 3 project are approved by the

State Commission for Mineral Reserves (GKZ), the Mineral Rights (Mine Allocation) will be amended and reissued based on new mineral reserve data.

4.4 Royalties

The licensed mining company is obliged to pay a royalty of 1% based on the average spot price of gold. This is based on the gold reserve mined and not the gold recovered. If the profit is more than 25% an additional bonus is payable to the government of 0.1% for each 0.8% of profit in excess of 25%.

4.5 Other

There are no back-in rights and the company is not subject to any other encumbrances. The company is not liable for any environmental damages caused by the previous mining activities of other operators (article 6.7a of the Implementation Agreement between the Government of the Republic of Armenia and First Dynasty Mines Armenia).

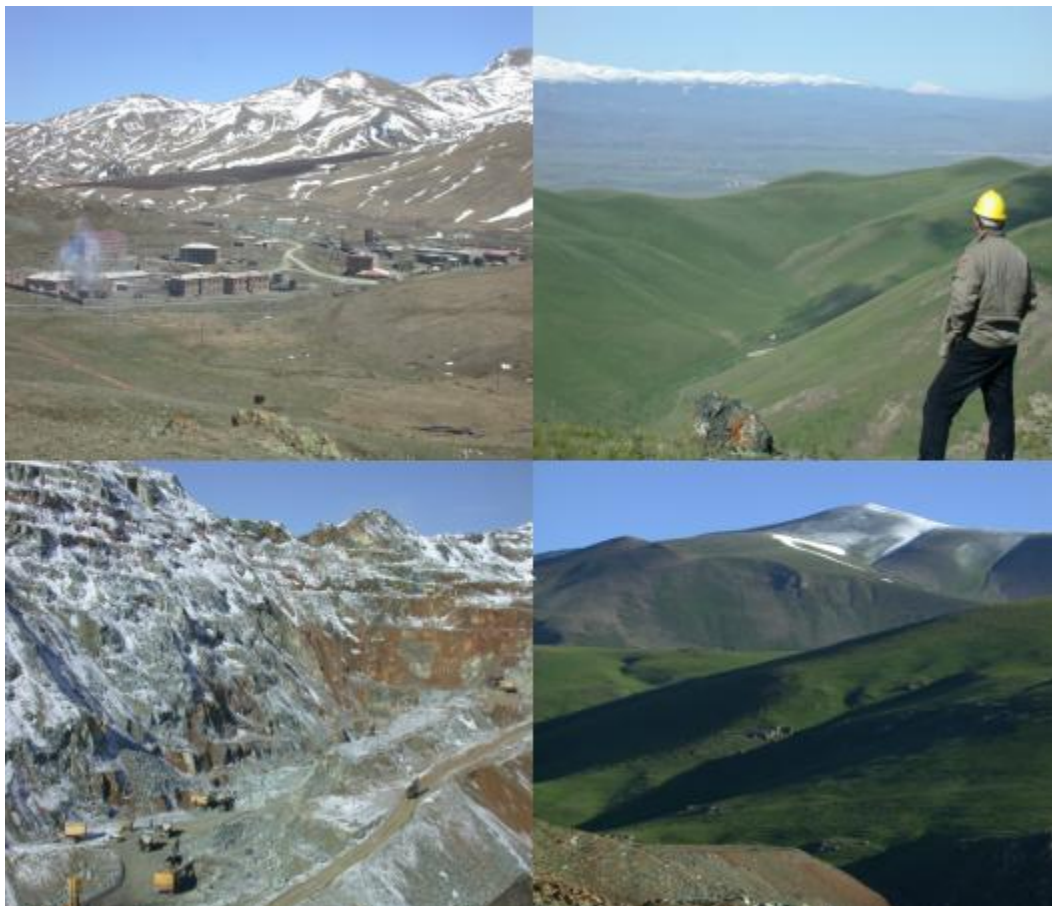
5.0 ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Zod mine site is located in an alpine valley east of Lake Sevan and adjacent to the former Armenia-Azerbaijan border. The topography is characterised by mountainous terrain with broad upland plains and isolated tundra areas. Mine elevations range from approximately 2150 m RL (above Black Sea Datum) in the valley where the existing mine office is situated to 2530 m RL at the highest point.

The mine site straddles the divide between Lake Sevan and the River Seidlar catchments. The majority of the site drains into the River Sotk and on then into Lake Sevan 18 km to the west. The northern drainage from the open pit enters the Seidlar River that eventually discharges into the Caspian Sea.

The site is accessed by an all weather asphalt road and railway and is serviced by a major high tension (110 Kv) power transmission line capable of supporting a mine and processing complex. Figure 5.1 provides a number of perspectives of the Zod Mine area.

Figure 5.1: Zod Property Mosaic



The climate of the region is highland continental, characterised by winters lasting 4 to 6 months, with temperatures averaging -4°C over that period. Summers are mild and sunny. The close proximity of Lake Sevan has a moderating effect on the microclimate of the site that tends to lessen the extremes in temperature and increase the amount of precipitation.

There are two broad soil types identified in the Zod area, flood plain meadow earths and mountain black humus. The flora of the region is species rich as a result of a variety of soil types, climatic conditions and relief. The study area lies within the Iranian-Turan floristic region and is characterized by typical upland or alpine species.

6.0 HISTORY

There has been a long history of gold production from the vicinity of the Zod Mine though there are no known formal production records. There is evidence in the mine area of early alluvial mining and old workings uncovered in the open pit may be centuries old. The recent history of exploration and development of the Zod area dates back to 1951 when Soviet geologists from the Kavzolotoravedka Trust exploration survey expedition re-discovered gold deposits in the vicinity of Zod. Exploration continued until 1955 when the Zod Geological Survey Expedition of the Administration of Armenia was established. In 1966 the Geological Survey Expedition of the Production Geological Survey Trust of the Administration of Nonferrous Metallurgy of the Armenian SSR was formed to accelerate exploration and development activities.

Exploration work completed during the period 1955 to 1965 totalled 51 km of underground development and 13,500 m of percussion and core drilling. The data collected was used to generate mineral reserve estimates that were confirmed by the USSR State Commission on Mineral Reserves (GKZ) in minutes 3007 dated 12/04/1960 and minutes 4718 dated 27/10/1965. Mineral reserves in the B, C₁ and C₂ categories contained 360 t (11.6 Moz) of gold. It is important to note that those reserves were calculated using Soviet methods that do not meet the JORC Code or CIM standards for mineral resources and reserves.

Following the confirmation of the 1965 mineral reserve statement by the USSR State Commission on Mineral Reserves (GKZ) the decision was taken to build the mine at Zod. In 1972 mine construction and development was assigned to the Armzoloto Corporation. Initial plans called for production of 250,000 tpa of ore from an open pit and 500,000 tpa of ore from an underground mine. The ore was to be transported to a centrally located processing plant. The location of the plant was intended to facilitate the development of additional gold reserves within Armenia.

Mine production commenced in 1976 and ore was transported to a 1 Mtpa processing plant constructed at Ararat some 285 km distance from the mine. The Ararat plant produced flotation concentrate that was processed at smelters in Russia. Production continued from the mine declining during the final years until 1997 when the infrastructure finally succumbed as a result of a lack maintenance and capital investment. A total of 7 Mt of ore were produced from the open pit and underground mines. Recovered precious metal production reached approximately 22 t of gold. The Ararat mill processed ore from Zod as well as ore from several other mines in the Former Soviet Union. The total amount of ore processed was approximately 11 Mt over the life of the operation.

Exploration and development continued at Zod between 1965 and 1980 and an additional 74 km of underground drifting and 97,000 m of drilling were completed. A new resource estimate was compiled that excluded all reserves outside the Central Zone as insufficient exploration had been conducted to permit classification of the material in the C₁ or C₂ mineral reserve categories. The new reserves were confirmed by the USSR State Commission on Mineral Reserves (GKZ) in minutes 8635 dated 21/11/1980 and are presented in Table XX of Section 6.2.

Following the collapse of the Soviet Union the Armenian government sought foreign investors to revitalise their failing mining industry. In 1996 "Armgold" and "Global Gold Corporation", a subsidiary of "First Dynasty Mines" (later renamed as First Dynasty Mines

Armenia Ltd. - FDMA) signed a multistage, 50/50, Joint Venture Agreement. “Armgold” agreed to put the Ararat tailings pond and related infrastructure into a new company to be known as Ararat Gold Recovery Company (AGRC). A plant was designed and installed to treat the 11 Mt of tailings that had accumulated over the previous 20 years. In February of 1998 production began through a new \$12 million processing facility at a rate of 1.5 Mtpa. The plant was reported to be the first constructed in the Former Soviet Union by a Western company that was completed on budget and on time.

At the same time the partners commissioned a joint venture of Kilborn-SNC and CMPS&F (Egis Consulting Australia Pty Ltd.) to conduct the KCMP Feasibility to determine if the Zod and Meghradzor mines could be brought into production. The study was completed in early 1998 and concluded that the project was technically feasible and economically attractive. It demonstrated that an open pit at Zod could produce 150,000 ozpa for seven years.

In 1998 another 50/50 Joint Venture Agreement was signed between Armgold and FDMA. In that agreement Armgold agreed to fold its remaining assets into AGRC. These assets included the Zod mine property and related facilities. Concurrent with this the government also signed an Implementation Agreement with FDMA legitimizing the Armgold / FDMA agreement. The government also issued a decree authorizing various government agencies to recognize the agreement. In total there were two agreements in 1998 and one decree authorizing the transfer of the Zod mine property and related infrastructure to AGRC. There was one agreement between Armgold and FDMA and one agreement between the Government of Armenia and FDMA. The 50/50 joint venture now had the right to deal with government agencies, export gold, hold off shore accounts and use expatriate personnel.

Due to a combination of corporate changes and technical variations, production at Zod did not commence immediately. In 2002 a small scale operation designated the “Test Pit” began. It processed 300,000 t of ore and produced 28,000 ounces of gold. It was deemed a success and a Phase II pit was inaugurated in mid 2003. This Phase II pit was planned to mine around 2 Mt of ore at a grade of 5.2 g/t Au. It was expected that production from this pit would be completed by early 2005.

In 2002 it became increasingly apparent that the government was continuing in its efforts to privatise industry. That afforded FDMA an opportunity to purchase Armgold’s 50% stake in AGRC. In The Implementation Agreement of 2002 FDMA purchased Armgold’s stake in AGRC from the Government of Armenia thereby increasing FDMA’s stake in the Zod mine and related facilities to 100%. The Implementation Agreement restated the guarantees given under the previous agreements and provided for additional guarantees. In particular FDMA was given an exclusive right to explore, develop, mine and extract any mineral deposits discovered within a 20 km radius of Zod.

Exploration continued at Zod during the period 2002 to 2004 focussing on resources of the Central Zone. The total amount of surface and underground diamond core and surface reverse circulation drilling completed during the two year period exceeds 45 km. AGRC completed a new mineral resource estimate and open pit mine plan in October 2004. Exploration is currently ongoing and is planned to continue throughout 2005.

6.1 Soviet Era Discovery and Development

The Zod gold deposit was discovered by the Soviets in the 1951. There was abundant evidence of earlier mining including relics from Roman times.

Serious exploration including underground development began in 1954. Annual exploration reports prior to 1965 detailing the exploration conducted and resources located were summarized in a resource assessment in that year. The reserves of the deposit were confirmed three times by the USSR State Commission on Mineral Reserves (GKZ); in minutes No 3007 dated 12.04.1960, in 1965 in minutes No 4718 dated 27.10.1965 and again in 1980 in minutes No 8635 dated 21.11.1980. The process of producing annual reports on exploration completed and approval of resources discovered continued on an annual basis until the last major review in 1979. This was three years after the commencement of mining in 1976.

Zod has been extensively explored by level development recorded on 1:200 and 1:1,000 scale level plans which show development outlines, geology and (on the 1:200 scale plans) assay and alteration/mineralisation envelope information. In general the exploration work in the Zod deposit area was documented at 1:50,000 and 1:10,000 scale. Detailed exploration work of the Zod orebodies was undertaken at 1:2,000 only on the area of the Central block, and included substantial underground development and sampling. Surface work included trenches and pits oriented across the strike of the orebodies at 20 m to 100 m spacing. Individual orebodies were also examined using along strike trenches. According to a Soviet report from 1979 in addition to 51,062 m of exploratory development and 13,500 m of boreholes drilled before 1966 (total expenses amounted 16.7 million roubles), during 1966 to 1980 74.2 km of underground working were advanced, 96.9 km of boreholes were drilled, and 51.6 thousand samples were tested; the total expenses in the geological survey amounted 41.6 million roubles.

Drilling was not undertaken on a regular grid but was designed for particular local exploration tasks. Three types of exploration drilling were applied:

1. Percussion and tungsten carbide core drilling, both vertical and inclined from the surface, with hole lengths of 150 m to 920 m.
2. Underground inclined percussion and tungsten carbide core drilling, with lengths of 100 m to 450 m.
3. Underground horizontal and inclined diamond drilling, with lengths of up to 150 m and core diameter of 59 mm (which approximates NQ size).

The data from the above drilling, trenches and pits were compiled by Snowden for the First Dynasty Mines Ltd (as Sterlite Gold Ltd was then known) in the 1998. Since the core recovery for all drilling methods were low, the core assays were not used in the resource estimate, apart from underground holes where samples were recorded on development plans. Typical recoveries are as follows:

- Gabbro, over 70%;
- Serpentinities, between 50% and 60%;
- Mineralised alteration zones, between 30% and 70%.

6.2 Previous Resource Estimates

Zod mineral reserves were estimated at the beginning of 1979 to be 37.4 Mt at 9.7 g/t Au containing some 363 t of gold. Mining from the previous three years had shown the grade to be significantly overstated and a complete revision of the resource was completed during 1979. The new estimate was approved in 1980. The new estimate was classified following the Soviet system as follows: category B where level development above and below the block has connecting raises, C₁ where development above and below is not connected by raises and C₂ for reserves below the development level, usually supported by drilling. This revision resulted in much of the previous C₂ category being excluded from the reserve and recalculation only in the Central block where mining was in progress or planned. Mineral reserves for Zod at 30.12.1980 are summarised in Table 6.1.

Table 6.1: Zod Mineral Reserves at 30th December 1980

Category	Mineral Reserves (kt)	Grade (g/t Au)	Contained Gold (kg)
Balanced B + C ₁ + C ₂	19,818.5	6.5	126,964
Off Balance B + C ₁ + C ₂	7,988.4	3.2	25,586
Total	27,806.9	5.5	152,550
Including Gabbro Massif C ₂	6,213.2	3.6	22,112

Note: Off Balanced material is not currently economic and therefore is not scheduled for exploitation.

Note: The Soviet system of Mineral Reserves classification is not consistent with JORC or CIM standards.

The 1980 report speculated that the total potential reserves of gold for Zod deposit could be estimated as 300 t.

For technical reasons the 1980 calculation of mineral reserves for the Gabbro Massif was not approved and it was left on the books at the previous figure of 39 t Au. The 1980 report acknowledged that this figure was too high and re-assessment was required. The annual update of mineral reserves has continued from 1980 through the breakdown of the Soviet system and subsequently under the Armenian authorities to the present. Armenian authorities currently record Zod mineral reserves at about 184 t of gold. Zod mineral reserves are currently being recalculated for GKZ approval as required by Armenia law.

Zod mineral resources were recalculated by the Australian consulting group, Snowden for the 1998 feasibility study using the Soviet era data. These resources were based on the JORC (1996) Code. The results of this study are presented in Table 6.2 below.

Table 6.2: Zod Mineral Resources March 1998

Cut-Off	Measured		Indicated		Inferred		Measured + Indicated	
(g/t Au)	(kt)	(g/t Au)	(kt)	(g/t Au)	(kt)	(g/t Au)	(kt)	(g/t Au)
0.5	5,400	3.1	61,900	1.8	25,000	2.6	67,350	1.9
1.0	4,150	3.8	33,500	2.7	20,050	3.1	37,650	2.8

6.3 Historical Production

Soviet mining commenced in 1976 and continued with minor interruptions until 1997. The Zod orebody was exploited by open pit and underground mines. Total production prior to 1997 has been estimated as 7 Mt at 5 g/t Au containing 33 t of gold.

Details of Sterlite Gold mining are shown under the heading “Exploration” in Section 10 of this report..

6.3.1 Open Pit

The open pit in the Central block exploited the deposit down to the 2350 m RL. Orthogonal trenches at approximately 10 m intervals were used for exploration and grade control sampling in the pit. Open pit ore production attained a maximum level of just over 200,000 tpa.

6.3.2 Underground Development and Stoping

Underground mining has been conducted in parts of Orebodies 4, 39, 1 (and satellites) and to a lesser extent, within Orebody 23. The underground mine is reported to have attained a maximum production of almost 300,000 tpa.

7.0 GEOLOGICAL SETTING

7.1 Regional Geology

Armenia lies within a tectonically active zone, at the point of incidence of the Arabian and Eurasian plates. The northward migration of the Arabian plate, and its impact with the southern flank of the Eurasian plate, has resulted in the creation of the Caucasus Mountains at the region's northern border, with general structural trends throughout the region corresponding to the direction of these geotectonic forces.

The Caucasus region as a whole can be divided geologically into three principal terranes: the Greater Caucasus, Transcaucasus and Lesser Caucasus, which in turn are comprised of sub-terrane units that accreted together at various stages since Middle Cenozoic times. Armenia lies principally within the Lesser Caucasus terrane, which extends into both Georgia and Azerbaijan. It would appear that in most cases, sub-terrane accretion took place before major terrane units were bonded on to the Eurasian plate with, at all times, the active front being at the north end of the mobile belt, in contrast to the southern edge that remained passive. The general WNW-ESE trend of these accretion zones is reflected in the direction taken by a number of major faults that can be traced across much of Armenia. Economic copper, molybdenum and gold mineralisation has been found associated with this regional-scale faulting that has been the focus of recent exploration.

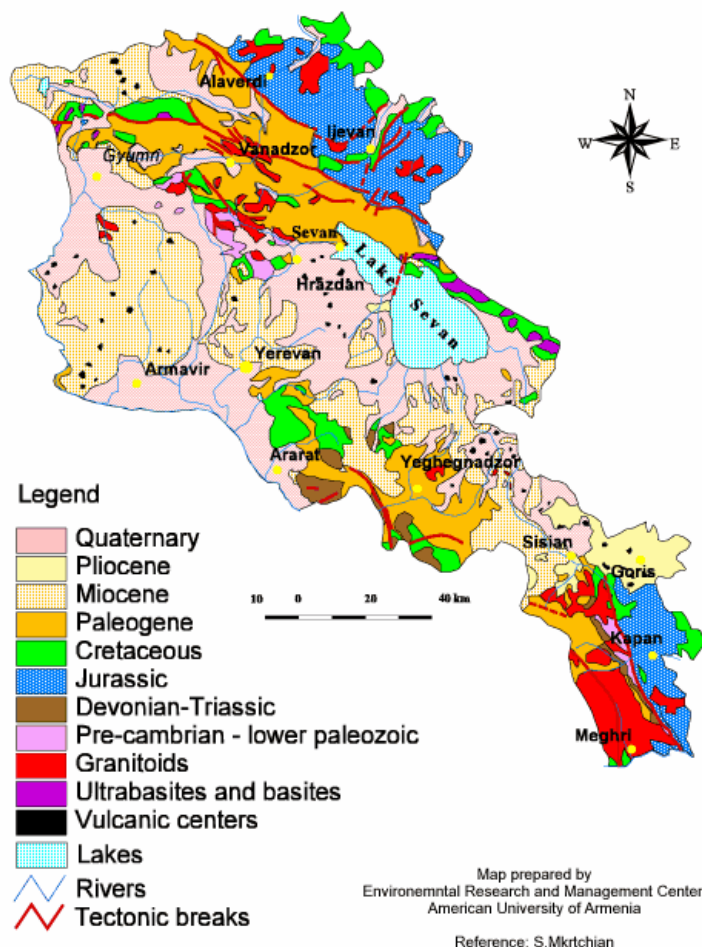
The Lesser Caucasus can be divided into five metallogenic zones. The northernmost, the Somgheto-Karabakh sub-zone, consisting mainly of rocks of Jurassic and Cretaceous age, hosts skarn deposits, porphyry copper and vein-type deposits associated with Late Cretaceous to Palaeogene intrusions. In the Sevan-Akera sub-zone, noted above, there are small-scale chromite and gold occurrences, while the Kapan sub-zone hosts vein-type copper and volcanogenic polymetallic sulphide deposits. Younger again, and further south and west, the Ankaban-Zangezur sub-zone contains the country's principal copper-molybdenum porphyry deposits, associated with Tertiary intrusions, together with vein systems containing both silver-gold and polymetallic mineralisation. Last, and the most recent of the sub-zones to be accreted within the regional structure, is the Peri-Araks sub-zone, which is known to host at least one small-scale copper-lead-zinc-mercury deposit.

While covering much of Armenia, the Lesser Caucasus is divided into two parts by the Sevan-Akera ophiolite zone, a narrow strip containing ultrabasic intrusive rocks of Cretaceous-Eocene age. Outcropping mainly along the north shore of Lake Sevan, the zone can be traced further to the northwest, although for much of this distance it is hidden beneath volcano-sedimentary rocks related to the extensive volcanism that subsequently affected the region.

The Zod deposits are hosted within sedimentary rocks and intrusive units related to a phase of regional volcanism which commenced during the early Tertiary. This volcanism relates to the closure of the Tethys Sea and the development of a major north-west striking suture zone through the Armenian land mass. Consequently, there is a very strong regional structural fabric generated as a result of this tectonic margin.

Figure 7.1: Geology of Armenia

GEOLOGICAL MAP



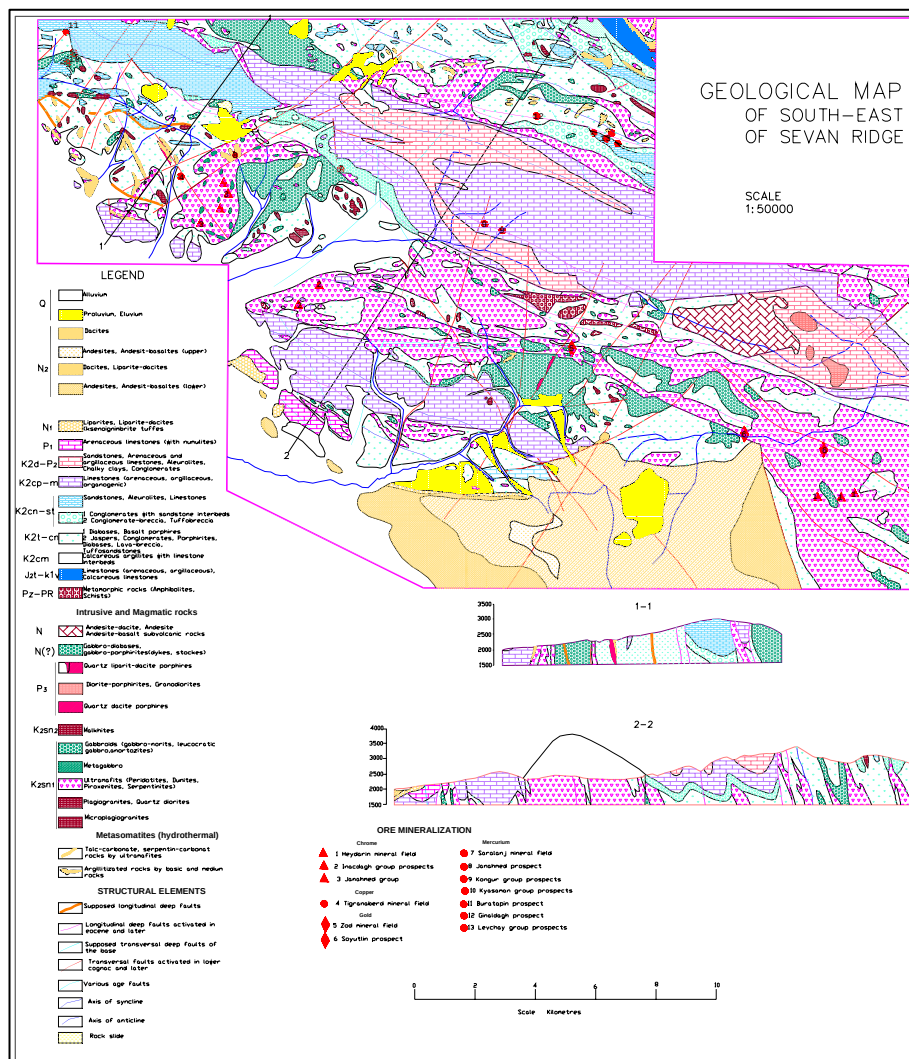
This zone has been a regional focus for high-level intrusions which, in turn, have generated an extensive regional heat flow. The highly sheared environment has given rise to the ideal structural and depositional conditions for the epithermal and mesothermal mineralisation at Zod. The intrusive and ultrabasic lithologies, which are thought to represent a typical ophiolite, have provided the host materials for mineralisation, and may also have been source rocks at depth. Regional uplift and differential erosion have since led to extensive exposure of the deeper portions of these systems.

Miocene-Pliocene rhyodacitic (quartz-porphyry) dykes have intruded this sequence and pre-date the mineralisation. The generalised geology of Armenia is presented in Figure 7.1. Geology east of the Savan Lake area is provided in Figure 7.2.

7.2 Local Geology

The Zod deposit is bounded to the north by the axis of the Karaiman-Zod anticline and the southern border is defined by the occurrence of younger volcanic rocks. The Karaiman-Zod anticline extends for more than 10 km in length and has a width of 4.5 km to 5 km. The southern limb dips at angles between 50° and 65°. Basement Precambrian schists are present in the hinge of the anticline, and they are overlain by ophiolite (gabbros, peridotites and serpentinites) and unconformably overlain by Upper Cretaceous (Turonian-Lower Senonian) conglomerate and limestone. Alluvium up to 10 m in thickness overlies the older materials.

Figure 7.2: Geology of the Zod Area



The area is divided into blocks of east-west, northeast and northwest trending tectonic zones which (from west to east) have the following names: West Tigranarsark, Tigranarsark, Central block, and Eastern block

The tectonic dislocations essentially define the structural setting of the deposit with respect to three distinct ages relative to the intrusion of Miocene-Pliocene rhyodacitic (quartz-porphyry) dykes as follows:

- Pre-dyke;
- Post-dyke and pre-mineralisation;
- Post-dyke and post-mineralisation.

The pre-dyke dislocations are characterised by approximately east-west trending shear and breccia zones, which extend along the axis of the anticline. They dip steeply (65° to 85°) and crosscut the volcano-sedimentary and intrusive rocks of Mesozoic age.

7.3 Mine Geology

Older north-south, northwest and northeast trending faults crosscut and split various parts of the deposit. They are observed on the surface and in underground development. They are represented chiefly by shear zones filled with mylonitised material. The east-west shear zones have steep dips (70° to 80°) towards east, whereas the northwest and northeast trending faults dip either east or west at 50° to 70° .

Both fault systems focused the intrusion of the Miocene-Pliocene dykes, which assumed the strikes and dips of the shear zones. Pre-dyke faults control the extent of the mineralisation, thus creating separate blocks of mineralisation and orebodies. The rhyodacite dykes are important hosts to mineralisation as are the ultrabasic and gabbro protolith. In the Central block mineralisation occurs in an east-west-trending dyke and a north-south-trending dyke. The north-south-trending dyke, which hosts Orebody 39, can be traced on the surface and on all underground levels. It strikes to the northeast (070° to 075°), dips 75° to 80° to the east-southeast and trends for more than 500 m. The dyke is linear and ranges in thickness from 5 m to 12 m. It can be traced from the surface to the lowest level of the underground mine. Below 2316 m RL the dyke coalesces with another one of identical composition, their strike gradually changing to approximately east-west and the total thickness ranging from 7 m to 12 m. This east-west dyke hosts Orebody 4.

Mineralisation is hosted by hydrothermal alteration zones that are represented by talc-carbonate and quartz-carbonate assemblages. Throughout the deposit they form approximately east-west, parallel and en echelon belts, interlaced in places. The zones range in thickness from 1 m to 2 m to tens of metres.

Talc-carbonate metasomatites are yellow-green-grey in colour, and contain 40% to 60% carbonate and 40% to 50% talc. Magnetite and chrome-spinels are also present. Quartz-carbonate alteration zones are light-grey to dark-grey-brown in colour, and have a carbonate content varying from 10% to 60%. They have either a crystalline, granular or brecciated texture, and fine grained, frequently porous, quartz aggregates comprise up to 40% of these materials. Quartz is frequently accompanied by chalcedony, and the materials are intensively pyritised.

8.0 DEPOSIT TYPES

The Zod deposit comprises steeply dipping sub-parallel quartz-carbonate vein structures in a gabbroic host rock. Six of the larger orebodies, namely, 1, 4, 16, 23, 23b and 39 host about 80% of the gold mineralisation. Orebodies 4 and 39 are the widest measuring up to 40 m, but typically varying between 10 m and 20 m wide, are associated with quartz stockwork veining predominantly within a rhyodacite dyke. These two orebodies contain about 50% of the reserves reported during the Soviet era. Of these only 4 has been drilled and included in the current mineral resource estimate. The other four major orebodies are quartz vein structures, generally ranging up to 12 m wide that have formed along major east-west striking fault structures. These fault structures appear to be discontinuous and gaps have been identified in Orebodies 23b, 1, 16 and 23.

The majority of the Zod orebodies are hosted by intrusions, including ultrabasics (mostly peridotites and serpentinites) and gabbros. In the main ore zones these are completely altered to carbonate and quartz-carbonate assemblages. The ultrabasic gabbro complex includes minor pyroxenite, as well as quartz-diorite and plagiogranite. Sheared zones where plagioclase is altered to epidote and carbonates are frequently observed.

Petrological studies by Maxwell (1997) suggest that a low sulphidation system operated during the ore formation process at Zod. Mineralogical characteristics are related to the multiple stages of hydrothermal processes and the paragenetic relation of the ore-bearing fluids to acid and intermediate rocks and ore deposition within basic and ultrabasic rocks. Dominant ore minerals include pyrite, arsenopyrite, sphalerite, marcasite, chalcopyrite, antimonite, galena, tennantite, lead and antimony sulpho-salts, and tellurides.

Gold occurs as native free gold, native finely dispersed gold, gold tellurides or secondary native gold (after oxidation of sulphides and tellurides). Silver occurs in its native form in quartz and in chalcopyrite and pyrite, and as silver tellurides.

The economic mineralisation is generally not continuous and a single vein/fault may carry several coplanar lenses, which may branch and curve. Previous and current mining provide a good understanding of the nature and continuity of the mineralisation and a basis for reconciliation with resource estimates based on drilling.

9.0 MINERALISATION

Hydrothermal alteration is developed within the pre-existing dislocations. Individually altered zones generally range in thickness from 10 m to 20 m and may coalesce at depth where total thickness may be tens or even hundreds of metres. The boundaries between altered and unaltered rock are variable, being sharp and sheared in some areas, to gradual in others. The latter occurrence is particularly true adjacent to gabbros.

9.1 Distribution of Mineralisation

The geometry and extent of hydrothermal alteration in the Central block is well understood as this is the area of detailed exploration and mining. There are two relatively thick and extensive alteration zones clearly visible on the surface. The first strikes east-west continuously through the southern portion of the block. Its thickness ranges from 10 m to 50 m. Orebody 1 is located within this zone. The second zone occurs immediately to the north. For the first 150 m to 200 m, it is parallel to the first zone and then, towards the east, its strike changes to south-east and the distance between the two decreases to 50 m or 60 m. Orebody 16 is located within the second zone.

Between these two main zones there are subordinate zones (less than 10 m in thickness) which strike east-west, partially northwest or northeast. Orebody 2 is located within one of these zones.

South of the main alteration zones is a belt containing well developed fracturing within a gabbro block (referred to as “Gabbro Massif”). Between the Gabbro Massif and the main alteration zones there is a narrow metasomatic zone surrounding a quartz porphyry dyke. The thickness increases with depth and in places it coalesces with the main ore-bearing zone.

The mineralisation is controlled in a general sense by a set of post-dyke, pre-mineralisation tectonic dislocations. These shears and faults have various orientations and dimensions and, on the basis of the material within them, can be subdivided into the following two groups:

1. Ore-bearing fractures (veins and stringers) filled with quartz-carbonate-sulphide material and characterised by displacement and sinuous outlines.
2. Tectonic fractures filled with mylonitised rock flour, and represented by shears with linear outlines and more-or-less consistent thickness and orientation. The dimensions vary and members of the group can be subdivided into categories: a) large and continuous, more than 50 cm wide; b) 0.1 m to 0.5 m wide and 10 m to 50 m long; and c) small, up to 0.1 m wide and several metres to several tens of metres long. They are developed mainly within less competent alteration zones.

Another structural feature is an east-west elongated zone of increased fracturing located within the Gabbro Massif. It is 20 m to 150 m wide and can be traced south of the major orebodies in the southern part of the Karaiman-Zod anticline. It is believed that this zone is structurally uniform and did not undergo any significant hydrothermal alteration. The fractures and fissures are filled with sub-parallel, steeply dipping quartz-sulphide veinlets with thicknesses ranging from less than a millimetre to 20 mm or more. They trend in a northeasterly direction (045° to 050°) over almost 1,000 m.

Structural analysis reveals that 75% of the quartz-sulphide veins are oriented approximately (060° to 120°), about 15% of veins strike between 030° and 060°, and less than 10% strike approximately north-south. A combination of mineralised structures and relatively extensive early structures has produced a mosaic of tectonic blocks with complex morphology.

Post-ore dislocations generally reactivate earlier structures but may rarely form wrench faults which displace parts of the orebodies. The amplitude of these displacements ranges from 0.1 m to 2 m.

Several types of mineralised bodies are defined within the deposit. They are represented by veins, stringers and veinlet-disseminated mineralisation developed in zones of hydrothermal alteration, rhyodacitic dykes and relatively fresh gabbros. The morphological type may change inside one delimited orebody, and sometimes veins with sharp outlines are accompanied by small zones of veinlet-disseminated type or stringer zones. The different morphologies are discussed below.

9.2 Types of Mineralisation

9.2.1 Type 1 Vein Zones

These are developed exclusively inside talc-carbonate and quartz-carbonate alteration zones and are represented by a series of sub-parallel, en-echelon veins related mainly to approximately east-west shear zones and faults. Type 1 mineralisation is accompanied by numerous offshoots and veinlet-disseminated mineralisation. Tapering and pinching are a characteristic feature, and the veins are composed of a quartz-carbonate mass with sulphides. They extend from tens of metres to hundreds of metres in length, and their thickness ranges from a few centimetres to 2 m, sometimes swelling up to 6 m. They dip at 65° to 85° towards the north and the south. The distance between separate veins varies from 0.4 m to 4 m. Sharp geological contacts are observed in places where the veins converge with mineralisation envelopes. In general the vein zones extend in strike length from 600 m to 800 m with variable thickness from 3 m to 6 m, and sometimes 10 m to 12 m. The mineralisation distribution is erratic, with high grade zones of 1 m to 20 m along dip and/or strike separated by barren material. Veins can be correlated over a distance of 50 m or more which is equivalent to the density of the exploration grid. In general, tectonic dislocations displace these zones by relatively small amounts (several centimetres to 2 m, and occasionally up to 6 m).

9.2.2 Type 2 Veins and Vein-Like Bodies

Type 2 mineralisation is also developed in the hydrothermal alteration and is represented by single quartz-sulphide veins, occasionally accompanied by thin zones (less than 2.5 m) of veinlet-disseminated mineralisation. In places the veins are discontinuous and represented by shattered zones. Veins are displaced by pre-ore and post-ore transverse dislocations.

9.2.3 Type 3 Mineralised Dykes

On the whole these types of orebody are equivalent to the rhyodacitic dykes described above, which are the hosts of the veinlet-disseminated mineralisation. There also exist massive sulphide concentrations with dimensions from tens of centimetres to 3 m. Distribution of mineralisation is irregular, and is particularly intensive along the contacts of dykes striking

approximately north-south and east-west. The continuity of mineralisation increases with depth. The length of economic mineralisation varies for particular levels from 60 m to 400 m, and thickness varies from 5 m to 45 m.

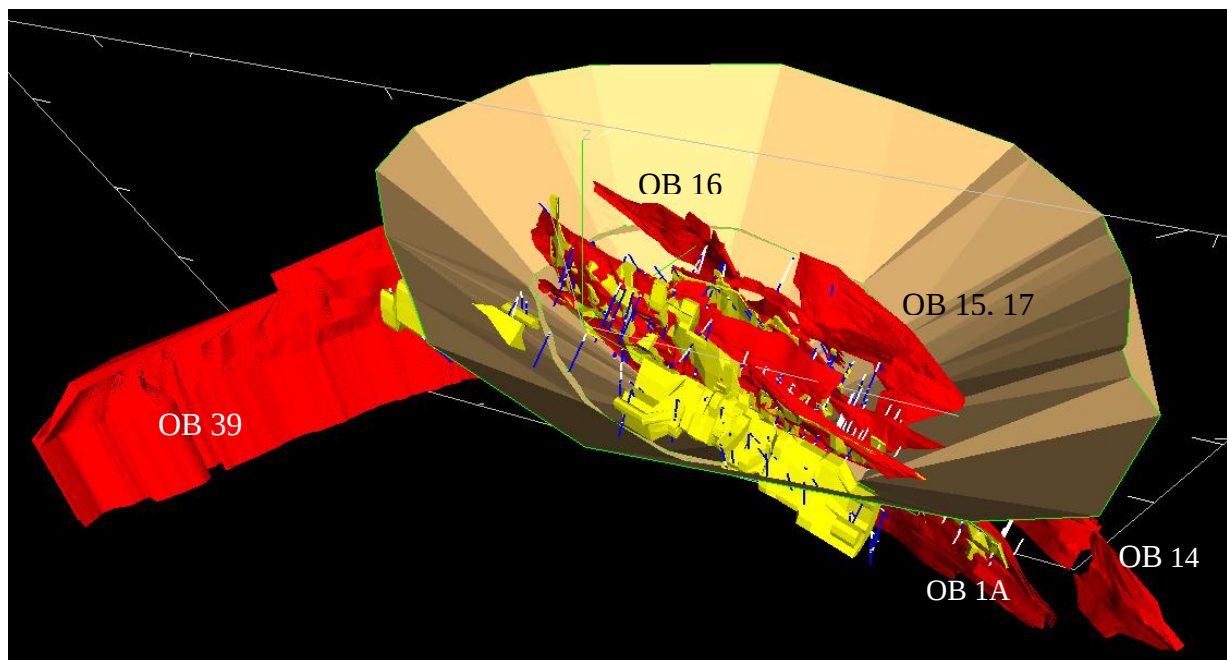
9.2.4 Type 4 Stockwork Zones in the Gabbro Massif

Distribution of gold mineralisation in this type is extremely erratic and structurally controlled by zones of increased fracturing within the gabbro. Detailed exploration work conducted during the Soviet era suggests that only isolated lenticular and irregular portions with higher gold grades (from 1.5 g/t Au to 5 g/t Au, and rarely more) can be delineated above a cut-off of 1 g/t Au within this zone. Such zones extend for 20 m to 100 m, at an average of 40 m to 50 m. Their thickness ranges from 1 m to 4 m and only occasionally attains 10 m or more. They are difficult to correlate up and down dip. There is some evidence that it is difficult to obtain reliable samples from the Gabbro Massif mineralisation. It is likely that some of the mineralised zones outlined during the Soviet era are unreliable while the gold content of other areas is understated. Large samples are required to attain reliably assess the mineral potential of the Gabbro Massif zone.

9.2.5 Type 5 Isolated Pockets of Stringers and Disseminated Mineralisation

This type predominates in hydrothermal alteration zones but is also observed outside these zones. The length of these bodies ranges from several metres to 20 m, rarely up to 40 m, with thickness in the range 1 m to 2 m and sometimes 5 m to 6 m. The majority of the lenticular bodies strike approximately east-west and their continuity is limited. Correlation of these units is very difficult, even with a dense exploration grid. Principal orebodies at Zod are shown in Figure 9.1

Figure 9.1: Distribution of the Principal Mineralised Zones at Zod



10.0 EXPLORATION

AGRC commenced mining underground and by open pit in January 2002 to assess the Zod mineralisation and the information generated during the Soviet era. This mining provided a cashflow, employment and training opportunities and an opportunity to gain an understanding of the orebodies that is far in excess of that which could be gained by further drilling alone.

10.1 Underground Development and Stopes

Exploration by Sterlite Gold consisted of limited underground development and mining of several orebodies, in particular Orebodies 1, 4, 16, 23 and 41, to confirm their estimated grade and continuity. This has been carried both by the company (AGRC) and a local contractor, Sotk Exploration. The majority of the production from this exploration has been processed at the companies processing facilities at Ararat.

Underground excavation was carried out both for drill chamber development and for orebody geometry understanding. Around 1,000 m were developed on 7th level (2188 m RL) for drill chambers and another 600 m was developed in Orebodies 16A and 41 at different exploration levels. Exploratory mining was conducted in Orebody 16A on 5th level (2275 m RL) and 20 m above 5th level (2295 m RL) over the complete length of the orebody. Orebody 41 was explored on 2375 m RL, 2367 m RL (3rd level), 2316 m RL (4th level) and 2275 m RL (5th Level).

10.2 Open Pit Mining

Open pit mining by Sterlite Gold's wholly owned subsidiary AGRC commenced with the test pit in 2002 and has continued to the present as Phase 2. Open pit mining confirmed the orebodies as outlined by Soviet era exploration but demonstrated the need for confirmatory drilling and resource assessment based on drilling. The mining experience identified that some of the Soviet era data was unaccepted and models based solely on Soviet era data tended to overestimate the grade. Mining of Orebodies 1A and 2B in the test pit and Phase 2 has been reconciled with the models from a mixture of Soviet era data and recent drilling and this has provided the background to designing the exploration programme for Phase 3.

Earlier models, which relied more on the Soviet era data, were found to overstate the tonnes and grade significantly in some areas. Enquiries regarding the reliability of the data indicated that some of the post-1980 data had not been thoroughly validated. As a result of its investigations AGRC decided to use only pre-1980 Soviet era data for resource estimates. The orebody models for resource estimates are now primarily based on AGRC drill data. Reconciliation with later models is much improved. However, even with the present model for Orebody 1A created in November 2003 the grade of the high grade ore in the model is higher than that achieved during production. The total tonnes of ore are significantly higher than estimated and the amount of contained gold is approximately correct. This is partly a reflection of problems with modelling and partly due to grade control, mining and dilution. More detailed reverse circulation drilling as mining proceeds will allow a grade control model to be produced for short term planning and grade control.

Ore production is processed at the company's processing plant at Ararat. The cost of transportation results in low grade material, which comprises a significant proportion of the

mineralisation being uneconomic. Recently when low grade ore was sent for processing the grade was shown to equivalent or slightly higher than estimated from grade control sampling.

Open pit mining production for the period 2002 to October 2004 is summarised in Table 10.1.

Table 10.1: Zod Open Pit Production 2002 to 2004

Year	2002	2003	2004 (October)	Total
Waste Mined (t)	4,648,496	8,755,750	7,728,787	21,133,033
Ore Mined (t)	195,271	325,662	536,808	1,057,741
Total Mined (t)	4,843,767	9,081,412	8,265,595	22,190,774
Ore Grade (g/t Au)	3.44	2.37	2.54	2.66
Gold Contained (kg)	672	773	1,364	2,809
Gold Produced (kg)	477	516	1,068	2,061

10.3 Topographic Survey

All data for use in mineral resource modelling is recorded on the same metric grid. This grid is oriented true north, parallel to the national grid but a local coordinate system has been adopted. The majority of data occurs between 881570 E and 883160 E, and between 555650 N and 556400 N.

Soviet era nomenclature is used to designate the underground exploration levels. The references used are summarised in Table 10.2 below.

Table 10.2: Nomenclature for Soviet Era Adit Levels

Elevation (m RL)	Level	Elevation (m RL)	Level
2500	Nominal Surface	2330	
2447	Level 1	2326	
2440		2318	Level 4
2408	Level 2	2306	
2380		2275	
2375		2272	Level 5
2370	Level 3	2225	Level 6
2350		2190	Level 7

The topographic survey coverage of the Zod area has been enlarged to encompass all of the current exploration. This coverage, in digital format, was completed on site utilising total station theodolites. In addition, the topographic surface was updated to reflect the Soviet era mining and current mining operations. Digital models of Soviet era underground mining surfaces were prepared for earlier studies.

11.0 DRILLING

Exploration drilling by AGRC was carried out from surface as well as underground levels. Drilling was undertaken on a regular grid with north-south cross sections at 40 m spacing. These sections are orthogonal to the predominant strike of the mineralisation and drilling is usually in the plane of the section. The majority of the drilling is directed to the south as most orebodies dip to the north. The purpose of this is to obtain drill intersections that reflect true thickness as closely as possible. The drilling conducted to date has included both diamond and reverse circulation methods. The work was conducted by a combination of AGRC, utilising its own diamond drill rig and local and international contractors using diamond and RC rigs.

A set procedure was established for siting drill holes. Borehole collars and the directional alignment for drill holes are located in the field by a surveyor following the drilling plan developed by the geologist in charge. The geologist is responsible for checking the position of the hole. The final collar position of the hole is established by the mine surveyor.

The total drilling to September 2004 used in creating the mineral resource model is tabulated in Table 11.1.

Table 11.1: Summary of Zod Drilling

Type of Drilling	Metres
Surface Diamond Core	8,564
Underground Diamond Core	19,255
Reverse Circulation	10,731
Total	38,550

11.1 Surface Diamond Drilling

Surface diamond drilling commenced on a limited basis in 2002. The initial surface drilling was directed at Orebody 1A, the focus of the open pit mining. The company carried out drilling using Diamec drills on surface and underground and a Connors drill on surface. A local contractor Sotk Exploration also carried out part of the drilling on surface and underground using Russian drills utilising NQ rods.

Surface diamond core holes are inclined both vertically and at angles as flat as 11° from the horizontal. Hole lengths range from 50 m to 210 m. NQ and NQ3) sized equipment was generally only used in gabbro at the start of the drill hole where recovery was good. Diamond drilling from the surface was difficult due to the soft and broken ground and extensive underground workings, which caused the loss of water return and build up of sludge. The majority of diamond drill holes from surface fail to achieve their target depth in areas where there is underground mining nearby. At the end of each hole a geologist completed a down hole survey using a Pajari gyroscopic instrument. A total of 86 diamond drill holes averaging almost 100 m were available and used in the resource calculation.

11.2 Underground Diamond Drilling

Underground diamond core drilling commenced in 2003 to examine the continuity and grade of the mineralisation both within and below areas explored by underground development during the Soviet era. This drilling was completed using a combination of the AGRC's drills

and the local contractor, Sotk Exploration. NQ3 with some NQ diameter holes were inclined at all angles from near vertical upward to vertical downward and vary in length from 100 m to 300 m.

Down-hole surveys were recorded at 30 metre intervals using either a Pajari gyroscopic compass or an Eastman multi-shot camera under the direction of the geologist. Due to problems with the instruments only about 50 percent of the holes were surveyed. In general holes tended to steepen with depth with up to a maximum deviation of 8 degrees recorded for long flat holes. In most holes an alignment deviation of a few degrees to the east was observed. Each hole was terminated by a geologist when it had achieved the targeted depth unless ground and drilling conditions forced abandonment earlier than planned. Important holes that were abandoned were re-drilled.

Most of the underground drilling was from 7th level, the lowest level established during the Soviet era. Holes were drilled to test the downward extension of the orebodies located by mining on this level. The average drill section spacing on 7th level is approximately 40 m but the holes range from 27 m to 54 m apart. Ground condition dictated precisely where drill chambers could be excavated. Geological sections were constructed at 40 m intervals. The drill chambers were located to the north of the orebodies since they dip to the north. The nearest orebody, 16 is less than 20 m from the chambers and the most distant is Orebody 4, which ranges up to 300 m from the chambers. A total of 93 holes totalling 18,525 metres, an average of 199 metres, were drilled from the chambers. Diamond drilling was also completed on 5th level where six holes totalling 730 m, an average of 122 m, were completed.

Core recovery for diamond drilling was maintained at a high standard and effort was made to maintain core recovery at greater than 90%. The length of core recovered was measured by the drillers and recorded for each run. Core recovery was specified in the drill contract and low recovery in the ore zones led to stringent penalties for the drilling contractor. Driller's blocks were inserted after each run and the supervising geologist also measured core recovery during logging to check against the recovery recorded by the drillers. All unsampled core has been retained as well as half cores from the intervals that were sampled. Core has been preserved in the core library. All drill core is routinely logged by a qualified geologist. The drill log records geological and geotechnical parameters and all core is photographed. A summary of core recovery by rock type is presented in Table 11.2.

Table 11.2: Summary of Core Recovery

Rock Type	Recovery Range
Gabbro	>95%
Serpentinite	85% to 95%
Altered, Mineralised Zones	70% to 95%

11.3 Surface Reverse Circulation Drilling

Surface reverse circulation drilling was completed by Spektra Jeotek, a Turkey-based drill contractor during May to August 2004. A total of 135 holes were drilled utilising 125 mm equipment to lengths of up to 170 m. The Gabbro Massif area on surface was drilled at a spacing of approximately 20 m and other surface drilling was spaced at about 30 m, depending on available access. Reverse circulation drill holes were only surveyed at the collar. A total of 106 RC holes were utilised in the mineral resource estimate.

12.0 SAMPLING METHOD AND APPROACH

Sampling at Zod is conducted by a geologist or a sampler working under the direction of a geologist. Many of the geologists have more than ten years experience at the mine and some have more than 20 years experience. A sampling protocol was been established during the Soviet era for collecting open pit and underground samples that is both systematic and appropriate for the type of mineralisation at Zod. This protocol is still used for collecting channel and grade control samples in the present operations.

12.1 Core Sampling

Core samples are acquired from the mineralised alteration zones, mineralised quartz-porphyry dykes and surrounding host rocks (gabbro and serpentinites) where indications of hydrothermal alteration and mineralisation are observed. In addition, samples are also taken from the adjoining waste rock to confirm the grade of the waste. Normally, waste samples were collected 5 m on either side of the alteration zone. Homogenous material was sampled continuously to a maximum sample length of 1.5 m and distinct lithologies were sampled separately. Core was split in half with a chisel along the longitudinal axis of the core. The mineralised zones tend to be very broken and are usually soft. The weight of a 1 m core sample varied from 1.5 kg to 2 kg.

12.2 RC Drill Samples

RC Drill Samples were collected at 1 m intervals from the cyclone at the drill. Average weight of these samples was 25 kg to 30 kg. These were split in a riffle splitter down to 2 kg to 6 kg. In some instance these metre samples were sent for assay but in most cases 2 m composites were assayed although the samples were still available at the drill site as metre samples for duplicate assay if required. All of the reverse circulation samples were sent for assay.

12.3 Channel Chip And Face Sampling

Various sampling procedures were used during the course of exploration, underground and open pit mining. The sampling procedures used are:

12.3.1 Channel Sampling

Channel sampling was done in all the underground workings developed by AGRC. Standard dimensions of channel samples were 1 m long, 0.1 m wide and 0.05 m deep. When sampling clear geological features (such as quartz-sulphide veins, mineralised tectonic dislocations, lithological contacts, etc.) the various geological elements were sampled separately. In workings across the strike of the orebodies, channel samples were taken from development sidewalls at a height of 1.2 m. The weight of the 1 m long channel samples varied from 11 kg to 15 kg.

12.3.2 Face Sampling

Face sampling was undertaken across the underground exposures. Sample length depended on the thickness of the orebody. However, height and depth were normally 1 m and 50 mm, respectively. The weight of 1 m² of face sample varied from 120 kg to 140 kg.

12.3.3 Open Pit Trench Samples

Open pit trench samples are used for grade control in the open pit. Trenches are dug with the excavator at 5 m to 10 m spacing across the open pit and cleaned by hand with a shovel. They are mapped and marked for sampling with spray paint. Samples, to a maximum length of 1 m are collected from each rock type by a quick chip channel combination. One metre samples range from 5 kg to 10 kg.

13.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY.

13.1 Sample Preparation

All samples were prepared and assayed at AGRC's laboratory facilities at the Zod mine site. Samples are delivered by the geologist or sampler to the laboratory on the same day that they are collected. Samples are numbered according to the type of sample and details are kept in a sample register by the geologist or sampler in charge. Sample numbers for drill core are also recorded on the drill log.

Samples received by the laboratory staff are placed in trays with a numbered tag and dried in an oven for 8 to 12 hours, before crushing pulverising and assaying as described below. The laboratory is a restricted area and only laboratory staff have access to the samples. From the time of collection until the time of assay samples are under secure control of the geologist or the assay laboratory.

13.1.1 Channel Samples

The channel samples collected underground by AGRC were used in resource estimation. The procedures used in the preparation of these samples are as follows:

An initial sample of 12.5 kg was taken, this was ground to 4 mm, sieved, mixed and divided into two 6.25 kg samples. One half of the material was kept as a field duplicate and the other half was used for further processing. The 6.25 kg sample splits were mixed and pulverized to more than 70% passing 70 µm. The 6.25 kg pulverized samples were split into two parts; one part of 5.75 kg was kept as a duplicate and a 0.5 kg sub-sample was sent to the laboratory for assay

13.1.2 Diamond Drill Core Samples

Diamond core samples initially weighing around 2 kg were reduced to 4 mm and a 0.5 kg split was pulverised and sent to the laboratory for assay.

13.1.3 Reverse Circulation Drill Samples

RC samples were initially split at the drill site with the majority of the sample returned to the bag. A 2 kg to 6 kg sub-sample was sent to the laboratory. Samples were dried, crushed and if particles greater than 4 mm are noted a 500 g to 1 kg split was pulverised for assay.

13.2 Analysis

Gold content was obtained by the fire assay method at the Zod assay laboratory using the following procedure:

25 g ore, flux and charcoal were mixed and heated to 1200°C in the furnace, lead buttons produced were added to cupels and the sample was subsequently reheating to between 800°C and 850°C. The resulting gold-silver alloy bead from the cupel was placed in a test tube and treated with HNO₃ (1:3 ratio) to separate gold from the silver. The gold was weighed on electronic scales and the sample assay calculated.

14.0 DATA VERIFICATION

14.1 Assay Data

14.1.1 Internal Quality Control

Sample at Zod are assayed in batches of 20 samples. Each batch includes one standard sample, one duplicate sample (assayed in duplicate from the pulverized sample) and one replicate sample (sample taken from the coarse reject). The results of the standard and duplicate are checked to confirm they are within ten percent and replicate samples are checked when the results are reported.

The assay results from the samples are compared to the geologist's estimates and any spurious results are queried and checked. Three standards were obtained from a supplier in Australia with well documented grades of 1.98 g/t, 5.16 g/t and 9.7 g/t. Assay results for standard samples are presented in Table 14.1.

Table 14.1: Quality Control Analyses for Standard Samples

Standard (g/t Au)	Mean Analysis (g/t Au)	Relative Difference	Standard Deviation	Minimum (g/t Au)	Maximum (g/t Au)	No of Analyses
5.16	5.08	2%	0.23	2.88	5.67	314
9.70	9.38	3%	0.25	8.27	10.26	345
1.98	1.93	3%	0.08	1.64	2.39	404

14.1.2 External Check Assays

External check assays were performed on 15% of the samples to monitor accuracy and precision of Zod assays. This was carried out on exploration drill assays only and samples were selected randomly by listing the results in sample number order and selecting every 20th sample. All samples in excess of 10 ppm Au were also sent for check assay. Consequently it was determined that the results of the Zod Mine Laboratory were usually lower than the check assays by 3% to 10%, and occasionally 15% to 18% for low grades less than 1.5 g/t Au.

A total of 1,094 samples were analysed at ALS Canada as part of this check assay quality control programme.

14.2 Data Compilation

A Microsoft Access database is used to store all of the drill, assay and survey data.

14.2.1 Drill Logs

The senior geologist checked all drill logs before entry to the database. Original hand written logs are retained for data validation. These were written in Armenian script but the data entry and output from the database was in English. Core logging limits conformed to lithological intervals and sample intervals coincide with changes in geology or grade. A simple code is used to record the lithology, alteration, mineralisation types and intensities. The completed drill logs can be printed along with graphic log using an interface to Autocad.

14.2.2 Assay Data

Initially the geology data entry clerk entered assay data from the hand written assay sheets provided by the assayer. In 2004 the laboratory commenced entering the data directly and this was imported into the database.

14.2.3 Drill Hole Survey Data

The geologist compiled the collar file that contained drill hole identification number, X-collar, Y-collar and Z-collar from information provided by the surveyor as well as the down hole survey file with drill hole identification number, measurement depth, azimuth and dip.

14.2.4 Bulk density data

In addition, bulk density data was collected and forms part of the data base. Bulk density values for approximately 500 samples were measured the hydrostatic displacement method in the Zod laboratory. The samples were weighed in air and water and their volume measured by displacement in water. None of the samples were porous requiring sealing. Results were recorded by orebody number, rock type, elevation and sample number. These were grouped by orebodies and analysed statistically after inspecting for outliers. The average density was then calculated for each of the major rock types, ores in metasomatites, mineralised dykes and gabbro stockwork. In general, the transition from oxide to fresh sulphide zone occurs at an average elevation of 2300 m RL. Bulk density values used in the present mineral resource model are presented in Table 14.2.

Table 14.2: Bulk Densities Used for Block Modelling

Orebody	Z>2300 m	Z<2300 m
OB 16	2.71	2.81
OB23A	2.71	2.81
OB23B	2.71	2.81
OB23	2.75	2.85
OB9A	2.73	2.83
OB1	2.69	2.79
OB1A	2.69	2.79
OB4	2.55	2.55
OB41	3.20	3.20
OBGM	2.74	2.74
OBSML	2.71	2.71
Dilution	2.74	2.74

15.0 ADJACENT PROPERTIES

The Mine Allocation and Land Allocation at Zod are surrounded by a 20 km diameter Exploration Licence as explained in Section 4.0. Sterlite Gold also has an underground gold mine at Megradhzor, approximately 120 km WNW of Zod, which also has a 20 km exploration Licence surrounding the mine. No data from this project has been used in the estimates presented here.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Several ore-bodies are contained within the resource, each of which has a refractory component. The three main Orebodies 16/23, 4 and 1, represent the predominant mineralization types, ie, low stibnite, coarse gold telluride and talc sulphide. The refractory component is generally associated with stibnite, pyrite, telluride and arsenopyrite.

The current programme of metallurgical testing has been conducted on composite samples of drill core, and bulk samples collected from the underground workings, which are considered to be representative of the main ore types. The results of chemical analysis and laboratory cyanide solubility tests on the drill-core composites have been used to indicate the metallurgical response of each ore body, and to validate the bulk samples. As expected from previous work, the 16/23 Orebody is the most refractory, whereas 4 and 1 are less so and also have a significant, readily leached component.

Standard laboratory procedures on the bulk samples have included, gravity, direct cyanide leach, flotation, pressure oxidation and cyanide leach of flotation concentrate; and scavenging of direct cyanide leach and flotation tailings using gravity and/or cyanide leach. The bulk of the test work has been conducted at the Armniprosvetmet Institute in Yerevan, which has considerable experience of the Zod ores, with the pressure oxidation test work has been conducted by Hazen Research Inc. in Colorado.

Depending on the ore type, the laboratory results are as follows: direct cyanide leach gold recovery varies from 11% to 86%; gold recovery to flotation concentrate varies from 70% to 95%; additional gold recovery of 4% to 10% is obtained from the flotation tailings by cyanide leaching; gravity concentration of flotation tailings increases gold recovery by 2% to 15%; and flotation concentrate pressure oxidation and cyanide leach recovery varies from 87% to 99%.

The current laboratory results indicate the use of conventional grinding and direct cyanide leach on non-refractory ore, and flotation, pressure oxidation of flotation concentrate and cyanide leach for the refractory ore. Scavenging of tailing using gravity or cyanide leach, as appropriate, is also indicated. Depending on the ore type and the process route, the indicated overall metallurgical recovery is 84% to 93%. The results obtained from the current test programme show good agreement with a previous pre-feasibility study conducted in 1997 and 1998 by Kilborn SNC – Lavalin for First Dynasty Mines and a further study by Aker Kvaerner in 2003.

Based on the encouraging results from the current laboratory test programme, AGRC has initiated a programme of confirmatory metallurgical test work. This programme will include pilot plant flotation and pressure oxidation testing of larger bulk samples and finalisation of process design criteria for all the ore types. Various process plant options have been considered: the current design is for a single line, 1 Mtpa plant at Zod, comprising each of the unit processes indicated by the test work, which will be capable of processing the various ore types on a campaign basis. A significant amount of equipment, including crushing, primary grinding, flotation and leaching, is available at AGRC's existing Ararat operation for relocation to Zod.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES.

A total of 20,750 samples were generated and compiled and used in the database. In addition, samples from Orebodies 1 and 4 collected during Soviet era mining above 2190 m RL were used. Soviet era samples total around 2,000.

17.1 Geological Interpretation

There are two main rock types in the area of exploration, gabbro and serpentinite / peridotite. Two methods were tried to understand and construct the geological section, the first was to consider two broad ore zones one within gabbro and the other within serpentinite / peridotite. The second method was to outline the metasomatic zones separately, to study their continuity based on the geology and general description of the mineralogy and sequential occurrence of these orebodies from north to south. The first method led to an open wireframe with broad control on geology, while the second method resulted in a closed and tight wireframe with more control on grade and mineralogical differentiation of ore types. The broader wireframes resulted in poorer definition of the orebodies and this method was eliminated after early evaluation.

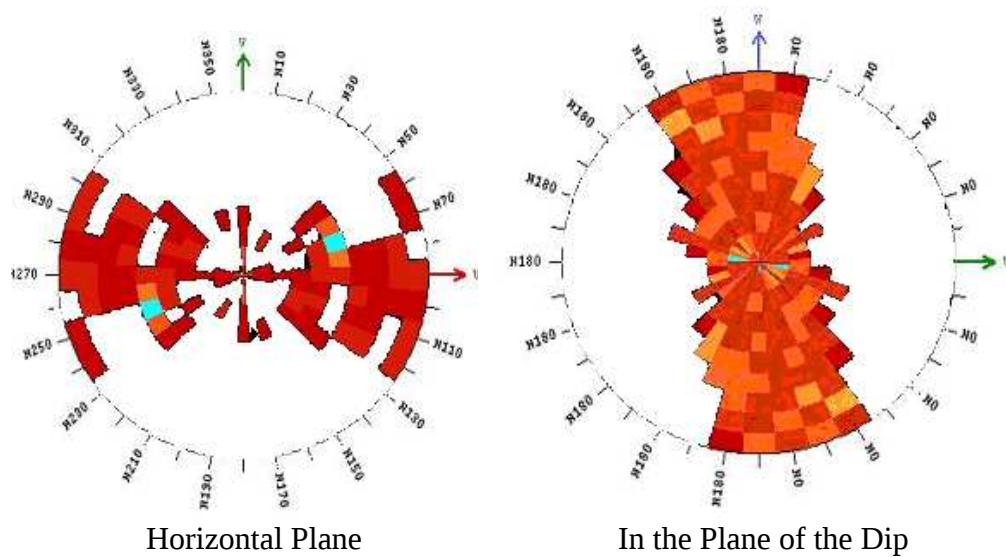
Mineralised areas were delineated using a cut off 0.9 g/t Au on the raw assay data. Geological sections were interpreted for each distinct orebody separately because drill spacing was not always regular.

The identity of the individual ore zones was based on the earlier nomenclature developed during the Soviet era. In order from north to south Orebodies 16A, 23B, 23 and 9A lie within gabbro, Orebody 1 is generally on the contact of gabbro and serpentinite / peridotite and has talc as part of the mineralogy and Orebody 4 which is a porphyry dyke lies well within peridotite. For Orebody 16A, exploratory mining data was also available from AGRC mining for 5th level (2275 m RL) and 20 m above 5th level (2295 m RL). Orebodies 23B, 23 and 9A were interpreted in a similar fashion within gabbro and considering mineralogy and grade.

Only exploratory mining data was available for Orebody 41. Data was derived from levels 2375 m RL, 2367 m RL, 2316 m RL and 2275 m RL. Outlines were digitised on each of the planes and joined to form 3-D orebody solids.

Variogram maps were generated using samples within each orebody to characterise the spatial continuity of gold mineralisation in the XY and YZ Planes. The best correlation was found to occur in the dip direction. The continuity observed is attributed to the close proximity of drill holes in the dip direction and the general continuity of the mineralisation. Examples of variogram maps are presented in Figure 17.1 below.

Figure 17.1: Variogram Maps Showing Anisotropy of Zod Gold Mineralisation



A typical cross section is shown in Figure 17.2 below with all the orebodies. Grade zones are defined as less than or equal to 0.9 g/t Au in red and greater than 0.9g/t Au in green. It is evident that some of the grade plus 0.9 g/t Au has not been included in the mineral resource wireframes due to lack of continuity. These intersections have not been used for mineral resource modelling and interpolation of grade as continuity could not be established. Alteration and gold mineralisation was interpreted to be very localised, and in few examples the grades occur within unaltered gabbro.

Table 17.1: Maximum Orebody Limits

Orebody	X-Min	X-Max	Y-Min	Y-Max	Z-Min	Z-Max
OB16A	882090	882513	556149	556325	2000	2415
OB23B	882090	882504	556192	556297	1930	2330
OB23	882090	882462	556168	556281	1920	2430
OB9A	882090	882442	556132	556256	1935	2327
OB1	881836	882546	556024	556263	1910	2481
OB1A	882377	882950	555980	556139	2120	2385
OB4	881936	882435	555951	556139	1930	2391
OB41	882022	882168	556131	556246	2228	2379
OBGM	881775	882770	555690	555878	2324	2515
OBSML	882247	882581	556170	556290	2013	2408

Table 17.2: Orebody Dimensions

Orebody	Strike length (m)	Depth (m)
OB16A	423	415
OB23B	414	400
OB23	372	510
OB9A	352	392
OB1	710	571
OB1A	573	265
OB4	499	461
OB41	146	151
OBGM	995	191
OBSML	334	395

In addition to the major orebodies, 3-D wireframes were made for smaller splays, which form part of the major orebodies. Each of these orebodies was coded separately and a group code was assigned for each major orebody group.

Table 17.3: Rock Codes for Block Modelling

Orebody	Rock Code	Group Rock Code
OB 16A	160	16
OB 16A EX	162	
OB 16AD	161	
OB16E	163	
OB23A	250	24
OB23B	240	
OB23BEX	241	
OB23	230	23
OB23EX	231	
OB9A	900	9
OB9AEX	901	
OB1	100	1
OB1EX	101	
OB1A	110	11
OB1AEX	111	
OB4	400	4
OB41	410	41
OBGM	1000	1000
OBSML	1500	1500

In addition, underground stopes were modelled to form 3-D wireframes and these were used to deplete mined blocks from the mineral resource model.

17.3 Statistical Analysis

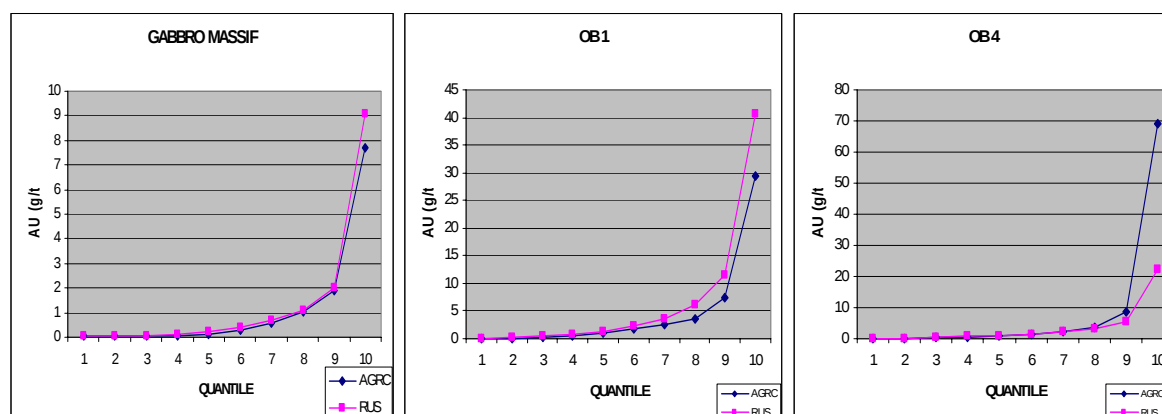
The wireframes were used to compile assay data to be used for grade interpolation. Sample data that fell within each orebody wireframe were analysed separately at all stages of mineral resource estimation. Basic statistical parameters for gold were generated for each data set. The purpose of the statistical analysis was to characterise gold grade distribution and to identify the presence of mixed data populations. The information acquired from the statistical analyses was used to determine the most appropriate interpolation technique for grade modelling. Orebody 16A is unique as two types of data are available and both have distinct statistical characteristics. Samples from underground development were treated separately from the drilling samples as was grade interpolation.

Table 17.4: Basic Statistical Parameters by Orebody for Gold Assays

Orebody	Minimum	Maximum	Mean	Std. Dev.	No. of Samples	Coeff. Var.
OB 16A	0.05	95.92	5.13	7.99	974	1.56
OB 16A DEV.	0.05	196.75	12.83	24.65	321	1.92
OB 16AEX	0.05	69.79	4.52	9.15	193	2.02
OB 16E	0.60	4.68	2.58	1.31	8	0.51
OB 23A	0.05	105.99	14.45	27.81	23	1.92
OB 23B	0.05	216.56	4.68	13.25	398	2.83
OB 23BEX	0.05	13.88	2.85	2.90	83	1.02
OB 23	0.05	94.08	3.77	7.01	323	1.86
OB 23EX	0.05	19.52	2.72	3.55	67	1.31
OB 9A	0.05	37.12	3.19	4.84	186	1.52
OB 9AEX	0.05	24.00	2.25	3.44	50	1.53
OB 1 (Z>2180)	0.05	137.44	4.67	10.90	715	2.33
OB 1 (Z<2180)	0.05	88.60	4.74	11.08	90	2.34
OB 1EX	0.01	192.44	8.56	22.32	475	2.61
OB 1A	0.01	64.00	4.65	8.92	133	1.92
OB 1AEX	0.04	436.78	8.66	33.76	393	3.90
OB 4 (Z>2180)	0.05	275.44	24.02	43.64	246	1.82
OB 4 (Z<2180)	0.05	74.80	1.18	3.67	976	3.11
OB 41	0.50	94.08	1.93	6.02	1441	3.12
OB GM	0.05	95.92	5.13	7.99	974	1.56

A basic statistical analysis of sample data derived from the Soviet era was made to determine if the data was suitable for use in mineral resource estimation. The results of this analysis were compared with the same statistical parameters compiled for AGRC exploration sample data. The quantile plots of Figure 17.3 show that AGRC exploration data and the Soviet era data have similar distributions. Approximately 2,000 Soviet era samples were used in grade interpolation. Only Soviet era samples derived from above 7th level (2190 m RL) were used. Samples for Orebodies 1 and 4 were divided into two groups based on the 2190 m RL. Samples above the 2190 m RL were treated separately from samples derived from below 2190 m RL.

Figure 17.3: Comparison of Grade Distributions for Soviet and AGRC Drilling for Gabbro Massif and Orebodies 1 and 4



17.4 Top-Cutting High Assays

Basic statistical parameters developed for raw gold assays showed that the data is positively skewed. It was decided that it was necessary to limit the influence of high assays. The options available to limit the influence of high assays include compositing sample lengths, cutting high assays (outliers), applying an indicator kriging protocol or alternatively, a combination of all of these methods. The lack of sufficient data for individual orebodies precluded the use of indicator kriging. The preferred method was to top-cut high assays and to carry out ordinary kriging using composites within each orebody. To determine appropriate top-cut levels for each orebody lognormal probability plots were examined.

Table 17.5: Top-Cut Level For High Assays

Orebody	Top-Cut (g/t Au)	Percentile
OB 16A	32	98.3
OB 16A EX	16	94.3
OB 16AD	58	95.2
OB16E		100.0
OB23A	7	73.3
OB23B	16	96.5
OB23BEX		100.0
OB23	18	98.1
OB23EX	9	93.3
OB9A	10	93.6
OB9AEX	10	97.9
OB1	35	97.7
OB1EX	9	92.0
OB1A	30	94.0
OB1AEX	16	94.7
OB4	40	95.4
OB41	100	93.9
OBGM	12	98.9
OBSML	9	83.7

17.5 Sample Composites

Core samples range from 0.3 m to 1.5 m and for most reverse circulation drill samples a 2 m composite sample was assayed. Thus the minimum sample length was 0.3 m the maximum sample length was 2 m. Prior to kriging all samples were composited to 2 m intervals. Compositing was created using only samples that fell within the orebody wireframes.

Basic statistic parameters for 2 m composited gold assays are provided in Table 17.6 below. These composites were used to interpolate grade for each of the orebodies.

Table 17.6: Basic Statistic Parameters by Orebody for Gold Assay Composites

Orebody	Min	Max	Mean	Std Dev	No. of samples	Coeff Var
OB 16A	0.05	32.00	4.62	5.61	600	1.21
OB 16A DEV.	0.05	58.00	10.47	11.48	166	1.10
OB 16AEX	0.05	16.00	3.67	4.37	124	1.19
OB 16E	0.60	4.68	2.58	1.31	8	0.51
OB 23A	0.05	7.00	2.46	2.74	19	1.11
OB 23B	0.05	16.00	3.13	3.07	225	0.98
OB 23BEX	0.05	12.65	2.34	2.51	55	1.07
OB 23	0.05	17.35	3.09	3.10	190	1.00
OB 23EX	0.05	9.00	2.16	2.10	37	0.97
OB 9A	0.05	9.81	2.66	2.30	104	0.86
OB 9AEX	0.18	7.41	1.96	1.62	29	0.83
OB 1 (Z>2180)	0.00	35.00	5.09	7.27	3091	1.43
OB 1 (Z<2180)	0.00	35.00	5.75	7.27	159	1.26
OB 1EX	0.05	9.00	2.11	2.07	85	0.98
OB 1A	0.00	30.00	3.83	5.54	1135	1.45
OB 1AEX	0.00	16.00	3.15	3.85	130	1.22
OB 4 (Z>2180)	0.00	40.00	3.35	5.59	1880	1.67
OB 4 (Z<2180)	0.05	39.52	4.70	8.41	188	1.79
OB 41	0.36	100.00	18.85	25.27	130	1.34
OB GM	0.00	12.00	1.10	1.86	2868	1.69

17.6 Spatial Analysis

Variogram maps were generated for major orebodies to determine the spatial correlation of gold assay data and trends inherent in the mineralisation. Variograms summarise the variability of sample grades for specific intervals of separation and direction vectors in 3-D space. Variograms were calculated at 10° increments in the plane of investigation and were contoured to highlight the spatial relationships in a 2-D plane. Variogram maps were generated in the horizontal plane relative to the strike direction and in the plane of the structures in their plunge directions. At Zod the plunge direction of the mineralisation demonstrated the greatest degree of spatial correlation of the mineralisation.

Variograms were calculated for all major orebodies and the results obtained were used in splays of the same orebody.

The search ellipse to be used for grade interpolation for each orebody was developed from these variograms. The search ellipses used for grade interpolation are summarised in Tables 17.7 to 17.12 below.

Table 17.7: Variogram Parameters Orebodies 16A, 16A dev, 16AEX, 16E, 23A, SML

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	S80 ⁰ E	N10 ⁰ E	S10 ⁰ W
Plunge	0	-75	-15
Spread	15	25	25
Spread limit	15	20	5
Lag	35	20	2
Max. Distance	400	200	20
Nugget	11	11	11
Structural variance	22	22	22
Range	80	32	8

Table 17.8: Variogram Parameters for Orebodies 23B, 23BEX, 23, 23EX

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	S80 ⁰ E	N10 ⁰ E	S10 ⁰ W
Plunge	0	-75	-15
Spread	20	25	25
Spread limit	20	20	5
Lag	25	20	2
Max. Distance	300	200	20
Nugget	0.35	0.35	0.35
Structural variance	4.1	4.1	4.1
Range	57	74	10

Table 17.9: Variogram Parameters for Orebodies 9A, 9AEX, 1, 1EX, 1A, 1AEX

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	S80 ⁰ E	N10 ⁰ E	S10 ⁰ W
Plunge	0	-65	-25
Spread	15	25	30
Spread limit	15	15	20
Lag	50	35	3
Max. Distance	400	400	25
Nugget	4	4	4
Structural variance	102	102	102
Range	130	65	5

Table 17.10: Variogram Parameters for Orebody 4

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	S80 ⁰ E	N10 ⁰ E	S10 ⁰ W
Plunge	0	-65	-25
Spread	25	25	30
Spread limit	5	30	20
Lag	40	35	3
Max. Distance	400	150	25
Nugget	2.8	2.8	2.8
Structural variance	103	102	102
Range	65	52	9

Table 17.11: Variogram Parameters for Gabbro Massif

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	N70 ⁰ E	S20 ⁰ E	N20 ⁰ W
Plunge	0	-60	-30
Spread	20	30	30
Spread limit	10	10	6
Lag	13	5	3
Max. Distance	150	50	30
Nugget	0.35	0.35	0.35
Structural variance	1.33	1.33	1.33
Range	29	11	5

Table 17.12: Variogram Parameters for Orebody 41

Parameter	Along Strike	Perpendicular to the Dip	Down the Hole
Azimuth	N45 ⁰ E	S45 ⁰ W	N45 ⁰ W
Plunge	0	0	-90
Spread	10	30	30
Spread limit	5	10	6
Lag	3	5	30
Max. Distance	25	50	200
Nugget	31	31	31
Structural variance	130	130	130
Range	10	3	25

A minimum of three and a maximum of ten nearest composites were used to interpolate block grades.

17.7 Mineral Resource Modelling

The gold mineral resource model was generated as a 3-D block model in Datamine mining software. The block model contains the following elements: orebody code, block X, Y and Z coordinates, block dimensions, rock type, bulk density, gold grade (interpolated or assigned), volume factor (depleted by prior mining) and mineral resource category. The final digital model is named “AGRCMOD”.

17.7.1 Block Model Description

The Zod mineral resource block model was generated using a parent block size of 2 m (northing) by 15 m (easting) by 5 m (vertical). This block size was deemed appropriate relative to the geometry of the orebodies and for mine planning. It was considered inappropriate to use model blocks smaller than this considering the data spacing and the probability that estimation of gold grades for smaller blocks would likely result in conditional bias, whereby the high grade blocks are artificially downgraded and the low grade blocks are artificially upgraded. The result of conditional bias is excessive smoothing of block grade estimates and therefore lower reliability of local block grade estimates.

The dimensions of the Zod block model is summarised in Table 17.13 below.

Table 17.13: Zod Block Model Limits

Coordinates or Elevation	Units	Dimensions (m)
881300 E to 883700 E	160 columns at 15 m E	2,400
554500 N to 556000 N	1,250 rows at 2 m N	1,500
1,800 RL to 2,700 RL	180 benches at 5 m RL	900

The coordinates for the centroid of the bottom left hand block are: 881307.5 E, 554501 N, 1802.5 RL.

17.7.2 Rock Type Assignment, Grade Interpolation and Trimming.

Individual 3-D wireframes of each rock type were filled with blocks. Parent blocks were sub-blocked to fill the wireframe completely and to remove any volume discrepancy arising out of the difference between the wireframe volume and the block model volume. Bulk density, rock code and group rock code were assigned to these individual blocks for each orebody before grade interpolation.

Gold grades were interpolated into the model blocks using ordinary kriging. The choice of ordinary kriging was supported by the favourable reconciliation achieved using a previous kriged model and mining and grade control results obtained over a period in excess of a year. Gold grade for each orebody was interpolated separately. After the first pass of grade interpolation some of the blocks remain unfilled. Grades were interpolated into the remaining unfilled blocks by increasing the range of search ellipsoid. Sub-blocks were not estimated separately but were assigned the grade of the parent block. To account for surface topography the model was cut by a 3-D topographic surface. Similarly, the block model was cut by the 3-D stope wireframes to remove previously mined volumes.

17.7.3 Block Model Validation

Basic statistical parameters were generated for gold grades in the mineral resource block model. The results of this analysis are presented in Table 17.14.

In addition to reviewing the statistical parameters of the mineral resource block model a variety of techniques were used to validate the model. A series of cross sections were generated showing drill hole assay data and block model grades. Plots were inspected for reasonableness of the block grade estimates. In another exercise 5 m bench composites were generated from the cut assay data and these were compared with the block grade in which the composite occurred. Scatter plots of block grade versus bench composite were generated for each orebody to reveal the degree of correlation between the two values.

Table 17.14: Zod Block Model Basic Statistical Parameters

Orebody	Min	Max	Mean	Std Dev	Coeff Var
OB 16A	0.00	32.00	4.59	2.93	0.64
OB 16A DEV.	0.44	30.76	9.57	5.24	0.55
OB 16AEX	0.05	16.00	3.46	3.05	0.88
OB 23A	0.08	7.00	2.28	1.59	0.70
OB 23B	0.05	12.91	3.29	2.29	0.70
OB 23BEX	0.05	8.78	2.66	1.32	0.50
OB 23	0.05	10.33	3.27	1.76	0.54
OB 23EX	0.34	9.00	2.40	1.44	0.60
OB 9A	0.05	9.30	2.64	2.14	0.81
OB 9AEX	0.59	7.41	2.02	1.25	0.62
OB 1 (Z>2180)	0.00	33.24	4.34	4.36	1.00
OB 1 (Z<2180)	0.01	30.24	5.31	4.87	0.92
OB 1EX	0.05	8.58	2.60	1.53	0.59
OB 1A	0.00	20.79	3.86	3.40	0.88
OB 1AEX	0.01	16.00	3.68	3.24	0.88
OB 4 (Z>2180)	0.00	34.13	3.05	2.93	0.96
OB 4 (Z<2180)	0.01	31.74	4.16	4.67	1.12
OB 41	0.92	64.98	16.46	9.79	0.59
OB GM	0.01	7.19	0.99	0.80	0.81

17.8 Mineral Resource Classification

Mineral resources were classified on the basis of the location of blocks relative to the data used to interpolate the block grade. The protocol for assignment of mineral resources to the appropriate category adhered to the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). Mineral resources were categorised as follows:

- **Measured:** Blocks which lie 15 m above or below a mining level developed either by AGRC or during the Soviet era. Only blocks in Orebodies 1, 4 and 16A satisfied these criteria.
- **Indicated:** Blocks estimated in the first pass of grade interpolation, ie. blocks that satisfied the primary search criteria derived from the variogram analyses.
- **Inferred:** Blocks that did not satisfy the primary search criteria and therefore received grades in subsequent grade interpolation runs where the search radius was arbitrarily increased until a block grade was estimated.

The JORC Code category definitions for Mineral Resources are to all intents and purposes identical to those used under the CIM Code. Use of the CIM Code in these instance would not have affected the resource estimates indicated herein.

The final mineral resource model was depleted for previously mined volumes, cut by the surface topography and adjusted using short term plans to reflect mineral resources at 31st December 2004. The resulting mineral resource statement is effective 1st January 2005.

A summary of block model tonnages and average gold grades for Measured, Indicated and Inferred mineral resources at several block grade cut-off grades is provided in Table 17.15.

**Table 17.15: Zod Mineral Resources at 1st January
(Corrected for Planned Mining to 31st December 2004)**

Cut-Off (g/t Au)	Measured		Indicated		Inferred		Measured + Indicated	
	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
0.0	1,729	4.34	17,564	3.34	2,494	1.95	19,293	3.43
0.6	1,597	4.67	15,415	3.76	1,769	2.60	17,013	3.85
0.9	1,501	4.92	13,881	4.09	1,392	3.10	15,382	4.18
1.5	1,286	5.54	11,542	4.68	924	4.07	12,828	4.77

Thus, at a block cut-off grade of 0.6 g/t Au, the total remaining mineral resource at 1st January 2005 is estimated to be 18.8 Mt at a grade of 3.7 g/t Au. This Measured and Indicated portion of this mineral resource contains 65.5 t of gold or 2.1 Moz of gold. The Inferred portion of the mineral resource contains a further 4.6 t of gold or 0.15 Moz of gold.

18.0 OTHER RELEVANT DATA AND INFORMATION.

A comprehensive review of all relevant project data and requirements is currently underway. This includes legal, environmental, geotechnical, mining, metallurgical and processing information. Results of these studies will enable a comprehensive analysis of project economics, development options and preferred project development method, timetable and cost. This is proceeding concurrently with the development of an expanded exploration programme as indicated above.

19.0 INTERPRETATION AND CONCLUSIONS.

Exploration including mining and drilling has confirmed the overall reliability of data collected during the Soviet era. Past mineral resource estimates calculated from this data have probably overstated the gold grade and underestimated the tonnage. This has been confirmed by recent open pit mining. It is apparent that infill drilling is necessary to supplement and confirm data acquired during the Soviet era prior to mineral resource calculations.

Drilling to date at Zod has only tested part of the area for which Soviet era mineral reserves were calculated. AGRC's first priority was to delineate the mineral resources below 7th level, 2190 m RL. Only 440 m of strike length has been explored of a total potential length of over 1,000 m. In addition, only the main ore bodies have been tested as well as a limited portion of the Gabbro Massif. Based on exploration results achieved to date it is evident that considerable potential remains to increase the mineral resources of the Zod Mine.

Additional drilling is required to test the remaining areas of known mineralisation and areas for which mineral reserves were calculated during the Soviet era. Figure 19.1 shows AGRC explored mineralised zones in yellow and mineralised zones unexplored by AGRC in red within the main area of the Central block.

Figure 19.1: Exploration Potential of the Central Block

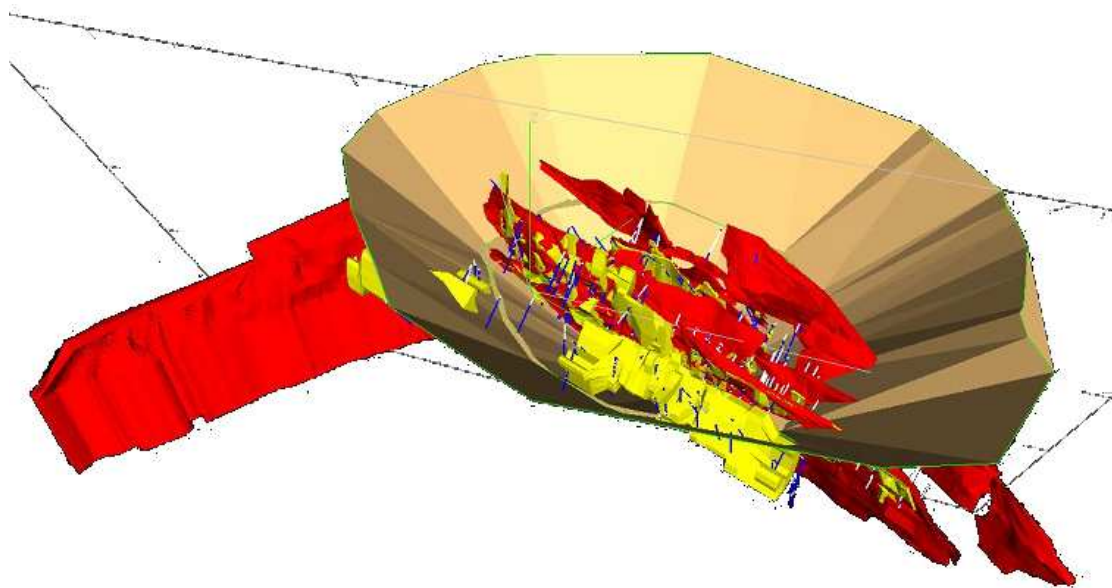
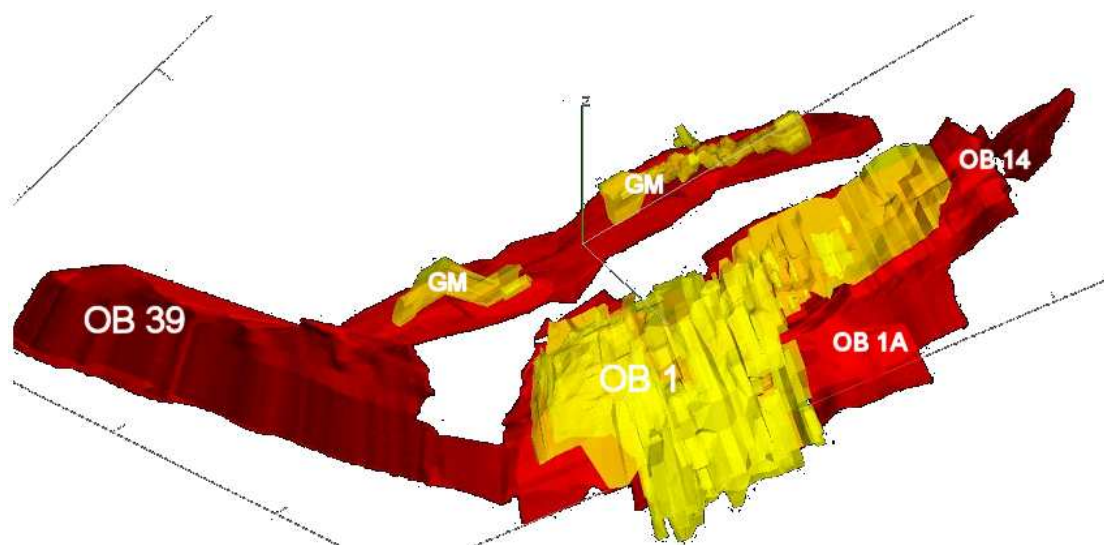


Figure 19.2 shows the limited extent to which the Gabbro Massif has been explored by AGRC. The figure also shows clearly that a significant proportion of Orebodies 1 and 1A remain to be explored by AGRC. The deeper part of 1A is also untested as is Orebody 14. This image presented is an oblique view looking to the northwest from below.

Figure 19.2: Exploration Potential of Gabbro Massif and Orebodies 1A, 14 and 39



Further exploration is required to fully assess the mineral resource potential of the Zod mine and surrounding area. Exploration plans for 2005 are currently under review.

20.0 RECOMMENDATIONS

Drilling is required to identify and quantify the additional mineral resources at Zod. Orebodies identified by exploration and mining during the Soviet era remain to be confirmed by AGRC.

20.1 Central Block

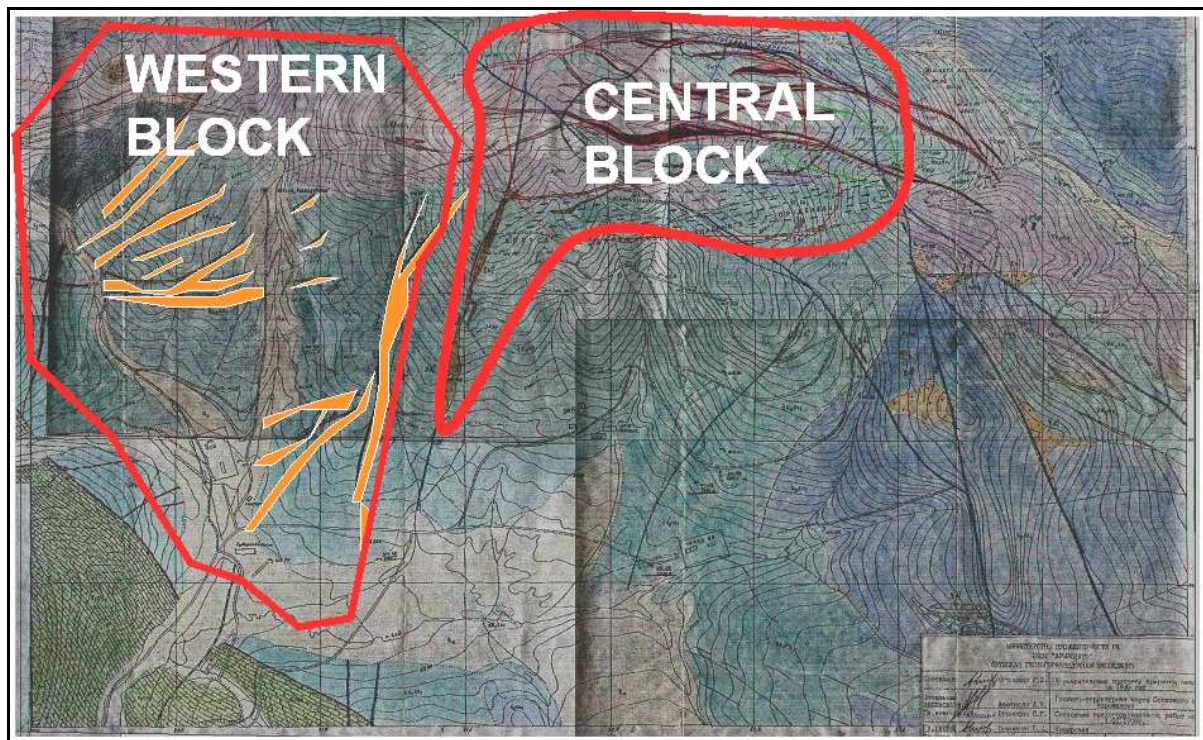
The first priority is to extend the drilling programme in the Central block. This will be accomplished utilising combination of RC and diamond drilling. All of the RC drilling will be from surface. Surface drilling will test known orebodies and areas of potential down to a depth of 200 m and provide pre-collars for deeper diamond drilling. Diamond drilling will be conducted from underground openings to intersect mineralisation below existing development. Some surface diamond drilling will be utilised to extend the information acquired from the RC holes. Where possible RC pre-collars will be used to maximise the drilling budget and take advantage of the improved coring conditions experienced beneath the zone of surface weathering. A limited amount of surface drilling will be conducted in areas primarily tested by reverse circulation to collect structural and geotechnical information and provide a comparison between diamond and RC drilling.

20.2 Western Block

The area located immediately to the west of the Central block is referred to as the Western block. The Western area is locally known as Tigranasarsk. Exploration of this area will primarily utilise drilling as a large amount of sampling and underground development has already been completed on many of the deposits. Several shafts have been sunk in the Western block and the deepest shaft extends to below 1980 m RL. Drilling in this area will include both RC and diamond drilling with deeper holes drilled by extending RC pre-collars by diamond drilling.

Figure 20.1 shows the location of the Western block relative to the main Central block. The map was created during the Soviet era and highlights the location of some of the more prominent mineralised zones that have yet to be explored by AGRC. The grid lines on the map represent 500 m.

Figure 20.1: Exploration Potential of the Western Block



20.3 Regional Exploration

A regional bulk cyanide leach stream sediment sampling programme is also recommended to identify areas of favourable mineral potential further away from the mine site. A number of mineral prospects in the area have been subject to some surface sampling and trenching and a regional sampling programme will serve to determine priorities. Regional sampling programmes previously completed will also be obtained from the government archives.

21.0 REFERENCES

- i) Zod and Meghradzor at Ararat Feasibility Study 1988 for First Dynasty Mines Ltd by KCMP Joint Venture Report No MZ 1002-RP-00-11
- ii) The State Commission on Mineral Product Reserves at the Council of the Ministers of the USSR Minutes No 8635 dated 21st November 1980
- iii) Maxwell, 1977; Unpublished petrological report

22.0 SIGNATURE

Signed -

A handwritten signature in black ink, appearing to be 'S. C. Bartlett', is written over a circular professional seal. The seal is for the 'PROFESSIONAL INSTITUTE OF GEOSCIENTISTS' and contains the name 'S. C. BARTLETT' and the word 'COLUMBIA'.

Stanley C. Bartlett, PGeo.

17th November 2004

Senior Economic Geologist, Micon International Co Ltd.

CERTIFICATE OF STANLEY C. BARTLETT, P.GEO.

As the principal author of this report entitled "Mineral Resources of the Zod Mine, Armenia" dated 17th November 2004, I hereby make the following statements:

1. My name is Stanley C. Bartlett and I hold the position of Senior Economic Geologist at Micon International Co Limited, Mineral Industry Consultants. My office address is Suite 10, Keswick Hall, Keswick, Norwich, Norfolk, United Kingdom, NR4 6TJ.
2. (a) I have the following degrees:
 - BSc. Geological Sciences, University of British Columbia, Vancouver, British Columbia, Canada.
 - MSc. Mining Geology, Camborne School of Mines, Redruth, Cornwall, United Kingdom.(b) I hold the following membership:
 - Member of the Association of Professional Engineers and Geoscientists of British Columbia (No. 19698).(c) I have been practising as a professional geologist for 25 years.
3. By reason of experience and education, I fulfil the requirements of a Qualified Person as set out in National Instrument 43-101, as regards the geological, exploration planning, resource and reserve aspects of the report.
4. I visited the Zod Mine in February and August 2004 for a total period of 7 days.
5. I have read National Instrument 43-101 and Form 43-101F1. This report has been prepared in accordance with generally accepted Canadian mining industry practice and is in compliance with National Instrument 43-101, and Form 43-101F1. It is based on an examination and analysis of data and records provided by "Ararat Gold Recovery Company" a subsidiary of Sterlite Gold Ltd and personal observation. It is a statement of material facts and opinion and may be used by "Sterlite Gold Ltd" and its advisors in support of their public announcement dated 19th October 2004.
6. As of the date of this Certificate, I am not aware of any material fact or material change in regard to the subject matter of this report, which is not reflected in this report, the omission to disclose, which makes the report misleading.
7. I am independent of Sterlite Gold Ltd applying all the tests in Section 1.5 of National Instrument 43-101.
8. I have not had prior involvement with the property that is the subject of this report.

Norwich, United Kingdom
17th day of November, 2004,

(Signed by)  
Stanley C. Bartlett, P.Geo.

CONSENT OF AUTHOR

TO: BRITISH COLUMBIA, ALBERTA AND ONTARIO SECURITIES
COMMISSIONS; THE REGISTRAR OF SECURITIES, GOVERNMENT OF THE
YUKON TERRITORY; AND THE TSX VENTURE EXCHANGE

I, Stanley C. Bartlett, do hereby consent to the filing, with the regulatory authorities referred to above, of the technical report titled "Mineral Resources of the Zed Gold Mine, Armenia" dated 17th day of November, 2004.

I further confirm that I have read the written disclosure to be filed and I do not have any reason to believe that there are any misrepresentations in the information derived from the technical report or that the written disclosure contains any misrepresentation of the information contained in the technical report.

Dated this 17th day of November, 2004



Norwich, United Kingdom

(Signed by) _____
Stanley C. Bartlett, P.Geo.