TECHNICAL BRIEFING

Toukhmanuk Gold Mine, Republic of Armenia

Analysis of the 2016 GKZ Reserves Approval and Associated Data Integrity Concerns

EXECUTIVE FINDING

In November 2016, Armenia's State Committee of Reserves approved 2.57 million tonnes of ore at 5.00 g/t gold for Toukhmanuk. By that date the operator had held, for nearly four years, three independent findings on its own database — a 17.3× divergence on independent pulp re-assay, phantom drill-hole intervals and a silver-for-gold transposition in the block model, and a 2.6× divergence between the operator's laboratory and an independent laboratory on splits of the same samples. None of it reached the commission.

The one constant factor across every finding, transaction and dispute described above is Van Z. Krikorian, who at all material times served as President, CEO, Director and Legal Counsel of Global Gold Corp. — signatory on the 2011 CSA Global contract, named recipient of the April 2012 adverse findings, and the senior officer whose representations brought each successive counterparty (CRA, Linne Mining, and now Optima Management) into the project.

The database cannot support a reliable grade or economic assessment. Until independent re-verification is performed and certified by a Competent Person under JORC or NI 43-101, the 2016 figure is not a basis on which to transact.

DELIVERED TO

Optima Management Company
Exclusive Operator, Toukhmanuk Gold Mine
116 Nalbandyan Street, Yerevan, Republic of Armenia
optimamanagmentcompany@gmail.com

PREPARED BY

Bill Mavridis
Former JV Partner of Global Gold Corp.
Montreal, Quebec, Canada
Tel / WhatsApp: +1 514-813-9200
vzk.exposed@gmail.com

Date of this briefing: April 2026

Cover letter to Optima Management Company

To the Directors and Principals of Optima Management Company:

It has come to my attention that Optima Management Company is presently engaged as the exclusive operator of the Toukhmanuk Gold Mine and is being invited to rely upon the reserves approved by the Republic of Armenia State Committee of Reserves (GKZ) in its State Subsoil Expertise Conclusion No. 6, dated 4 November 2016, as prepared by Mego-Gold LLC, an Armenian subsidiary of Global Gold Corp. (OTC: GBGD).

I am a former investor in mineral exploration in the Republic of Armenia (2009–2012, principally at the Marjan polymetallic project) and a former joint-venture partner of Global Gold Corp., counterparty to its President, CEO, Director and Legal Counsel, Mr. Van Z. Krikorian. Since 2018 I have maintained a public record of documentary evidence concerning the Toukhmanuk project, the CRA joint venture of 2011–2012, the Linne Mining contract-miner engagement of 2013–2015, the 2012 CSA Global pulp re-assay programme, the Cusiani / Geo-Logaritmica analyses of the RESMODEL block model, and the subsequent bankruptcy of Mego-Gold LLC.

The purpose of this briefing is to place in your hands, before you commit capital or operating resources, a consolidated technical and factual analysis of what the 2016 GKZ approval represents — and, critically, of what was withheld from the GKZ when the file was submitted. Two prior counterparties (Consolidated Resources Armenia, which invested approximately USD 7 million, and Linne Mining, which advanced approximately USD 5.8 million and later filed a USD 39 million creditor claim in the Mego-Gold bankruptcy) entered into transactions on substantially the same dataset that is now being presented to Optima. Both left the project alleging that the underlying assays had been manipulated. Neither recovered its investment.

You are not obliged to accept any conclusion in the pages that follow. You are, however, placed on notice of the documentary record that exists and of the specific technical concerns that, in my view, make the 2016 GKZ reserves unreliable for investment or operating decisions without a full independent re-verification programme. The underlying source documents — the 2016 GKZ report itself, SEC filings, the April 2012 CSA Global email chain, the Geo-Logaritmica reports, and the court and bankruptcy records — are cited in the Sources section at the back of this briefing and remain publicly available.

Respectfully,

Bill Mavridis

Montreal, Quebec, Canada

Red flags at a glance

The central finding

The 2016 GKZ reserves approval for Toukhmanuk rests on a sample database that three independent technical reviews, conducted over four years on behalf of three different commercial counterparties, have shown cannot support a reliable determination of gold grade or mine economics. The deficiencies are not marginal. The CSA Global 1,013-pulp re-assay programme of April 2012 returned only 6 of 1,013 pulps at Au ≥ 1 g/t, against a reported operator mean of 1.58 g/t on the matched 551-pair subset — a 17.3× divergence, with 99.8 per cent of pairs falling outside ±10 per cent limits. The Cusiani / Geo-Logaritmica forensic examinations of 2014–2015 documented, in the RESMODEL block model that underwrites every downstream reserves claim, phantom drill-hole intervals on named drill holes, collars placed up to 22 m below the physical terrain, top-soil horizons reporting gold at ore grade, and at least one named sample in which the silver value from the operator's own laboratory database appears as the gold value in the block model. On splits of the same samples, the Linne Mining / Toukhmanuk laboratory returned mean gold grades 2.6 times lower than the Mego-Gold / Yerevan laboratory (paired t = 7.28, Z = −7.30). None of this was placed before the GKZ commission in 2016.

The consequence is not that the 2016 figure is wrong and some other figure is right. The consequence is that no reliable gold grade, and no reliable economic assessment, can be derived from the existing sample database. The Cusiani rebuild at 0.86 g/t Au — computed on Linne Mining's independent laboratory data but using the same drill-hole traces and block-model geometry that Cusiani's own contemporaneous report had already shown to contain phantom intervals, mis-placed collars and at least one documented silver-for-gold transposition — is not an alternative reliable grade. It is a demonstration that, even with the operator's laboratory values stripped out of the computation, the deposit as described does not yield the tier-one economics implied by the 2016 register. The CSA 551-pair pulp mean of 0.09 g/t Au is not a reserve grade either; it is an independent measurement showing the scale at which the operator's reported values diverge from independent assays of the same material.

What the documentary record supports, and the only thing it supports, is this: **the 2016 GKZ reserves figure cannot be relied upon for investment or operating decisions without an independent re-verification programme.** Such a programme would comprise, at minimum: twin-hole drilling at a statistically meaningful fraction of the resource; umpire assaying at an internationally accredited laboratory on blind submissions; an independent block-model build on the resulting data; and certification by a Competent Person under JORC or a Qualified Person under NI 43-101. Until that work is done, every assessment of Toukhmanuk's economic value is an illustration of the range of outcomes the unreliable data could support, not a basis on which to transact.

The case in numbers

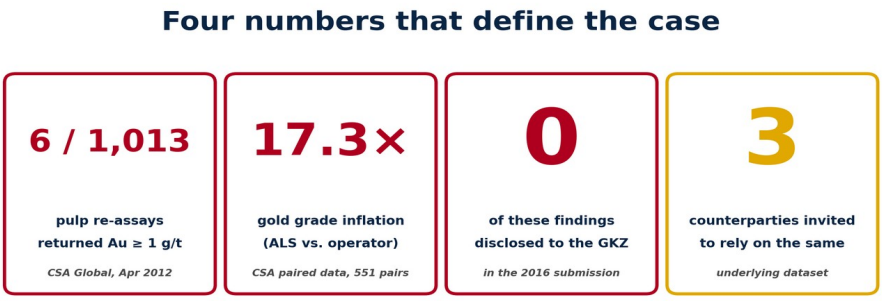

Figure 1. The four numbers that define the case.

The following is a consolidated list of every material concern identified in this briefing, organised by category. Each item is developed, with sources, in the sections that follow.

A. Integrity of the 2016 reserves calculation itself

- 10× cut-off inconsistency: marginal cut-off appears as 0.1 g/t in the methodology sections and 1.0 g/t in the approved conditions — both in the same file, never reconciled.
- Reported vein capacities (1.15–2.53 m in Southern blocks) exceed the physical vein widths described in the same report's geological text (0.8–1.5 m, up to 3.0 m at swells).
- Selective high-grading admitted on record: author's own statement that "only excessive levels characterised" veins were included, explaining the grade jump from historical data.
- Initial C1 over-classification at Mirak and Tsitskar (drill spacing of 95–100 m, which is C2 spacing) — caught only by independent experts and downgraded.
- Top-heavy resource pyramid: C1 represents only approximately 9 per cent of total C1+C2+P1 at Southern area.

B. QA/QC architecture failures on the face of the 2016 file

- No blank samples disclosed — no insertion rate, performance summary, or pass/fail analysis.
- No certified reference materials (CRMs) disclosed anywhere in the report.
- No field duplicate programme disclosed.
- No pulp or coarse-reject duplicate programme disclosed.
- No quantitative bias or precision metric: no paired difference, no correlation coefficient, no Thompson-Howarth analysis, no HARD statistics.
- The sole quantitative QA/QC figure in the entire report — a "15 per cent increase in accuracy" — is not a QA/QC metric and is technically meaningless.
- Inverted lab architecture: the one internationally accredited laboratory in the programme (Alex Stewart) was used only for non-primary metals (Cu, Pb, Zn); primary gold and silver were assayed in the operator's own laboratory with a single domestic Armenian umpire ("Analitic" CJSC).

C. Material information withheld from the GKZ

- The April 2012 CSA Global Pty Ltd. 1,013-pulp re-assay programme. On the 551-pair subset with matched Global Gold database values, mean Au in the independent re-assay was 0.09 g/t against 1.58 g/t reported by the operator — a 17.3× divergence, paired t = 20.14. Only 6 of the 1,013 pulps returned Au ≥ 1 g/t. Commissioned by the CRA JV. Acknowledged by Van Z. Krikorian in writing on 20 April 2012. Not disclosed to the GKZ.
- The 2015 Cusiani / Geo-Logaritmica forensic findings on the RESMODEL block model. Specifically: (i) direct side-by-side evidence for sample GGMT01430 on drill hole T-3-2-06 showing the "gold" value in the block model (5.2 g/t) is the silver value from the operator's own laboratory database; (ii) a duplicate-pair analysis of approximately 1,500 pairs showing the Mego-Gold / Yerevan lab reporting gold grades 2.6 times higher than the Linne / Toukhmanuk lab on splits of the same samples (t-statistic 7.28, Z-statistic −7.30); (iii) named drill holes with multi-metre phantom intervals (T-71-06: 17 m gap; T-27-06: 40 m gap); (iv) drill-hole collars placed up to 22 m below the physical terrain surface; (v) block model reporting 2.6 g/t Au in intervals the drill-hole logs identify as top-soil at approximately 0.2 g/t; (vi) P-P plot showing block model and input drill holes are statistically inconsistent. Not disclosed to the GKZ.
- Cusiani's rebuild of the pit plan on the Linne Mining data returned 2.94 Mt at 0.86 g/t Au — against Mego-Gold's 2016 GKZ figure of 2.05 Mt at 5.00 g/t Au for the Southern area alone. Not disclosed.
- Linne Mining's November 2015 walk-away from Toukhmanuk citing falsified assays — five months before the GKZ reporting date. Not disclosed.
- The CRA v. Global Gold Corp. proceedings in the Royal Court of Jersey concerning the same dataset. Not disclosed.
- Mego-Gold LLC's own bankruptcy proceedings, active at the time of submission. Not disclosed.

D. GKZ commission's own conduct

- Commission point 6 of the 4 November 2016 conclusion requests that the Subsoil State Inspection perform a "credibility survey" of the very geological information it is approving in the same document.
- Vote was not unanimous: 8 in favour, 0 against, 1 abstention. Identity of the abstaining member not recorded.
- Three independent experts (Gevorgyan, Hamazaspyan, Avetisyan) each flagged outstanding laboratory and technological work — reserves approved regardless.

E. Peer benchmark against Kapan / Shahumyan (closest Armenian analogue)

- Toukhmanuk Southern C1+C2 of 5.00 g/t Au sits above Kapan's gold-equivalent reserve grade of ~4.2 g/t and roughly 80 per cent above Kapan's Au-only reserve grade of ~2.74 g/t.

- Toukhmanuk Southern C1 of 6.69 g/t Au is roughly 340 per cent above Kapan's reconciled mined grade of 1.53 g/t Au (2006–2011).
- Ag:Au ratio at Toukhmanuk is approximately 2:1 across all three areas, against a district norm of 10:1 to 30:1 for Armenian polymetallic vein deposits — the direction of the anomaly is consistent with the Cusiani allegation of gold-silver transposition.

F. Corporate and governance pattern

- Combined executive, board and legal-counsel functions in a single individual (Van Z. Krikorian: President, CEO, Director and Legal Counsel) at Global Gold Corp.
- SEC-filed ore-mined tonnages exceed Armenian government records by +25 per cent to +104 per cent across multiple years (2006, 2008, 2010, 2011).
- Same dataset recycled into three successive commercial vehicles: CRA (2011–2012, lost USD 7 million), Linne Mining (2013–2015, lost USD 5.8 million, filed USD 39 million creditor claim), and now Optima Management (2026).
- Global Gold Corp. (GBGD) ceased SEC reporting in December 2017 following a 251-to-1 reverse share consolidation and transfer of remaining assets to officers and directors, leaving USD 20.9 million in current liabilities against USD 40,591 in cash.
- Mego-Gold LLC, the Armenian operator, is in bankruptcy; the Government of Armenia confirmed the project bankrupt at the March 2018 PDAC mining convention in Toronto.

1. Executive summary

The 2016 GKZ State Subsoil Expertise Conclusion No. 6 approved reserves of approximately 2.57 million tonnes of ore across the Southern, Mirak and Tsitskar areas of the Toukhmanuk mineral field, containing a reported 11.74 tonnes of gold and 26.59 tonnes of silver. The headline Southern area grade is 5.00 g/t Au (C1+C2), with the highest-confidence C1 category reported at 6.69 g/t Au.

The principal findings of this briefing are as follows:

- The arithmetic of the 2016 submission reconciles. Geometric conversions, tonnage calculations and area subtotals add up. Any concern with the reserves is not in the addition; it is in the inputs, the contours and the QA/QC architecture that produced the inputs.
- The QA/QC disclosure in the 2016 submission is inadequate by any modern standard (CIM Best Practices, JORC, NI 43-101) and weak even under the older Soviet HCAM / HCAM framework. No blanks, no certified reference materials, no field duplicates, no pulp duplicates, no quantitative bias or precision metric, and no internationally accredited umpire laboratory for the primary metals are disclosed. The only quantitative figure offered — a 15 per cent “increase in accuracy” — is not a QA/QC metric.
- An earlier independent umpire programme of material size was withheld from the GKZ. In April 2012, CSA Global Pty Ltd., an internationally recognised mining consultancy engaged by the CRA joint venture, re-assayed 1,013 pulps from Toukhmanuk at ALS Romania. On the 551-pair subset with matched Global Gold database values, the mean gold grade in the independent re-assay was 0.09 g/t against 1.58 g/t reported by the operator for the same pulps — a 17.3× divergence. Only 6 of the 1,013 pulps returned Au at or above 1.0 g/t. This finding is incompatible with the 2016 reserves and was not placed before the commission.
- A contract miner walked away from the project citing falsified assays five months before the GKZ reporting date. Linne Mining was engaged in 2013 to operate the Toukhmanuk open pit and abandoned the project in November 2015 after independent technical review by Sergo Cusiani of Geo-Logaritmica found: (i) direct side-by-side evidence, for at least one named sample (GGMT01430), that the gold grade in the operator’s own block model is the silver grade from the operator’s own laboratory database; (ii) a duplicate-pair analysis of approximately 1,500 sample pairs showing the Mego-Gold / Yerevan laboratory reporting mean gold grades 2.6 times the grades returned by the Linne Mining / Toukhmanuk laboratory on splits of the same samples ($t = 7.28$, $Z = -7.30$); and (iii) systemic construction errors in the RESMODEL block model including 17- and 40-metre phantom intervals on named drill holes (T-71-06, T-27-06), drill-hole collars placed 22 metres below the terrain surface, no lithological interpretation in the database, and a P-P plot showing the block model and its input drill holes behave as if drawn from different statistical populations. None of this was disclosed to the GKZ.
- The 2016 GKZ commission recorded its own unresolved doubts in its own conclusion. In point 6 of its conclusion the commission requested that the Subsoil State Inspection

perform a “credibility survey” of the geological information presented by Mego-Gold. The vote was 8 in favour, 0 against, 1 abstention. The reserves were approved notwithstanding these items.

- The reserve grade is anomalously high against the closest Armenian peer. Kapan / Shahumyan — the only producing Armenian narrow-vein polymetallic deposit with comparable geology — carries a gold-equivalent reserve grade of approximately 4.2 g/t and a reconciled mined grade (2006–2011) of 1.53 g/t Au. Toukhmanuk’s 5.00 g/t Au reserve sits above Kapan’s reserve and roughly 3.3 times Kapan’s reconciled mined grade.
- Mego-Gold LLC is bankrupt and Global Gold Corp. ceased SEC reporting in December 2017 following a 251-to-1 reverse share consolidation and the transfer of remaining assets to officers and directors. The operating entity behind the 2016 reserves is no longer a reporting public company.

On the record now assembled, the 2016 GKZ reserves should not, in my view, be relied upon for any investment or operating decision without a full independent re-verification programme. Specific recommended steps are set out in Section 10.

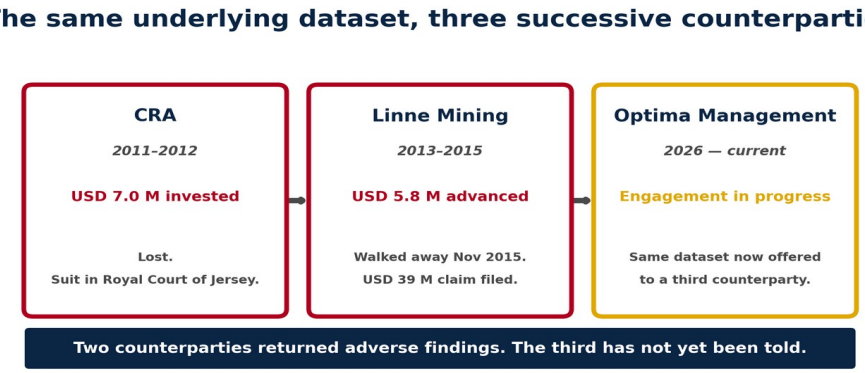

Figure 2. Each counterparty entered the transaction on the strength of the same Mego-Gold assay database. Two returned adverse findings. The third has not yet been told.

2. Chronology

The following table establishes the sequence of events relevant to the 2016 GKZ submission. The central point is that, by the time the GKZ file was lodged, Mego-Gold had been in possession of adverse independent findings on its assay data for approximately four years.

Date	Event
2005–2006	Global Gold Corp. acquires the Toukhmanuk property in two stages. Licence area covers 53.76 km².
October 2008	Global Gold issues a press release claiming a 2-million-ounce gold deposit at Toukhmanuk.
March 2011	SEC Form 8-K filed. Consolidated Resources Armenia (CRA) enters a joint-venture formation agreement with Global Gold Corp. / Mego-Gold; CRA ultimately advances approximately USD 7 million.
October 2011	Behre Dolbear 43-101 technical report issued; claims 39.23 Mt at 2.1 g/t Au. The report states on its face that Behre Dolbear performed no independent exploration, drilling, sampling or analyses.
November 2011	CSA Global Assignment Specification Agreement (reference RAS.TRK.01) executed. Malcolm Titley, Managing Director of CSA Global (UK) Ltd, signs on 20 October 2011. Van Z. Krikorian signs as Chairman for Global Gold Consolidated Resources Limited (Jersey) on 18 November 2011. Agreed scope includes “further QAQC review work and re-assaying”, laboratory audits of the site laboratory and the primary check laboratory, and “NI-43-101 Compliant Mineral Resource Estimation and Reporting”. Estimated fee £34,415 excluding VAT; £10,000 advance required before commencement.
April 2012	CSA Global Pty Ltd., engaged by the CRA JV to confirm the assay database, completes a 1,013-pulp re-assay programme. Finding: only 6 of 1,013 pulps return gold values at or above 1 g/t. David Muir (CSA) emails the adverse finding on 20 April 2012. Van Z. Krikorian acknowledges receipt in writing the same day.
2012–2014	The CSA Global final report is never paid for and is not published. CRA abandons the project, loses its USD 7 million, and commences proceedings against Global Gold Corp. in the Royal Court of Jersey.
July 2013	SEC Form 8-K filed. While the CRA dispute is active, Global Gold signs a financing and mine-contractor agreement with Linne Mining, a Cyprus-registered entity, to operate the Toukhmanuk open pit as originally envisioned by Behre Dolbear and CRA. Approximately USD 5.8 million is advanced.
2014–2015	Linne Mining, preparing to mine at the reported grades, commissions three independent technical reviews from Sergo Cusiani of Geo-Logaritmica. Findings include transposition of gold and silver grades in the RESMODEL block model and non-correlation between reported grades and the underlying sample data.
November 2015	Linne Mining walks away from Toukhmanuk, citing manipulated assays.
September 2015	Mego-Gold LLC enters bankruptcy proceedings in Armenia. Linne Mining subsequently files a creditor claim of approximately USD 39 million.
1 April 2016	Reporting date of the reserves calculation submitted by Mego-Gold to the GKZ.

Date	Event
4 November 2016	GKZ State Subsoil Expertise Conclusion No. 6 issued. Reserves approved: 2.57 Mt ore; Southern area 5.00 g/t Au. Vote: 8-0-1 abstention. Commission point 6 requests a credibility survey of the operator's data.
4 December 2017	Global Gold Corp. transfers remaining assets to officers and directors, executes a 251-to-1 reverse share consolidation (92 million shares to approximately 368,000), ceases SEC reporting. Public record shows USD 20.9 million in current liabilities against USD 40,591 in cash.
5 March 2018	At the PDAC mining convention in Toronto, representatives of the Government of Armenia confirm the Toukhmanuk project is bankrupt.
2026 (current)	Optima Management Company named as the exclusive operator of Toukhmanuk and is being invited to rely on the 2016 GKZ reserves.

The 2016 GKZ submission was therefore prepared and lodged by an operator that, at the time of lodgement: (i) had been in possession of an adverse 1,013-pulp independent re-assay programme for approximately four years; (ii) had been abandoned as a counterparty by its own contract miner five months earlier on the express grounds of falsified assays; (iii) was the subject of pending litigation in Jersey brought by its previous JV partner over the same dataset; and (iv) was itself in bankruptcy proceedings. None of this was placed before the GKZ commission.

3. Arithmetic verification of the 2016 reserves calculation

The 2016 submission contains block-level reserve calculations for veins 5/1, 5/3 and 5/4 of the Southern area, vein 1 of the Mirak area, and veins 1 and 1 ap of the Tsitskar area. All block-level figures were recomputed from first principles.

Method

- Real surface S2 = vertical-plane surface S1 / sin(falling angle).
- Block volume = S2 × average vein capacity.
- Ore tonnage = block volume × ore density (2.84 t/m³ Southern; 2.73 t/m³ Mirak; 2.66 t/m³ Tsitskar).
- Contained metal = ore tonnage × reported average grade.

Findings

- Every geometric conversion (S1 → S2) reconciles. Example: vein 5/4 at 75°, 11,148 / sin(75°) = 11,542 m² as reported.
- Every tonnage reconciles to volume × density within rounding.
- All vein subtotals and area totals sum correctly. Southern C2 ore = 559,789 + 617,077 + 480,035 = 1,656,901 t as reported. Southern C2 contained Au = 2,579.74 + 2,504.11 + 2,529.89 = 7,613.74 kg as reported.
- Minor rounding drift of 0.1–0.7 kg Au appears at block level, consistent with grades being reported to two decimals and more precise values being used internally.

Conclusion: the arithmetic is not the source of the problem. The integrity question lies upstream — in the block-level grades and capacities that are used as inputs to these calculations.

4. The 10-times cut-off inconsistency

A defining parameter of any reserves calculation is the marginal (or “border”) cut-off grade: the minimum grade at which a sample at the periphery of an ore body is pulled inside the contour. The 2016 GKZ report lists the marginal cut-off at two different values, differing by a factor of ten.

Location in the 2016 document	Stated marginal cut-off
Page 2, main conclusion, point 3	**1.0 g/t**
Page 16, Southern area methodology	**0.1 g/t**
Page 23, parameters summary	**0.1 g/t**
Page 29, independent expert Hamazaspyan	**1.0 g/t**
Page 33, final commission conclusion	**1.0 g/t**

The commission formally approved 1.0 g/t. The author's methodology used 0.1 g/t. These are not the same parameter set, and the inconsistency is not a translation artefact — both values appear in full English sentences, differently, in the same file.

Operational meaning

A 0.1 g/t marginal cut-off is, for practical purposes, a detection cut-off rather than an economic one. Gold is routinely assayed down to 0.01–0.05 g/t, so a 0.1 g/t threshold captures essentially any sample with a measurable signal. The contour expands outwards until it hits demonstrably barren rock. A 1.0 g/t marginal cut-off is a standard narrow-vein economic boundary. It holds the contour tight to the mineralised structure.

Implication

The effect of using a 0.1 g/t marginal in the calculation is to widen the apparent vein capacity. The 2016 Southern blocks report capacities of 1.15–2.53 m, which already sit above the physical vein widths described in the geological text of the same report (0.8–1.5 m, up to 3.0 m at swells). A faithful rebuild at the approved 1.0 g/t marginal would likely:

- Reduce booked Southern tonnage by roughly 10–25 per cent through tighter contours and lower capacities.
- Reduce the P1 forecast tonnage of 2.5 Mt materially — possibly 40–60 per cent.
- Lift the reported block grade modestly (0.2–0.6 g/t) through loss of diluted edge material.

The reserves as reported were evidently calculated at 0.1 g/t marginal and approved at 1.0 g/t marginal, with no re-run. This is a reconciliation failure visible on the face of the file.

5. Peer benchmark: Toukhmanuk against Kapan / Shahumyan

Kapan / Shahumyan (Syunik Province, Armenia) is the most relevant peer to Toukhmanuk. It is a producing Armenian narrow-vein polymetallic deposit with a near-identical geological signature: sub-vertical veins of 20 cm to 3 m true thickness; Au-Ag-Cu-Zn-Pb mineralogy; Middle Jurassic volcanic hosts; tectonic / structural control; pyrite-chalcopyrite-galena-sphalerite assemblage. Critically, Kapan has both a published reserve grade and publicly reconciled mined grades from actual production, allowing a realistic test of how narrow-vein Armenian reserve grades translate to operating reality.

Deposit / category	Ore (Mt)	Au (g/t)	Ag (g/t)	Notes
Toukhmanuk Southern C1+C2	2.05	5.00	10.59	Subject of this briefing
Toukhmanuk Southern C1 only	0.39	6.69	12.65	Highest-confidence category
Toukhmanuk Mirak C2	0.35	3.00	8.89	Fully downgraded to C2
Toukhmanuk Tsitskar C2	0.18	4.96	10.44	Grade extrapolated from Southern
Kapan / Shahumyan P&P (2018)	5.10	~4.2 AuEq	—	AuEq includes Ag, Cu, Zn credits
Kapan / Shahumyan reserve (DPMK 2016)	15.90	~2.74	~46.9	Plus 80 kt Cu, 270 kt Zn
Kapan mined (reconciled, 2006–2011)	1.80	1.53	29.8	Actual mill-head grade

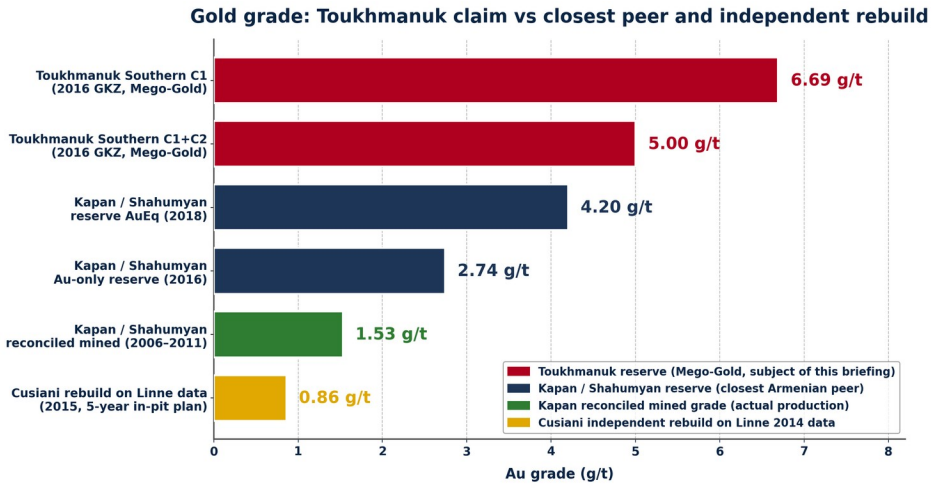

Figure 3. Gold grade at Toukhmanuk (Mego-Gold 2016 reserve) compared with the closest Armenian peer (Kapan / Shahumyan) and with Cusiani's 2015 rebuild on the Linne Mining dataset. All values in g/t Au.

On grade

Toukhmanuk Southern (C1+C2) at 5.00 g/t Au is roughly 20 per cent above Kapan's gold-equivalent reserve grade — and the AuEq figure includes silver, copper and zinc credits, so Kapan's pure-gold grade is lower still. The Southern C1-only figure of 6.69 g/t is approximately 60 per cent above Kapan's AuEq reserve and roughly 340 per cent above Kapan's reconciled mined grade. Toukhmanuk is also notably smaller than Kapan — Southern C1+C2 at 2.05 Mt is approximately 13 per cent of Kapan's reserve tonnage — which makes the claim of a superior grade in a smaller, less-explored deposit the harder case to sustain.

On reconciliation — the central point

Kapan's 2006–2011 reconciled mined grade was 1.53 g/t Au against a reserve grade of the period near 2.74 g/t. That is a reserve-to-mined reconciliation of approximately 56 per cent. Narrow-vein polymetallic deposits routinely reconcile 30–50 per cent below reserve grade as a result of wall-rock dilution, selective-mining difficulty, and loss at vein pinches. If Toukhmanuk Southern reconciled on a similar ratio to its closest geological analogue, actual mined grade would land in the range of 2.8–3.5 g/t — which, not coincidentally, matches the district's own stated typical range of 0.5–3.0 g/t as set out on page 23 of the 2016 report. In that scenario the contained gold inventory would be roughly halved, and the valuation case for the deposit would need to be re-worked from first principles.

6. Deep-dive of the QA/QC architecture in the 2016 GKZ submission

The quality of a reserves calculation is no better than the quality of the assay data that feeds it. Under any modern framework — CIM Best Practices, JORC, NI 43-101 — and under the older Soviet HCAM / HCAM framework when applied rigorously, a submitted reserves estimate must include a quantitative QA/QC section that discloses, at minimum: blanks, certified reference materials (CRMs), field duplicates, pulp duplicates, an independent umpire-lab comparison, and quantitative bias and precision statistics.

6.1 What the 2016 report discloses

- Primary gold and silver assays were performed in the operator's own laboratory (Mego-Gold).
- External / umpire assays were performed by a single Armenian laboratory, "Analitic" CJSC.
- Associated components (Cu, Pb, Zn) were assayed at Alex Stewart International — a reputable, internationally accredited laboratory.
- The method reference cited by independent expert Gevorgyan is the "HCAM method," corresponding to the post-Soviet HCAM / VIMS analytical standards.
- The single quantitative QA/QC figure offered anywhere in the report is the author's statement, in response to a committee question from member Barseghyan, that modern laboratory equipment "increased the degree of accuracy of the test results by 15 per cent."
- The qualitative conclusion is that "Ordinary and inspection analyses comparison is demonstrating absence of systematic mistakes in ordinary analyses."

6.2 What the 2016 report does not disclose

Every item in the following list is a basic element of a fit-for-purpose QA/QC programme. None is disclosed in the 2016 document.

- Blank samples: insertion rate, material type, pass/fail thresholds, performance summary. Blanks detect cross-contamination in the lab.
- Certified Reference Materials: no matrix-matched CRMs at any insertion rate, no tracking against ±2 / ±3 standard-deviation bands, no performance summary. CRMs detect lab bias.
- Field duplicates: no programme disclosed. Field duplicates quantify sampling variance.
- Pulp or coarse-reject duplicates: no programme disclosed. These separate analytical precision from sub-sampling precision.
- Umpire-lab comparison metric: no mean paired difference, no correlation coefficient, no bias plot, no Thompson-Howarth analysis, no HARD (half-absolute-relative-difference) statistics.

- Chain-of-custody protocol.
- Sample numbering, batch-insertion rates, blind-submission discipline.
- Detection limits, over-limit procedures, and the specific analytical method — fire assay with AAS finish, gravimetric finish, cyanide leach.
- Any audit of the historical assay database used as input to the reserves, for integrity, completeness or duplication.

6.3 On the “15 per cent accuracy” figure

Accuracy, as a term of art in analytical chemistry, is not reported as a single aggregate percentage change. The relevant metrics are precision (typically quoted as relative standard deviation or HARD90 thresholds), bias (systematic offset against CRM certified values, usually ±5 per cent acceptable and ±10 per cent investigated), and correlation between primary and umpire labs (usually expressed as R^2). A statement that “accuracy increased by 15 per cent” is not technically meaningful and would not, in a competent review, be accepted as an answer to the question Barseghyan asked.

6.4 The architecture is inverted

The one internationally accredited laboratory in the programme (Alex Stewart) was used only for the low-value associated metals. The primary economic metals — gold and silver — were assayed in the operator’s own laboratory and cross-checked against a single domestic Armenian laboratory. There is no technical reason to configure a QA/QC programme in this way. The effect is that the assays most exposed to manipulation incentives are the ones least exposed to independent scrutiny.

6.5 The three independent experts each flagged outstanding technical work

- Gagik Gevorgyan (Appendix 2) stated that additional laboratory and technological work was needed at Mirak and Tsitskar, and downgraded C1 at both areas to C2.
- Hamlet Hamazaspyan (Appendix 3) noted “technical mistakes in table 10.6.1” were returned to the authors and that the environmental-protection section was thinly described.
- Hrant Avetisyan, the Materials Expertise Lead (Appendix 5), recorded in the final commission conclusion that additional laboratory and technological work remained outstanding, and that exploitation should not begin given “incomplete technological feature conditions.”

Three separate senior reviewers each flagged outstanding laboratory and technological work. The reserves were approved nonetheless.

7. Information withheld from the GKZ

The most significant analytical point in this briefing is the following: the 2016 GKZ submission was lodged by an operator that, on the documentary record, had been in possession of adverse independent findings on its own assay database for approximately four years. None of the following material items was placed before the commission.

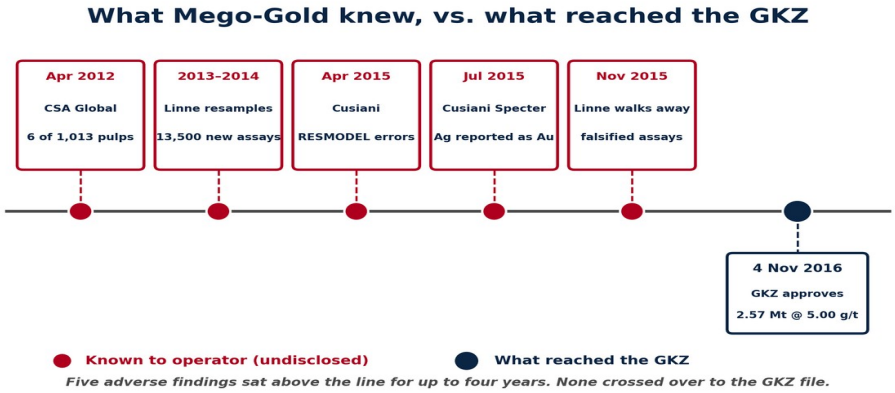

Figure 4. Five adverse findings were in the operator's possession before the 2016 GKZ submission. None were disclosed. Each finding is documented in a cited source (see Section 11).

7.1 The April 2012 CSA Global 1,013-pulp re-assay programme

CSA Global Pty Ltd. (internationally accredited mining consultancy, Perth, Australia) was engaged by the CRA joint venture in early 2012 to verify the Toukhmanuk assay database after CRA had committed its USD 7 million investment. The methodology was a re-assay of 1,013 pulp samples — the finely ground fraction closest to analytical ground truth.

The engagement is of record. CSA Global's Toukhmanuk work commenced under Assignment Specification Agreement reference RAS.TRK.01, executed by both parties in late 2011: Malcolm Titley, Managing Director of CSA Global (UK) Ltd, signed on 20 October 2011; Van Z. Krikorian signed as Chairman for Global Gold Consolidated Resources Limited (Ogier House, St Helier, Jersey, JE4 9WG) on 18 November 2011. The contracted scope of work is set out in the agreement in the following terms, in this order: "project review; to provide guidance on NI43-101 compliance with respect to the current data set and to provide a strategy to review the data and bring it up to a western standard if required"; "possible re-capture of data (Verification drilling and sampling, re-logging, further QAQC review work and re-assaying)"; "digitisation of hard copy data and plans where required"; "creation and possible management of a secure relational database for the project"; "surveying of all mine workings and drill hole collar points"; "NI-43-101 Compliant Mineral Resource Estimation and Reporting"; and "conceptual mining study, based upon the NI43-101 compliant mineral resource." The agreement specifies that Robyn Belcher (Principal Data Geologist) would "undertake laboratory audit's [sic] of the site laboratory and the primary check laboratory facilities", and that following successful data verification work Galen White would "undertake Mineral Resource Estimation work" at 25 days and £1,000 per day. The named consulting team is Malcolm Titley (Principal/Director), Karen Volp (Principal Geologist),

Robyn Belcher (Principal Data Geologist) and Galen White. The estimated fee excluding VAT is £34,415; a £10,000 advance was required before commencement. The programme whose findings are the subject of the remainder of this section was delivered into that contractual framework and received by the signing party on the client side.

On 20 April 2012 at 16:18, David Muir of CSA Global wrote to Joe Borkowski (Rasia Group, representing the CRA side): “We have completed a preliminary assessment. The correlation is poor — 6 out of 1,013 pulp assays have gold values of 1 g/t or greater, the balance all below 1 g/t. Sorry to be giving you such bad news, but we thought it important you get an indication as soon as possible.”

One hour later, at 17:21 on the same day, Van Z. Krikorian replied: “A little while ago I received the email from Joe Borkowski… The fact that CSA produced what appears to be a negative report today only increases the importance of transparency.”

The CSA final report was never paid for and was never published. This is the single largest independent umpire programme ever performed on Toukhmanuk samples. It was commissioned by an investor counterparty, not by an adversary. Its non-disclosure to the GKZ is the omission of the most consequential external data point bearing on the reliability of the reserves.

Technical significance

A pulp re-assay finding of 6 of 1,013 samples at ≥ 1 g/t is incompatible with the 2016 block-level reserve grades of 3.62–6.99 g/t unless the pulps and the database grades refer to different material. There are only three non-benign explanations:

1. The database numbers were not produced from those pulps (database fabrication or reassignment).
2. The pulps were substituted or swapped between original assay and check.
3. The pulps correspond to a different sampling campaign than the database (systematic mislabelling).

A fourth possibility — methodical bias in the primary laboratory of the required scale (a factor of 5–7) — is not plausible for fire-assay gold.

The CSA source documents — the full programme, not only the cover-email figure

The publicly reported figure (“6 of 1,013 pulps at or above 1 g/t”) is only the most extreme of several findings in CSA Global’s own Correlation Report of 20 April 2012. The underlying spreadsheet of 551 paired samples (ALS Romania re-assay paired with Global Gold’s reported value for the same pulp) establishes the following. All numbers below are computed directly from the CSA spreadsheet ‘PulpvsOrigResults_20120420.xlsx’ and cited in the CSA Correlation Report of the same date.

Metric	Value	Source
Mean Au, ALS re-assay (independent lab)	**0.09 g/t**	CSA paired dataset, 551 pairs
Mean Au, Global Gold reported (same pulps)	**1.58 g/t**	CSA paired dataset, 551 pairs
Divergence (Orig / Re-assay)	**17.3×**	CSA Correlation Report, p.1
Paired t-statistic, Au (Orig − Re-assay)	**20.14**	Computed from source data
Significance threshold (95%)	**1.96**	Standard
Proportion of Au pairs outside ±10% limits	**99.8%**	CSA Report: “99.5% fall outside 10% limits”
Pulps with ALS Au ≥ 1.0 g/t	**6 of 1,013**	CSA Correlation Report, Pulp Re-Samples
Pulps with ALS Au ≥ 0.5 g/t	**10 of 1,013**	CSA Correlation Report, Pulp Re-Samples
Pulps with ALS Ag ≥ 5.0 g/t	**11 of 1,013**	CSA Correlation Report, Pulp Re-Samples
Mean Ag, ALS re-assay	**0.69 g/t**	CSA paired dataset, 550 pairs
Mean Ag, Global Gold reported	**4.15 g/t**	CSA paired dataset, 550 pairs
Ag divergence (Orig / Re-assay)	**6.0×**	Computed from source data

The directional structure of the divergence is important. Where the ALS pulp is low and the Global Gold reported value is high, the database has been inflated relative to the pulp. The reverse case — ALS pulp high and Global Gold reported value low — is almost absent from the spreadsheet. Of the 551 pairs, 300 (54.4 per cent) show Global Gold reporting at or above 1 g/t while the same pulp returned less than 0.3 g/t in an independent laboratory.

This is not a scatter of bidirectional imprecision such as coarse-gold nugget effect would produce. It is one-sided inflation across half the paired dataset. The CSA report characterises the bias in the plainest terms: “99.5% fall outside 10% limits (i.e. no correlation) and concentrated below the expected i.e. apparent bias.”

A 505-pair subset of the same programme (CSA core re-assays against CSA pulp re-assays — i.e. two independent measurements both performed by CSA at ALS) shows 59.4 per cent of pairs outside the 10 per cent limit, with random spread and no significant bias. The internal CSA methodology is consistent. The bias is specifically against the Global Gold reported values.

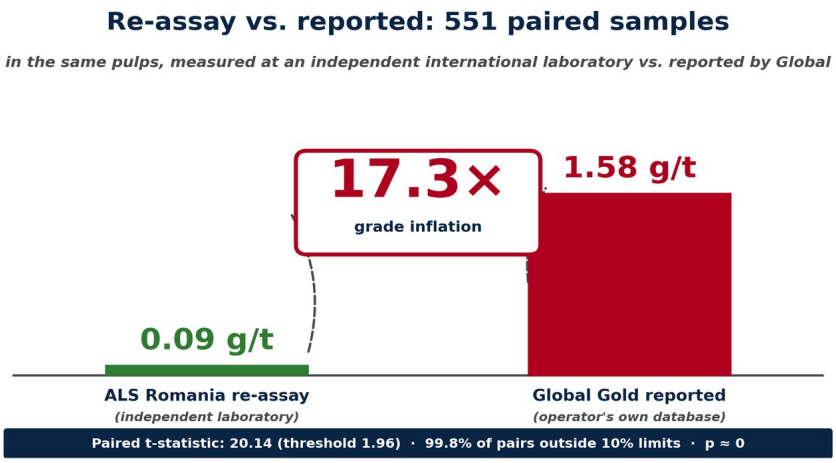

Figure 5. CSA Global paired-sample re-assay, April 2012. On 551 paired pulps, the mean gold grade reported by Global Gold was 1.58 g/t; the mean gold grade the same pulps returned when re-assayed at ALS Romania was 0.09 g/t. The paired t-statistic on the difference is 20.14 against a 1.96 significance threshold. 99.8 per cent of pairs fell outside ±10 per cent limits. Source: CSA Correlation Report of 20 April 2012 and the accompanying 551-pair spreadsheet.

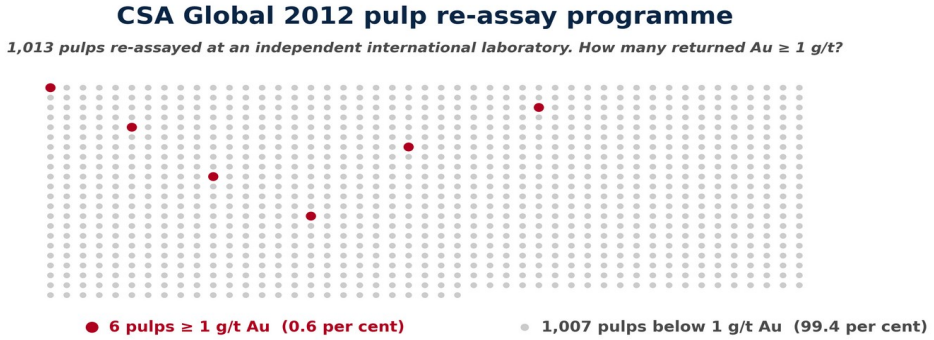

Figure 6. Visual rendering of the full 1,013-pulp programme. Each dot represents one of the 1,013 pulps re-assayed at CSA Global. The six red dots are the six samples that returned Au ≥ 1 g/t. The remaining 1,007 pulps (99.4 per cent) returned below 1 g/t. Only 11 of 1,013 pulps returned silver above 5 g/t — silver is substantially absent even in the pulps themselves.

7.2 The 2015 Cusiani / Geo-Logaritmica reports

Engaged in 2013 as contract miner to operate the Toukhmanuk open pit, Linne Mining performed the most direct form of reconciliation available: preparing to actually mine at the reported grades. In 2014–2015 Linne Mining's laboratory at Toukhmanuk resampled and re-assayed a substantial portion of the existing sample set — not at pulp level, but at rock level — generating 13,500 new sample assays, of which approximately 1,500 were duplicates of earlier Mego-Gold samples. Sergo Cusiani of Geo-Logaritmica (Tbilisi / Yerevan) was retained by Linne to analyse the two data sets against each other and against the RESMODEL block model on which the 2011 Behre Dolbear 43-101 and subsequent reserves claims were built.

Three Cusiani reports are in the public domain. Their findings are set out below not as characterisations but as specific, cited, testable observations about named drill holes, named

sample numbers, and quantified statistical parameters. Each can be verified directly against the RESMODEL files and the Global Gold database ‘Total GGMT.xls.’

7.2.1 Two data sets — comparison of resources (Cusiani, 4 August 2015)

Cusiani compared two data sets. The First Data Set comprised approximately 8,500 sample assays collected between 2003 and 2008 by Mego-Gold and assayed at a Yerevan laboratory (“E-AAS,” for Yerevan atomic absorption spectroscopy). The Second Data Set comprised approximately 13,500 sample assays from 2013–2014, taken by Linne Mining at its own Toukhmanuk laboratory (“T-AAS”) on the same locality, including approximately 1,500 pairs that could be directly compared as duplicates.

The duplicate-pair analysis returned the following statistical result:

Parameter	E-AAS (Yerevan / Mego-Gold)	T-AAS (Toukhmanuk / Linne)
Mean grade	0.33875 g/t Au	0.13125 g/t Au
Variance (dispersion around the mean)	0.47544	0.05138
t-Statistic of the paired difference	7.28 standard deviations	—
95 per cent confidence threshold	1.96	—
Z-statistic	−7.30	—

In plain terms: across 1,500 duplicate pairs, the mean grade reported by the Mego-Gold / Yerevan laboratory was approximately 2.6 times the mean grade reported by the Linne / Toukhmanuk laboratory on the same splits of the same samples. The t-statistic of 7.28 against a 1.96 threshold, and the Z-statistic of −7.30, place the probability that this divergence is random at effectively zero. Cusiani records: “The mean of the population assayed at Tukhmanuk is significantly different to the known mean of the population assayed at Yerevan AAS.”

Cusiani then re-ran the block model on the two data sets and computed the five-year pit plan:

Five-year pit plan	Ore (t)	Au grade (g/t)	Contained Au (oz)
Built on the Mego-Gold data (E-AAS)	4,758,011	0.62	95,381
Built on the Linne data (T-AAS)	2,940,425	0.86	81,445

Both figures, it must be emphasised, are a long way below the 2016 GKZ headline figure of 5.00 g/t Au across 2.05 Mt for the Southern area. Cusiani’s rebuild at 0.62–0.86 g/t was for the full in-pit reconciliation scenario across the whole sample population, not just the selectively-included veins; but the point stands. Even in the more favourable of Cusiani’s two scenarios the deposit is a sub-1 g/t operation, not a 5 g/t one.

7.2.2 What is wrong with RESMODEL (Cusiani, 30 April 2015)

Cusiani's second report is a forensic examination of the RESMODEL block model — the model that underpinned the Behre Dolbear 43-101 technical report and that was the direct antecedent of the model relied upon in the 2016 GKZ submission. The report identifies five distinct classes of error, each illustrated with named drill holes and named sample numbers from the Mego-Gold file TM_DHOLES.

Error class 1 — discontinuous drill hole traces.

- Drill hole T-71-06 has a 17-metre "phantom" interval between samples GGMT11055 and GGMT11072 — a 17-metre gap along the supposed drill trace with no sample record. Several smaller gaps are present on the same hole.
- Drill hole T-27-06 contains a 40-metre phantom interval — described by Cusiani as "the record holder," able to "accommodate several drill rigs in a single gap." Sample GGMT06302 sits on the hole.
- Cusiani reports that "every second drill hole used for RESMODEL is not continuous. That is, it brakes at some depth, then suddenly appears several metres deeper."

Error class 2 — drill hole collar coordinate errors.

- A vertical cross-section of RESMODEL shows drill-hole collars located up to 22 metres below the physical terrain surface. A drill-hole collar is, by physical necessity, the point at which the drill rig enters the ground. Collars located 20+ metres below the surface are not survey error; they are data-entry error or fabrication.

Error class 3 — no geological interpretation in the database.

- The drill-hole logs on the Mego-Gold side contain lithological descriptions — including identification of top-soil horizons — but that lithology was not entered into the drill-hole database used to build RESMODEL.
- As a consequence, the RESMODEL block model reports gold grades of Au 2.6 g/t in 10.7-metre-thick top-soil horizons (weathered, washed-out material of the type normally stripped and dumped as waste), while the corresponding drill-hole logs indicate the same intervals as sub-grade at approximately 0.2 g/t Au.
- Cusiani's characterisation: "Thanks to the RESMODEL it 'supposedly' ads up an extra phantom value to the reserves."

Error class 4 — statistical distribution.

- A histogram of the Au values in the TM_DHOLES drill-hole database (the file from which RESMODEL was built) does not follow the log-normal distribution characteristic of hydrothermal gold deposits. Instead it shows a stepped pattern, consistent with repeated readings clustering around a small number of fixed values — a signature Cusiani attributes to "precision of the readings… questionable" and "the measurements are not accurate, too, except of those few incidental readings where the reading accounts for true value simply by chance."

Error class 5 — block model does not correlate with its own input drill holes (P-P plot).

- A probability-probability (P-P) plot compares the cumulative distribution of Au values in a block model against the cumulative distribution of Au values in the drill holes that built it. If the two are drawn from the same population, the points fall on a 45-degree line.
- On Toukhmanuk, the P-P plot of RESMODEL against “comp_dholes” (composited drill holes) and the P-P plot of RESMODEL against “TM_dholes” (static drill holes) both depart significantly from the diagonal. The block model and the drill holes on which it is supposedly based are not drawn from the same statistical population.
- Cusiani’s characterisation: the block model behaves “as if the drill holes are drilled somewhere except the Toukhmanuk site.”

The consolidated conclusion of the RESMODEL report is that the block model is not usable: drill-hole values are questionable; drill holes are built up incorrectly; the block model reports ore-grade values in what the logs describe as top-soil; ore zones are not controlled with wireframes; the model is populated using parameters inconsistent with the underlying distribution.

7.2.3 The Specter Reserves report — the direct Au/Ag transposition (Cusiani, 15 July 2015)

The third Cusiani report is the shortest and, in evidentiary terms, the most serious. It sets out a single example, exhibiting the underlying Mego-Gold database directly against the block model Mego-Gold built from it.

Drill hole T-3-2-06. Sample number GGMT01430. Interval 209.7–210.7 metres depth.

The Mego-Gold laboratory database record for sample GGMT01430

From file “Total GGMT.xls”, produced by Global Gold Mining LLC / Mego-Gold LLC, dated 25 August 2006, row 233, sample number GGMT01430:

Column	Value
Sample number	GGMT01430
Au (gold) content	0.2 g/t
Ag (silver) content	5.2 g/t

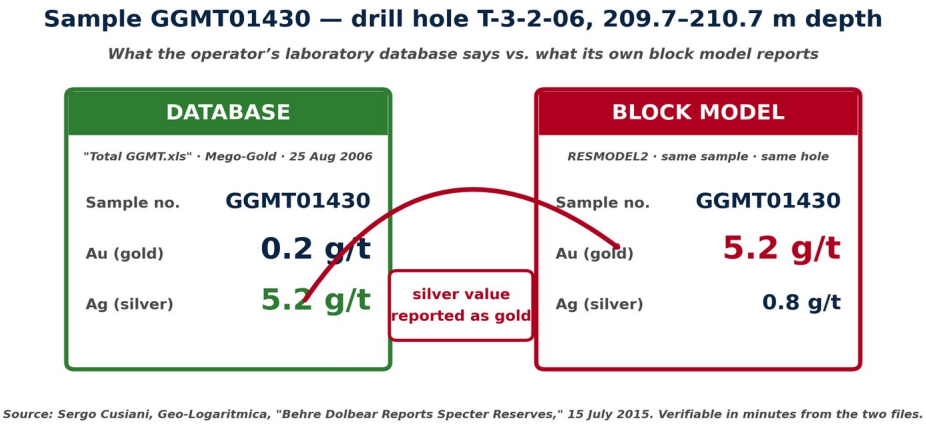

Figure 7. The single most important item in the documentary record. The gold value in the block model for sample GGMT01430 is the silver value from the operator's own database. Verifiable in minutes by anyone holding the two files.

The RESMODEL2 block model entry for the same sample

- Sample number: GGMT01430 — same sample.
- Au (gold) content: 5.2 g/t — this is the silver value from the database.
- Ag (silver) content: 0.8 g/t.

In the database, this sample is silver 5.2 g/t and gold 0.2 g/t. In the block model that feeds the Behre Dolbear 43-101 and every downstream reserves claim including the 2016 GKZ submission, the same sample is gold 5.2 g/t. The silver value has been relabelled as the gold value. The underlying gold value (0.2 g/t) has vanished from the model entirely.

Cusiani's observation, verbatim: "So do other samples.… Which probably means someone, who made the block model, mistakenly (or purposely) used silver grade figures for gold." Cusiani notes that on that basis, and on the assumption that the observed transposition is systemic across the database rather than isolated to one sample, the "2 million ounces of gold" marketed by Global Gold Corp. is more accurately described as an ore body carrying silver values at the rate the company assigned to gold — and a gold endowment that is an order of magnitude smaller than claimed.

This single example is the most important item in the entire documentary record. It is not a characterisation, not a statistical argument, not a second-order inference from a peer benchmark. It is a side-by-side presentation of the operator's own laboratory record against the operator's own block model for one named sample on one named drill hole, showing that the gold value in the model is the silver value from the database. Any party who holds the Mego-Gold laboratory file "Total GGMT.xls" and the RESMODEL file can verify it in one minute.

7.2.4 The Ag:Au ratio in the 2016 reserves is consistent with systemic transposition

Armenian narrow-vein polymetallic deposits typically show Ag:Au ratios of 10:1 to 30:1. The 2016 GKZ Toukhmanuk reserves show:

- Southern C1+C2: Au 5.00 g/t, Ag 10.59 g/t — ratio 2.1:1.
- Mirak C2: Au 3.00 g/t, Ag 8.89 g/t — ratio 3.0:1.
- Tsitskar C1+C2: Au 4.96 g/t, Ag 10.44 g/t — ratio 2.1:1.

If silver grades were systematically relabelled as gold grades in some proportion of the database, the aggregate 'gold' column would be inflated and the aggregate 'silver' column would be biased downward — which is the direction of the observed anomaly. The observation cannot by itself prove the Cusiani finding. It is, however, exactly the signature such a finding would produce.

7.3 The CRA and Linne Mining disputes

At the time of the 2016 GKZ submission: CRA's proceedings against Global Gold Corp. in the Royal Court of Jersey were extant; Linne Mining had walked away five months earlier citing falsified assays; and a Linne Mining creditor claim of approximately USD 39 million was pending in the Mego-Gold bankruptcy. None of these disputes — each of which directly concerned the reliability of the assay database being relied upon — appears in the 2016 GKZ file.

7.4 The Mego-Gold bankruptcy

The operator of the deposit was in active bankruptcy proceedings in Armenia while simultaneously asking the state to register reserves representing, at 2016 gold prices, several hundred million dollars of gold-in-ground. The GKZ file as I have read it does not discuss the bankruptcy or its implications for the continuity of the operating entity behind the submission.

7.5 SEC-filed tonnage overstatement

A separate issue, not directly a matter for the GKZ but bearing on the credibility of management representations generally, is that reported ore-mined tonnages in Global Gold Corp.'s SEC filings diverge materially from Armenian government records. The largest overstatements are for 2006 (SEC 52,000 t vs. government 27,000 t, +93 per cent) and 2008 (SEC 82,000 t vs. government 40,200 t, +104 per cent).

7.6 On the economic consequence of the findings above

No economic valuation of the Toukhmanuk deposit is offered in this briefing. The data from the 2016 GKZ file has been completely invalidated by the April 2012 CSA Global pulp re-assay programme set out in Section 7.1, which Van Z. Krikorian received on 20 April 2012 in his combined capacity as President, CEO, Director and Legal Counsel of Global Gold Corp. and concealed from the GKZ commission, from Linne Mining, and from every subsequent counterparty including the present invitee.

Any credible valuation requires a reliable head-grade input, and the central finding of Sections 7.1 through 7.5 is that the sample database from which every available grade figure is derived cannot support a reliable determination. A desktop computation performed on the three grade figures present in the record — 5.00 g/t Au (2016 GKZ), 0.86 g/t Au (Cusiani rebuild on Linne data), and 0.09 g/t Au (CSA 551-pair pulp re-assay mean) — yields undiscounted operating outcomes ranging, across the 2.57 Mt GKZ tonnage at a USD 3,500 per ounce gold price, from approximately plus USD 1.0 billion to approximately negative USD 90 million; a range of that magnitude, held open by the documentary record itself, is precisely why no such computation is defensible on the existing data. The appropriate next step is not a better economic model. It is an independent sample re-verification programme — twin-hole drilling at a statistically meaningful fraction of the resource, umpire assaying on blind submissions at an internationally accredited laboratory, an independent block-model build on the resulting data, and certification by a Competent Person under JORC or a Qualified Person under NI 43-101 — whose results would constitute the basis on which economic analysis could then responsibly be performed.

8. The GKZ commission's own conduct

The primary deception in 2016 was Mego-Gold's. The GKZ commission is not, however, blameless. The commission had multiple warning signs directly in front of it within its own file and approved the reserves notwithstanding.

- The commission's own member Hovsepyan asked in session why metal grades had jumped sharply relative to historical fund materials. The author's answer was that only "excessive levels characterised" veins had been included — an explicit on-record admission of selective high-grading. The commission accepted this without requiring a reconciled comparison to the historical dataset.
- The commission's own independent experts found that C1 classification at Mirak and Tsitskar was not supported by drill spacing, and that additional laboratory and technological work was needed at both areas. The commission downgraded those categories but approved reserves grounded in an assay programme whose adequacy its own experts had questioned.
- The commission's own document contained a 10-times cut-off inconsistency. It was not resolved before approval.
- The QA/QC disclosure was inadequate on its face, as set out in Section 6 above. A commission applying even the HCAM / HCAM framework rigorously should have noticed the absence of any quantitative bias or precision metric, any CRM or blank programme, or any internationally accredited umpire comparison for the primary metals.
- The commission itself wrote into point 6 of its own conclusion a request that the Subsoil State Inspection perform a credibility survey of the geological information presented by Mego-Gold. A commission that requests a credibility audit of its own applicant's data in the same document in which it approves the reserves is a commission that documents its own unease in writing. The appropriate action would have been to defer approval pending the credibility survey, not to approve and request the survey in parallel.
- The vote was 8 in favour, 0 against, 1 abstention. One member of the commission declined to affirm the decision. The identity of the abstaining member is not recorded in the document.

This is not the profile of a rigorous regulatory review. It is the profile of a commission that documented its own doubts in its own conclusion and approved the file anyway.

9. Consolidated view

1. The arithmetic of the 2016 submission reconciles. Any manipulation, if any, is upstream in the assay database, not in the reserve calculation itself.
2. The QA/QC architecture disclosed to the GKZ is inadequate and structurally inverted (accredited lab used only for non-primary metals; primary metals assayed in-house with a single domestic umpire).

3. Material adverse independent findings on the assay database — the 2012 CSA Global 1,013-pulp programme and the 2015 Cusiani forensic analyses (including the direct GGMT01430 side-by-side showing the block model's gold value is the database's silver value, and the 1,500-pair duplicate analysis at t = 7.28) — were in the operator's possession at the time of submission and were not disclosed to the GKZ.
4. The contract miner engaged to actually produce ore at the reported grades walked away five months before the GKZ reporting date, citing falsified assays. This is the strongest form of adverse technical signal available short of actual production reconciliation. It was not disclosed.
5. The GKZ commission recorded its own unresolved doubts and approved the file regardless.
6. The approved reserves are anomalously high against the closest Armenian peer (Kapan / Shahumyan). Reasonable reconciled mined grades, applying Kapan's own reserve-to-mined ratio, would land in the 2.8–3.5 g/t range — which coincides with the district's own stated typical mineralisation range.
7. The 2016 state-registered reserves have already been used to support the CRA and Linne Mining transactions, both of which ended in dispute and loss. Optima Management is now being invited to become the third commercial counterparty to rely on the same underlying dataset.

10. Recommendations to Optima Management Company

The following steps are, in my view, the minimum required for Optima to protect itself against the fate of CRA and Linne Mining. They should be completed — and their results reviewed by an independent Qualified Person reporting directly to Optima — before any material capital commitment or operational expansion.

10.1 Demand production of the withheld documents

1. The full CSA Global (Pty Ltd.) April 2012 correlation report, including the underlying 1,013-sample pulp re-assay dataset.
2. The three Sergo Cusiani / Geo-Logaritmica technical reviews commissioned by Linne Mining in 2014–2015, including the RESMODEL analysis, the “Two Data Sets” report, and the Specter Reserves report.
3. The complete Linne Mining technical correspondence file concerning grade reconciliation at Toukhmanuk.
4. The CRA-Jersey litigation record and any associated expert reports.
5. The Mego-Gold bankruptcy file in full.

10.2 Commission a full independent re-verification programme

1. Twin-hole verification drilling of a statistically meaningful sub-sample of historical holes, performed by an operator independent of Mego-Gold and of any successor entity.
2. Assay at an ISO/IEC 17025 accredited international laboratory (ALS, SGS, Bureau Veritas, or Actlabs), with a blank, CRM and duplicate programme inserted at industry-standard rates (typically 1-in-20 for each).
3. Full umpire re-assay of the existing pulp and coarse-reject library at a second independent international laboratory, with Thompson-Howarth and bias analysis.
4. Reconciliation against actual production tonnages and grades from the Central area of the same mine, using Armenian government records as the reference source, not company-reported figures.
5. Rebuild of the block model at a consistent 1.0 g/t marginal cut-off, by an independent Qualified Person, with proper compositing, top-cuts or capping, and variography.
6. Targeted integrity review of the gold and silver columns in the historical sample database, given the specific Cusiani allegation of transposition.

10.3 Governance and counterparty diligence

1. Verify the current legal status of Mego-Gold LLC and any successor entity that holds or claims to hold the mining licence EHT 29/136 (ԵՀՇ 29/136).
2. Confirm the chain of title of the mining licence through the bankruptcy, including any transfers to officers, directors or related parties.

3. Obtain independent Armenian counsel opinion on whether the 2016 GKZ approval is subject to reopening or revocation in light of the documentary record summarised in this briefing.
4. Obtain US securities counsel opinion on any disclosure or liability exposure arising from reliance on SEC filings made by Global Gold Corp. during 2011–2017.

10.4 Disclosure

Until the above items are discharged, Optima Management Company should not, in my view, represent to any third party — whether a lender, a downstream off-take counterparty, a government agency or an employee — that the 2016 GKZ reserves figure is a reliable indicator of the gold-in-ground at Toukhmanuk. The narrow question “how much gold is there?” cannot be answered on the public record. What the public record does show is that the 2016 GKZ approval is not a reliable answer to that question.

11. Sources and supporting documents

Primary document under review

- Republic of Armenia, Ministry of Energy Infrastructure and Natural Resources, State Committee of Reserves: State Subsoil Expertise Conclusion No. 6, 4 November 2016. Aragatsotn Region Toukhmanuk Gold Mine Southern and Mirak Sections, and Kotayk Region Tsitskar Gold Mine. Translated from Armenian.

Documentary evidence — publicly available

- SEC Form 8-K, Global Gold Corp., 17 March 2011: Formation Agreement with Consolidated Resources Armenia.
- SEC Form 8-K, Global Gold Corp., 5 July 2013: Financing and mine contractor agreement with Linne Mining.
- SEC Form 10-K, Global Gold Corp., fiscal year ending 31 December 2013.
- SEC Form 10-Q, Global Gold Corp., quarter ending 30 September 2015.
- Behre Dolbear independent technical report (43-101), Toukhmanuk Mine Project and Getik Prospect, Armenia, 17 October 2011.
- CSA Global Assignment Specification Agreement, Our Ref RAS.TRK.01, “Mineral Resource Estimation and Mine planning work at the Toukhmanuk Au Project, Armenia.” Cover letter dated 16 November 2011 from CSA Global (UK) Ltd addressed to Van Krikorian at Global Gold Consolidated Resources Limited, Ogier House, The Esplanade, St Helier, Jersey JE4 9WG. Seven pages. Executed by Van Z. Krikorian as Chairman on 18 November 2011, and by Malcolm Titley as Managing Director of CSA Global (UK) Ltd on 20 October 2011. Includes the CSA Global Assignment Specification Sheet, the CSA Global Assignment Specification Terms and Conditions, and Annex A detailed budget.
- Email correspondence of 20 April 2012: David Muir (CSA Global Pty Ltd.) to Joe Borkowski, copying Van Z. Krikorian. Reply of Van Z. Krikorian, 20 April 2012, 17:21.
- Geo-Logaritmica reports prepared for Linne Mining (Sergo Cusiani):
- — “Tukhmanuk Deposit — Two Data Sets: Comparison of Resources,” 4 August 2015. Statistical analysis of approximately 1,500 duplicate pairs assayed at the Mego-Gold / Yerevan laboratory (E-AAS) and at the Linne Mining / Toukhmanuk laboratory (T-AAS). Mean grades 0.33875 g/t vs. 0.13125 g/t; t-statistic 7.28 against a 1.96 confidence threshold; Z-statistic −7.30. Five-year pit rebuild: 4.76 Mt at 0.62 g/t Au on Mego-Gold data vs. 2.94 Mt at 0.86 g/t Au on Linne data.
- — “What Is Wrong With RESMODEL Block Models of Tukhmanuk Deposit,” Tukhmanuk, Aparan, Armenia, 30 April 2015. Forensic examination of RESMODEL block model errors: discontinuous drill-hole traces (T-71-06 with a 17 m phantom interval between GGMT11055 and GGMT11072; T-27-06 with a 40 m phantom interval; “every second drill hole… is not continuous”); drill-hole collars placed up to 22 m below the terrain surface; absence of lithological interpretation in the database (top-soil reporting Au 2.6 g/t in the model vs. 0.2 g/t in the underlying logs); non-log-normal histogram of Au values indicating questionable precision; and P-P plots demonstrating that the block

model and the drill-hole file from which it was built are not drawn from the same statistical population.

- — “Behre Dolbear Reports Specter Reserves — On So-Called ‘Tukhmanuk Gold Deposit,’ Armenia,” Yerevan, 15 July 2015. Direct side-by-side of the Mego-Gold laboratory database (file “Total GGMT.xls,” dated 25 August 2006) against the RESMODEL2 block model, for sample GGMT01430 on drill hole T-3-2-06 at 209.7–210.7 m depth. Database: Au 0.2 g/t, Ag 5.2 g/t. Block model: Au 5.2 g/t. The silver value in the database has been reported as the gold value in the block model.
- All three Cusiani reports are published at geo-logaritmica.com.
- Consolidated Resources Armenia v. Global Gold Corp., Royal Court of Jersey.
- Mego-Gold LLC bankruptcy file, Republic of Armenia.

Peer-deposit reference material

- CSA Global NI 43-101 Technical Report, Shahumyan Project, Kapan, Republic of Armenia, Galen White, Competent Person, 23 March 2015.
- Dundee Precious Metals Kapan / Polymetal International reserve disclosures, 2015–2018.
- USGS Mineral Industry of Armenia, 2016 and 2017–2018 editions.
- MDRU (University of British Columbia), structural, mineralogical and fluid evolution of the Shahumyan intermediate-sulphidation vein deposit, Kapan district, Armenia.
- mindat.org, Shahumyan Mine, Kapan, Syunik Province, Armenia.

Public record — Bill Mavridis

- Public record on Van Z. Krikorian / Global Gold Corp. (GBGD) and Toukhmanuk: krikorian-fraud-toukhmanuk.netlify.app (updated March 2026).
- Supplementary record: van-z-krikorian-exposed.com, including Hartounian v. Krikorian, Superior Court of New Jersey, Bergen County, Docket BER-C-000287-25 (filed 9 December 2025).

12. Statement on authorship, scope and limitations

This briefing has been prepared by Bill Mavridis in his personal capacity as a former JV partner of Global Gold Corp. with direct prior commercial exposure to Van Z. Krikorian in the Republic of Armenia. It is delivered to Optima Management Company for the sole purpose of placing on the record of a prospective counterparty the documentary and technical concerns summarised above.

This briefing is analytical and documentary in character. It is not a legal opinion, a formal technical report under any mining code (CIM, JORC or NI 43-101), or a formal reserves audit. It does not purport to resolve the question of how much gold is economically recoverable at Toukhmanuk. It does set out, with sourcing, the reasons why, in the author's view, the 2016 GKZ reserves approval is not a reliable foundation for that determination on its own.

The allegations concerning conduct by Van Z. Krikorian, Ashot Boghossian, Global Gold Corp. and Mego-Gold LLC that are reproduced or summarised in this briefing are drawn from the sources cited in Section 11. Where those sources characterise conduct as fraudulent, manipulated or falsified, those characterisations are the sources' and are presented as such. Optima Management Company is invited to review the cited primary documents directly and to form its own independent judgement.

Optima Management Company is free to share this briefing in full or in part with its professional advisers, with the Republic of Armenia State Committee of Reserves, with the Ministry of Territorial Administration and Infrastructure, and with any other party it considers appropriate. The author requests only that the briefing not be excerpted in a manner that misrepresents its conclusions.

Respectfully submitted,

Bill Mavridis

Montreal, Quebec, Canada

Tel / WhatsApp: +1 514-813-9200

vzk.exposed@gmail.com

---

† Prepared with the analytical assistance of Anthropic's Claude.