NI 43-101 Technical Report

Preliminary Economic Assessment

Zgounder Silver Mine

Kingdom of Morocco

Prepared for Maya Gold & Silver Inc.
Noureddine Mokaddem President & CEO
By:
GoldMinds Geoservices Inc.
Claude Duplessis, Eng.
Merouane Rachidi, P. Geo. Ph.D.
Gilbert Rousseau, Eng.
Effective date: February 5, 2018
Issue date: February 22, 2018
Amended date: March 16, 2018

Certificate of Qualified Person

Claude Duplessis, Eng. - GoldMinds Geoservices Inc. 2999 Chemin Sainte-Foy, suite 200, Québec, Qc Canada G1X 1P7

To accompany the Report entitled: "NI 43-101 Technical Report, Preliminary Economic Assessment Zgounder Silver Mine, Kingdom of Morocco" dated February 22 and amended on March 16, 2018 with an effective date of February 5th, 2018 (the "Technical Report").

I, Claude Duplessis, Eng., do hereby certify that:

a) I am a graduate from the University of Quebec in Chicoutimi, Quebec in 1988 with a B.Sc. in geological engineering and I have practised my profession continuously since that time;
b) I am a registered member of the Ordre des Ingénieurs du Québec (Registration Number 45523). I am also a registered engineer in the province of Alberta, Ontario and Newfoundland & Labrador. I am a Member of the Canadian Institute of Mining, Metallurgy and Petroleum. I am a Senior Engineer and Consultant at GoldMinds Geoservices Inc.;
c) I have worked as an engineer for a total of 29 years since my graduation. My relevant experience for the purpose of the Technical Report is: Over 25 years of consulting in the field of Mineral Resource estimation, orebody modelling, mineral processing, mine design, mineral resource auditing and geotechnical engineering, cash flow analysis and economic analysis;
d) I have prepared, written, participate in the technical report, I am responsible of Items: 15, 19, 21 and 22 while co-author on Items 1, 2, 3, 12, 14, 15, 16, 18, 20, 25, 26 and 27. I have personally visited the site of the Zgounder Silver Deposit property from June 3 to June 10, 2013 also in May 28th to 30th 2015 and May 2017
e) I am independent of the issuer as defined in section 1.5 of NI 43-101("The Instrument");
f) I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101.
g) I have read NI 43-101 and Form 43-101F1 and have prepared the technical report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
h) I have no personal knowledge as of the date of this certificate of any material fact or material change, which is not reflected in this report.

This 16 day of March 2018.

Original signed and sealed

(Signed) "Claude Duplessis"
Claude Duplessis Eng.
Senior Geological Engineer
GoldMinds Geoservices Inc

Certificate of Qualified Person

Merouane Rachidi, P. Geo., Ph. D. - GoldMinds Geoservices Inc. 2999 Chemin Sainte-Foy, suite 200, Québec, Qc Canada G1X 1P7

To accompany the Report entitled: "NI 43-101 Technical Report, Preliminary Economic Assessment Zgounder Silver Mine, Kingdom of Morocco" dated February 22 and amended on March 16, 2018 with an effective date of February 5th, 2018.

I, Merouane Rachidi P. Geo., Ph. D., do hereby certify that:

a) I am a Geologist at GoldMinds Geoservices Inc. - 2999 Chemin Sainte-Foy, suite 200, Québec, Qc Canada G1X 1P7
b) This certificate applies to the Technical Report entitled Preliminary Economic Assessment (PEA) Zgounder Silver Mine, Kingdom of Morocco, Maya Gold & Silver Inc., Quebec, dated February XX, 2018 (the "Technical Report")
c) I am a graduate from Laval University in Quebec City (Ph.D. in Geology, 2012). I am a member of good standing (#1792) of the l'Ordre des Géologues du Québec (Order of Geologists of Quebec). My relevant experience includes over 8 years in exploration geology, drilling supervision, and 5 years in 3D orebody modelling, mining and mineral resource estimation (NI 43-101).
d) I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
e) I first visited the property in May 2013, and made a second visit from June to October 2013. My last visit was in May 2017 to supervise drilling, sampling and the 3D scan survey of the underground openings and adits at Zgounder mine.
f) I have prepared, participate and written the technical report. I am responsible of the following items 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 23 and 24 and I am co-author of Items 1, 2, 3, 16, 18, 20, 21, 25, 26 and 27 of the technical report.
g) I am independent of Maya Gold & Silver Inc. as defined by Section 1.5 of the Instrument.
h) I have no prior involvement with the property that is the subject of the Technical Report.
i) I have read the Instrument, and the sections of the Technical Report that I am responsible for have been prepared in compliance with the Instrument.
j) As of the effective date of the Technical Report, February 5, 2018, to the best of my knowledge, information, and belief, the Technical Report, or part that I am responsible for, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 16 day of March 2018, Quebec.

"Original document signed and sealed
by Merouane Rachidi P.Geo., Ph.D."
Merouane Rachidi. P.Geo.
GoldMinds Geoservices Inc.

Certificate of Qualified Person

Gilbert Rousseau, Eng.

g.rousseau@goldmindsgeoservices.com

I, Gilbert Rousseau B Sc.A, Eng., of Ville de Saguenay, Province of Quebec, do hereby certify:

a) I am a Senior Mining-Metallurgical Engineer with GoldMinds Geoservices Inc., with a business address at 2999 Chemin Ste-Foy suite 200, Quebec, Qc Canada G1X 1P7.
b) This certificate applies to the Technical Report entitled, "NI 43-101 Technical Report, Preliminary Economic Assessment Zgounder Silver Mine, Kingdom of Morocco" dated February 22 and amended on March 16, 2018 with an effective date of February 5th, 2018.
c) I graduated from The Ecole Polytechnique of the University of Montreal (B.Sc.A, Mining Engineer in 1969). I am a member in good standing of the "l'Ordre des Ingénieurs du Québec" #20288). My relevant experience includes more than 40 years of experience in the mining and milling of minerals including iron, copper, lead, zinc, silver, gold, asbestos, graphite, nickel, silica, etc. I am a "Qualified Person" for the purposes of National Instrument 43-101 (the "Instrument").
d) I visited the property on January 18 and 19, 2011 and May 28th to 30th in 2015.
e) I am responsible for Items 13 and 17 of the Technical Report, and I am co-author of Items 1, 2, 3, 16, 18, 21, 22, 25, 26 and 27 of the Technical Report.
f) I am independent of Maya Gold & Silver, as defined by Section 1.5 of the Instrument.
g) I have worked for Maya in previous audits, PEA and PFS with the property that is the subject of the Technical Report.
h) I have read the Instrument and the sections of the report that I am responsible. These sections have been prepared in compliance with the Instrument.
i) As of the effective date of the Technical Report, February 5, 2018, to the best of my knowledge, information and belief, the sections of the report for which I am responsible for, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Signed and dated this 16th day of March 2018 at Quebec, Quebec.

"Original document signed and sealed
by Gilbert Rousseau, Eng"
Gilbert Rousseau, Eng.
GoldMinds Geoservices Inc.

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1 Summary

1.1 General

The Zgounder silver mine is owned since 2012 by Maya Gold and Silver (Maya owns 85% in joint venture with l'Office National des Hydrocarbures et des Mines (ONHYM) of the Kingdom of Morocco (15%)).

The Zgounder Mine is located in the central Anti-Atlas Mountains in the Taroudant Province, Morocco, approximately 265 km east of Agadir City.

GoldMinds Geoservices Inc. (GMG) has prepared in 2014 the first NI 43-101 compliant mineral resource estimation and the Preliminary Economic Assessment (PEA) of the Zgounder mine in order to resume mining and exploitation. Maya has publically disclosed the Pre-Feasibility Study (PFS) on May 2014 that was conjointly prepared by GMG and SGS Geostat of Blainville.

The milling operations started in July 2014 and Maya Gold and Silver announced the first silver pour in August 2014 with the production of the first 20 silver ingots.

The surface diamond drilling programs of 2015 and 2017 allowed Maya Gold and Silver to increase the mineral resource of Zgounder and intersect a rich silver mineralization at the eastern zone close to the surface. Maya has also intersected, during the recent diamond drilling campaign and for the first time, a very rich silver mineralization which probably correspond to the extension of Corps D at an elevation 1655 m Z.

On April 12th, 2017, Maya Gold and Silver gave a mandate to GoldMinds Geoservices to prepare the NI 43-101 compliant mineral resource estimation and the Preliminary Economic Assessment (PEA) of the Zgounder mine.

Maya has publically disclosed the mineral resources estimate prepared by GMG on January 8th, 2018 and has disclosed the Economic Preliminary Assessment (PEA) on February 5th, 2018. The PEA is based on the January 8th 2018 mineral resources estimate.

The Zgounder property covers an area of 16 km^2 (4 km x 4 km) and is situated within the Proterozoic Siroua massif (Anti-Atlas domain). The mining title number 09/2096 and exploitation license number 2306 provide surface rights and access to the property and allow any type of mining. The approximated coordinates of the project in the Lambert conformal conic projection are as follows: x: 276,000; y: 420,355. The elevation is within a range of 2,000 to 2,180 metres above sea level. The site is accessible from Agadir by a well maintained paved road (N10) running 216 km east to Taliouine. From Taliouine, a hillside paved road heads north 50 km to the village of Askaoun. The mine site is accessible from Askaoun by a well maintained 5 km gravel road.

The Zgounder silver deposit is located in the central Anti-Atlas on the northwest flank of the Siroua massif hosted, in the Pan-African orogenic belt (680-580 Ma).The Zgounder deposit is Late Neoproterozoic in age and is described as a Neoproterozoic epithermal hypogene system. The

Zgounder deposit is mainly composed of a volcano-sedimentary formation (Precambrian II (PII)) intruded to the west by the Askaoun granodioritic massif (later Precambrian II-III).

The silver mineralization occurs at the top of the Brown Formation (sandstones), mainly at the contact and within a dolerite sill. The economic silver concentrations at Zgounder are found mainly as vertical columns, complex clusters, shear zones, veinlets and at the intersection of the E-W and N-S fractures located preferentially at the contact zone between schist and dolerite.

The silver mineralization extends laterally over 1,000 m with a subvertical dip to the south. The vertical extension of the body is offset by sub-horizontal faults with a northward movement of 10 to 30 m, pushing the mineralized zones in steps or blocks. There is a granitic intrusion to the north-east of the mine and some holes have intersected the granite at depth. The granite appears to plunge West at 30 degrees and may be the thermal source for mineralized fluid circulation and structural movement.

Since the acquisition of Zgounder deposit, Maya Gold and silver has started exploration and development programs that include drifting, preparation of underground working and drilling.

Maya Gold and silver has completed in 2015 a diamond drill program (total of 17 dill holes) totaling 5,896 meters. Maya has also completed in 2017 a diamond drilling program planned and supervised by GoldMinds Geoservices totaling 7,243 meters of diamond drilling.

Recent drilling works have been done since 2015 under the supervision of Zgounder Millenium Silver Mine (ZMSM) geologists. In 2016, a total of 1,598.4 meters were drilled using the T28 percussion hammer at level 2000 and 2100. During 2017, ZMSM has drilled a total of 3,219.8 meters using the T28 percussion hammer at level 2000 and 2100.

Maya Gold and Silver has also done some recent exploration works on the Zgounder property. The purpose of these works was to map and sample the northern area and to dig some trenches in the eastern part of the property. Maya undertook surface sampling in the northern zone of the Zgounder mine. Systematic sampling has been done according to a regular distance of 20m/20m.

In order to accurately estimate the mineral resources, GoldMinds Geoservices did a survey in May 2017 at Zgounder mine using the GeoSight cavity monitoring system (CMS). Hence, they have been able to get an accurate 3D mapping of underground voids, shafts, stope drifts and adits.

1.2 Executive summary

This section presents an executive summary of the results of an independent NI 43-101 Preliminary Economic Assessment Study ("PEA") on its Zgounder Silver Mine in Morocco. The mine is owned by Zgounder Millenium Silver Mining S.A. (ZMSM), a Maya 85% owned joint venture with l'Office National des Hydrocarbures et des Mines of the Kingdom of Morocco (15%). The PEA Study was prepared by GoldMinds Geoservices Inc. from Québec City (GMG) and is effective as of January 30th 2018 and relies on mineral resource estimates reported on January 8th 2018. The details of the study are presented in the following sections of this report.

A prefeasibility study with 200 t/d processing rate was prepared in 2014 and the results was announced in the press release of May 22nd 2014. The PFS highlighted 573,000 tonnes Proven & Probable reserves at 317.3 g/t Ag for 5,845,000 ounces of silver and was expected to last 6 years.

Out of the mineral reserves identified in 2014, 76,154 tonnes at 381 g/t Ag for 932,902 ounces of silver in the measured and indicated resources have been taken out. The remaining proven & probable reserves are: 493 582 tonnes at 311 g/t for 4,936,797 ounces of silver (resources: 462,589 tonnes at 337g/t for 5,015,118 ounces of silver) and current mineral reserves could sustain 4.8 years at 200 t/d or could sustain 2 years at a milling rate of 500 t/d.

These mineral reserves are included in the mineral resources statement within this PEA report, i.e. they are included in the PEA 2018 resources and do not add, they are inclusive.

The additional silver mined out up to December 2017 is from historical stopes broken and mineralized materials which were not taken into account in the mineral resources & reserves of 2014. The company has planned an updated PFS by the end of 2018.

Maya started the first diamond-drilling program at Zgounder in April 2015 and both the diamond drilling programs of 2015 and 2017 allowed Maya to increase the mineral resource estimates of Zgounder. The milling operations began in July 2014 and Maya announced the first silver pour in August 2014 with the production of the 20 silver ingots. Maya has produced a total of 1.432 million ounces of silver ingots at its Zgounder mine as of December 2017.

Highlights of the Zgounder Silver Mine PEA Study:

- A project life of 10 years with the current resources up to 2027;
- ZMSM Internal Rate of Return of 134% and 118% after taxes;
- ZMSM pre-tax Net Present Value of US$215.1M (discounted at 6.5%) at variable silver price from US$17.50 to US$21.50 per ounce with yearly average of US$20.50 per ounce;
- ZMSM after-tax Net Present Value of US$200.2M (discounted at 6.5%) at variable silver price from USD$17.50 to USD21.5 USD per ounce with average of US$20.5 per ounce;
- The extraction of 3.974Mt at 292 g/t Ag for silver production of 33.682M ounces;
- Milling to increase to 500 tpd in 2018 then up to 2020 followed by a 2000 tpd in 2021;
- Production increase to 1.354M ounces per year up to 4.762M ounces of silver per year;

- Total operating cost of US $63.64 per tonne (averaged over the expected mine's life);
- Capex and sustaining capital requirements of US $46.9M
- MAYA Internal Rate of Return of 121% with an NPV of US$209.86M;
- A break-even point before taxes of US$10.40/ounce Ag:
- The Zgounder mine PEA was prepared as combination of underground extraction, open pit extraction of mineralized material as well as reprocessing of old tailings based on the mineral resources reported on January 8, 2018.

Cautionary Statements

The PEA is preliminary in nature and includes the use of inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. Thus, there is no certainty that the results stated in the PEA will be realized. Actual results may vary, perhaps materially. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Additional exploration work is required to increase the quality of the mineral resources.

Mineral resource used in the PEA

The NI 43-101 PEA Study was based on the undiluted mineral resource estimate prepared by GMG previously reported by Maya on January 8th, 2018. The table below summarizes the mineral resource estimated by GMG combining forty-eight (48) envelopes and the old tailings.

A cut-off grade of 61.89 g/t was applied for the in-pit mineral resources and a cut-off grade of 125 g/t was applied for the underground mineral resources (just under the pit surface).

Total resource estimate at Zgounder silver mine (rounded numbers).

Measured			Indicated			Inferred			Measured + Indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
242,000	**338**	**2,633,000**	**748,000**	**308**	**7,395,000**	**3,437,000**	**256**	**28,338,000**	**990,000**	**315**	**10,028,000**

In-pit resource estimate at Zgounder silver mine (rounded numbers).

Measured			Indicated			Inferred			Measured + Indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
208,000	**315**	**2,108,000**	**616,000**	**293**	**5,794,000**	**1,886,000**	**248**	**15,012,000**	**824,000**	**298**	**7,902,000**

High grade underground resource estimate at Zgounder silver mine (rounded numbers).

Measured			Indicated			Inferred			Measured + Indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
34,000	**482**	**527,000**	**132,000**	**377**	**1,601,000**	**1,051,000**	**332**	**11,209,000**	**166,000**	**398**	**2,128,000**

The old tailings Inferred mineral resources

Inferred		
Tonnes	Ag g/t	Ounces
500,000	**132**	**2,122,000**

Project Economics

A summary of the base case parameters and assumptions are shown in table below:

Project Base Case Economic Parameters and Assumptions

Items	Units	Values
Silver price (yearly average)	US/oz	$20.50
Processed tonnage over LoM	metric tonne	4,926,500
Silver metal production	ounces	33,682,600
Royalty on sales (ONHYM)	%	3.0
Maya Management Fees including NPI*(1)*	%	2.75
Taxes for the first 5 years on gross revenues for a new company*(2)*	%	0.5
Taxes after the first 5 years on profits	%	17.5

1 Net Profit Interest on gross profits (sales less milling and mining costs)

2 After completion of OHNYM 8Million Oz commitment (15%), Project will be 100% owned by a new company owned by Maya in 2021.

The project cash flow summary of the base case is shown in the following table:

Project Cash Flow Summary ZMSM

Items	Value US
Total revenue of silver sales	$708,967,000
Total operating costs	$313,515,000
After-tax undiscounted cash flow	$325,182,000
After-tax discounted (6.5%) NPV	$200,217,000

Project Sensitivities are shown in the following table:

Sensitivity Analysis for Zgounder Millenium Silver Mining (ZMSM)

Parameter	Unit	-30%	-20%	-10%	0%	+10%	+20%	+30%
Pre-Tax								
Capex	M US$	32,83	37,52	42,21	**46,90**	51,59	56,28	60,97
NPV @ 6,5%	M US$	224,68	221,49	218,30	**215,11**	211,92	208,73	205,53
IRR	%	152	146	140	**134**	128	123	117
Opex	M US$	219,46	250,81	282,16	**313,51**	344,87	376,22	407,57
NPV @ 6,5%	M US$	275,55	255,40	235,26	**215,11**	194,96	174,81	154,66
IRR	%	182	165	149	**134**	119	106	93
Metal Price (avg)	$/oz	14,35	16,40	18,45	**20,50**	22,55	24,60	26,65
NPV @ 6,5%	M US$	86,97	129,68	172,39	**215,11**	257,82	300,54	343,25
IRR	%	59	83	108	**134**	161	189	217
Recovery (avg)	%	61	70	78	**87**	96	–	–
NPV @ 6,5%	M US$	88,33	130,59	172,85	**215,11**	257,37	–	–
IRR	%	60	84	108	**134**	161	–	–
Head Grade	g/t	204	234	263	**292**	321	351	380
NPV @ 6,5%	M US$	94,07	134,42	174,76	**215,11**	255,45	295,80	336,14
IRR	%	63	85	109	**134**	160	187	214
Parameter	Unit	-30%	-20%	-10%	0%	+10%	+20%	+30%
After-Tax								
Capex	M US$	32,83	37,52	42,21	**46,90**	51,59	56,28	60,97
NPV @ 6,5%	M US$	209,79	206,60	203,41	**200,22**	197,03	193,83	190,64
IRR	%	135	129	124	**118**	113	108	103
Opex	M US$	219,46	250,81	282,16	**313,51**	344,87	376,22	407,57
NPV @ 6,5%	M US$	256,59	237,80	219,01	**200,22**	181,43	162,63	143,84
IRR	%	155	143	130	**118**	107	95	85
Metal Price (avg)	$/oz	14,35	16,40	18,45	**20,50**	22,55	24,60	26,65
NPV @ 6,5%	M US$	80,15	120,17	160,19	**200,22**	240,24	280,26	320,29
IRR	%	55	76	97	**118**	140	162	185
Recovery (avg)	%	61	70	78	**87**	96	–	–
NPV @ 6,5%	M US$	81,43	121,02	160,62	**200,22**	239,81	–	–
IRR	%	56	77	97	**118**	139	–	–
Head Grade	g/t	204	234	263	**292**	321	351	380
NPV @ 6,5%	M US$	86,87	124,65	162,43	**200,22**	238,00	275,78	313,57
IRR	%	58	78	98	**118**	139	160	182

The sensitivity analysis suggests that the most sensitive parameters are the head grade, the recovery and the silver price. The project outlook calculation presents a robust positive project even at US$14.35/Oz silver and also shows important NPV with the increase in Metal price.

Operating Costs

The operating costs, also called operating expenditures (Opex), are expressed in USD per tonne processed, and are summarized below. This next Table outlines the costs of the total project.

Operating Costs

Items	Cost US	Cost US/t milled
Waste development cost	$102,074,242	$20.72
Mineralized Material production cost	$51,842,142	$10.52
Mineralized Material process cost	$95,507,510	$19.39
General and Administration	$23,325,499	$4.73
Royalty & Management fees (incl. NPI)	$40,765,601	$8.27
Total	**$313,514,993**	**$63.63**

Note: The internal shaft, main ramp with all major underground developments of the mine down to 1620m level are in the Capex sustaining capital. Provision for additional underground development is taken into account with a 20% waste development of mineralized material mined at year 2021 as it is currently at 10%.

Capital Costs

The breakdown of the surface, mill and underground remaining capital cost expenditures (Capex) and sustaining capital to materialize the study is summarized in the following table. It is important to realize that the Zgounder project capital costs for the 500 tpd mill has already been paid with the mine revenues.

The sensitivity analysis suggests that the remaining capital cost has low impact on the economical results.

It is important to mention that operating costs are based on existing real cost adapted to up scaling scenarios. Moreover, the mill capital costs are based on real effective quotes received from Xinhai based in China. The 500 tpd mill is already on site and is being installed.

Capex Summary

Description	Cost - US
Mill 500 tpd	$5 000 000
Mill 2000 tpd	$20 000 000
Shaft+Rock B.	$3 000 000
Ramp & Gallery	$6 400 000
New tailing	$1 500 000
Energy line	$3 500 000
Explosive magazine	$800 000
UG Maintenance room	$750 000
Site prep. mill 2000 tpd	$1 000 000
Air vent/Exit	$250 000
Exploration+Studies	$2 500 000
Water treatment plan	$450 000
Ventilation	$500 000
Upgraded Live Camp	$1 250 000
Total	**$46 900 000**

1US$=10Dirhams

In addition to the capital cost needed of US $5,000,000 initially, there is an estimated amount of US $41,900,000 required for the sustaining capital included in the cash flow. No contingency on the Capex has been added, as it is a preliminary economic assessment with a +/- 30% precision.

The Zgounder Cash Flow after tax is positive every year from its own revenues except for year three, which will require financing, and with a payback of one year. The 500 tpd mill is uphill near the existing base camp, while the proposed new 2000 tpd mill should be installed south of the 2000m level entrance and the existing 200 tpd mill.

Mining

The Zgounder deposit assumes the processing of an average of 340 tpd for the first year (half at 187.5 tpd and half at 500 tpd), with an envisioned expansion to 500 tpd forecasted for two years and 2000 tpd for the remaining seven years of production.

The Zgounder deposit is located in competent rock and has a steep overall dip, making it easily mined using free falling methods. It is recommended to use the open long-hole mining method with sub-levels for the proposed new mining sites.

It is proposed to excavate a main ramp to connect all existing levels to the East above the 2,000m up to 2,100m level. Continued ramp access to the 1,800m level below the 2000m level and reach out the develop levels down to 1,925m and the future levels down to 1,800m; this will facilitate the development and also the transportation of backfill when required. Above 2,100 m elevation, the levels are accessible by adits. As the mine has previously been in production, few new developments are required above 2000m. The total of additional development required is estimated at 20% of mineralized material tonnage with an average of 3.0m linear meters per working day. There is a provision in the Capex (sustaining capital) for an average of 6.0m linear per working day, including the ramp (3.4m x 4m section), for a total of 4,691 meters for the major access and a 315m internal shaft for the life of mine (LOM).

The current processing plant was built to process 200 metric tons per day, assuming 350 working days per year, amounting to 70,000 tonnes per year. With the implementation of the new 500 tpd, mill assuming 350 working days per year, amounting to 175,500 tonnes a year, the feed would come from the underground mine above the 2000m level. Subsequently with the implementation of the 2000 tpd mill, mining and mill feed should come from the surface, underground and the ancient tailings in a proportion of 45%, 42% and 13% respectively. The scheduled tonnage for the 2000 tpd from surface is 900 tonnes, 840 tonnes from underground and 260 tonnes from the old tailings. This has been applied to the ratio of available resources and optimization has not been done.

The surface extraction should use drill, blast, load, haul to crusher and/or ore pass of the existing Alimak. A fleet was initially selected and the management of ZMSM prefers to use national mining contractors to reduce the Capex burden. As well, underground mining equipment was initially selected as a fleet, as the mine is actually mining contractors, the company wishes to pursue that path and equipment list elaborated by Goldminds should be used as reference for the equivalence. With the present total mineralized material being in the order of 4Mt, the mine life would be 10 years with the upgrade to 500 tpd and the 2000tpd. The mineralized material available is 1.681Mt at 331 g/t from UG, 1.79Mt at 300 g/t from potential quarry and 500,000 tonnes at 132 g/t Ag from the old tailings. Material at the surface is pit constrained.

According to the historical and the current mine production, the mining dilution is 10% and the mining recovery is 97%. The 10% mining dilution is applied up to year 2020 and afterward 30% as it represents the 10% from underground and an expected 50% dilution in the pit. These values are applied in the PEA Study. A dilution grade of 50 g/t Ag to the mill feed grade is applied.

The Zgounder mine is accessible from adits on each main level, offering the advantage of straightforward dewatering and good natural air circulation from surface to the 2000m Level. Existing levels down to 1925m should be used in the redevelopment below the 2000m main level.

Metallurgy and Processing

Actual mill operation is about 185 tpd, the feed grade approximately 330 g/t Ag, and the silver recovery is in the 87% range. The intent of Maya is to gradually increase the Zgounder mill feed rate from +/- 200 tonnes per day to 2,000 tonnes per day.

- First step is to increase the mill feed rate to 500 tpd (2018 -2020)
- Second step is to increase the mill feed rate to 2,000 tpd (2021 -2027)

This section describes the mill operation at 500 and 2,000 tonnes per day. If this PEA proves successful, the 500 tpd operation will be addressed later in a future prefeasibility study.

The 500 tpd process plant is designed to recover the silver by a gravity-flotation process followed by the cyanide leaching of the gravity and the flotation concentrates in two different mills. The "upper" mill, designed by Yantai Xinhai Mining Research & Design Co., Ltd. (Xinhai), which will be located some 1,5 km from the actual mill will incorporate the following sections: run of mine mineralized material storage, a three stage crushing plant, two 500 tonne fine mineralized material bins, a two stage grinding bay integrating gravity, a flotation section followed by gravity and flotation concentrates thickening and regrinding spaces.

The "lower" mill (actual Zgounder mill), will essentially remain the same as it is now except for the removal of the two small ball mills and changing of the present clarifier by four filter-presses. The "lower" mill will be fed by gravity from the gravity-flotation concentrates (cyclones O/F) coming from the "upper" mill. The expected mill recovery is based on provided met test is set to 80%.

For the 2,000 tonnes per day operation (2021 – 2027), ZMSM will need a complete new mill. Mill feed averaging 233 g/t (at least for years 2021 to 2024) will come from 3 different locations. Around 45% will come from the open pit, 12% from the old tailings and the other 43% from deep underground-mineralized sectors. To have a smooth and steady operation and to avoid large variations in feed grade and quality, the design criteria for the processing plant is based on a continuous and homogenous feed rate from all sources. The 2,000 tpd processing plant will be designed to recover the silver mainly by cyanide leaching followed by a CIP (carbon in pulp) process. The mill tentatively proposed by Goldminds Geoservices Inc. (GMG) should be located some 250m from the actual 200 tpd mill and will incorporate the following sections: run of mine mineralized material storage, a one stage crushing plant, two fine mineralized material bins, a two stage grinding bay integrating gravity, cyanide leaching followed by carbon adsorption, carbon elution and finally refining. The expected mill recovery based on provided met test with a complete new mill is set to 90%. Additional metallurgical testing is required to validate all parameters of the proposed process.

Mill rejects should undergo cyanide destruction before disposal into the tailings pond or will be naturally destroyed in the pond. GMG is of the opinion that the new conceptual tailings pond has the capacity to store the whole mine life production of this PEA, that is to say during the next ten years of operation. Additional work will need to be done to validate the conceptual design.

Supernatant from the tailings ponds will flow by gravity to a small polishing pond, where it will be treated if necessary, and approximately 80% will be pumped back to the mill. The other 20%, free of any cyanide, will be discharged in the valley connected to the small Zgounder River.

Infrastructure

The energy is coming from a new power line rating 22 KV, having a power of 2500 KVA, is expected to be powerful enough for the milling operation of the 500 tpd. Subsequently, for the 2000 tpd mill, a new line will have to be installed from Taliouine and preliminary discussions with the Office National of Energy (ONE) set the total Capex to US3.5 million.

A new water line will have to be installed for the 2000 tpd mill upgrade and there is a provision in the Capex for this. As well, the existing tailings will be reinforced and modified to accommodate the whole mine life of the PEA. A polishing pond with water containment of 450,000 cubic meter is planned to assist in the management of recycle water. Provision for a water treatment plant near the polishing pond has been done.

A provision in the Capex exists for the expansion of the existing accommodation camp will be required to lodge the additional workforce (the staff and mining contractors).

1.3 Conclusions and recommendations

The exploration results have been positive with a significant increase in mineral resources since 2014 where they have been multiplied by almost a factor of 300%. The new mineral resources have allowed the company to prepare this PEA with a ramp up scenario compared to previous studies.

The company knows now more about mineralization, processing behaviour and the mine accesses. The production from 2014 to 2018 has set solid base for the company to move forward as it is not a resume operation scenario anymore.

The property has resources, shows interesting potential and deserves additional exploration. The author would not be surprised of a significant discovery to the west at depth as our beliefs are that the current Zgounder mine is a block which has moved upward and the potential extension appears to be plunging to the west.

The forecast silver recovery for the base case for this report was set at 80% for a process using gravity, flotation and cyanidation and 90% for a new mill using gravity cyanidation. The installation of the new mill should comfort the silver recovery and addition works (testings) should be done to maximise the recovery for the 2000 tpd design.

The PEA is positive and deserve serious attention, significant effort should be put in place for extensive exploration to convert and increase the quality of the resources.

With ZMSM after-tax Net Present Value of **US$200.2M** (discounted at 6.5%) at variable silver prices from **USD 17.50** to **USD 21.5** per ounce with an average price of **US$ 20.50** per ounce; and MAYA Internal Rate of Return of **121%** with an NPV of **US$209.86M** we can conclude that the company has a positive project in its hands.

GoldMinds Geoservices recommend to Maya Gold and Silver an exploration drilling program composed of Reverse circulation drilling (RC drilling), percussion drilling, surface and underground diamond drilling in order to convert inferred mineralized envelopes to indicated or measured.

For the old tailings we recommend an auger drilling campaign of 500 meters (estimated at 35,000 USD). At least 5 holes in the tailings pile should be sampled in a manner which enables the measurement of the in-situ density profile from surface to bottom which should allow conversion an adequate estimation of tonnage.

For the first phase of exploration budget GMG propose the following program (budgeted) at Zgounder property:

Estimation of the first phase of exploration budget at the Zgounder property.

Recommended works for Phase I	All included cost (USD)
Reverse circulation drilling (5500 meters) at 120 USD per meter	660,000
Surface diamond drill (3000 meters) at 150 USD per meter	450,000
Underground diamond drill (4500 meters) at 175 USD per meter	787,500
Percussion drilling (1500 meters) at 70 USD per meter	105,000
Auger drilling for tailings (500 meters) at 70 USD per meter	35,000
Total	**2,037,500 USD**

Core specific density measurement should be done on the whole core sample length, ideally the whole core and match the from-to of the analysis for at least 5 holes of the next diamond drilling program.

Cavities became one of the main hazard sources that endanger the safety of miners. The lack of accurate cavity information may cause deterioration in mining condition (safety assessment, mining dilution, and disaster prediction).

GoldMinds Geoservices recommend to Maya Gold and Silver to acquire a cavity monitoring system (CMS) to get an accurate 3D mapping of underground voids, shafts, stopes, drifts and adits on a continuous basis or carry a survey at least 3 times a year. The CMS will help the mining operators for volume calculations, blasting design of the pillars, slope analysis, mine planning and overall operations.

Mine levels below elevation 1975m need to be dewatered before to start developments in these parts of the mine. It is highly recommended to analyse the water coming from these underground levels to make sure it can be safely discharged into the Zgounder River or to be used for the processing without being treated.

It is necessary to make a more extensive study on the location of the new mill (2000 tons per day). This location must take into consideration all processing operations and the tailings location.

GMG propose the installation of the mill (2000 tons per day) at about 300 meters at the south from the mine entrance (following figure). For this study Maya has also to take into account the stabilisation of the tailings and the management of the rainstorms waters.

Maya has to build water retention ponds between the main tailings pond and the Zgounder Oued to prevent contamination in case of overflow while rainstorms periods.

Maya Gold and Silver as part of his development project intends to increase the mill feed rate from 200 tons/day to 500 tons/day to 2000 tons/day. This increase of the tonnage processed go with an increase of water use. Maya should develop/secure a method for water recycling and also the installation of water dams to retain water during the periods of high flood. During November 2014, heavy rains increased the level of Zagmouzen oued, which caused extensive damage to the Taliouine bridge and the surrounding farmlands about 56 km south at crow flies of the Zgounder mine.

GoldMinds would like to thanks Maya management and the Zgounder team for their collaboration and transparency as well as special thanks to the team for their assistance during the extensive Cavity Monitoring survey of the mine in 2017.

2 Introduction

Since 2012, the Zgounder mine is owned by Maya Gold and Silver Inc. Zgounder Millenium Silver Mine (ZMSM) is a Joint Venture where Maya owns 85% and the Office National des Hydrocarbures et des Mines of the Kingdom of Morocco owns the other 15%.

Zgounder mine is located in the central Anti-Atlas Mountains in the Taroudant Province, Morocco. The Zgounder mine is accessible from Agadir city at approximately 265 km.

Zgounder was an operating underground mine from 1982-1990 and works were carried out by SOMIL. The latter extracting approximately 500,000 tonnes at 330 g/t Ag. From 2002 to 2004, the Compagnie Minière de Touissit (CMT) did exploration developments and extracted approximately 5,500 tonnes at 429 g/t Ag from the mine and 10,000 tonnes from the old mine development material at a grade of 358 g/t Ag.

GoldMinds Geoservices Inc. (GMG) prepared the first NI 43-101 mineral resource estimation and the Preliminary Economic Assessment (PEA) of the Zgounder mine in 2014. On May 2014, Maya has publicly disclosed a NI 43-101 Pre-Feasibility Study (PFS) that was conjointly prepared by GMG and SGS Geostat of Blainville (both located in Canada).

The milling operations started at Zgounder Silver mine in July 2014 and the first silver pour was announced in August 2014 with the production of 20 silver ingots.

Maya started the first Diamond drilling campaign at Zgounder on April 2015 and followed by a diamond drilling program in 2017 funded by its revenues from the mine. The main objective of the drilling program was the validation of the widespread mineralization hypothesis across the known deposit, to explore lateral extensions of the deposit to the north and the east and to explore extensions at depth of the mineralized zones.

Both drilling programs of 2015 and 2017 allowed Maya to increase the mineral resources of Zgounder and intersect a rich silver mineralization at the eastern zone, close to the surface. Maya has also intersected, during the recent diamond drilling campaign and for the first time, a very rich silver mineralization at depth which probably corresponds to the extension of Corps D at an elevation 1655 m Z.

2.1 Terms of Reference – Scope of Work

At the request of Mr. Noureddine Mokaddem, President and CEO of Maya Gold and Silver, the mandate with the initial scope of work, was defined in April 2017, it includes the mineral resource estimation using the historic and recent diamond drilling programs, as well as the preparation of the Preliminary Feasibility Study (PFS) for a 500 tpd flotation mill followed by a Preliminary Economic Assessment (PEA) presenting the development and dimensioning of the project using also the inferred mineral resources all presented in this NI 43-101 technical reports.

The mandate requests can be read as follows:

1- Elaboration of the 2017 surface drilling program and definition of the drilling targets;

2- Assistance to the ZMSM Geologists during the drilling;

3- Assistance for the preparation of the press releases;

4- Compilation and verification/validation of the recent database (drilling and sampling);

5- Execution of an underground 3D monitoring survey of levels, sublevels and stopes using the laser scanner at the Zgounder silver mine;

6- Modelling of the mineralized zones;

7- Preparation of mineral resource estimation and NI 43-101 compliant technical report;

8- Realisation of a conceptual mining plan and the development sequence to define the PEA;

9- Preparation of the Preliminary Economic Assessment (PEA) NI 43-101 technical report.

There has been a scope change during the assignment and the client has requested to have the dimensioning of the Zgounder project with the PEA study prior to proceed with a 500 tpd mill PFS as there was already sufficient mineral reserves defined in the previous PFS of 2014 to sustain the 500 tpd mill feed in the context.

2.2 Personal inspection on the property by each Qualified Person

The following persons visited the site for various reasons as outlined below.

- Claude Duplessis P. Eng., Senior Engineer, GoldMinds Geoservices Inc., visited the Zgounder property in 2013, in May 2015 with Mr. Rousseau and May 2017 with Mr. Rachidi. M. Duplessis is an independent Qualified Person as defined in the NI 43-101. The purposes of these visits were to examine the underground mine, review the mining method and developments, visit the levels especially the 1975m level accessed by ladders, to conduct verification of the drill core, review sampling preparation, carry laboratory inspection, visit the mill and ingots production, to take independent samples and to supervise the 3D monitoring survey performed with the CMS.

- Merouane Rachidi P. Geo., Ph. D., GoldMinds Geoservices Inc., visited the site on several occasions. The initial visit was from April 5th to April 21st, 2013. The second visit was from June 4th to October 11th, 2013. He supervised and managed the underground percussion drilling and sampling program and also examined the geology of various underground levels. The last visit was in May 2017 with Mr. Duplessis for undertaking the 3D monitoring survey of underground levels by GMG technical team, sublevels and stopes, review sampling and core management as well as drill alignment. He has also supervised the recent diamond drilling program at Zgounder mine.

- Gilbert Rousseau Eng., made a reconnaissance visit to the site on January 18th and 19th, 2011. The installations were still on a care and maintenance basis and most buildings were not accessible. Nevertheless, this visit offered a good general overview of the surface infrastructures. For security purpose, the underground visit was not possible. In May 2015 Mr. Rousseau made an audit of the mill operation with Mr. Duplessis, Mr. Réjean Gosselin member of the board of director and Mr. Noureddine Mokaddem President of Maya.

2.3 Units and Currency

In this report, all prices and cost are expressed in United States Dollars (US$) unless otherwise stated. If other currencies are utilized, their symbols are specified (i.e. Canadian Dollars (Can$), Moroccan Dirhams (MAD), etc.). Quantities are given in the "International System of Units (SI) metric units, the standard Canadian and international practice, including metric tonne (tonne or t) for weight, and metre (m) or kilometre (km) for distance. Some other non-SI units used in the report have been accepted by the International Committee for Weights and Measures and their symbols and names are specified in the following table. The projection system used is the Lambert Conformal Conic. Abbreviations used in this report are listed below. 1 US$ is 9,200. MAD.

Table 1: List of abbreviations

Description	Abbreviation
"Surface Agricole Utile" (total cultivated area)	SAU
Buildings and Public Works	BTP
Bureau de Recherches et de Participations Minières (Morocco)	BRPM
Carbon monoxide	CO
Canadian dollar	Can$
Certificate of Authorization	CofA (CA)
Cubic metre per second	m^3/s
Cubic metre per hour	m^3/h
Decibel, a unit of sound intensity	dB
Decibel weighted by the frequency	dBA
Day-night intensity noise average	Ldn
Fecal Coliform	CF
Fecal streptococci	SF
Calorific Value	PCI
Cubic metre	m^3
General and Administration	G & A
Goldminds Geoservices Inc.	GMG
Gram per litre	g/L
Gram	g

Description	Abbreviation
Gram per tonne or parts per million (ppm; 10^{-6})	g/t
Gross Combined Weight	GCW
Hectare	ha
Inches	in
International Organization for Standardization	ISO
Kilogram	kg
Kilometre	km
Cubic Kilometre	Km^3
Kilovolt	kV
Kilowatt	kW
Kilowatt-hour per tonne	kWh/t
Megawatt	MW
Laboratory for analysis (Casablanca)	Laagrima
Moroccan Dirham	MAD
Medium Voltage	MT (MV)
Mega Volt Ampere	MVA
Megawatt-hour per day	MWh/d
Millimetre	mm
Metre	m
Micro Siemens per centimetre	µS/cm
Micrometre (Micron)	µm
Milligram per litre	mg/L
Cubic Megametre	Mm^3
Megatonne	Mt
Millions of metric tonnes per year	Mtpy
National Action Plan for the Environment	PANE
National Instrument 43-101(Canadian)	NI 43-101
National Office of Drinking Water and Electricity	ONEEP
Nitrogen oxides	NO_x
Milligram per normal cubic metre	mg/Nm^3
Office of Agricultural Development in Agadir	ORMVAA
Office National des Hydrocarbures et des Mines	ONHYM
Omnium Nord Africain	ONA
Organic Matter	MO
Parts per million, parts per billion	ppm, ppb
Preliminary Economic Assessment	PEA
Provincial Directorate of Agriculture	DPA

Description	Abbreviation
Run of Mine	RoM
Secretary of State for the Environment	SEE
SGS Geostat Blainville	SGS
Short ton (0.907185 tonne)	t, st, ST, ton
Société Anonyme Chérifienne d'Études Minières du Maroc	SACEM
Société Minière de Sidi Lahcen	SOMIL
Société Nationale des Autoroutes du Maroc	SNAM
Specific gravity	s. g.
Square metre	m^2
Standard Moroccan Potability	NMP
Study of Environmental Impact	EIA
Sulfur dioxide	SO_2
Suspended Matters	MY
Tonne per day	Tpd (t/d)
Tonne per hour	Tph (t/h)
Tonne per month	Tpm
Tonne per year	Tpy
United Nations Development Program	PNUD
United State Dollar	US$
Volt	V
Water supply	AEP
Degree	°
Celsius degree	°C

3 Reliance on other experts

This Report was prepared by GoldMinds Geoservices Inc. for Maya Gold and Silver Inc. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to GoldMinds Geoservices Inc. at the time of the preparation of this Report with an effective resource disclosure date of January 8, 2018 and effective date of February 5th 2018 for the PEA;
- Assumptions, conditions and qualifications as set forth in this Report;
- Reports, data, files and opinions supplied by Maya Gold and Silver Inc. and its ZMSM affiliate company;
- The recent drilling database supplied by ZMSM technical team has been verified by GMG.

- Analytical laboratories ADM, ALS, Bourlamaque, SGS and the mine laboratory.
- Cap Resources for 3D scan survey of openings in 2014
- Hydraumet & Engitech for the socio-environmental aspects
- Xinhai, engineers and metallurgists

This Report is intended to be used by Maya Gold and Silver Inc. as a Technical Report with Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes contemplated under provincial securities laws, any other use of this report by any third party is at the party's sole risk.

4 Property description and location

4.1 Location

The Zgounder silver mine is located approximately 265 km east of Agadir and 220 km west of Ouarzazate (Figure 1 to Figure 3, central part of the Anti-Atlas Mountains, Morocco).

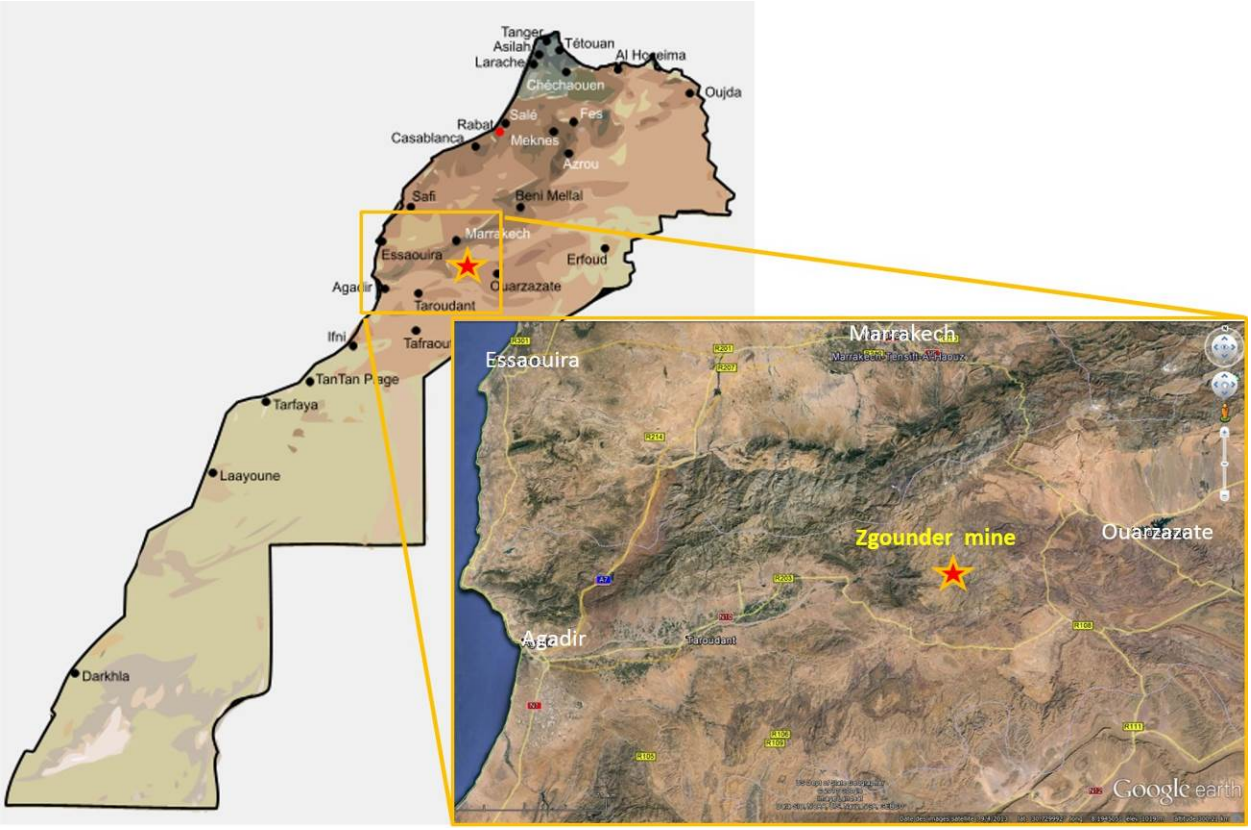


Figure 1: Location of Zgounder property between Agadir and Ouarzazate (from Google Earth).

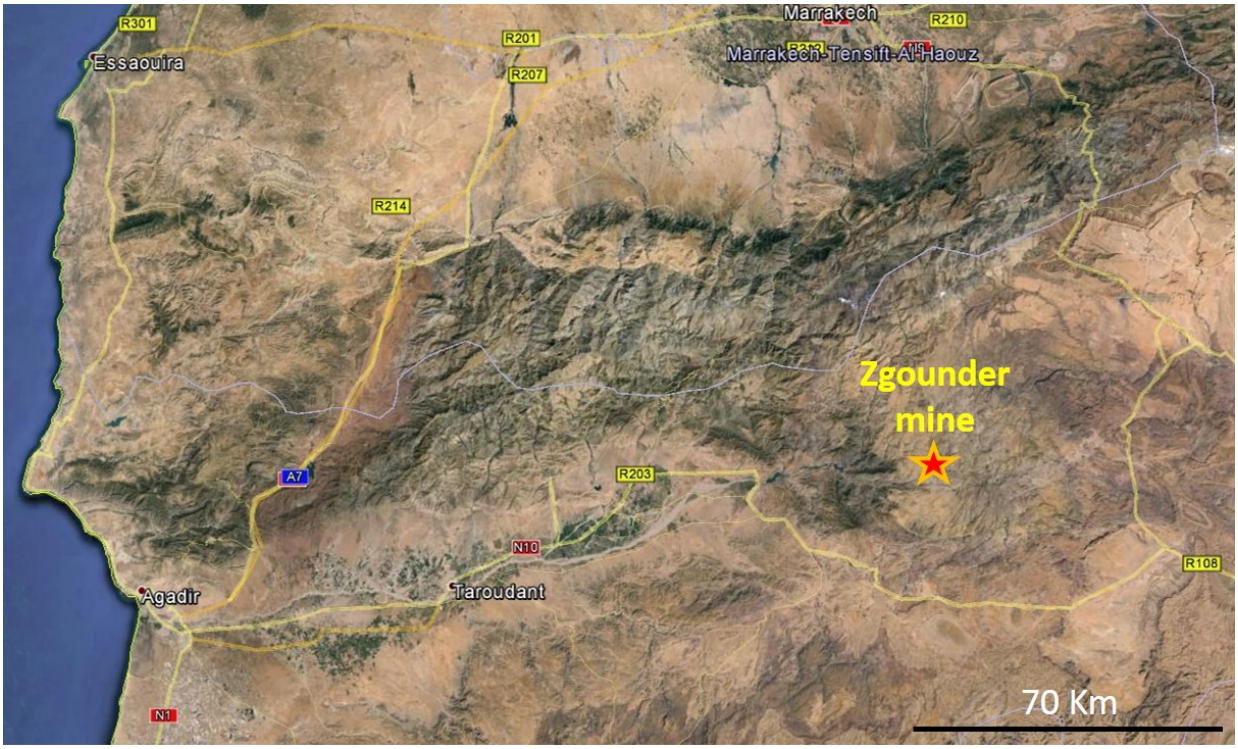


Figure 2: Location & access to the Zgounder silver mine (from Google Earth).

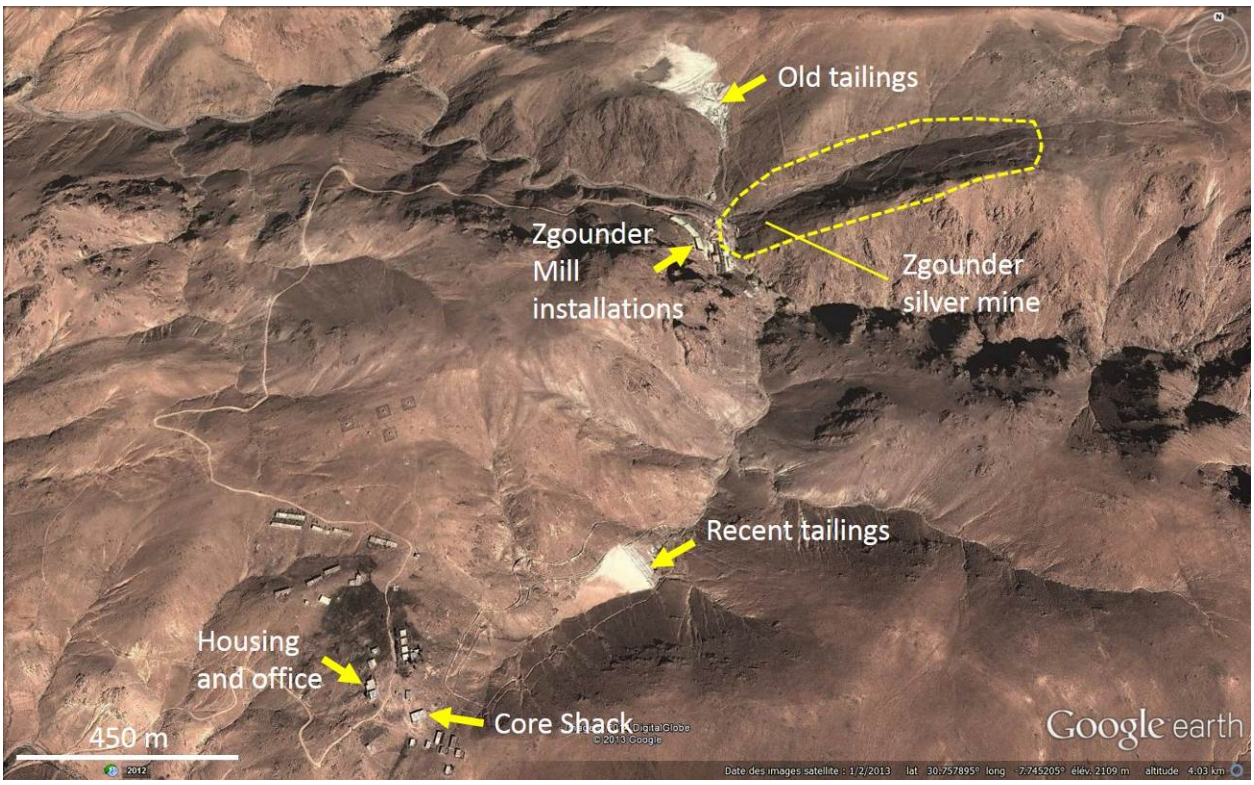


Figure 3: The Zgounder silver mine site (from Google Earth).

4.2 Property description

The Zgounder property covers an area of 16 km^2 (4 km x 4 km, Figure 4) and is situated within the Proterozoic Siroua massif (Anti-Atlas domain). The approximated coordinates of the project in the Lambert conformal conic projection are as follows: x: 276,000; y: 420,355. The elevation is within a range of 2,000 to 2,180 metres above sea level. The details regarding the current coordinate system are described herein:

Maroc_LCC_zone2
Authority: Custom

Projection: Lambert_Conformal_Conic
False_Easting: 500000.0
False_Northing: 300000.0
Central_Meridian: -5.4
Standard_Parallel_1: 28.102913
Standard_Parallel_2: 31.288494
Scale_Factor: 1.0
Latitude_Of_Origin: 29.7
Linear Unit: Meter (1.0)

Geographic Coordinate System: GCS_Merchich_Degree
Angular Unit: Degree (0.0174532925199433)
Prime Meridian: Greenwich (0.0)
Datum: D_Merchich
  Spheroid: Clarke_1880_IGN
  Semimajor Axis: 6378249.2
  Semiminor Axis: 6356515.0
  Inverse Flattening: 293.4660212936265

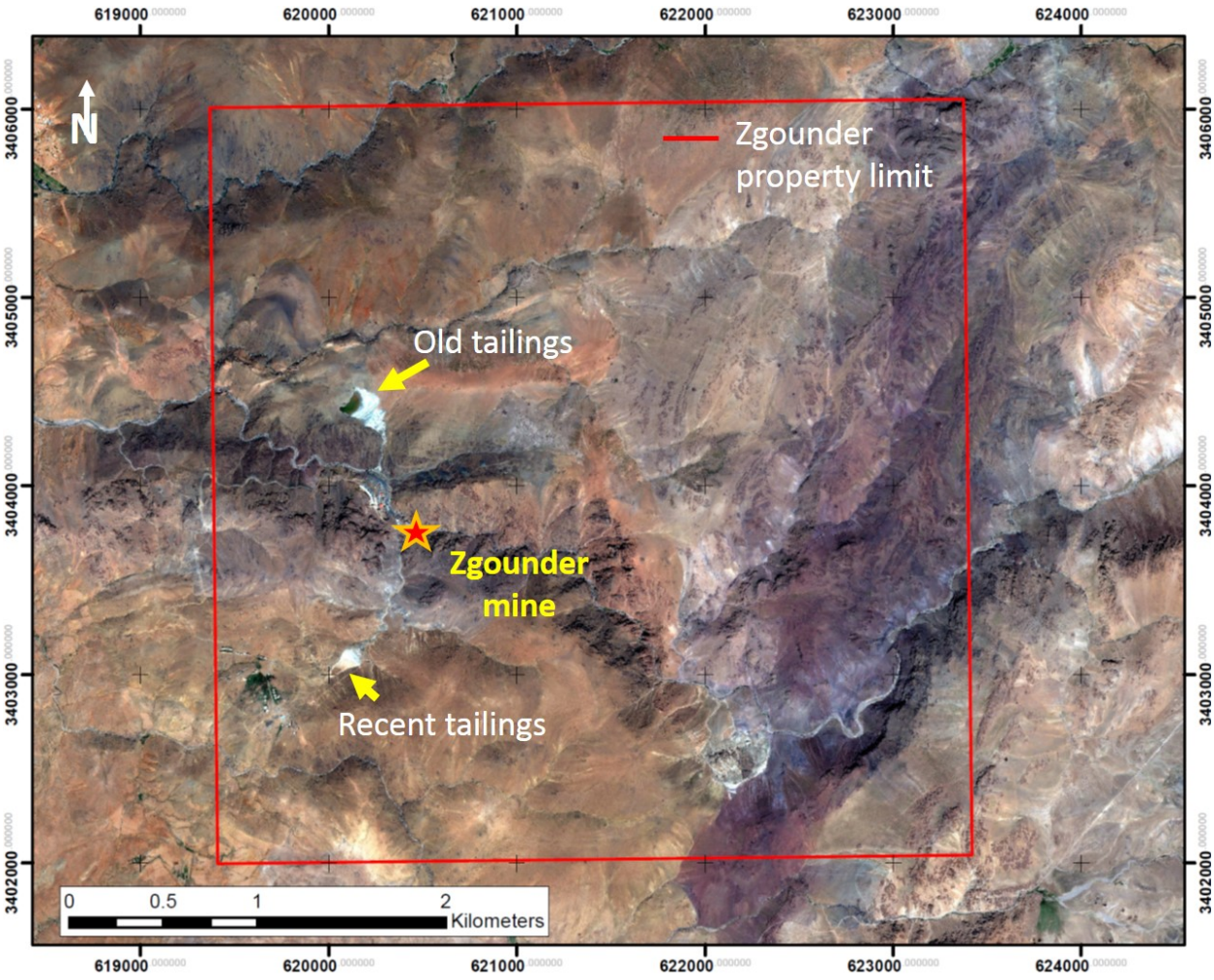


Figure 4: Property mining permit limits of Zgounder silver mine (from Goulex).

4.3 Mineral rights and other permits

ONHYM authorizes Maya Gold and Silver Inc. to prospect and exploit base and precious metals at the Zgounder mine. The mining title number 09/2096 and exploitation license number 2306 provide surface rights and access to the property and allow any type of mining. Necessary authorization for the use of public water was obtained from the Water Basin Agency of Souss Massa Draa, including the use of spring water or groundwater necessary for the milling process. Following its use, wastewater will be discharged into the tailings pond.

4.4 Royalties

Maya Gold and Silver and ONHYM have signed in 2012 an agreement for the development and the exploitation of the Zgounder mine. Maya Gold and Silver offered a 15% stake in its share capital to ONHYM, free of charge until the production of 8 million silver ounces. Once the 8 million ounces is achieved and royalty of 15% dully paid, Maya will become the sole owner of the Zgounder Mine. Maya Gold and Silver is committed to give 5% of the gross revenues generated from the Zgounder

silver mine, to which is subtracted the mining and milling costs (the "Royalty"), to Global works, Assistance and Trading Société à "responsabilité limitée" (Glowat S.A.R.L). For simplification in the cash flow of this PEA, this royalty is included in the Maya Management fees royalty.

A new Moroccan company has been established in January 2014 and called Zgounder Millennium Silver Mining (ZMSM) with Maya Gold and Silver (85%) and ONHYM (15%) as shareholders. Hence, the mining title of the Zgounder property is transferred to the ZMSM Company by ONHYM. ONHYM receiving a 3% royalty from the sale incomes of ZMSM as management fees.

Any dispute related to the validity of the interpretation or execution of the Agreement between ONHYM and Maya Gold and Silver shall be resolved amicably by conciliation between the two parties. It is appropriate to note that in case of the failure of this approach, the dispute shall be submitted to the arbitration process of the International Chamber of Commerce in Paris, under the rules of this chamber that apply to Moroccan laws.

5 Accessibility, climate, local resources, infrastructure and physiography

5.1 Accessibility

The Zgounder silver mine is situated in the province of Taroudant. The Zgounder property is located approximately 265 km east of the port city of Agadir in the Precambian formation of Siroua (central part of Anti-Atlas Mountains, Morocco). The site is accessible from Agadir by a well maintained paved road (N10) running 216 km east to Taliouine. From Taliouine, a hillside paved road heads north 50 km to the village of Askaoun. The mine site is accessible from Askaoun by a well maintained 5 km gravel road (Figure 9).

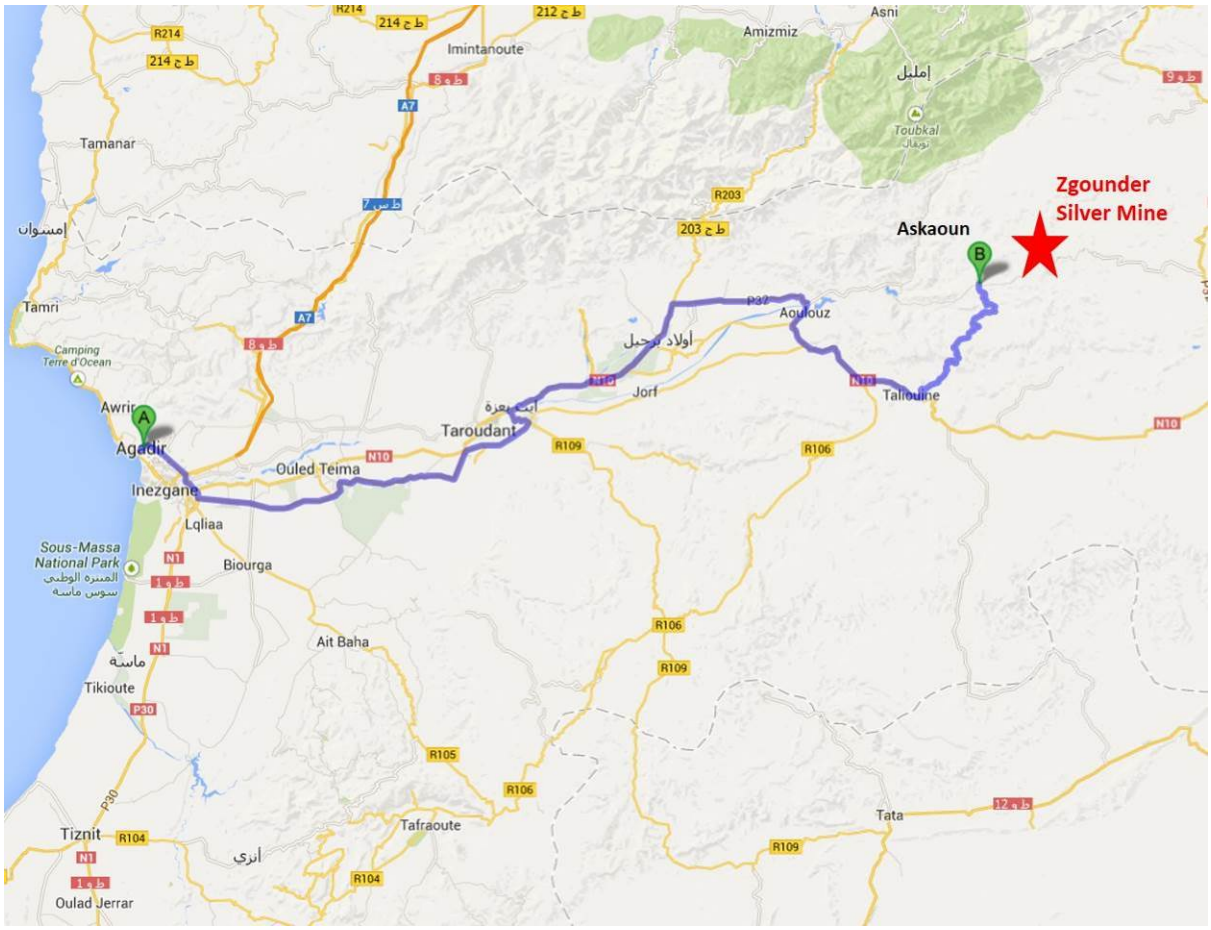


Figure 5: Location of Zgounder mine with respect to Agadir (from Google Maps).

A 260 km paved road from Marrakech to Askaoun, via Agouim, is presently under construction.

5.2 Climate

The Zgounder silver mine is located between 1,925 and 2,200 metres above sea level (m.a.s.l.) on the western flank of the Siroua massif of the Anti-Atlas Mountains. This region is separated from the influence of the Mediterranean climate by the High Atlas Mountains to the north and therefore shares the Sahara climate. The area is semi-arid as the Sahara desert is less than 50 km away. Winters are cool to cold; snowfalls of up to 0.5 m occasionally occur during the first quarter of the year in area which elevation is above 1,600 m.a.s.l. The average annual rainfall is about 317 mm; the driest month is July with 1 mm of rain and December has the highest rate of precipitation with an average of 71 mm (Figure 6). The average annual temperature is approximately 12.2 °C; summers are warm to hot and essentially dry. Seasonal and daily temperature variations are significant (Figure 7). The 2017-2018 winter is exceptional with spectacular snow falls and colder temperature than normal.

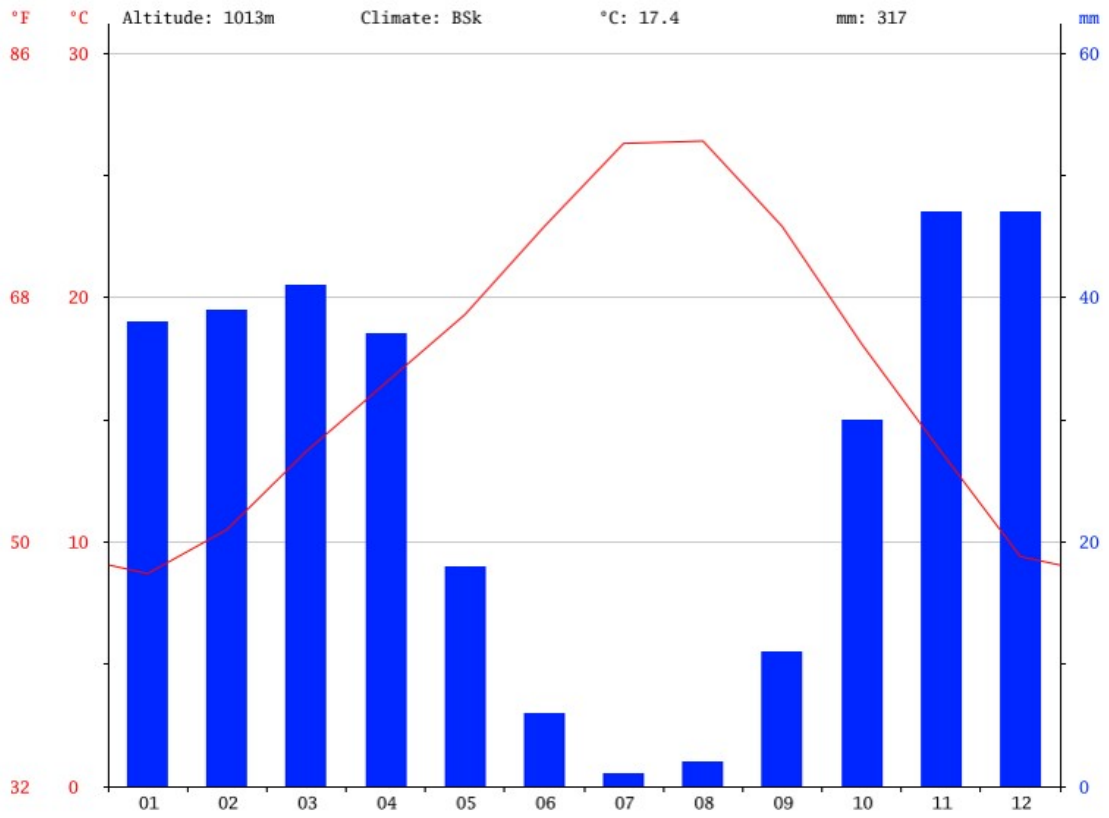


Figure 6: Monthly precipitation and temperature averages at Askaoun (climatdata.org).

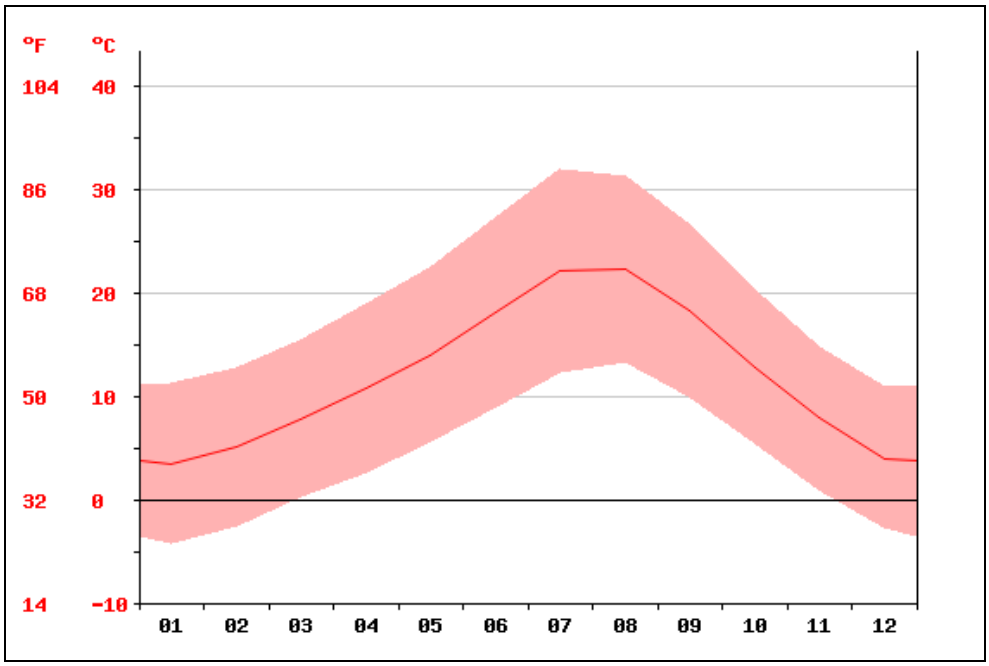


Figure 7: Monthly temperature averages at Askaoun village (climatedata.org).

The hottest month of the year is August with an average temperature of 22.2°C. January is the coldest one with an average temperature of 3.5°C (Figure 8).

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	60	55	67	60	32	14	3	4	20	45	69	71
°C	3.5	5.1	7.8	10.7	14	18.1	22.1	22.2	18.2	12.8	7.9	4
°C (min)	-4.3	-2.5	0.2	2.6	5.6	8.9	12.3	13.2	9.9	5.5	1	-2.8
°C (max)	11.3	12.8	15.5	18.9	22.5	27.3	31.9	31.2	26.6	20.2	14.8	10.9
°F	38.3	41.2	46	51.3	57.2	64.6	71.8	72	64.8	55	46.2	39.2
°F (min)	24.3	27.5	32.4	36.7	42.1	48	54.1	55.8	49.8	41.9	33.8	27
°F (max)	52.3	55	59.9	66	72.5	81.1	89.4	88.2	79.9	68.4	58.6	51.6

Figure 8: Monthly precipitation & temperature averages at Askaoun (climatedata.org).

5.3 Local resources

The main villages are located close to rivers (oueds) for water sources, offering habitat for select vegetation (certain cereals, vegetables and some trees). The local population is exclusively Amazigh (aboriginal population) with a semi-sedentary lifestyle. The local economy is principally supported by livestock, agriculture and food trade (saffron, potatoes, dates), as well as the manufacturing of traditional carpets. The Siroua region is a popular tourist destination from spring to late fall.

Basic supplies such as food and limited accommodation are available at Askaoun; the larger city of Talioune offers greater diversity. Special items must be purchased from Agadir.

Mining in Morocco has been existing for centuries and skilled labour is readily available. The mining manpower for Zgounder resides in nearby villages which are located between 5 to 10 km away from the mine site. Some of the inhabitants are previous employees of Somil and CMT. The implication of the local manpower in the Zgounder project benefit the local economy, which is almost entirely based on agriculture.

5.4 Infrastructure

The Zgounder silver mine is easily accessible by a well maintained gravel road from the village of Askaoun (Figure 9).

Skilled labour is available in nearby villages and some inhabitants have previously worked for SOMIL and CMT. Electrical power on site is provided by 3 x 1000 kVA (850kW) diesel generators (Figure 12).

During the first years of production, Maya used the trapped water lower from level 2000. The Zgounder River flows through the property and is sufficient to supply water (Figure 13).

The mine now also brings potable water by gravity from an artesian well five kilometres from the mine office. A small dam helps to maintain an adequate water supply during the dry summer months.

Figure 9: A) Paved road from Taliouine to Askaoun; B) Gravel road on site from Askaoun.

Figure 10: Broadening of the gravel trail from level 2000 to 2175 at Zgounder silver mine.

Figure 11: A-B) The mining crew houses with the snowy Siroua massif visible in the background (April 2013); C) The Zgounder site offices; D) A core shack used for the preparation and archiving of the drilling samples (cutting and core samples); E) The mine entrance at level 2000; F) Trail linking the entrance of level 2000 to 2100, 2125 and 2150.

Figure 12: A general view looking west of the Zgounder mill installations showing the conveyor (yellow arrows), storage bins with crushers (white arrows), two cyanidation lines with counter-current decantation (blue arrows) and diesel generators (black arrow).

Figure 13: The Zgounder River (Oued-yellow arrow) flowing through the property.

Milling installations at Zgounder include a crushing plant, a grinding bay followed by a cyanide leaching with counter-current decantation circuit. There is an analytical geochemical laboratory at the Zgounder site with the laboratory equipment to secure grade control in process and analyse of mine samples.

Figure 14: View of the cyanide leaching tanks & counter-current decantation thickeners.

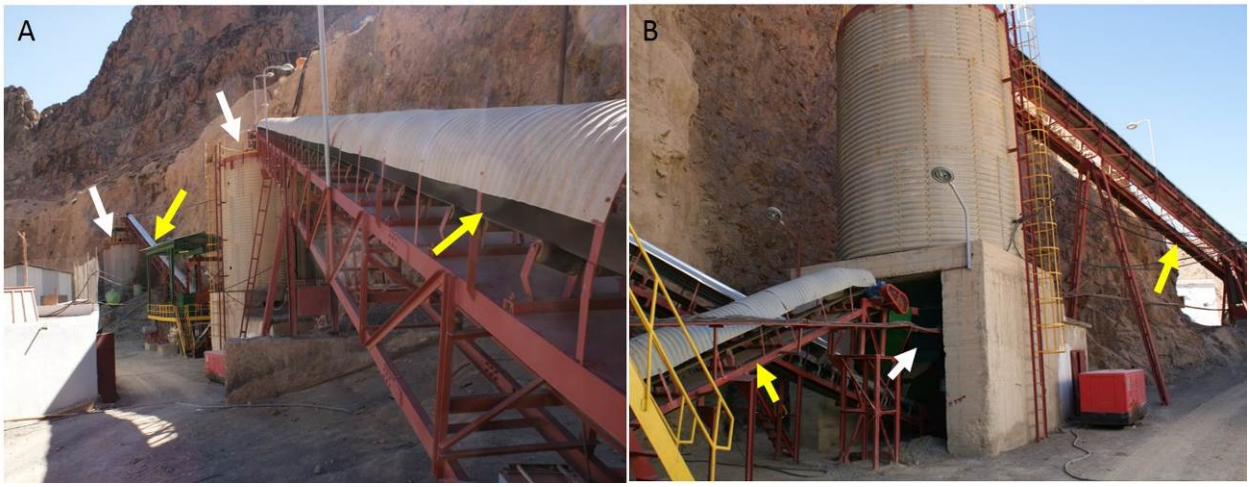


Figure 15: A) Conveyors (yellow arrows) and the coarse storage bins with cone crushers at the base (white arrows); B) A close-up view of the secondary crusher (white arrow).

5.5 Physiography

The Jbel Siroua region (elevation 3304 m.a.s.l., Adrar n'Siroua) is the highest point of the Anti-Atlas, located 14 km southeast of the Zgounder mine. The Siroua massif is crossed by numerous rivers, the principal ones being Assif n'Tifnout, Assif n'Oumarigh, and Assif n'Iriri. The Zgounder deposit is situated on the northern flank of a steep ridge between the Talat N'ouna River to the north and the Zgounder River to the south and west. The ridge rises steeply from an elevation of 2000 m.a.s.l. at the Zgounder River to 2230 m.a.s.l. at the far east of the deposit.

The topography at Zgounder is characterized by moderately steep hills with high altitudes, in the range of 2100 m.a.s.l., and low valleys with seasonal flow in rivers (oueds). Vegetation is limited to minor alpine flowers, mosses, lichens and small evergreen trees. Wheat is cultivated proximal to the villages on man-made terraces which are irrigated by springs and dams in waddies (Figure 16).

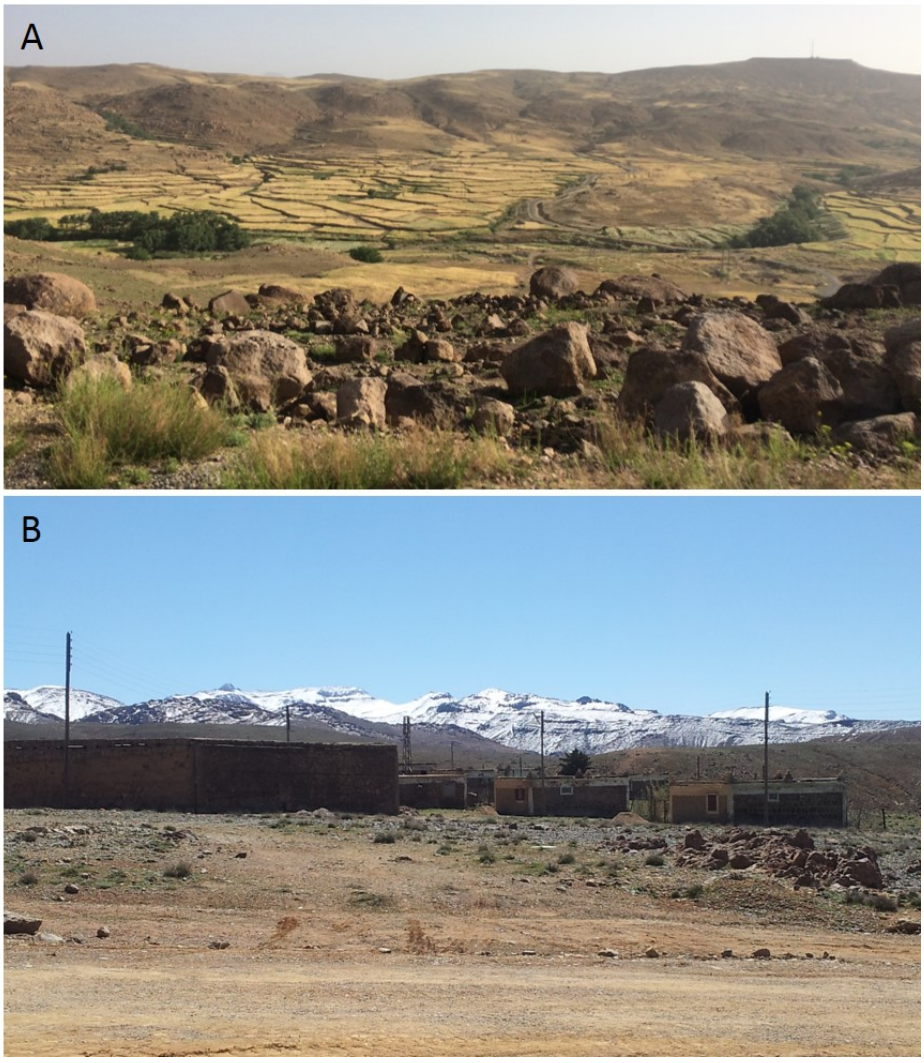


Figure 16: A) A cultivated valley between Taliouine and Askaoun, flanked by moderately steep hills; B) Hills of moderate elevation and sparse vegetation.

6 History

The Zgounder silver deposit was first exploited between the 10th and 12th centuries, principally in exposed shallow oxidized zones with native silver stringers hosted within EW, NS, NW and NE-trending veins. Excavation scars are the result of these old mining operations; they can exceed 60 m in depth (Figure 17). Evidence of these ancient operations are found locally (Figure 18) and sectors containing many of these excavation sites have been mapped.

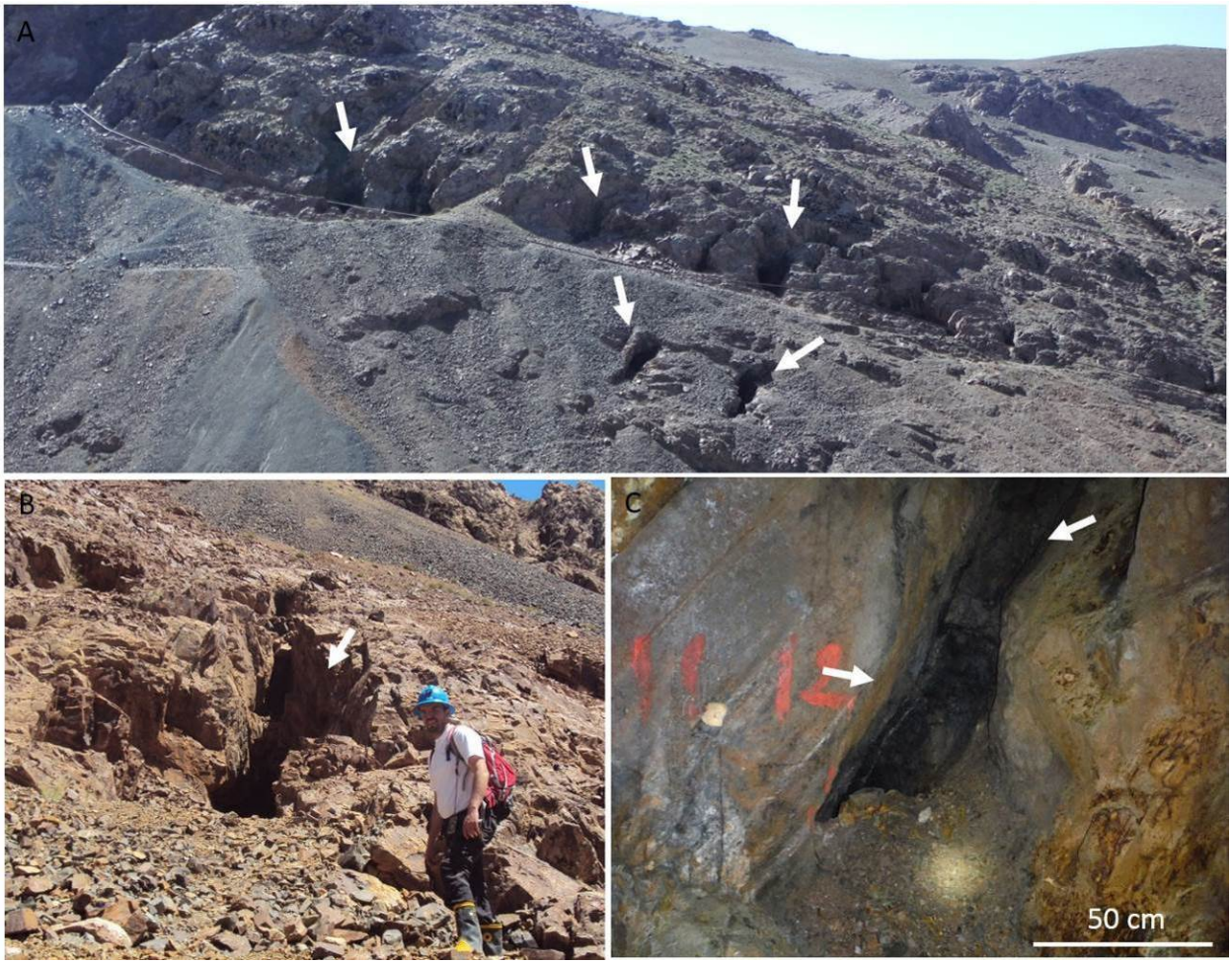


Figure 17: A) Ancient mining excavations (arrows) generally oriented N-S; B) A close-up view of an ancient excavation from the surface; C) An underground adit cross-cutting an old excavation (arrows).

Figure 18: A) A granite wheel used in the medieval period to reduce the size of extracted mineralized rocks; B) Slag (the remainders of molten metal) found at the surface, close to the entrance of level 2100 at the Zgounder mine.

Earlier exploration campaigns and mining activities were completed by SNAM (1950-1955), BRPM (1956-1965; 1969-1972) and SACEM-BRPM jointly (1971-1972).

The Société Minière de Sidi Lahcen (SOMIL) has operated the Zgounder silver mine from 1982 to 1990. Several underground drifts and adits (9,220 m in total) connected by raises (1,200 m in total) were developed. The highest adit level was excavated at 2,175 m at the eastern end of the mine and the lowest level was excavated at 1,925 m in the western sector (Figure 19). SOMIL extracted 5,304,955 ounces of silver between 1982 and 1990.

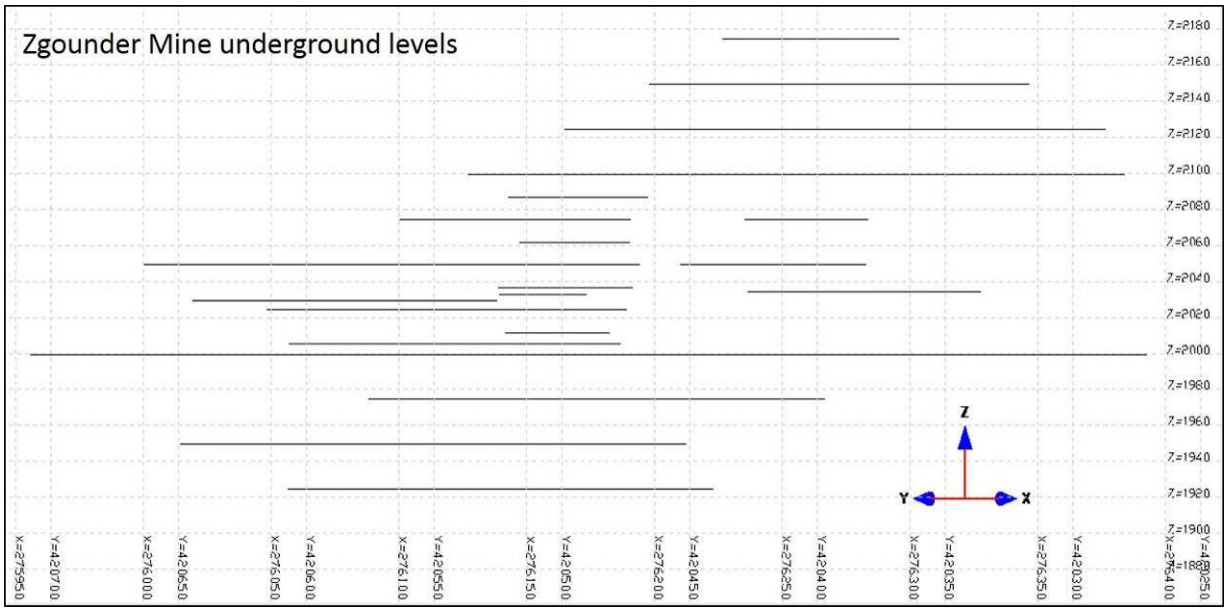


Figure 19: A longitudinal section of the Zgounder mine levels from 1925 to 2175 m using a constant elevation (z) for each level (adits digitalized by Goulex from SOMIL and CMT mine plans).

The BRPM started an exploration campaign in 1997 consisting in mapping and sampling the mineralized structures, these steps being followed by a drilling program. Seven surface holes were drilled along strikes of mineralized zones, totaling 1,761 m of cores. The BRPM interpreted these zones as new mineralized zones parallel to, and stratigraphically beneath, the dolerite contact zone.

From 2002 to 2004, the Compagnie Minière de Touissit (CMT) conducted surface and underground exploration programs to delimit the mineralized zones in the northern sector of the Zgounder mine and to verify the historical resource estimation as previously defined by BRPM. CMT extracted 75,861 ounces of silver between 2002-2004.

In 2012, Maya Gold & Silver and the Office National des Hydrocarbures et des Mines (ONHYM) agreed to negotiate an agreement for Maya to acquire 85% of the Zgounder silver deposit. Maya Gold & Silver was granted the license (No. 2306) that provides them the surface rights and access to the property for any type of exploration and exploitation. The agreement on the Zgounder silver deposit was signed January 06, 2012.

To the authors knowledge Maya Gold & Silver is in good standing with its commitment with ONHYM.

7 Geological setting

7.1 Regional geology

The Zgounder silver deposit is located in the central Anti-Atlas on the northwest flank of the Siroua massif hosted in the Pan-African orogenic belt (680-580 Ma). The Pan-African orogeny started during the Middle Precambrian (Clauer, 1974) with the formation of a back-arc basin filled by a series of synorogenic volcano-sediments. The back-arc basin was covered at the end of the Precambrian by the Adoudounian marine sediments as a result of a marine transgression affecting the whole Anti-atlas (Figure 20).

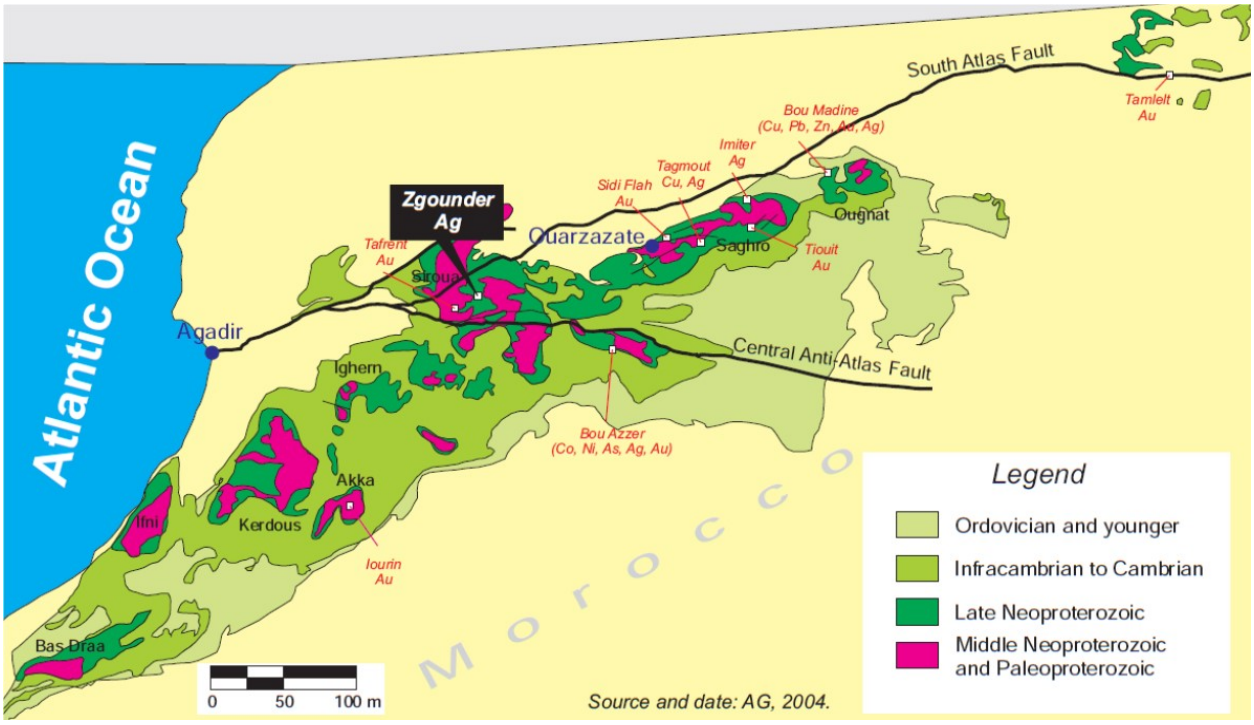


Figure 20: Regional geology of the Anti-Atlas displaying proterozoic windows hosting numerous polymetallic deposits, that includes the Zgounder silver mine (AG, 2004).

The Siroua massif is located between two major structural zones, namely a northern unit attached to the Pan-African domain and a southern unit generated by the Eburnian orogeny and accreted onto the West African Craton. The Siroua massif consists of a Pan-African bedrock (gneiss and amphibolite) which is unconformably overlaid by ophiolitic complexes and volcano-sedimentary units of alternating schist-sandstone, limestone, quartzite and turbidite. The Zgounder mineralization dates to the Late Neoproterozoic during felsic calc-alkaline/alkaline volcanic activity marking the commencement of rifting and the Infracambrian–Cambrian transgression (Buggisch and Flügel, 1988).

7.2 Property Geology

The geological series at Zgounder consist mainly of volcano-sedimentary formations attributed to the Precambrian II (PII), which are intruded to the west by the Askaoun granodioritic massif (later Precambrian II-III), (Demange, 1977). The series are overlaid in the east by the volcano-sedimentary rocks of the Ouarzazate series (PII) and Neogene phonolites.

The Zgounder volcano-sedimentary series comprise a mixed sequence of metavolcanics, metasediments, doleritic and granodioritic intrusives. It outcrops in the form of a window of PII rocks on the south limb of a large east-west trending monocline, strongly dipping to the south. It is surrounded by PIII volcanics and volcanoclastics to the east, basal PII formations to the north, and by the Askaoun granite to the west and southwest.

The geological series at Zgounder were divided into three formations (Demange, 1997), two with a major clastic component intercalated with volcanics (the 'Blue' and 'Brown' Formations) overlaid by an acid ignimbritic volcanic complex (the 'Black Formation'), (Figure 21).

Blue Formation

The Blue formation is 300 to 400 m in thickness, composed of sandstone, greywacke and pelites with interbedded tuffs and quartz-keratophyre. The formation terminates in an orange rhyolitic unit, which forms the ridge to the north of the mineralized zone.

Brown Formation

The Brown formation is 350 to 400 m in thickness and consists of mica schist, arenaceous schist, breccia intercalations, and pelite containing green volcanic clasts overlaid by a 45 m thick dolerite sill/dyke. The brown formation is affected by epizonal metamorphism as evidenced by weak schistosity, which is difficult to distinguish from the stratification. This formation is composed of two units: Unit 1 is 120 m in thickness and composed of heavily oxidized, coarse mica schist located north of Talat N'ouna; Unit 2 is 280 m in thickness and largely covered by the ancient tailings on the southern flank of the Oued Talat N'ouna. It is composed of a coarse-grained pelite with millimetric clasts in sericitic/chloritic tuffaceous bands. The bands have a volcano-sedimentary origin displaying polymetallic mineralization (pyrite, sphalerite, galena, arsenopyrite, silver sulphide and native silver), (Figure 21 and Figure 22).

Black Formation

The Black Formation is 900 m in thickness and composed of a basal felsic volcanic complex (ignimbrite, rhyolitic breccias, devitrified rhyolite, pyroclastic rocks) forming the hanging wall of the Ag-mineralization in the upper part of the Brown Formation. Further south, the upper part of the Black Formation is composed by sandstone, greywacke and some thin intercalations of polymictic conglomerate (Figure 21).

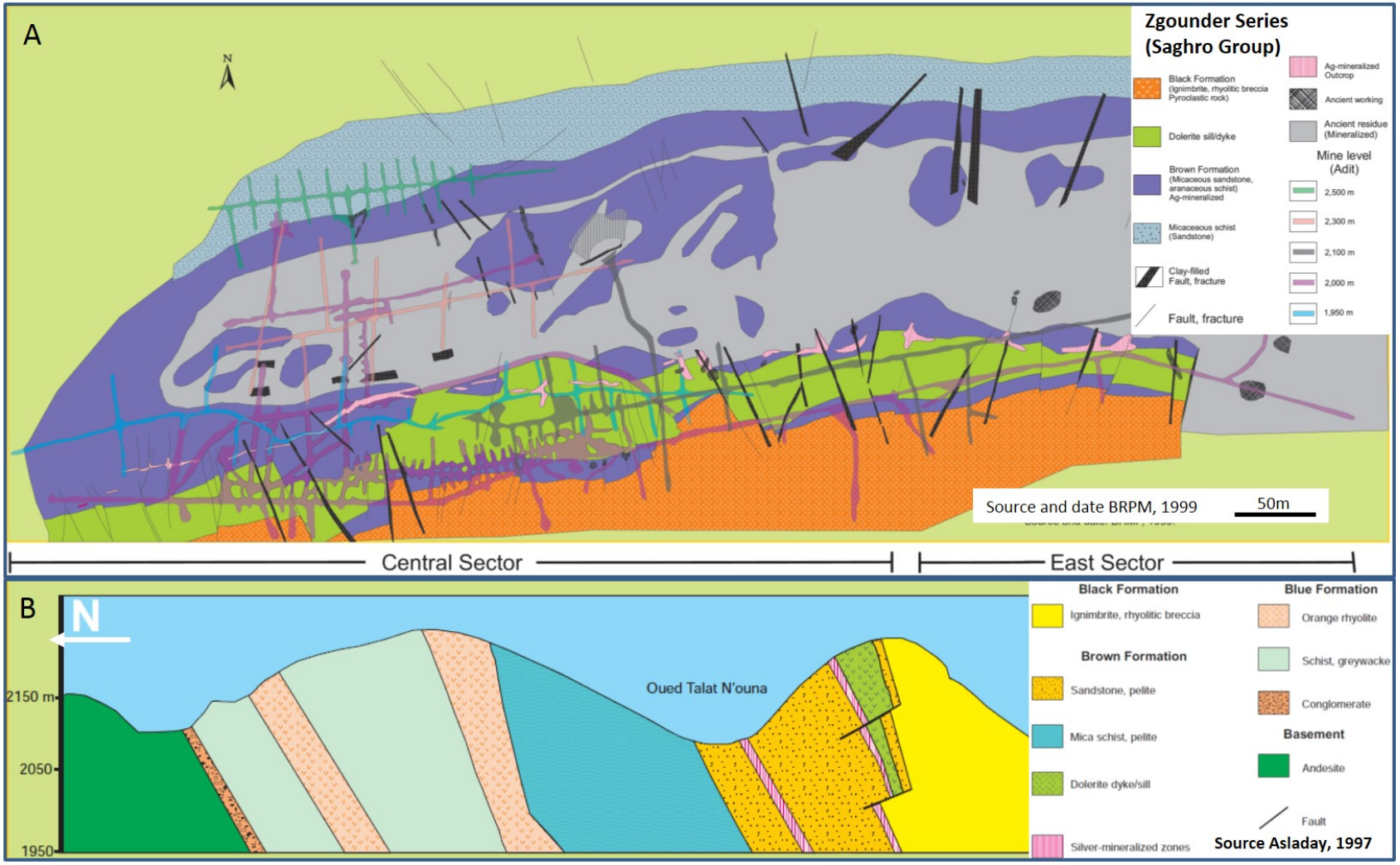


Figure 21: A) Geology, structure and silver mineralization of the Zgounder mine (BRPM 1999). The trace of five principal adits and the ancient excavations can also be seen; B) Stratigraphy of the Zgounder volcano sedimentary assemblage with the silver-mineralized zones.

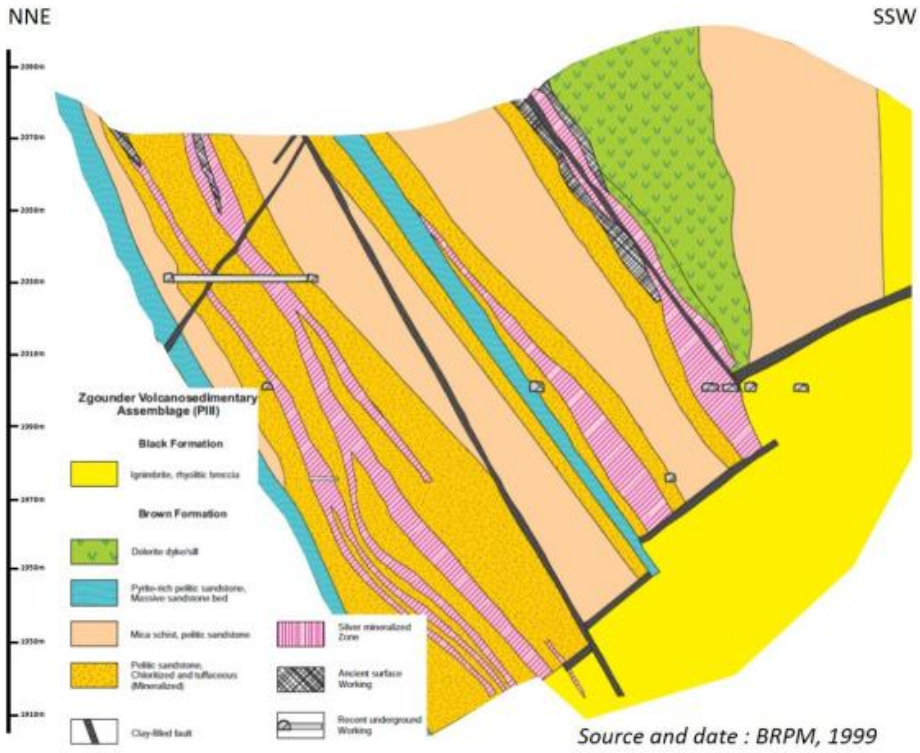


Figure 22: Typical NNE-SSW cross section through the Zgounder mine showing the relation between silver mineralized zones and the lithology (BRPM 1999).

The Zgounder silver deposit is crosscut by fractures of variable orientations. There are at least four fracture systems: 1) Late sub-vertical E-W fractures and shear zones; 2) N-S fractures/faults dipping steeply to the east; 3) NNE-NNW-oriented system dipping 60° at a strike of 75°E; 4) A sub-horizontal system of fractures oriented NNE and NNW, which displaced the Brown Formation to the north with depth (Bounajma, 2002), above **obsolete as some blocks with the flat faults are moving southward as per recent findings 2017.**

Based on the information collected from the recent diamond drilling programs GMG modeled the surface of the granite at Zgounder mine. The deepest silver mineralisation intersected during the 2017 drilling program (Hole 16) which correspond to the deep extension of the Corps D is just above the granite surface. The diamond holes drilled at the eastern sector intersect the granite surface less deep than the western sector with a minimum depth of elevation around Z 1945m

A revised model is being prepared, and the following shows an on-going modification of the previous models. There is a granitic intrusion to the North East of the mine and zone granitic contacts and fingers have been found at depth suggesting the mineralization of high grade silver being associated with this intrusion. The southern contact with the rhyolite is irregular with blocks moving southward/northward and southward in such a way that mineralization believed to be cut by rhyolite is found displaced. The overall trend of the mineralized bodies being subvertical dipping south, it has been found that mineralisation is shifted northward by the flat faults. The appearance

of contact with rhyolite mapped at surface shown in previous BRPM figure with play of faults is found as well vertically. The GMG conceptual geological model revised is presented in the following figure. We are still not sure if the Granite reach the Rhyolite to the south. The other figure present the trend of Granite contact plunging westward.

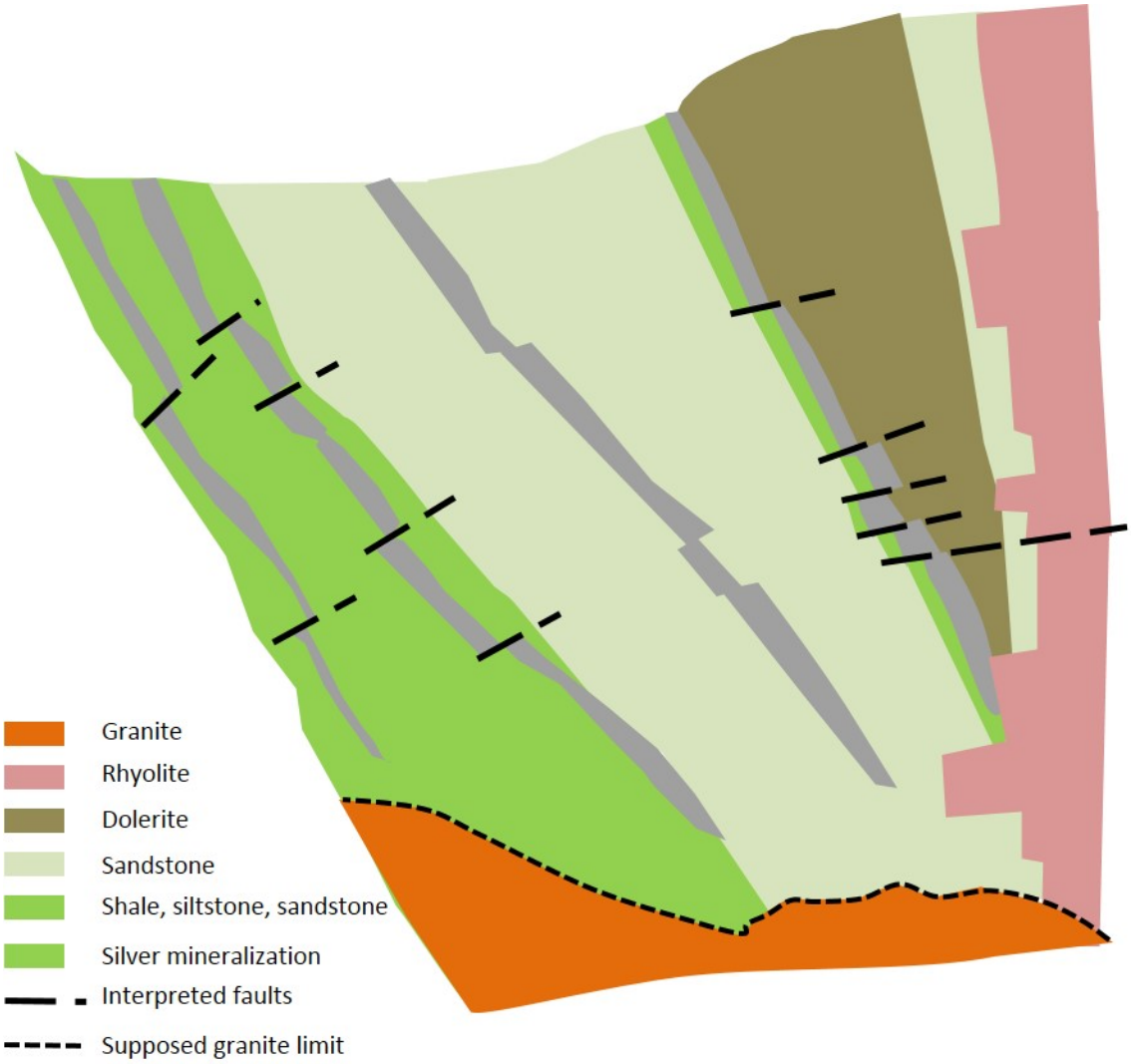


Figure 23: revised conceptual geological model of Zgounder in-progress (GMG-2017)

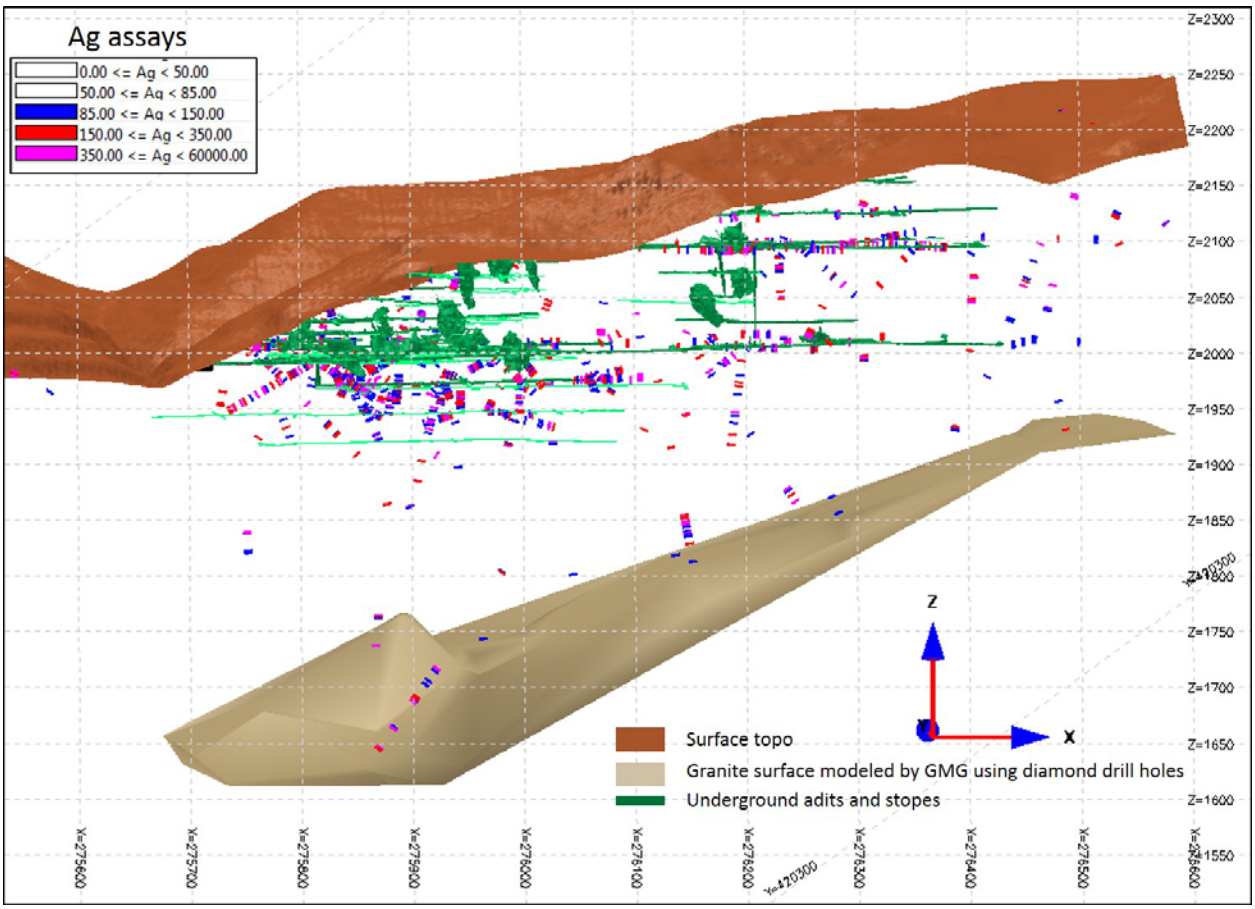


Figure 24: Granite surface model contact at depth plunging westward (GMG-2017)

7.3 Mineralization

The silver mineralization occurs at the top of the Brown Formation (sandstone), predominantly along the contact and within the dolerite sill. The economic silver concentrations at Zgounder are present mainly as vertical columns, complex clusters, shear zones, veinlets and at the intersection of the E-W and N-S fractures. Though preferentially at the contact zones between schist and dolerite (Figure 25), (Petruk, 1975; Popov et al., 1989). Native silver is observed in complex sets of microfractures, mainly at intersections with sulphide veinlets (Figure 26) and locally accompanied by a chlorite rich alteration. Small Ag grains (average size of 50 µm) are also found in corrosion zones of early sulphides or disseminated within the schist and dolerite.

Tension gashes originally trapped the silver mineralization within a NNE-oriented shear zone affecting the shale-sandstone beds (Brown Formation) that contain anomalous Ag values. The silver was then likely remobilized by EW-oriented structures forming isolated Ag-mineralized lenses and fissures. The silver mineralization extends laterally over 1,000 m with a subvertival dip to the south.

The vertical extension of the body is offset by sub-horizontal faults with a northward movement of 10 to 30 m, pushing the mineralized zones in steps or blocks (Bounajma, 2002).

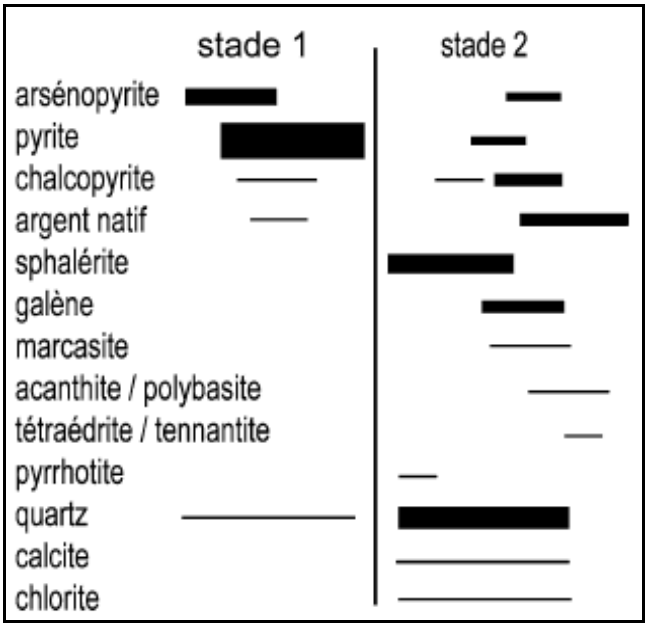


Figure 25: Paragenetic sequence of Zgounder deposit (Marcoux & Wadjinny, 2005).

Figure 26: Tension gashes filled by blende and galena (GMG Duplessis).

Two successive stages of Zgounder paragenetic sequence were discussed by Marcoux and Wadjinny (2005): An early Fe-As stage (silver-bearing pyrite and arsenopyrite), followed by an Ag-bearing polymetallic (Zn, Pb, Cu, Hg; sphalerite and chalcopyrite) event. The late polymetallic event involved the formation of two generations of sphalerite with Fe-poor and Fe-rich components devoid of silver. Native silver is by far the most common form, representing 65 up to 90% of the total amount of silver at Zgounder. The silver mineralization consists of an Ag-Hg amalgam in the

shape of 25 to 480 μm blebs (average 150 to 250 μm). Marcoux and Wadjinny (2005), revealed the presence of two generations of silver amalgam: large Ag-rich patches (85–95 wt% Ag, $Ag_{17}Hg$) presumably corresponding to remobilized mineralization, and "normal" blebs containing 72 to 80 wt% Ag (Ag_5Hg; close to eugenite), which represent the majority of the native silver deposit at Zgounder. Acanthite (Ag_2S) is the major silver sulphide but far less abundant than native silver and often includes several micropatches of native silver.

Based on lead isotope ratios (206Pb/204Pb: 17.89 and 207Pb/204Pb: 15.57) measured on the galena crystals of the polymetallic silver stage, the calculated age for the Zgounder silver mineralization is approximately 510 Ma (Marcoux and Wadjinny, 2005) using Stacey and Kramers (1975) model. The Zgounder lead isotopic ratios are similar to those measured at Imiter (206Pb/204Pb: around 18.10; 207Pb/204Pb: around 15.5) with a mineralization age calculated at around 550 Ma (Late-Proterozoic; Pasava, 1994; Cheilletz et al., 2002). The similar ages of Zgounder and Imiter (eastern Anti-Atlas, Morocco) imply that Zgounder is another example of a Neoproterozoic epithermal deposit in the Anti-Atlas of Morocco (Baroudi et al., 1999; Essarraj et al., 1998).

8 Deposit Types

The Zgounder deposit is described as a Neoproterozoic, epithermal, hypogene and is resulted from distinct stages of fluid circulation associated with two major events of mineral deposition (Essaraj et al., 1998):

- The first stage was characterized by the deposition of quartz with minor biotite and As-Co minerals with a variety of H2O-CO2-CH4-rich fluids equilibrated with metasediments. These fluids were maintained at high temperatures (around 400-450°C) over a wide range of pressures during the early brittle deformation of the Brown Formation after the emplacement of the Askaoun granite.

- The second stage corresponds to the major (Cu-Zn)-Ag (Hg) mineralization deposition and clearly postdates the As-Fe mineralization. Silver deposition occurs after the crystallization of quartz-sphalerite-chalcopyrite veins, but both Cu-Zn and Ag(Hg) mineralized-bearing fluids are NaCl-CaCl2 brines trapped under minimum temperatures of around 160°-200°C.

The origin of the Zgounder silver mineralization are thus Na-Ca brines and the main driving mechanisms for silver deposition are associated with the dilution and cooling process (Essaraj et al., 1998).

9 Exploration

9.1 Geological works

Maya Gold and Silver has done some recent exploration works on the Zgounder property. The purposes of these works were to map and sample the Northern area and to dig some trenches at the eastern sector of the property.

In addition, the objectives of these works were to increase the mineral resources and to define the continuity of the mineralized bodies (NW1, NW5, NW6, NW7, NW10, NW11, 2030N01, Panel 8 and Panel 9)

9.1.1 **Surface sampling**

Maya undertook surface sampling at the northern zone of the Zgounder mine. Samples represent the Brown Formation mainly composed by metamorphosed argillite (schist) & sandstone. The sector north is essentially affected by NE-SW, NW-SE and E-W fractures. The tension gashes that originally trapped the silver mineralization within a NNE-oriented shear zone contain generally a high Ag values.

Systematic sampling was done according to a regular distance of 20m/20m. The direction of the sampling profiles was North-South perpendicular to the stratification direction (Figure 27 and Figure 28).

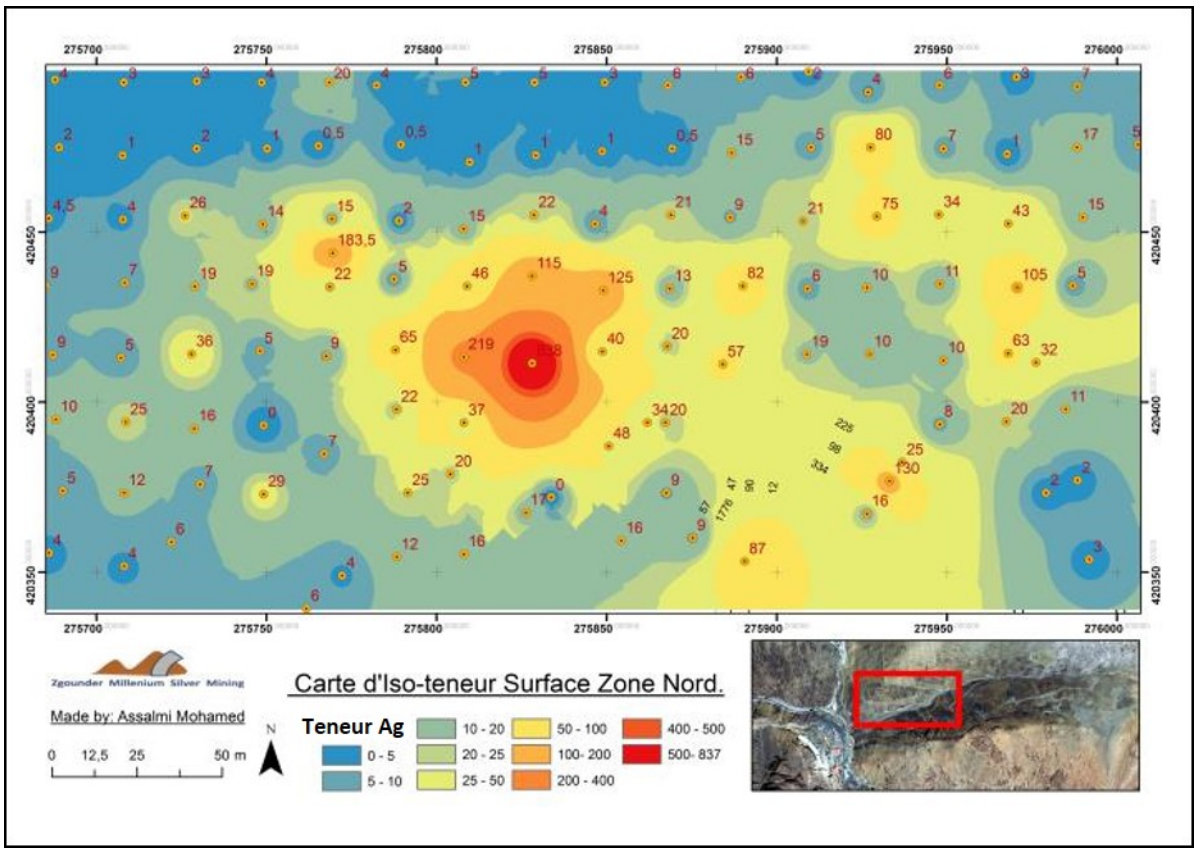


Figure 27: Ag assay result isocontours map, surface sampling in the North zone.

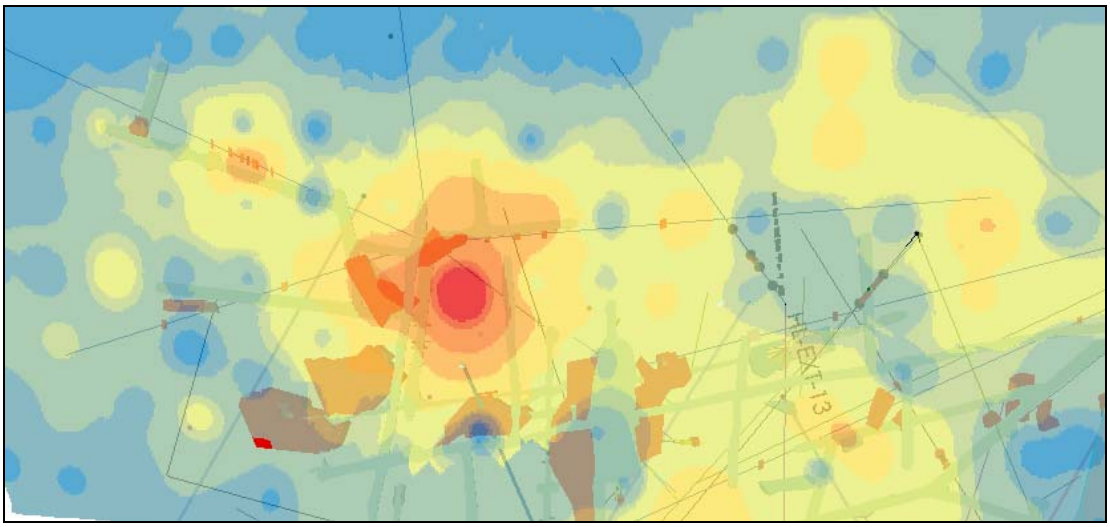


Figure 28: Superposition of Ag assay results of surface sampling and the mineralized envelopes positions modeled by GMG in 2014.

The western sector (the zone at the west from the Zgounder Oued) was also the subject of surface sampling (Figure 29). The surface samples were taken from the sandstone following the fractures oriented WNW-ESE, NW-SE and NNW-SSE.

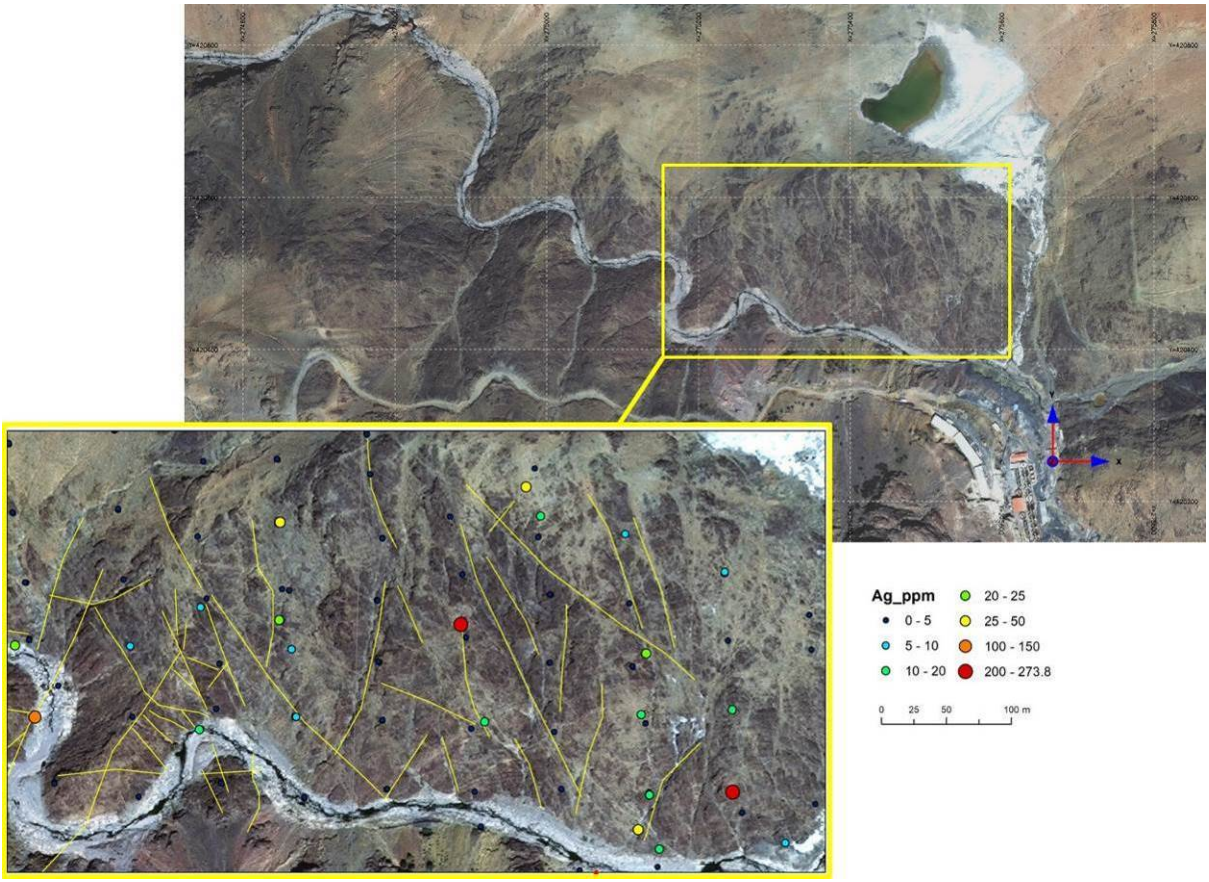


Figure 29: Ag results of surface sampling in the western sector at Zgounder property.

9.1.2 Surface mapping

Surface mapping was done in the western zone and about 35 measures of fault/fracture directions were taken and plotted into a stereogram (Figure 30). The main fault/fracture groups are oriented WNW-ESE, NW-SE and NNW-SSE (Figure 31 and Figure 32).

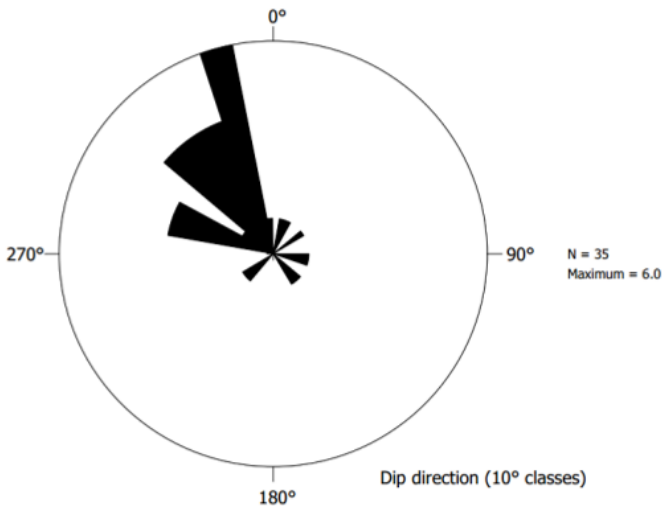


Figure 30: Stereogram showing the fault and fracture orientations at the western sector, Zgounder property.

Figure 31: Faults/fractures at the western sector.

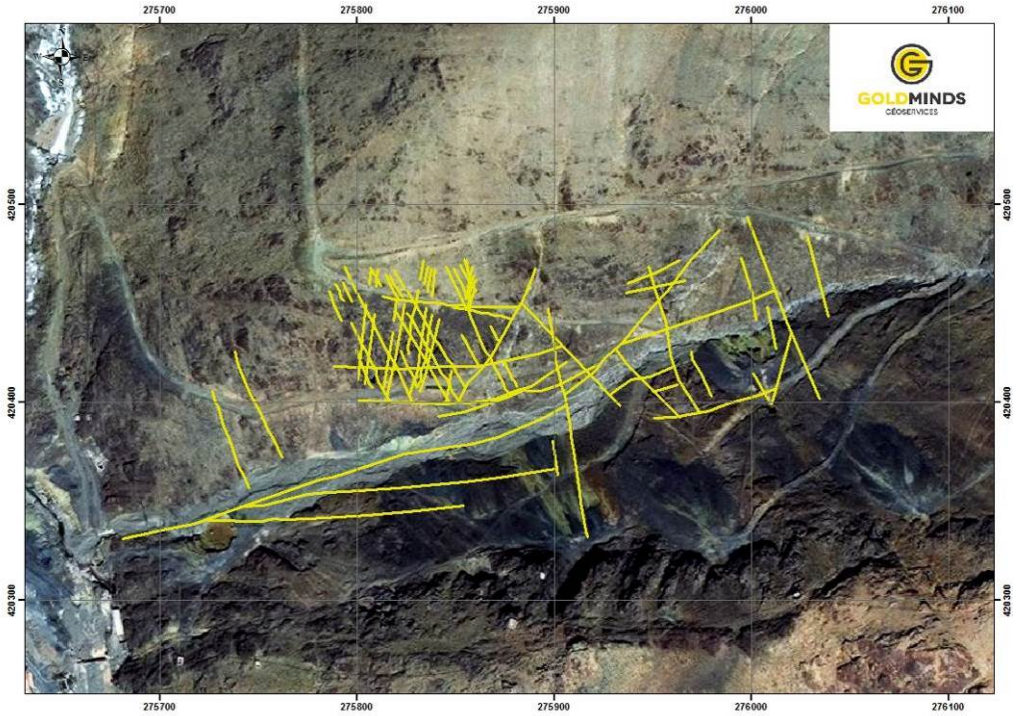


Figure 32: Fractures/faults at the northern sector, Zgounder property.

9.1.3 Trenches

A total of seven trenches were dug in the eastern sector of the Zgounder property. They are mainly oriented N-S and intersect multiple shear zones mainly oriented E-W.

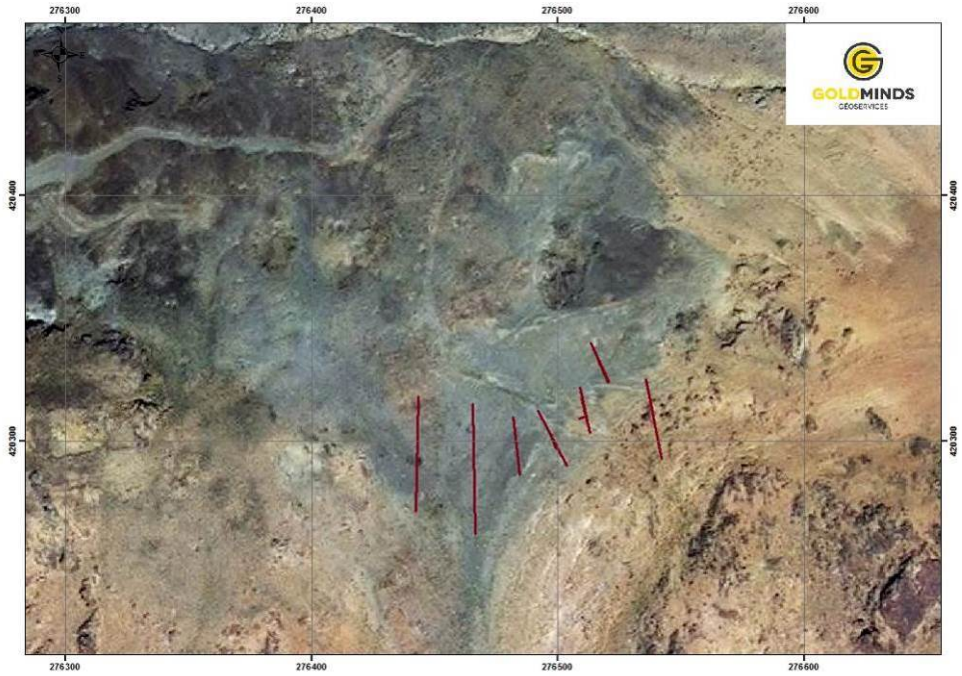


Figure 33: Trench localisations at the eastern sector, Zgounder property.

9.2 3D laser scanning survey

A 3D laser scan survey was conducted for the first time at Zgounder mine in April 2013 using a laser scanner Faro Photon 120 and Faro Focus (Figure 34). Underground drifts, adits (levels and sublevels) and openings were the object of the 3D laser scanning.

Laser Scanner Faro Photon 120
Focus 0,60 – 120m
Distance accuracy up to ±2mm
Deflector resolution 0,009° (40000 points 3D on 360)
Miror Max speed rotation: 2880 rpm

Laser Scanner Faro Focus^{3D} S120
Focus 0,60 – 120m
Distance accuracy up to ±2mm
Deflector resolution 0,009° (40960 points 3D on 360)
Miror Max speed rotation : 5820 rpm

Figure 34: The laser scanners used for the underground 3D monitoring survey in 2013.

The five main levels (2000, 2100, 2125, 2150 and 2175) and five sublevels (level 2025, 2030N, 2035E, 2050S, 275 and 2087), as well as the stopes at levels 2035E, 2087and 2100 accessible at that time were scanned. Some of these sublevels were partially surveyed due to a lack of access (refer to Figures below).

In order to accurately estimate the resources, GoldMinds Geoservices did a survey in May 2017 at Zgounder mine using the GeoSight cavity monitoring system (CMS). Hence, they have been able to get an accurate 3D mapping of underground voids, shafts, stopes drifts and adits (Figure 35, Figure 36).

The CMS give an accurate surveying of the underground openings and the operator can specify the density of cloud points in dependence on the desired accuracy and the size of the surveyed opening. In order to georeference the cloud points that has been created, the operator must identify two points on the CMS using a Total Station (Figure 37). These two points allow the device to locate points in space and also to set the orientation and the dip of the device.

Several levels and sublevels were scanned for the first time wholly or partially, principally levels at 1975, 2000, 2011, 2025, 2030, 2050, 2075, 2100 and 2150.

Figure 35: Underground monitoring survey using Geosight CMS by GoldMinds Geoservices.

Figure 36: The CMS surveying an opening at Zgounder mine.

Figure 37: Using Total Station underground to georeference the CMS.

The results of the 3D monitoring survey have been integrated with the 3D resource model using Genesis, a modeling and estimation software. This allowed GMG to visualize the mined material within the mineralized envelopes and to account for this missing volume during estimation (see section 14).

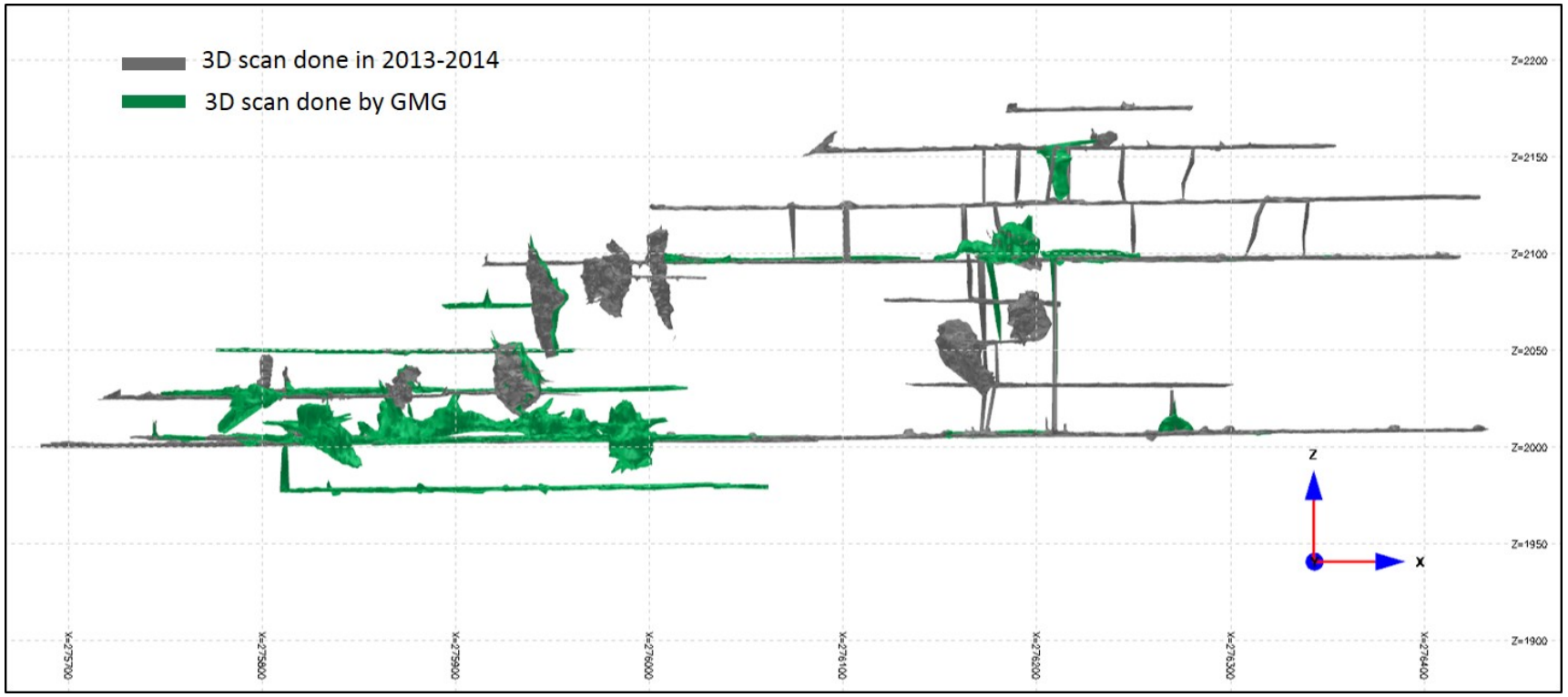


Figure 38: A 3D underground laser scan of various levels and sublevels at Zgounder silver mine.

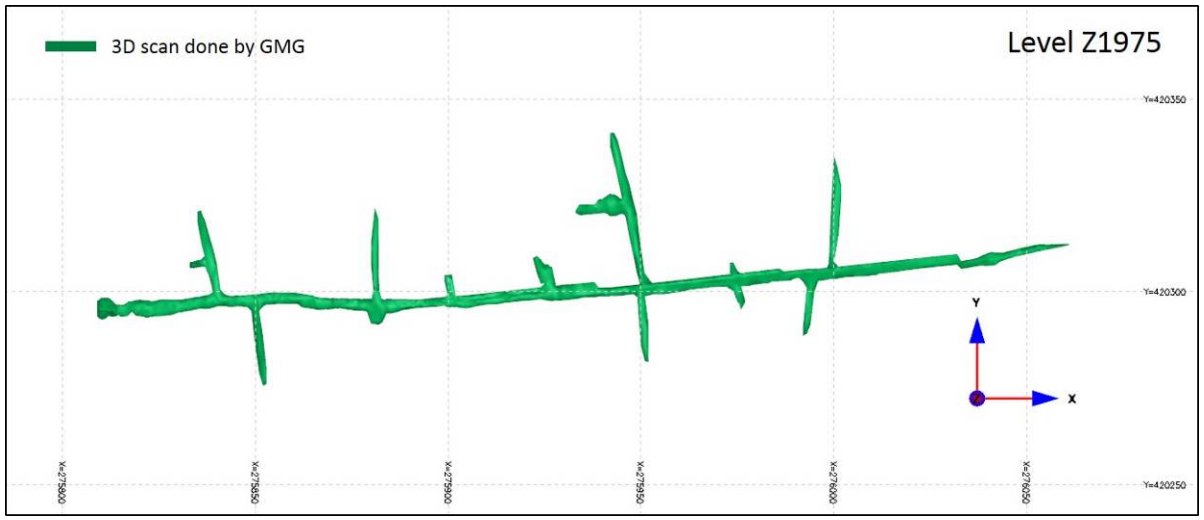


Figure 39: 3D scan of level Z1975, Zgounder mine.

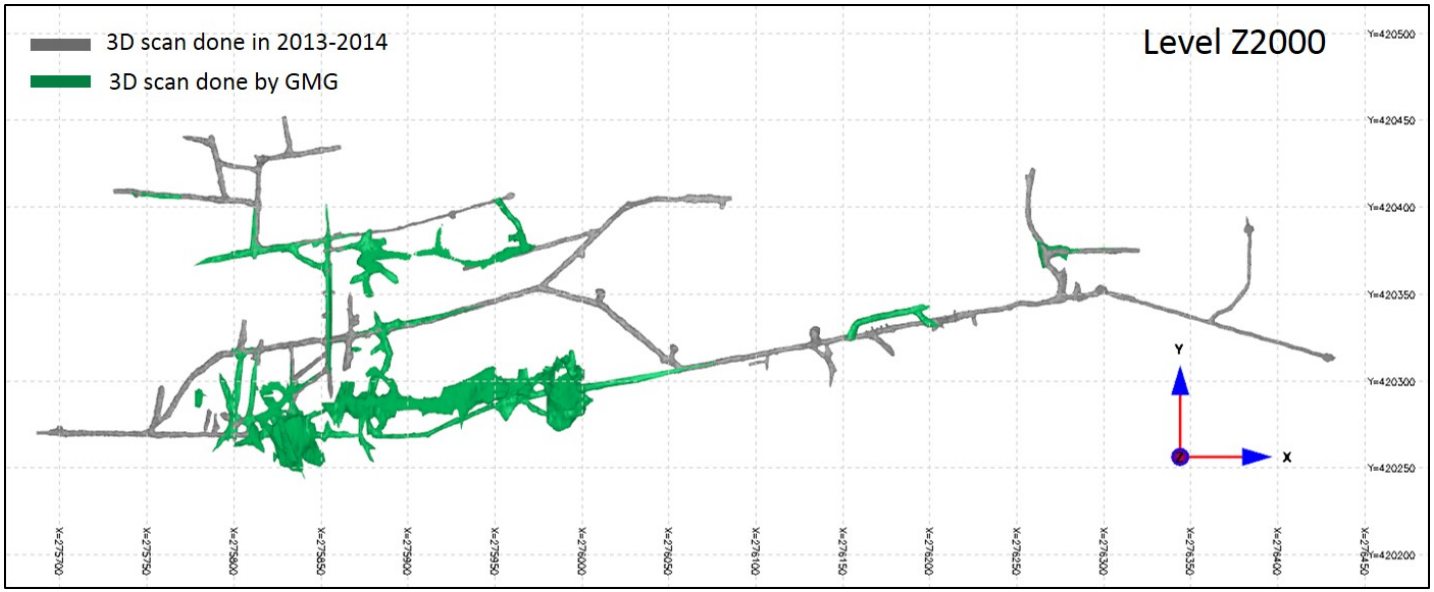


Figure 40: 3D scan of level Z2000, Zgounder mine.

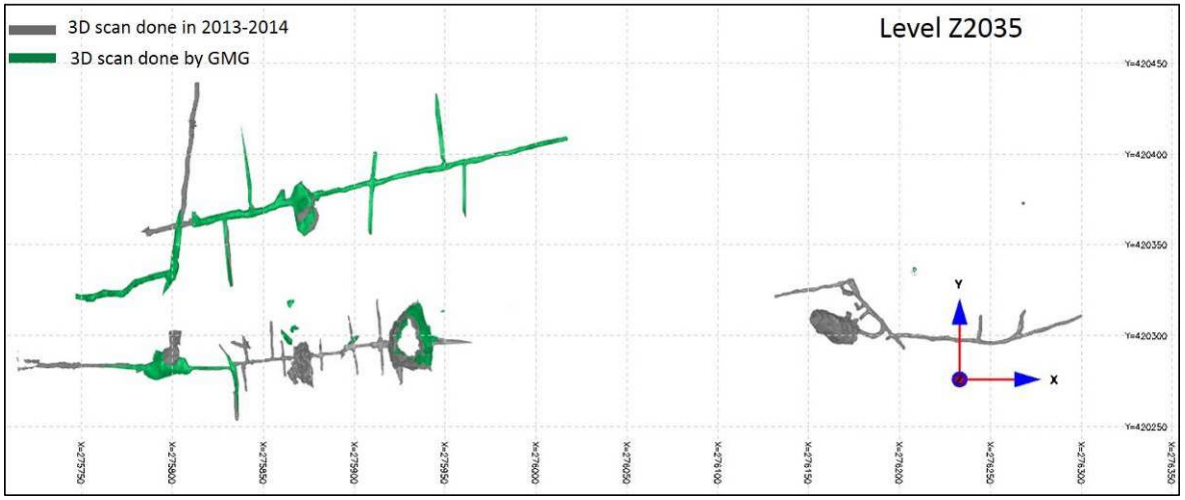


Figure 41: 3D scan of level Z2035, Zgounder mine.

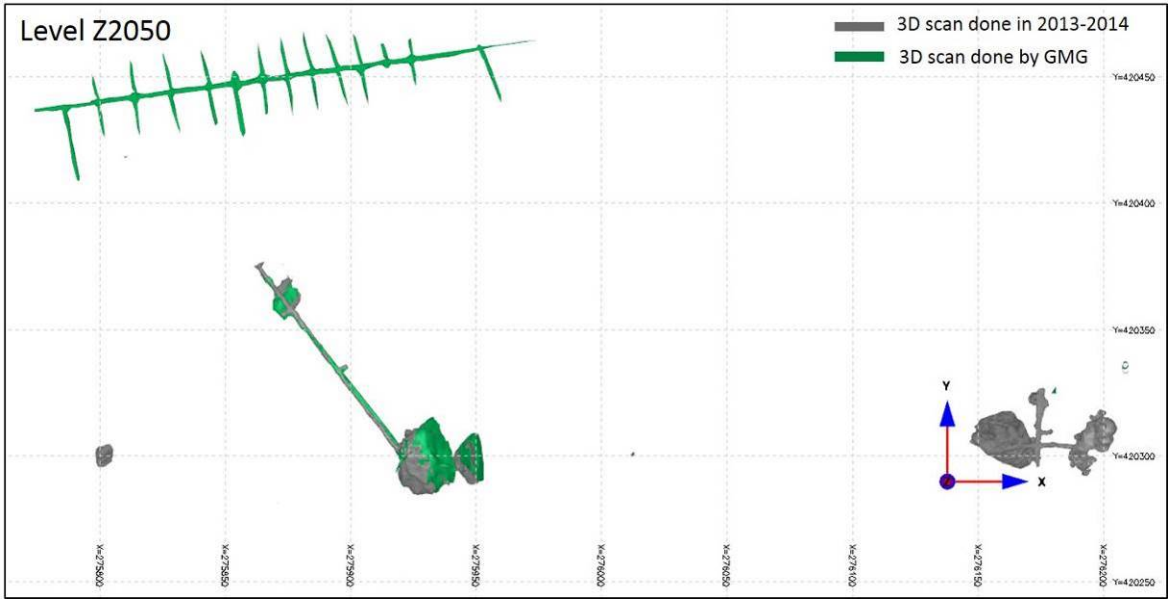


Figure 42: 3D scan of level Z2050, Zgounder mine.

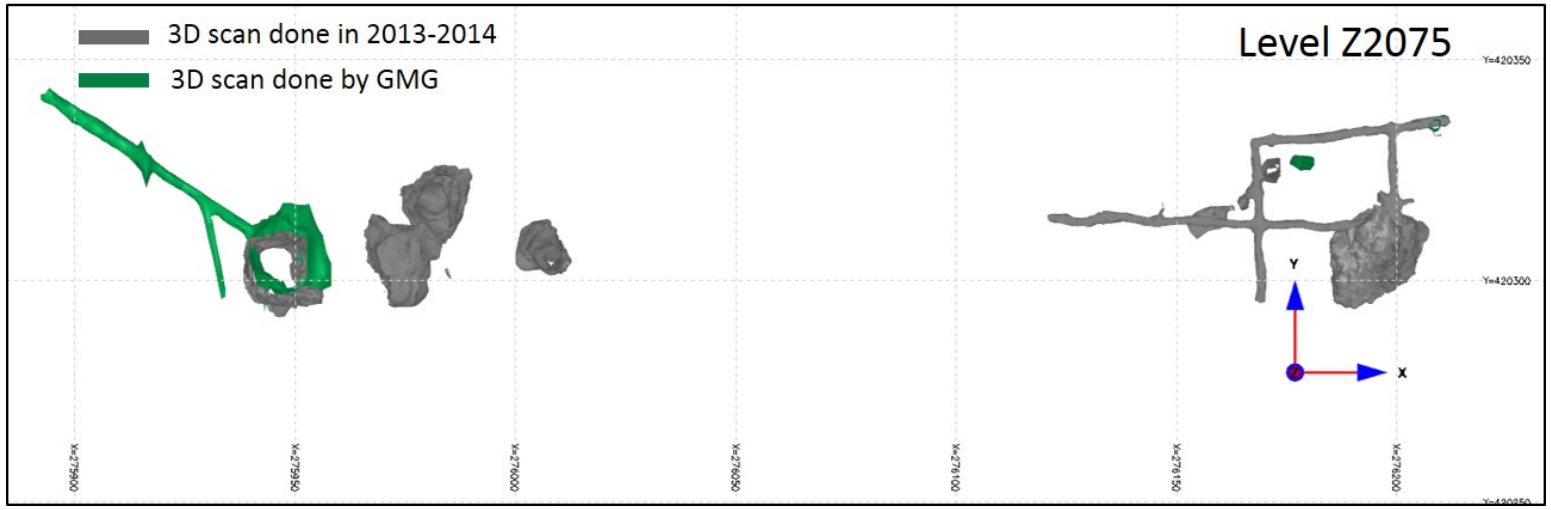


Figure 43: 3D scan of level Z2075, Zgounder mine.

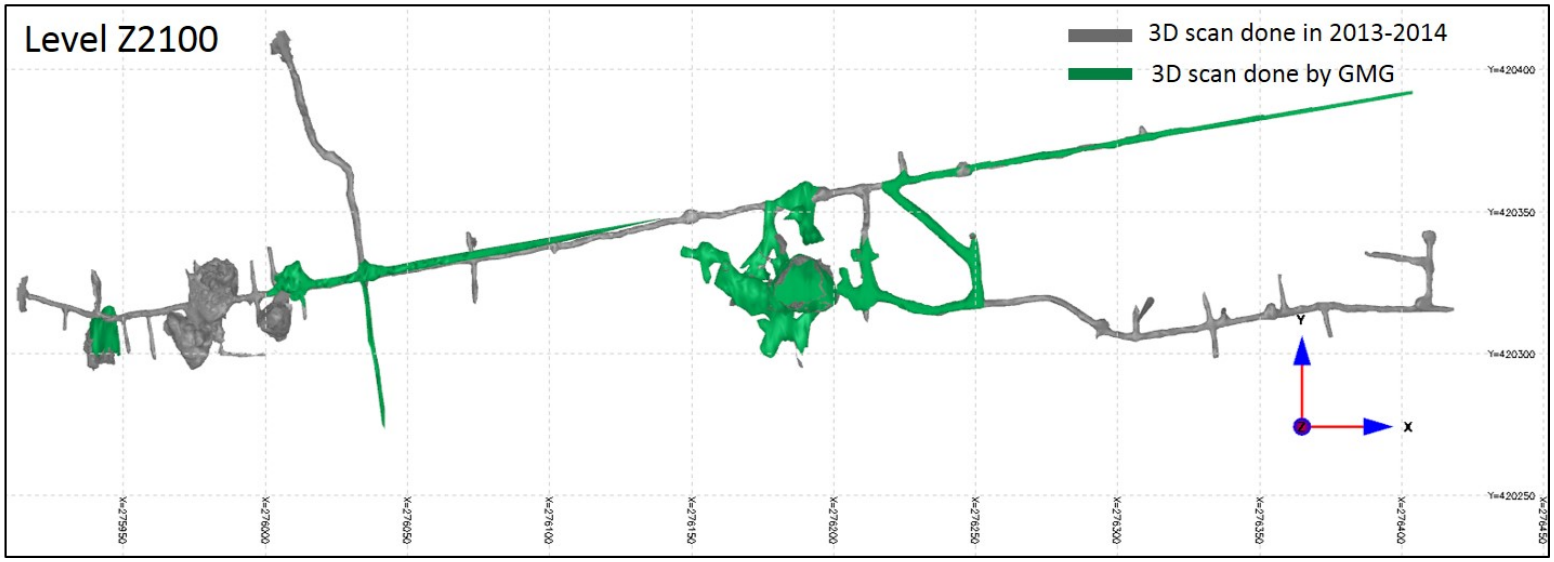


Figure 44: 3D scan of level Z2100, Zgounder mine.

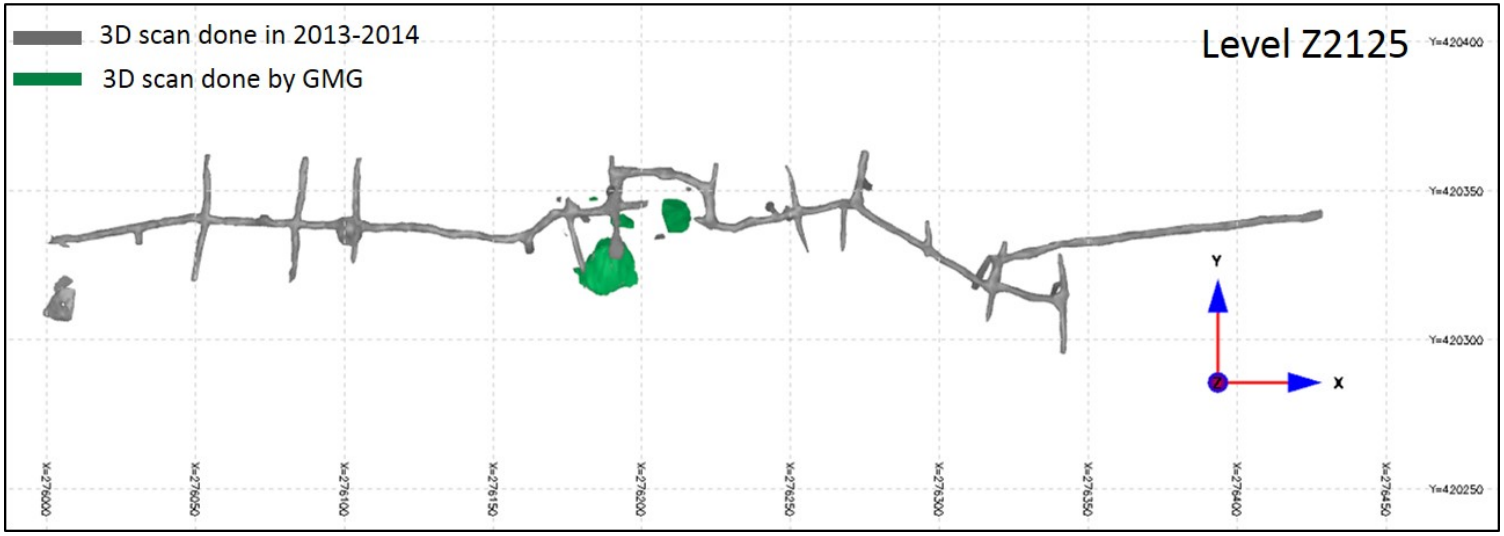


Figure 45: 3D scan of level Z2125, Zgounder mine.

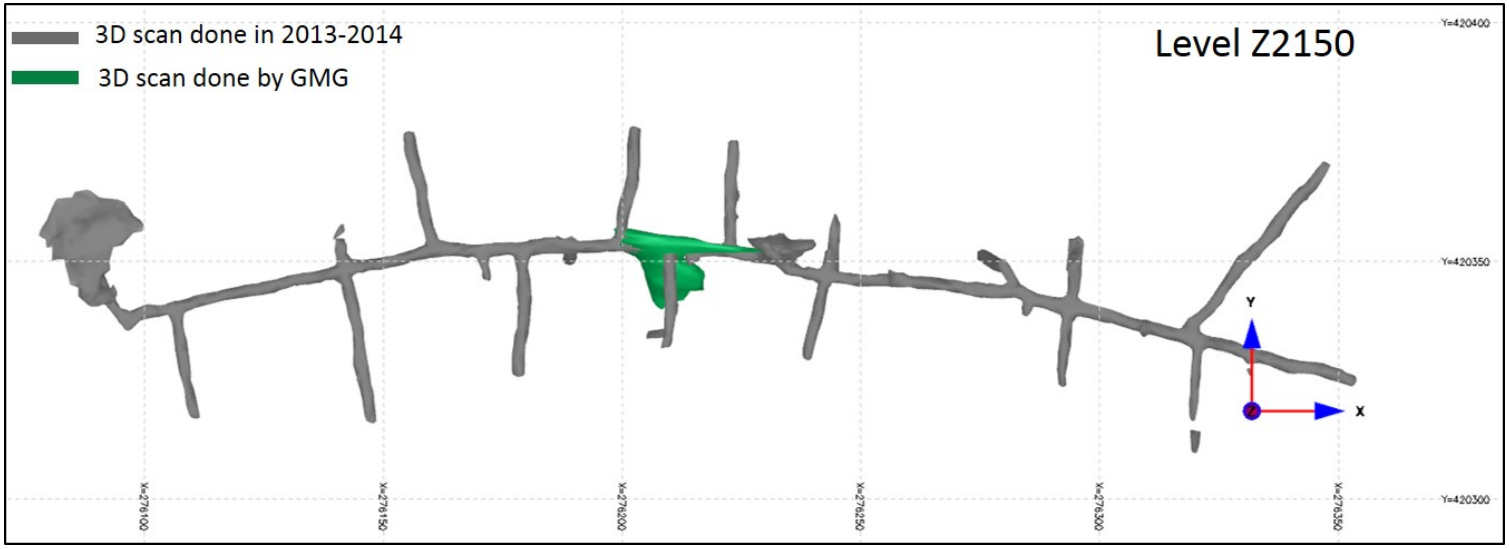


Figure 46: 3D scan of level Z2150, Zgounder mine.

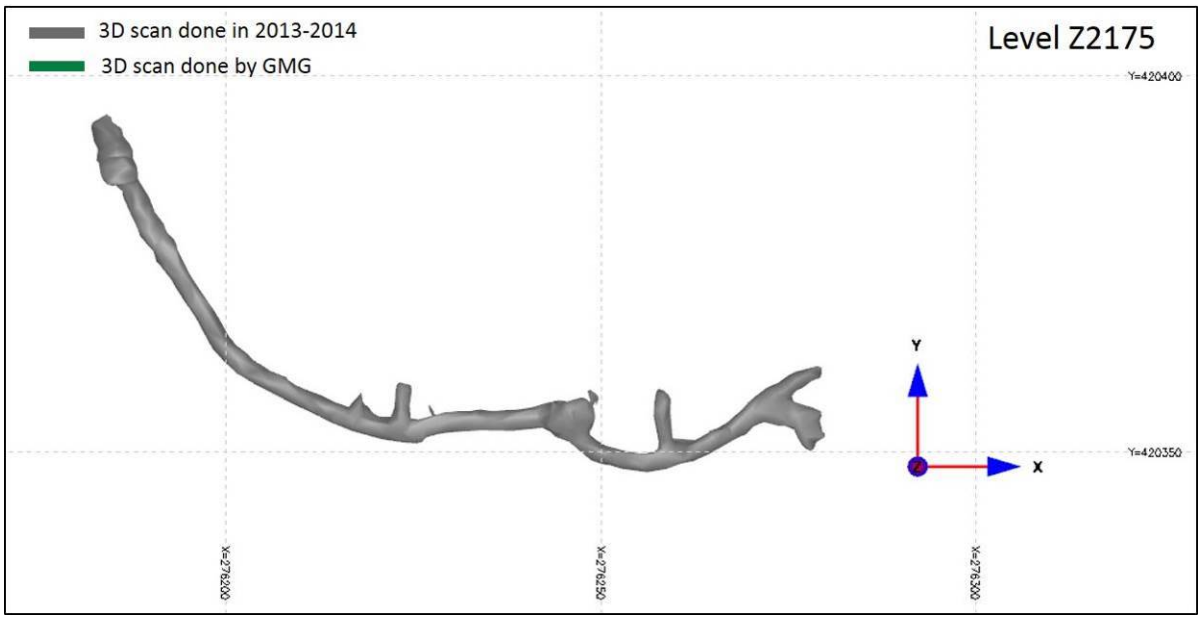


Figure 47: 3D scan of level Z2175, Zgounder mine.

10 Drilling

10.1 Percussion drilling

GoldMinds Geoservices has prepared the first mineral resources estimation NI 43-101 for Zgounder mine in 2014. Exploration works and a program of underground drilling was performed in 2013-2014 at Zgounder mine under the supervision of GMG (see PEA report March 20th and PFS report May 22nd 2014).

Recent drilling works have been done since 2015 under the supervision of Zgounder Millenium Silver Mine geologists. The percussion holes drilled in 2015 weren't integrated into the database because they weren't compiled in the right way due to the resignation of Zgounder mine's chief geologist.

In 2016 a total of 1598.4m were drilled using the T28 percussion hammer at level 2000 and 2100.

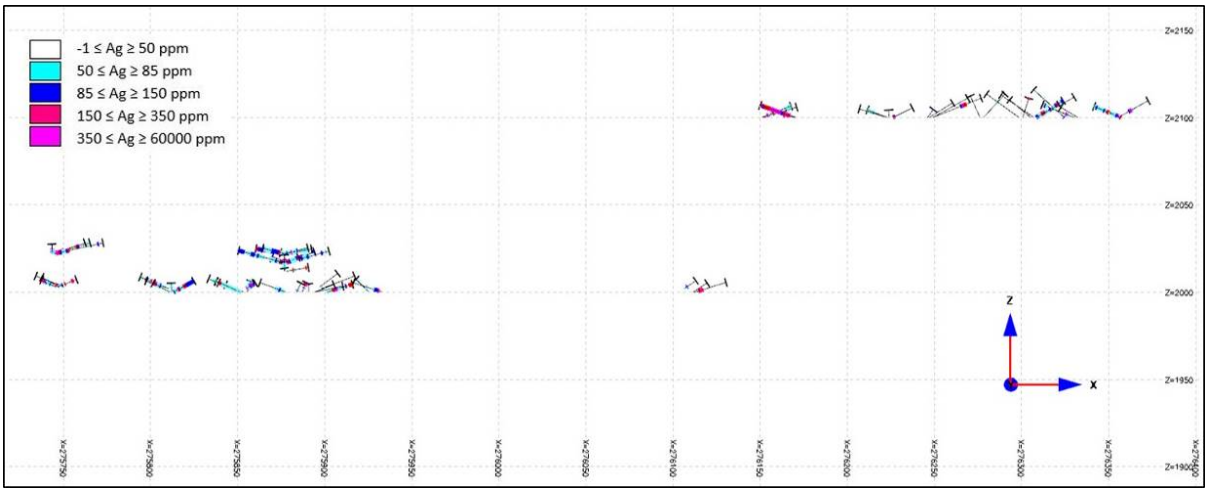


Figure 48: Section view to the North of the percussion drill holes drilled in 2016.

Table 2: Highlights of the mineralized intervals intersected by 2016 percussion drill holes.

Hole name	From (m)	To (m)	Length (m)	Ag (g/t)
T28-16-89	15.6	19.2	3.6	1641.33
T28-16-88	12	14.4	2.4	359.5
T28-16-87	6	18	12	385.7
T28-16-86	10.8	14.4	3.6	574
T28-16-66	0	14.4	14.4	636.42
2000-T28-16-37	0	7.2	7.2	454.5
T28-16-04	10.8	16.8	6	1772.8

These percussion holes intersect highly mineralized zones at level 2000 in the north sector. The previous table summarizes the highest assay results.

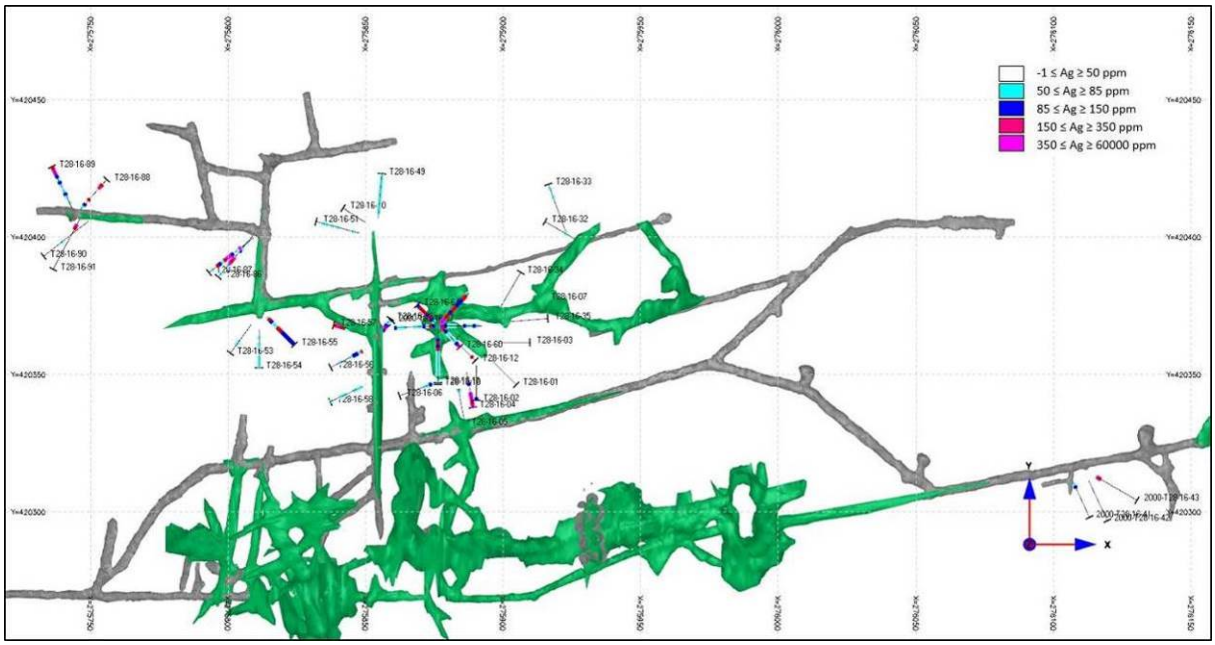


Figure 49: Plan view of level 2000 showing the 2016 percussion drill holes.

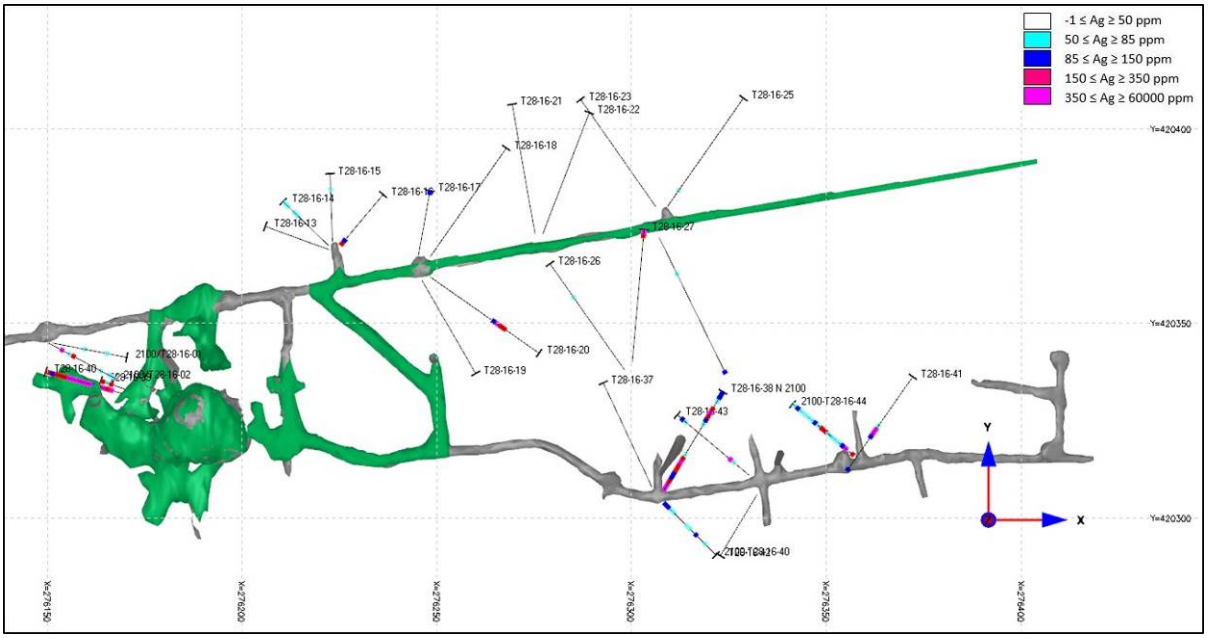


Figure 50: Plan view of level 2100 showing the 2016 percussion drill holes.

During 2017, Maya drilled a total of 3219.8 m using the T28 percussion hammer drill at level 2000 and 2100.

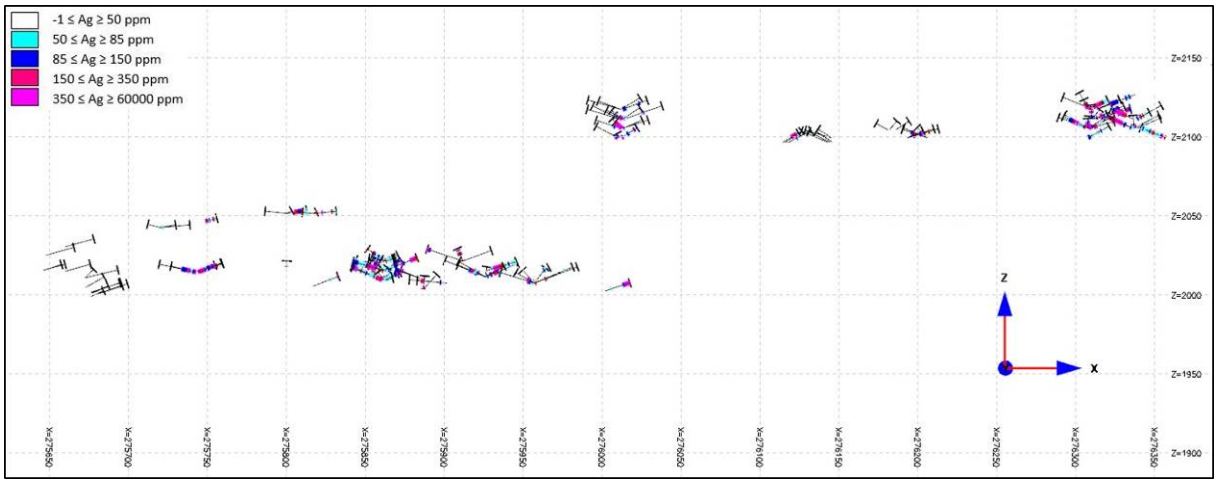


Figure 51: Section view to the North of the percussion holes drilled in 2017.

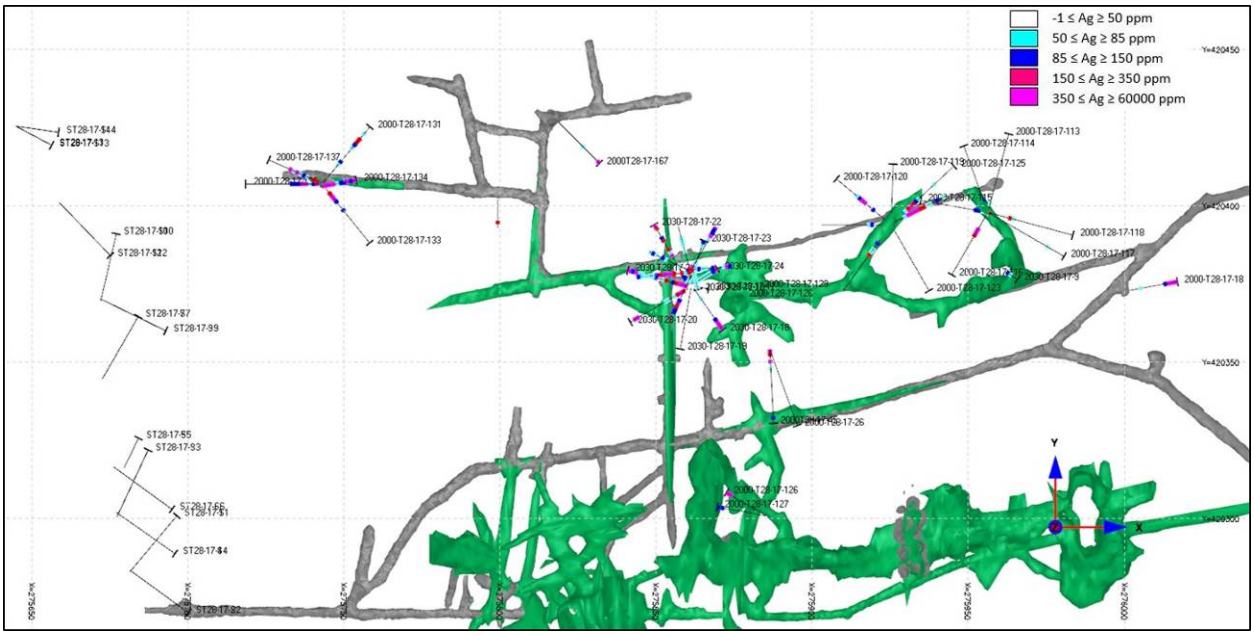


Figure 52: Plan view of the percussion holes drilled in 2017 at level 2000.

The percussion holes drilled at the North zone intersects some mineralized intervals and confirm the extension to the east of the panel 9.

The data highlights a new zone to the north east of Corps D, above the 2100 elevation. The holes have been drilled from an exploration raise in fan and alongside the drift to define the shape of the body. Furthermore, the area has been drilled to define the geometry of the Y6 with an extension to the east of that body on level 2100. New findings have occurred on levels 2030 and 2000.

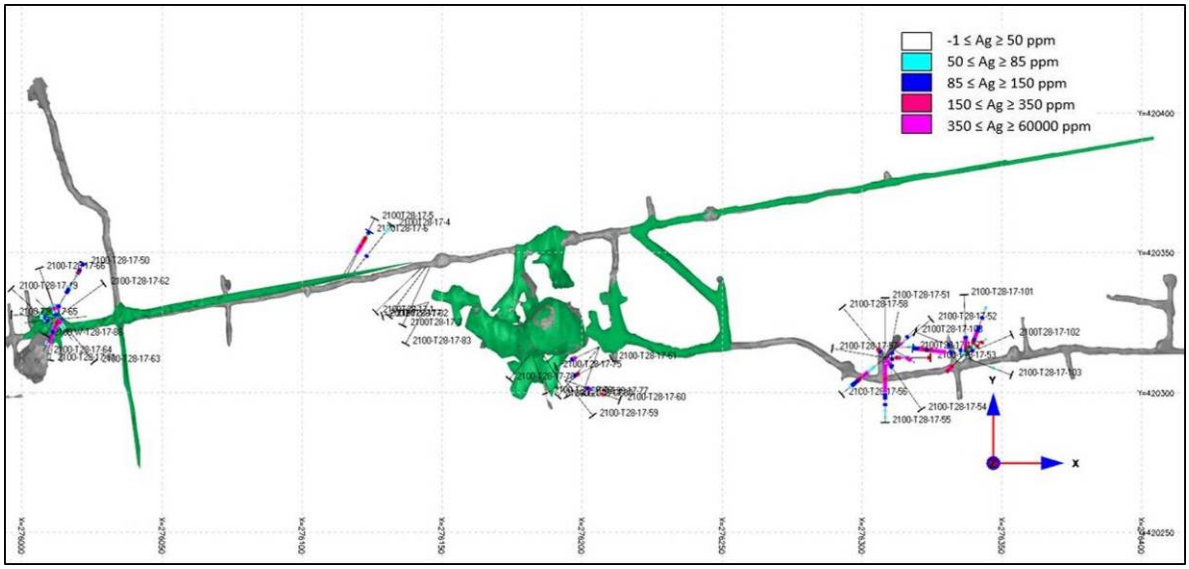


Figure 53: Plan view of the percussion holes drilled in 2017 at level 2100.

Table 3: Highlights of the mineralized intervals intersected by 2017 percussion holes

Hole name	From (m)	To (m)	Length (m)	Ag (g/t)
2100-T28-17-6	10.8	20.4	9.6	1636
2100-T28-17-55	2.4	13.2	10.8	1054
2100-T28-17-56	4.8	16.8	12	430
including	8.4	13.2	4.8	933
2100-T28-17-64	0	13.2	13.2	2376
2100-T28-17-70	6	18	12	683
2100-T28-17-71	1.2	16.8	15.6	575
2100-T28-17-107	7.2	18	10.8	1112
2100-T28-17-113	9.6	21.6	12	701.2
2100-T28-17-114	6	19.2	13.2	531
2100-T28-17-116	2.4	9.6	7.2	951
2000-T28-17-124	3.6	21.6	18	3809
including	4.8	12	7.2	9430

Hole name	**From (m)**	**To (m)**	**Length (m)**	**Ag g/t**
2000-T28-17-120	10.8	13.2	2.4	1310
2000-T28-17-124	4.8	12	7.2	8951
including	6	7.2	1.2	59500
including	7.2	9.6	2.4	1653

Figure 54: Typical surface percussion drilling at Zgounder silver mine.

Figure 55: Surface percussion drill samples after being prepared and split up; ready to be taken to the laboratory for silver analyses.

Independent analysis has been conducted at Bourlamaque Laboratory in Val d'Or Quebec on 10 samples from hole 2100-T28-17-64. These independent samples show a mineralized interval of 2.63 Kg/t Ag over 12m. The hole was drilled on elevation 2106 at 200 degrees north and +17 degrees dip. The mineralized zone is irregular and sub-vertical in shape.

Table 4: Independent samples of hole 2100-T28-17-64 assayed at Bourlamaque lab in Val d'Or, Qc.

From (m)	To (m)	Length (m)	Ag (g/t)	Ag (g/t) duplicate	Ag (g/t) Fire Assay Canada
0	1.2	1.2	3557	3669	4501
1.2	2.4	1.2	4237	4190	3580
2.4	3.6	1.2	5361	5455	4528
3.6	4.8	1.2	1100	1089	1260
4.8	6	1.2	3174	3200	3671
6	7.2	1.2	5710	5680	5497
7.2	8.4	1.2	950	1001	1204
8.4	9.6	1.2	1136	1188	1199
9.6	10.8	1.2	469	445	571
10.8	12	1.2	285	298	280
12	13.2	1.2	155	158	

The percussion drill holes close to the entrance of the mine do not show the expected results. Sulfides minerals of lead and zinc are observed in the rock at surface to the west near the Zgounder Oued and was the reason these holes were drilled as per recommendation of GMG. The silver was not found in these holes suggesting a plunge and a silver distal mineralization relation for its occurrence. However, the holes drilled to the north of Tlat Nouna Oued intersect some high mineralized zones near from the surface (Figure 56 and Table 5).

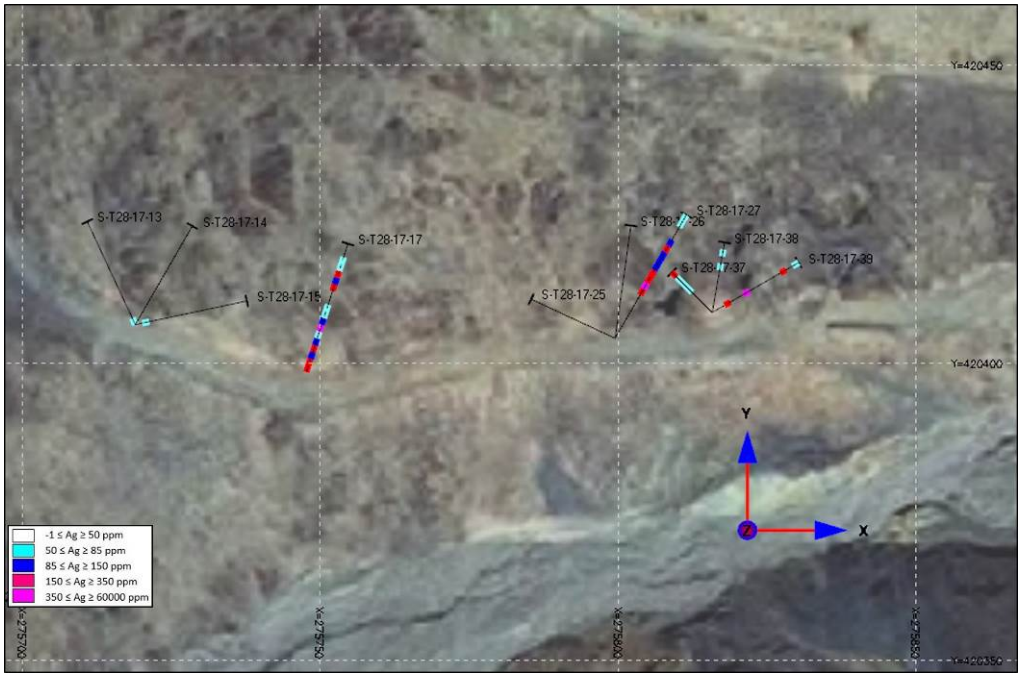


Figure 56: Plan view of the percussion holes drilled in 2017 at the northern sector.

Table 5: Highlights of the mineralized intervals intersected by 2017 percussion holes drilled from the surface.

Hole name	From (m)	To (m)	Length (m)	Ag (g/t)
S-T28-17-17	0	18	18	156.4
including	0	8.4	8.4	213.57
S-T28-17-27	8.4	19.2	10.8	291.73
S-T28-17-39	2.4	7.2	4.8	270.75

10.2 Diamond drilling

10.2.1 2015 diamond drilling program

Maya Gold and silver completed in 2015 a diamond drill program (total of 17 dill holes) totaling 5,896 m. The main objectives were:

- Validation of the hypothesis that widespread mineralization occurs across the known silver deposit;
- Explore lateral extensions of the known deposit to the North and to the East;
- Explore possible extensions of the known deposit at depth.

Table 6: The 2015 diamond drilling program, Zgounder silver mine.

Hole Name	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Length (m)	Hole Type
IC_ZG_15_03	275474	420290	2042	350	-78	422,5	DDH
HL-Ext-003	276257	420277	2203	340	-55	400,5	DDH
HL-Ext-008	275738	420354	2021	340	-70	200,6	DDH
HL-Ext-010	275738	420354	2021	160	-80	351,1	DDH
HL-Ext-012	275919	420411	2062	340	-65	299,3	DDH
HL-Ext-013	275919	420411	2062	160	-67	386,1	DDH
HL-Ext-019	276097	420467	2113	340	-47	200	DDH
HL-Ext-025	276615	420331	2248	338	-45	376,8	DDH
HL-Ext-06	276512	420307	2209	340	-60	356,6	DDH
HL-Ext-17	276097	420467	2113	160	-60	391,4	DDH
HL-TEST-01	275910	420238	2115	340	-53	368,6	DDH
HL-TEST-20	276333	420320	2223	340	-51	326,6	DDH
HL-TEST-23	276437	420270	2203	340	-60	352,5	DDH
HL_EXT-002	276038	420237	2133	340	-55	395	DDH
IC-ZG-15-001	275515	420390	1992	335	-48	365,3	DDH
P_ZG_15_01	276590	420361	2247	300	-65	350,4	DDH
P_ZG_15_02	275551	420302	2027	80	-65	353,5	DDH

The first batch of samples from the drilling program have been shipped to ALS Laboratory in Seville, Spain. Native silver has been observed in eight of all the holes drilled. Note that the silver mineralization is typically associated with zinc (sphalerite/blende) and lead minerals (galena).

During the visit to the site during that campaign, Claude Duplessis Eng. selected 42 individual samples (one-metre each) for independent sampling from three different holes drilled in four different zones. A ten metre sample from drill hole HL-Ext-012 was selected as a high priority

sample in the aim to evaluate a sub-parallel mineralized trend north of the main Zgounder zone in the central portion of the deposit area. This sample was collected from 31.3 m to 41.3 m in depth in hole HL-Ext-012. GoldMinds independent assay prepared and analysed by Fire Assay at Bourlamaque Assay Laboratories Ltd in Val d'Or has returned an average of 1098 g/t as shown in the table below (Table 7). This hole has been collared in the valley going northward and has probably been intersecting extension to the east of the northern body.

Table 7: Fire Assay results by Bourlamaque Assay Laboratories Ltd of the independent samples taken from hole HL-Ext-012.

Sample number	From (m)	to (m)	Length (m)	Ag (1) g/t
3433	31,3	32,3	1	114
3434	32,3	33,3	1	320
3435	33,3	34,3	1	2904
3436	34,3	35,3	1	4408
3437	35,3	36,3	1	1073
3438	36,3	37,3	1	123
3439	37,3	38,3	1	244
3440	38,3	39,3	1	159
3441	39,3	40,3	1	84
3442	40,3	41,3	1	1554

Three diamond holes were drilled at the western part from Zgounder Oued and the mineralized zone is probably deeper than what was expected.

Sulphide mineralization consisting in sphalerite, galena and pyrite was encountered in an altered sandstone unit along with quartz, sericite and chlorite. A total of 3055 samples were prepared and assayed at the ALS Laboratory in Spain and another 1167 samples were assayed at ALS Laboratory in Ireland.

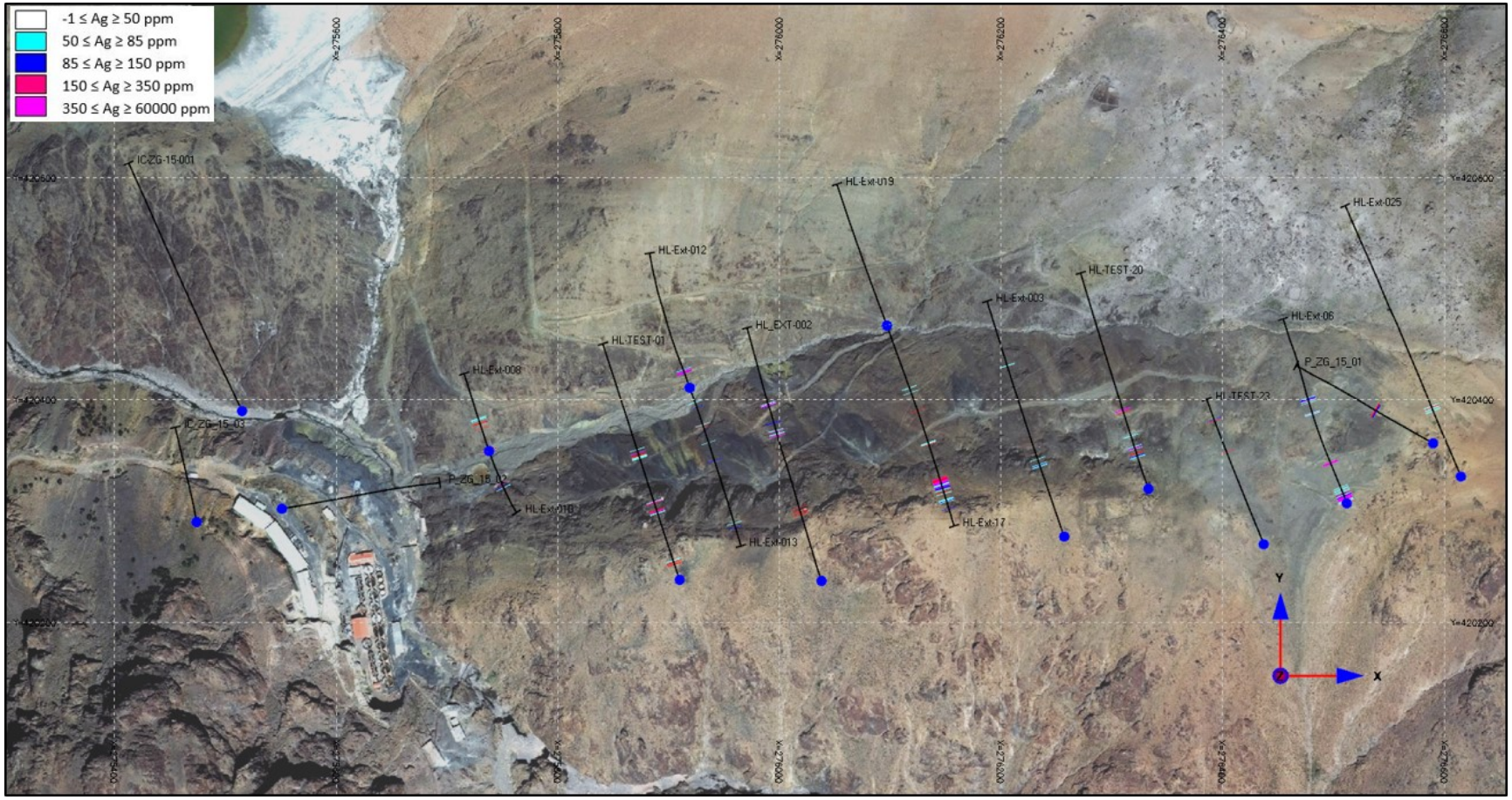


Figure 57: Plan view of the diamond holes drilled in 2015 (color coded by Ag assays).

Table 8: Assay result highlights from the 2015 drilling exploration program.

Hole Name	From (m)	To (m)	Length (m)	Ag (g/t)	Objective
ZG-Test-01	23.5	28	4.5	159	Test widespread mineralization along Main and Central corridors
ZG-Test-01	106.5	109.5	3	296	
ZG-Test-01	119.5	122.5	3	507	
ZG-Test-01	192.5	198.5	6	367	
ZG-Test-13	90	92	2	154.5	Extension at depth of Main Zone along rhyolite contact
ZG-Test-13	98.5	102.5	4	187.5	
ZG-Test-13	337.5	340.5	3	83	
P-ZG-15-01	138.5	144.5	6	184	Continuity between sections to the east
ZG-EXT-020	48	65	17	375	Main & North Zones, eastern extension
Including	60.5	65	4.5	1250	
ZG-EXT-20	116	121	5	437	
ZG-EXT-23	298.5	303	4.5	100	North Zone, eastern extension
ZG-EXT-25	89.5	97	7.5	125	Eastern extension mine package
ZG-EXT-06	0	31.5	31.5	229	Eastern zone
Including	0	19	19	348	
ZG-EXT-06	77	81	4	946	
ZG-EXT-06	174	177.5	3.5	189	
ZG-EXT-06	200.5	205.5	5	172	
ZG-EXT-17	294	327.5	33.5	283	Test the extension of the main zone at depth
Including	295.5	315.5	20	431	
ZG-test-02	225	233.5	8.5	259	Explore the disseminated mineralization in the Main and Central zones
ZG-test-02	272.5	277.5	5	302	Main and Central zones

Other metals have also been the subject of exploration at Zgounder mine. The analysis of multi-element (especially zinc, lead and copper) have provided the identification of at least two important polymetallic corridors with horizontal widths of approximately 25 and 40 metres, extending over 1000 metres long in which shoots of higher grade silver mineralization have been observed.

10.2.2 **2017 diamond drilling program**

Maya Gold and silver started in 2017 a diamond drilling program planned and supervised by GoldMinds Geoservices (Table 9). The program consisted of 7,243 metres of diamond drilling.

Figure 58: Diamond drilling machine on Zgounder property – May 2017 GMG.

The objectives of the drilling program were:

- Continue to prove the hypothesis that widespread mineralization occurs across the known deposit;
- Explore lateral extensions of the known deposit to the North and to the East;
- Explore possible extensions of the known deposit at depth;
- Refine the quality of the mineral resources to enable possible conversion to reserves;

- Increasing the total amount of identified resources on the property for the analysis of a larger mining operating plan.

Table 9: The 2017 diamond drilling program.

Hole Name	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Length (m)	Hole type
ZG-17-03	275744	420369	2019	88	-45	383	HQ
ZG-17-03bis	275744	420369	2019	88	-60	305	HQ
ZG-17-04	275672	420214	2001	20	-45	400,5	HQ
ZG-17-06	276097	420468	2114	160	-70	340,4	HQ
ZG-17-07	276013	420417	2100	165	-65	337,8	HQ
ZG-17-09	275828	420391	2043	340	-60	200	NQ
ZG-17-10	275828	420391	2043	160	-60	231,6	HQ - NQ
ZG-17-11	275900	420411	2060	200	-73	338	HQ
ZG-17-12	276140	420485	2127	180	-60	244,5	HQ
ZG-17-14	276189	420489	2140	180	-60	264,8	HQ
ZG-17-15	276189	420489	2140	146	-64	335,7	HQ - NQ
ZG-17-16	276189	420489	2140	232	-51	684	HQ
ZG-17-17	276189	420489	2140	110	-50	337,4	HQ
ZG-17-18	275657	420360	2004	118	-65	168,5	HQ
ZG-17-19	275657	420360	2004	100	-45	218,6	HQ - NQ
ZG-17-20	275657	420360	2004	140	-45	150,3	HQ
ZG-17-5	275657	420360	2004	118	-45	294,4	HQ
ZG-17-5bis	275671	420214	2002	50	-46	405	HQ
ZG-EXT6-17-S1	276488	420366	2216	159	-45	92,9	HQ
ZG-EXT6-17-S10	276488	420366	2216	45	-60	177,8	NQ
ZG-EXT6-17-S11	276488	420366	2216	65	-60	39,6	NQ
ZG-EXT6-17-S2	276488	420366	2216	140	-45	106,1	HQ - NQ
ZG-EXT6-17-S3	276488	420366	2216	180	-45	87,3	NQ
ZG-EXT6-17-S4	276488	420366	2216	115	-45	153,3	NQ
ZG-EXT6-17-S5	276488	420366	2216	200	-45	72,4	NQ
ZG-EXT6-17-S6	276488	420366	2216	125	-57	9	NQ
ZG-EXT6-17-S7	276488	420366	2216	150	-57	101	NQ

Samples taken from the diamond drilled holes were assayed at the independent laboratory Analyse Development Minier S.A.R.L.(ADM) based in Marrakech (Morocco).

A new zone was intersected to the East where the mineralization was identified present at the surface. At the North zone, the hole ZG-17-03 extended mineralization at depth from known zones (panels 8 & 9) at higher elevation. Same conclusion was observed with hole ZG-17-10. These positive intervals are extending the mineralization at depth. The following tables present additional

information on intersections of interest. The map present drill hole locations and the position of the intersections of interest (Figure 59).

The hole ZG-17-16 is the deepest hole ever drilled at Zgounder with a depth of 684 m (Z elevation at 1,613 m). The hole intersects disseminated native silver over 3 m at 630 m core length. An altered granite contact has been intersected at 653 m along the hole. Zinc in form of sphalerite is associated with high grade silver reaching up to 2.38% over 1.5 m. It was the first time that Maya intersected such a rich mineralization at such depth at Zgounder mine.

Table 10: New mineralized zones intersected in 2017.

Hole Name	From (m)	To (m)	Length (m)	Ag (g/t)	Objective
ZG-EXT6-17-S1	0	18	18	62	New structures to the East
(including)	0	3	3	248	
ZG-EXT6-17-S2	27.5	47	19.5	152	New structures to the East
(incl.)	30.5	33.5	3	223	
(incl.)	38	41	3	406	
ZG-EXT6-17-S3	0	13.3	13.3	65	New structures to the East
ZG-EXT6-17-S3	26	32	6	113	
ZG-EXT6-17-S4	106	130	24	34	New structures to the East
ZG-EXT6-17-S4	139	142.5	3.5	158	
(incl.)	139.5	140.5	1	382	
ZG-EXT6-17-S5	3	13	10	58	New structures to the East
(incl.)	11.8	13	1.2	225	
ZG-EXT6-17-S7	2	3.5	1.5	146	New structures to the East
ZG-EXT6-17-S10	0	3	3	312	New structure to the East, adjacent of ancient workings.
ZG-EXT6-17-S10	12	21	9	1 315	
(incl.)	13.5	16.5	3	3 808	
ZG-EXT6-17-S10	56	57.5	1.5	203	
ZG-EXT6-17-S10	148	149.5	1.5	184	
ZG-17-10	0	18.5	18.5	101	The Centre zone and panel 9
(incl.)	3	11	8	150	
ZG-17-10	43.5	99	55.5	177	

Hole Name	From (m)	To (m)	Length (m)	Ag (g/t)	Objective
(including)	51	55	4	472	
(incl.)	61	62.5	1.5	987	
(incl.)	71	79	8	373	
ZG-17-10	202	206.5	4.5	97	
ZG-17-09	1.5	39.5	38	186	North West zone
(incl.)	25	27	2	2419	
ZG-17-11	1.5	15	13.5	48	North West zone and at depth
ZG-17-11	86	108	22	345	
(incl.)	92	97.5	5.5	816	
(incl.)	102	103	1	1244	
ZG-17-11	307.5	310.5	3	236	
ZG-17-11	335.3	336.6	1.3	963	
ZG-17-16	533	539	6	297	Prolongation of Corps D at depth
(incl.)	534.5	536	1.5	630	
ZG-17-16	567.5	574.5	7	262	
(incl.)	573	574.5	1.5	701	
ZG-17-16	603.5	608	4.5	426	
(incl.)	605	606.5	1.5	1078	
ZG-17-16	627.5	630.5	3	4874	
(incl.)	627.5	629	1.5	9480	
ZG-17-03	25	54	29	277	
(incl.)	35.5	43.5	8	753	
(incl.)	48.8	54	5.2	185	
ZG-17-03	90	91	1	663	

Important note: not all the assay results were received at the moment of preparing the resource model.

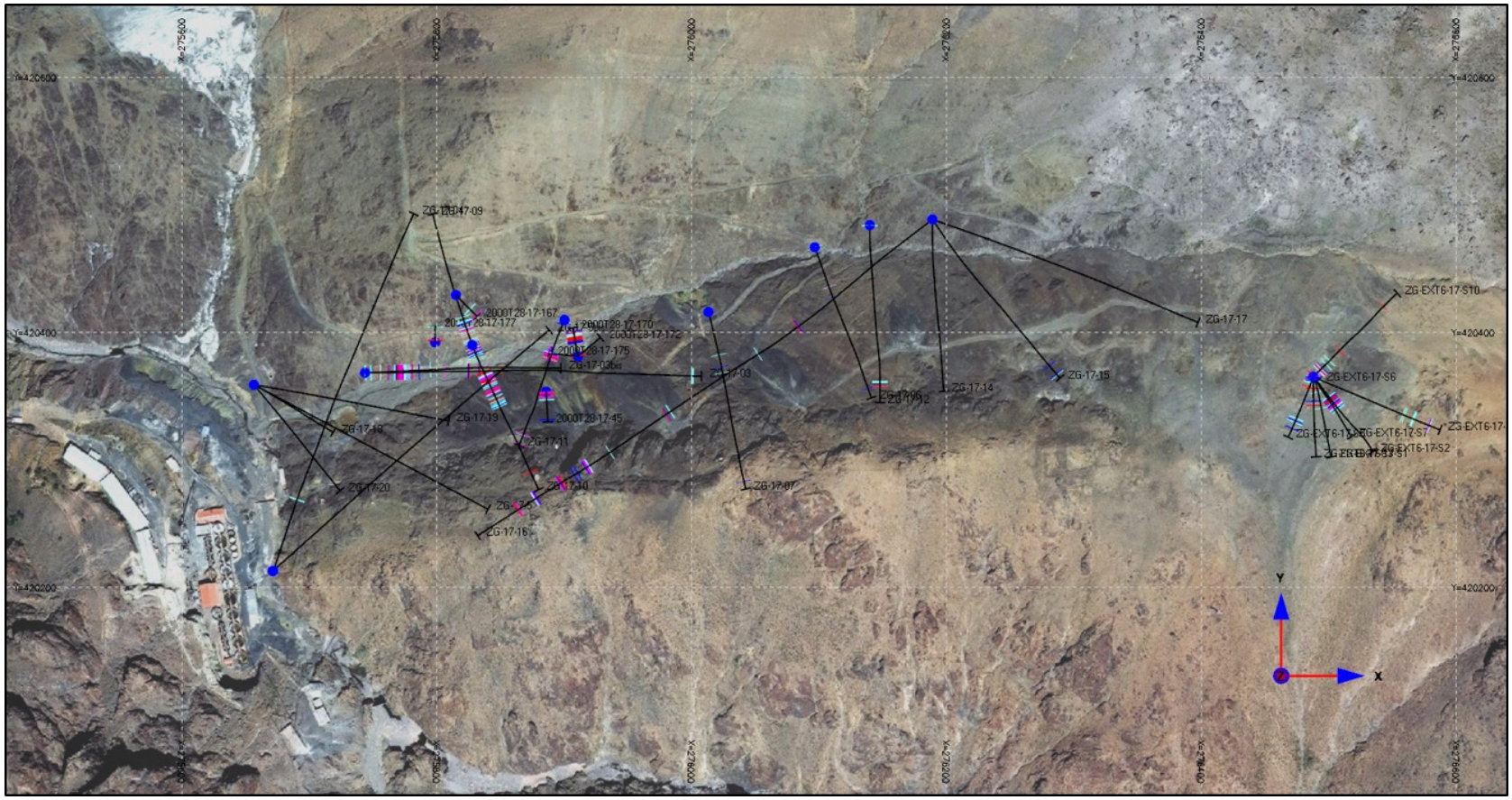


Figure 59: Plan view of the collars drilled in 2017 at Zgounder mine with available assay results.

11 Sample preparation, analysis and security

- **Percussion drilling samples**

For percussion samples, the preparation (Figure 60) was the same as the sampling procedure established and supervised by GoldMinds Geoservices in 2013.

The length of each sample (cutting) was 1.2 m. The T28 percussion drill bit diameter is approximately 32 mm. The cutting samples were placed into a plastic bag and grouped by drill hole. Sample bags were then transported to the core shack and emptied separately into small trays. A number was assigned to each sample to ease identification after the drying process. Samples were placed in the oven at a low temperature until they were fully dried, this process typically takes between 12 to 16 hours. Once dry, each sample was divided in two using a Jones riffle spitter. One part was placed in a tightly sealed plastic bag and sent to the laboratory of the Zgounder mine. The remaining sample material has been kept for archive in a well-organized area in the core shack.

All the percussion samples were prepared and analyzed at the Zgounder mine laboratory.

Figure 60: Percussion drill sampling protocol established by GMG at Zgounder silver mine.

- **Diamond drilling core samples**

The core boxes were identified with the hole names, length of cores wase marked and then the boxes were transported to the core logging and splitting facilities at Zgounder mine (Figure 61). At the core shack, the core was logged by the geologists of Zgounder Millenium Silver Mine (ZMSM). The core intervals to be sampled were identified by the geologists. For the non-mineralized sections, the sample lengths were between 1 and 1.5 m and for the mineralized zones, the sample lengths were 0.5 m.

Figure 61: A) Drilling program of 2017 at Zgounder mine; B) The HQ core boxes; C) Silver mineralization within a core.

Technicians then prepared the core and split it in half to keep a witness (Figure 62).

Figure 62: A) The core was split using an electric saw; B) The sample tags placed at the end of each sample interval; C) One half of the core sample (control sample) was placed into plastic bag which was then tagged and sealed.

The core sample was entirely crushed to have d80 passing 2 mm and afterward riffled and split to have 100 grams which was then pulverized to have a pulp d80 of 75 microns (Figure 63).

Figure 63: A-D) Sample preparation of the core samples.

The core samples from the drill holes (ZG-17-03, ZG-17-09, ZG-17-10, ZG-17-04, ZG-17-14, ZG-17-15, ZG-17-17) were analyzed at the Zgounder laboratory. The diamond drill holes (ZG-EXT6-17-S1, ZG-EXT6-17-S2, ZG-EXT6-17-S3, ZG-EXT6-17-S4, ZG-EXT6-17-S5, ZG-EXT6-17-S6, ZG-EXT6-17-S7, ZG-EXT6-17-S10, ZG-17-7, ZG-17-11, ZG-17-3bis, ZG-17-6, ZG-17-12 and ZG-17-16) were analyzed at the independent laboratory Analyse Development Minier S.A.R.L.

11.1 Sample preparation at the laboratory

Chemical analyses for the percussion drilling samples were performed at the Zgounder mine laboratory and some core samples, as discussed above, were also analyzed at the Zgounder mine laboratory.

The samples were subjected to a chemical digestion using the bi-acid (acid nitric for 1/3 and acid hydrochloric for 2/3) in order to put in solution the chemical elements present within the samples. These solutions were analyzed by atomic absorption spectrometer (AA iCE 3500). Fire assay was used for high grade silver samples. The assay results were then sent in a file format supported in Microsoft Excel to the geological department for integration.

In 2015 and 2017, the authors visited the Zgounder laboratory and found the equipment and procedures to be adequate for the Zgounder silver deposit. For independent assaying, Maya has sent some core samples to the independent laboratory Analyse Development Minier S.A.R.L.

Figure 64: The Zgounder mine laboratory.

The geologists of Maya inserted blank (construction sand) and standards (Table 11) at random intervals in every batch of approximately 40 samples. The standards were prepared by Ore research and exploration Pty Ltd.

Table 11: The standards used for the 2017 drilling program.

Standard	Certificate
Standard 1 (STD 1)	Oreas 131a
Standard 2 (STD 2)	Oreas 132a
Standard 3 (STD 3)	Oreas 133a
Standard 4 (STD 4)	Oreas 134a

Oreas 131a SUMMARY STATISTICS

Constituent	Recommended Values			
	Fusion	4 Acid	Aqua Regia	Leco
Silver, Ag (ppm)	30.2	30.9	29.5	-
Aluminium oxide, Al_2O_3 (wt.%)	8.79	8.75	1.85	-
Arsenic, As (ppm)	91	82	82	-
Barium, Ba (ppm)	851	728	111	-
Calcium oxide, CaO (wt.%)	7.81	7.57	7.36	-
Cadmium, Cd (ppm)	80	81	81	-
Cobalt, Co (ppm)	25	23	21.9	-
Copper, Cu (ppm)	324	322	329	-
Iron, Fe (wt.%)	5.90	5.88	5.64	-
Magnesium oxide, MgO (wt.%)	5.39	5.17	4.91	-
Lead, Pb (wt.%)	1.74	1.72	1.71	-
Sulphur, S (wt.%)	4.82	4.80	4.73	4.66
Antimony, Sb (ppm)	49	47	41	-
Silica dioxide, SiO_2 (wt.%)	44.6	-	-	-
Zinc, Zn (wt.%)	2.84	2.83	2.79	-

Figure 65: Certificate of analysis for Oreas 131a Zn-Pb-Ag reference material.

SUMMARY STATISTICS Oreas 132a

Constituent	Recommended Values			
	Fusion	4 Acid	Aqua Regia	Leco
Silver, Ag (ppm)	58	57.0	55.6	-
Aluminium oxide, Al_2O_3 (wt.%)	7.62	7.82	1.84	-
Arsenic, As (ppm)	144	146	143	-
Barium, Ba (ppm)	882	528	120	-
Calcium oxide, CaO (wt.%)	7.33	6.89	6.93	-
Cadmium, Cd (ppm)	167	155	155	-
Cobalt, Co (ppm)	42	42.6	40.6	-
Copper, Cu (ppm)	458	461	478	-
Iron, Fe (wt.%)	7.79	7.73	7.36	-
Magnesium oxide, MgO (wt.%)	4.83	4.76	4.54	-
Lead, Pb (wt.%)	3.66	3.64	3.60	-
Sulphur, S (wt.%)	8.08	7.93	7.99	7.86
Antimony, Sb (ppm)	52	49.0	40.6	-
Silica dioxide, SiO_2 (wt.%)	38.4	-	-	-
Zinc, Zn (wt.%)	4.96	4.98	4.86	-

Figure 66: Certificate of analysis for Oreas 132a Zn-Pb-Ag reference material.

SUMMARY STATISTICS Oreas 133a

Constituent	Recommended Values			
	Fusion	4 Acid	Aqua Regia	Leco
Silver, Ag (ppm)	96	100	97	-
Aluminium oxide, Al_2O_3 (wt.%)	6.80	7.11	1.39	-
Arsenic, As (ppm)	132	139	140	-
Barium, Ba (ppm)	785	494	59	-
Calcium oxide, CaO (wt.%)	5.67	5.50	5.39	-
Cadmium, Cd (ppm)	298	296	297	-
Cobalt, Co (ppm)	24	24	23	-
Copper, Cu (ppm)	302	323	324	-
Iron, Fe (wt.%)	7.92	8.10	7.92	-
Magnesium oxide, MgO (wt.%)	3.85	3.80	3.56	-
Lead, Pb (wt.%)	4.84	4.90	4.86	-
Sulphur, S (wt.%)	10.8	11.1	10.7	10.95
Antimony, Sb (ppm)	175	171	147	-
Silica dioxide, SiO_2 (wt.%)	34.36	-	-	-
Zinc, Zn (wt.%)	10.67	10.87	10.60	-

Figure 67: Certificate of analysis for Oreas 133a Zn-Pb-Ag reference material.

SUMMARY STATISTICS Oreas 134a

Constituent	Recommended Values			
	Fusion	4 Acid	Aqua Regia	Leco
Silver, Ag (ppm)	197	201	194	-
Aluminium oxide, Al_2O_3 (wt.%)	2.60	2.53	0.774	-
Arsenic, As (ppm)	218	228	226	-
Barium, Ba (ppm)	1369	531	<500	-
Calcium oxide, CaO (wt.%)	6.38	6.04	6.09	-
Cadmium, Cd (ppm)	546	536	547	-
Cobalt, Co (ppm)	100	105	101	-
Copper, Cu (ppm)	1278	1291	1279	-
Iron, Fe (wt.%)	12.32	12.04	11.89	-
Magnesium oxide, MgO (wt.%)	3.55	3.49	3.42	-
Lead, Pb (wt.%)	12.95	12.79	12.64	-
Sulphur, S (wt.%)	19.4	19.27	18.5	19.11
Antimony, Sb (ppm)	118	115	101	-
Silica dioxide, SiO_2 (wt.%)	14.81	-	-	-
Zinc, Zn (wt.%)	17.49	17.27	17.00	-

Figure 68: Certificate of analysis for Oreas 134a Zn-Pb-Ag reference material.

11.2 Quality Assurance/Quality Control (QA/QC) program

The integration of blank and standard samples was established in order to verify the accuracy and precision of the laboratory results. GoldMinds Geoservices relied on the drilling program and independent samples taken by Claude Duplessis Eng. as external quality control steps to complete the QC program.

The results from the combination of blank, standards, duplicates and the internal QA/QC met the quality criteria, indicating that Maya Gold and Silver can rely on these values for the sample program.

GMG did not visit the ALS laboratory in Val d'Or but it has a reliable industry reputation and work was completed in a professional manner. GMG also did not visit the independent laboratory Analyse Development Minier S.A.R.L in Morocco.

11.3 Security

Core sampling, underground sampling, sample preparation, sample handling and transport all followed a protocol established by GMG that included a strict chain of custody from sampling to the laboratory.

Samples were sent to Zgounder and to the independent laboratory Analyse Development Minier S.A.R.L. in sealed containers. The authors believe that the sample preparation, security, and analytical procedures were adequate and well suited for the purpose of the 2017 drilling program.

12 Data verification

12.1 The independent analytical program

GoldMinds Geoservices verified the percussion drilling analytical results and integrated the batches into the database.

The diamond drillhole and percussion drillhole collar locations were surveyed by Maya's surveyor at Zgounder mine using Total Station. The collar azimuth and dip of each drill hole were also surveyed. The azimuth and dip were measured by GMG geologist, using a compass and referring to the orientation of the drift wall.

12.2 The database

The results of the percussion drilling campaign and the diamond drilling program were verified and validated by GMG after what they've been integrated into the database.

12.3 Independent sampling – 2015 and 2017 personal inspections

The authors are Qualified Persons as defined by the NI 43-101. Mr. Duplessis and Mr. Rachidi visited the Zgounder silver mine in 2013, 2015, 2017 and organized the preparation and sampling protocols.

12.3.1 2015 Independent sampling and personal inspection

A total of 31 samples (1/4 of each core sample selected) were taken from two holes (HL_Ext-006 and HL_Ext-012) drilled at the eastern zone. During the 2015 drilling campaign, Maya sent core samples to ALS in Spain for Fire assay. For inspection purposes, Mr. Duplessis sent core samples (1/4 of each core sample selected) to be assayed at Bourlamaque laboratory in Val d'Or (Quebec, Canada). The table below (Table 12), shows the assay results. The distribution of the assay results is linear and the correlation coefficient is close to unity ($R^2 = 0.91$).

Table 12: Bourlamaque fire assay values of independent samples and respective duplicates analyzed at ALS laboratory (Spain).

Hole name	ID	Bourlamaque 1/4 core (Ag g/t)	ALS 1/2 core (Ag g/t)
HL_Ext-006	3411	51	26
HL_Ext-006	3412	56	63
HL_Ext-006	3413	67	57
HL_Ext-006	3414	32	68
HL_Ext-006	3415	51	36
HL_Ext-006	3416	43	48
HL_Ext-006	3417	42	59

Hole name	ID	Bourlamaque 1/4 core (Ag g/t)	ALS 1/2 core (Ag g/t)
HL_Ext-006	3418	17	42
HL_Ext-006	3419	32	15
HL_Ext-006	3420	19	37
HL_Ext-006	3421	13	15
HL_Ext-006	3422	10	9
HL_Ext-006	3423	5	8
HL_Ext-006	3424	29	16
HL_Ext-006	3425	915	353
HL_Ext-006	3426	1 128	999
HL_Ext-006	3427	474	423
HL_Ext-006	3428	2 239	2 010
HL_Ext-006	3429	64	36
HL_Ext-006	3430	7	9
HL_Ext-006	3431	12	8
HL_Ext_012	3433	58	534
HL_Ext_012	3434	176	91
HL_Ext_012	3435	3469	2320
HL_Ext_012	3436	4408	5300
HL_Ext_012	3437	438	710
HL_Ext_012	3438	36	27
HL_Ext_012	3439	17	12
HL_Ext_012	3440	51	35
HL_Ext_012	3441	84	54
HL_Ext_012	3442	1074	781

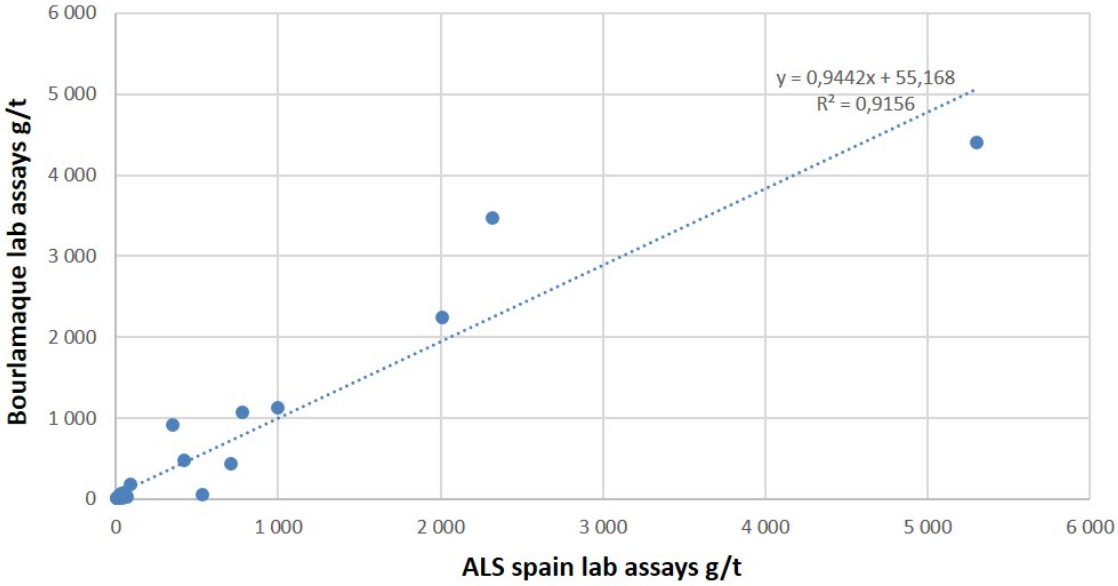


Figure 69: Relation between core samples and respective duplicates.

12.3.2 2017 Independent sampling and personal inspection

A total of 33 independent samples were taken and verified for reliability. Thirty (30) cutting samples were taken from two percussion drill holes (2100-T28-17-1 and 2100T28-17-64, refer to table below) and three core samples were taken from two diamond drill holes (ZG-EXT6-17-S2 and ZG-EXT6-17-S4) drilled in the eastern area.

On his way back to Montreal M. Duplessis took the sealed independent samples in his luggage to send them to the ALS laboratory in Val d'Or; results are presented in table below. Sample and duplicate fire assay values are quite similar and no abnormal value was detected.

Table 13: ALS Val d'Or fire assay values of independent samples and their respective duplicates analyzed at Zgounder lab.

Hole name	Sample type	ID GMG	Ag PYRO-GRAV ALS Val D'Or (g/t)	Ag Labo Zgounder (g/t)
ZG-EXT6-17-S2	Core	2266	46	38
ZG-EXT6-17-S4	Core	2267	100	82
ZG-EXT6-17-S4	Core	2268	340	367
2100-T28-17-1	Cuttings	2100-T28-17-1-1	5	7
2100-T28-17-1	Cuttings	2100-T28-17-1-2	5	5
2100-T28-17-1	Cuttings	2100-T28-17-1-3	4	6
2100-T28-17-1	Cuttings	2100-T28-17-1-4	97	7
2100-T28-17-1	Cuttings	2100-T28-17-1-5	17	19
2100-T28-17-1	Cuttings	2100-T28-17-1-6	14	14
2100-T28-17-1	Cuttings	2100-T28-17-1-7	9	10
2100-T28-17-1	Cuttings	2100-T28-17-1-8	9	15

Hole name	Sample type	ID GMG	Ag PYRO-GRAV ALS Val D'Or (g/t)	Ag Labo Zgounder (g/t)
2100-T28-17-1	Cuttings	2100-T28-17-1-9	7	8
2100-T28-17-1	Cuttings	2100-T28-17-1-10	4	8
2100-T28-17-1	Cuttings	2100-T28-17-1-11	6	9
2100-T28-17-1	Cuttings	2100-T28-17-1-12	14	16
2100-T28-17-1	Cuttings	2100-T28-17-1-13	22	38
2100-T28-17-1	Cuttings	2100-T28-17-1-14	230	262
2100-T28-17-1	Cuttings	2100-T28-17-1-15	417	470
2100-T28-17-1	Cuttings	2100-T28-17-1-16	196	186
2100-T28-17-1	Cuttings	2100-T28-17-1-17	77	43
2100-T28-17-1	Cuttings	2100-T28-17-1-18	36	33
2100-T28-17-1	Cuttings	2100-T28-17-1-19	38	21
2100-T28-17-1	Cuttings	2100-T28-17-1-20	27	22
2100T28-17-64	Cuttings	2100T2817641	4 501	3 557
2100T28-17-64	Cuttings	2100T2817642	3 580	4 237
2100T28-17-64	Cuttings	2100T2817643	4 528	5 361
2100T28-17-64	Cuttings	2100T2817644	1 260	1 100
2100T28-17-64	Cuttings	2100T2817645	3 671	3 174
2100T28-17-64	Cuttings	2100T2817646	5 497	5 710
2100T28-17-64	Cuttings	2100T2817647	1 204	950
2100T28-17-64	Cuttings	2100T2817648	1 199	1 136
2100T28-17-64	Cuttings	2100T2817649	571	469
2100T28-17-64	Cuttings	2100T28176410	280	285

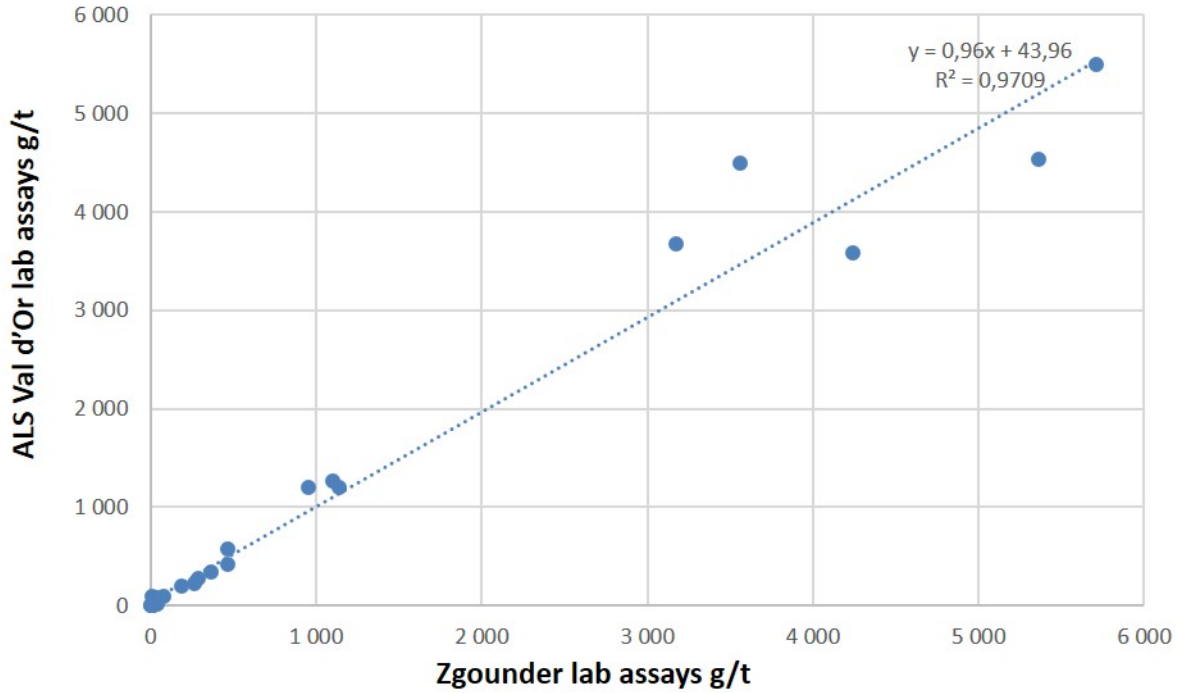


Figure 70: Core samples, percussion drill samples and respective duplicates.

The distribution of results is linear and the coefficient of correlation is close to 1 ($R^2 = 0.97$).

The independent samples taken from the underground mineralized zones (veins and shear zones) at the Zgounder silver mine as well as the core samples both confirmed the presence of high grade silver that can exceed 5,000 g/t Ag (Table 13).

12.3.3 QA/QC program

During the diamond drilling campaign of 2017, four standards (Table 11) were used in the site QA/QC program prepared by Ore research and exploration Pty Ltd (Figure 65, Figure 66, Figure 67, Figure 68). These standards were inserted at random in every batch of approximately 40 samples.

Figure 71: Standards used during the drilling campaign of 2017 at Zgounder silver mine.

STD1 (Oreas 131a) displayed a minimum value of 29 ppm and a maximum value of 44 ppm Ag with an average of 36.7 ppm. STD2 (Oreas 132a) displayed a minimum value of 50 ppm and a maximum value of 61 ppm Ag with an average of 56.5 ppm (Figure 72). STD3 (Oreas 133a) displayed a minimum value of 91 ppm and a maximum value of 104 ppm Ag with an average of 99.5 ppm (Figure 72). STD4 (Oreas 134a) displayed a minimum value of 184 ppm and a maximum value of 213.5 ppm Ag with an average of 197 ppm (Figure 72).

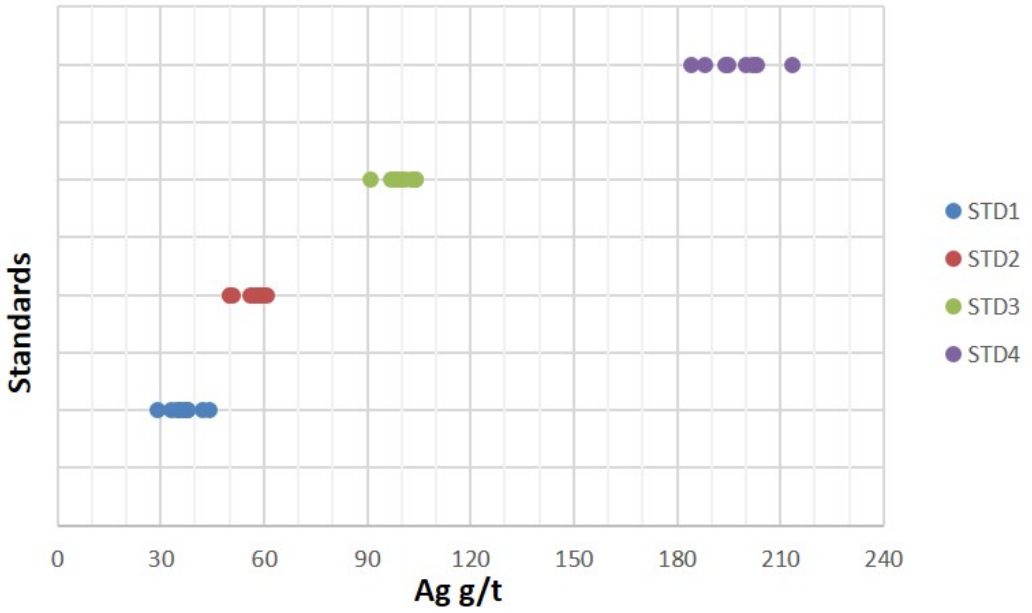


Figure 72: Distribution of standards used during the 2017 drilling program.

The blank samples correspond to sand used for building construction. The blank were inserted in every batch of approximately 40 samples. The blanks assay results displayed a minimum value of 1 ppm and a maximum value of 11 ppm.

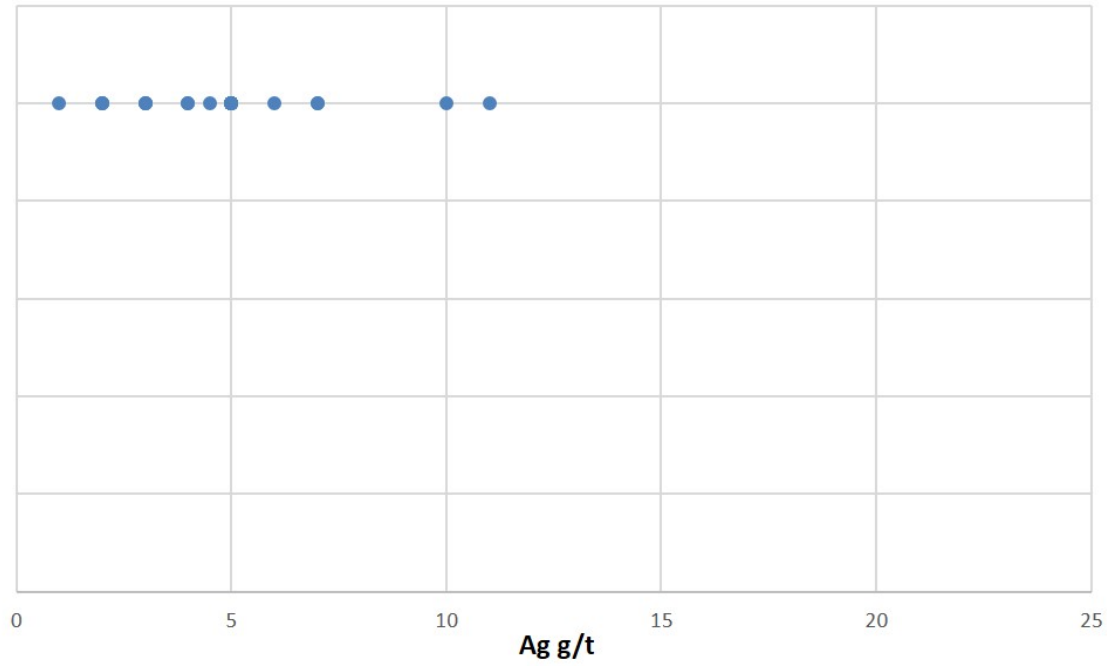


Figure 73: Distribution of blank samples used during the 2017 drilling program.

Duplicates samples were also inserted for the QA/QC program. Samples and duplicates assay values are quite similar; no abnormal value was detected. The assay results are considered reliable and repeatable as shown in the figure below (Figure 74).

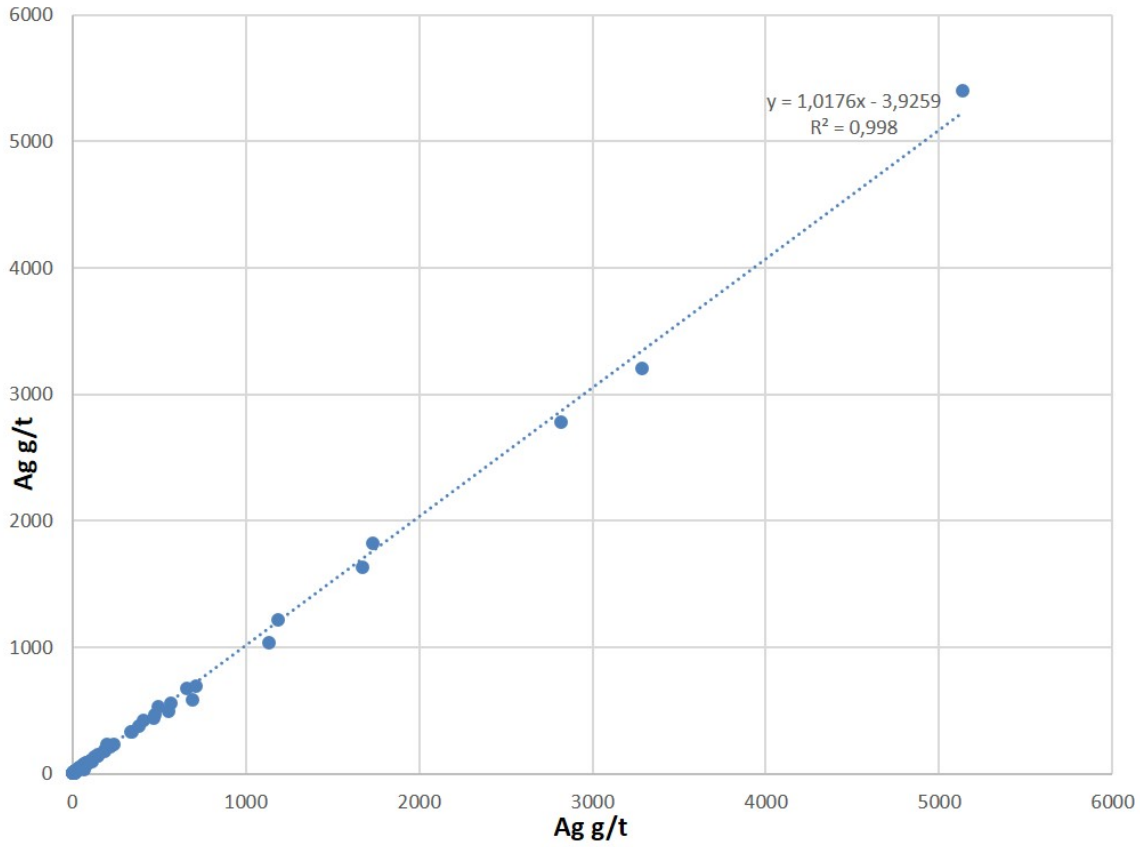


Figure 74: Samples assay results and their duplicates.

13 Mineral processing and metallurgical testing

13.1 Historic metallurgical testing

Before and even after the mining-milling operations at Zgounder (1982 to 1990), many metallurgical tests (gravity[1], flotation and cyanidation) have been done on the ore and/or the old mine rejects. These tests have been mainly performed by the BRPM (Bureau de Recherche et Participation Minière) and the BRGM (Bureau de Recherche Géologique et Minière).

13.1.1 **BRPM testwork (1978)**

a) The most relevant pilot plant results, obtained by the BRPM for the flotation followed by the cyanidation of the flotation tailings from the old mine rejects, were:

Flotation feed: 240 g/t

Flotation recovery: 58.6%

Cyanidation feed: 100 g/t (tailings of the above flotation test)

Cyanidation recovery: 82.8% (after 15 hours of leaching time)

Finally, flotation followed by the cyanidation of the flotation tailings for Lot 3 (ancient mine rejects) produced a total recovery of 92.4%, 56.2% from the flotation concentrate and 36.2% from the leaching of the flotation tailings.

b) The most relevant pilot plant results, obtained by the BRPM for the direct cyanidation of the fresh underground material, were:

Fineness: 95% <74µm

% solid: 40%

Cyanide consumption: 3.0 kg/t

Lime consumption: 1.20 kg/t

pH: 10.0

Leaching time: 24 hours

Ag recovery: 93.8%

[1] There is no mention of the gravity testwork in this report since it has been done with non-representative samples.

13.1.2 **BRGM testwork (2003)**

a) Bench test results for the flotation of Zgounder fresh material were:

Flotation parameters:

PAX:	250 g/t rougher
	150 g/t scavenger
Lime:	2.0 kg/t
Flotation time:	5.0 min rougher
	5.0 min scavenger
pH:	Natural (7.67)
Flotation feed:	360 g/t
Flotation concentrate:	7757 g/t
Weight recovery:	3.64%[2]
Silver recovery:	82.6%

b) Bench test results for the cyanidation of some flotation concentrate were:

Cyanidation feed:	6098 g/t
Flotation-cyanidation recovery:	54.1%[3]

13.1.3 **Work index**

The mineralized material was reported as relatively hard with a Work Index of 14 to 17 kWh/t.

[2] Probably more than 3.84%. Perhaps an error in the data transcription.
[3] There was no explanation for such a low recovery result.

13.1.4 Mill Historical Performance

Table 14: Mill operation – years 1986 - 1987

	1986	1987
Material processed (t)	61 388	66 440
Ag grade (g/t)	290	350
Ag recovery (%)	**84.4**	**86.6**

13.2 Recent metallurgical testing – Zgounder's laboratory

In 2015, a series of flotation tests were done by Maya's personnel at the Zgounder laboratory in order to assess the best combination of flotation reagents to obtain the maximum silver recovery.

13.2.1 Mill cyclone overflow

The flotation material for the first two tests came from the mill cyclone overflow and were taken on December 22th, 24th, 26th, 27th and 28th, 2014. Percentage of solid material of the whole lot was 30.4% and the sample had a fineness of 71µm (D80).

The significant test was the one employing potassium amyl xanthate for the collector at a rate of 32 g/t and MIBC as a frothing agent at a rate of 25 g/t. A silver recovery of 78.7% was achieved while 18.27% of the original feed was floated.

Table 15: Flotation test at Maya's Zgounder laboratory – mill cyclone O/F.

	Flotation	Weight		Grade	Recovery
	Time	g	%	g/t	%
Rougher	5 min	92	9.60	2446	**71.28**
Scavenger 1	5 min	45	4.60	364	**5.19**
Scavenger 2	2 min	39	4.07	180	**2.22**
Tails		782	81.68	86	21.30
Feed		958	100.00	330	100.00

13.2.2 Mill fresh feed (Ball mill feed)

Another series of tests was conducted on fresh mill feed ground to F80 = 50µm and having a percentage of solid material varying between 30 to 33%. The most optimal test was done at 30.2%

solid with the use of 27 g/t of potassium amyl xanthate, 28 g/t of MIBC and 30 g/t of sufidrate[4] at natural pH. A silver recovery of 82.2% was achieved while 23.6% of the original feed was floated.

Table 16: Flotation test at Maya's Zgounder laboratory – mill fresh feed.

	Flotation	Weight		Grade	Recovery
	Time	g	%	g/t	%
Rougher	5 min	234	15.96	1686	**71.95**
Scavenger 1	5 min	48	3.27	804	**7.04**
Scavenger 2	10 min	64	4.37	278	**3.24**
Tails		1120	76.40	87	17.77
Feed		1466	100.00	374	100.00

13.3 Recent metallurgical testing – Yantai Xinhai Mining Research & Design Co., Ltd (Xinhai), April 2016

Upon request of Millennium Silver Mining S.A (Maya), Yantai Xinhai Mining Research & Design Co., Ltd. (Xinhai) undertook some laboratory tests on a sample of 30 kilograms or so from the Zgounder deposit. The objective was to determinate the most optimal technological process for the recovery of silver and than properly design the future 500 tpd mill.

The laboratory tests included: gravity, flotation, granulometry chemistry, ore density and tailings settling rate.

Table 17: Multi Element Analysis of Zgounder Deposit Sample as Received.

Element	Ag	Au	Cu	Pb	Zn
Grade %	317.22	<0.1	0.057	0.14	0.47
Element	S	TFe	Sb	AS	C
Grade %	0.99	5.09	0	0.01	0.11
Element	SiO_2	Al_2O_3	CaO	MgO	TiO_2
Grade %	56.48	20.13	0.8	0.94	0.86

N.B.: Silver and gold are in g/t

[4] The addition of sulfidrate was employed to help the recovery of argentite (Ag_2S).

Table 18: Sample Granulo-Chemistry Analysis.

Size Fraction		Weight (%)		Grade	Occurance
mm	Mesh	Fraction	Passing	g/t	%
+1	+16	32.70	100.00	219.53	22.58
-1+0.5	-16+32	30.21	67.30	275.78	26.20
-0.5+0.25	-32+60	14.94	37.06	367.34	17.26
-0.25+0.15	-60+100	7.58	22.15	438.54	10.46
-0.15+0.074	-100+200	5.23	14.57	535.26	8.81
-0.074	-200	9.34	9.34	500.5	14.69
	Ore	100.00		317.96	100.00

13.3.1 Two-stage gravity concentration Test

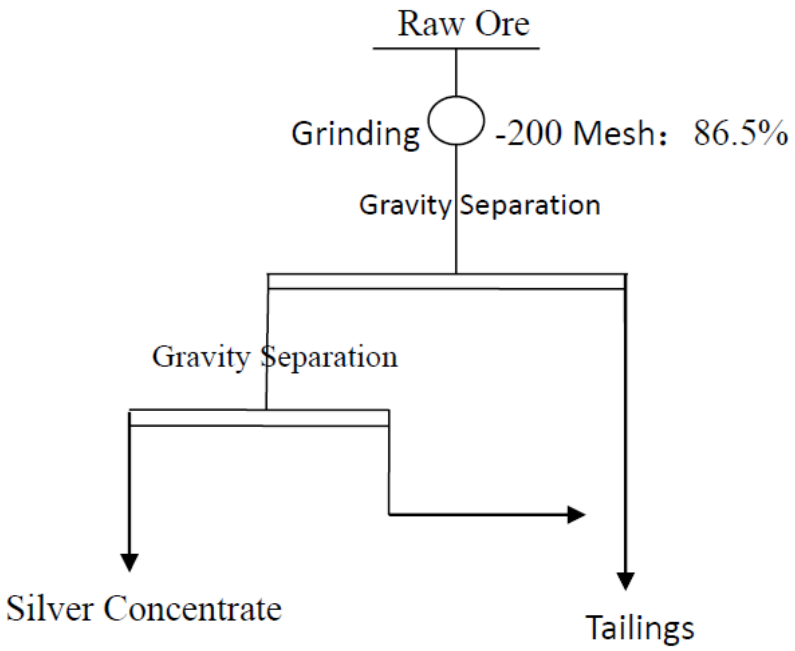


Figure 75: Gravity Concentration Diagram.

Table 19: Gravity Concentration Results.

	Weight	Grade	Recovery
	%	g/t	%
Concentrate	**0.34**	17957	**19.31**
Tailings	99.66	256	80.69
Feed	100.00	316	100.00

13.3.2 **Flotation**

Yantai Xinhai Mining Research & Design Co., Ltd made a series of flotation tests on the Zgounder ore in order to determine the best flotation conditions. Different flotation reagents and consumption were tested (CuSO4, butyl xanthate, butylamine Aeroflot, Na2S, Na2CO3, etc.) as well as fineness levels of the grind.

According to the laboratory tests, a recovery of approximately 92% could be achieved with the following conditions:

Fineness:	≈ 86.5% -200 mesh (75µm)
Copper sulfate ($CuSO_4$)	= 200 g/t (activator)
Butyl Xanthate	= 80 g/t (collector)
Butylamine Aeroflot	= 80 g/t (collector)
Pine oil	= 30 g/t (frother)
Flotation time	= 6 min. (roughing + scavenging)

13.3.2.1 Diagram and results of basic laboratory flotation tests

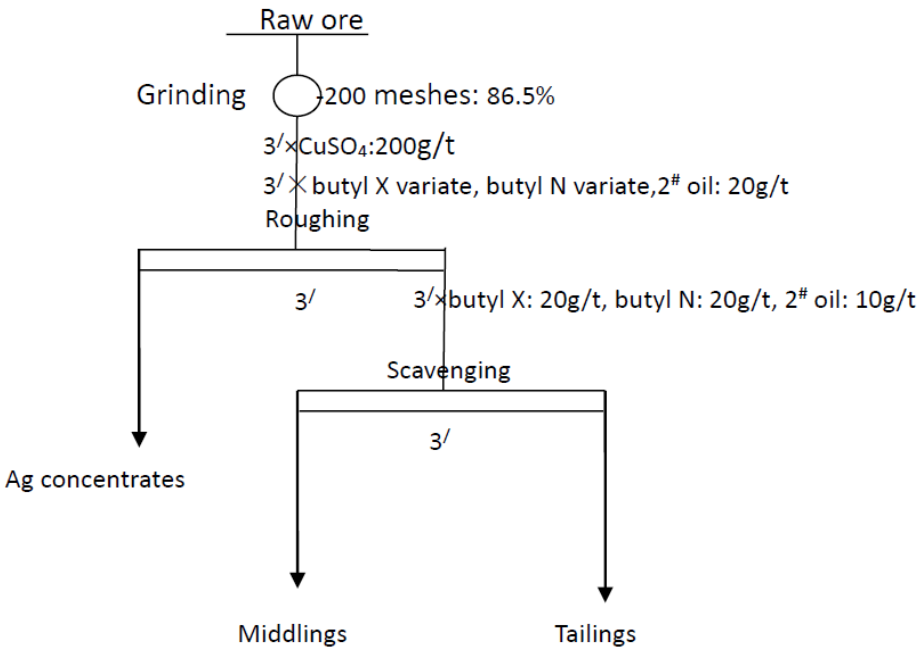


Figure 76: Basic Flotation Diagram.

Table 20: Best Laboratory Flotation Results.

	Flotation Time	Weight Rec. %	Grade g/t	Ag Recovery %
Rougher	3 min	27.91	983	**88.47**
Scavenger	3 min	12.36	95	**3.80**
Tails		59.73	40	7.73
Feed		100.00	310	100.00

13.3.2.2 Diagram and results of open circuit flotation test including 2 stages of scavenging and 2 stages of cleaning (no gravity)

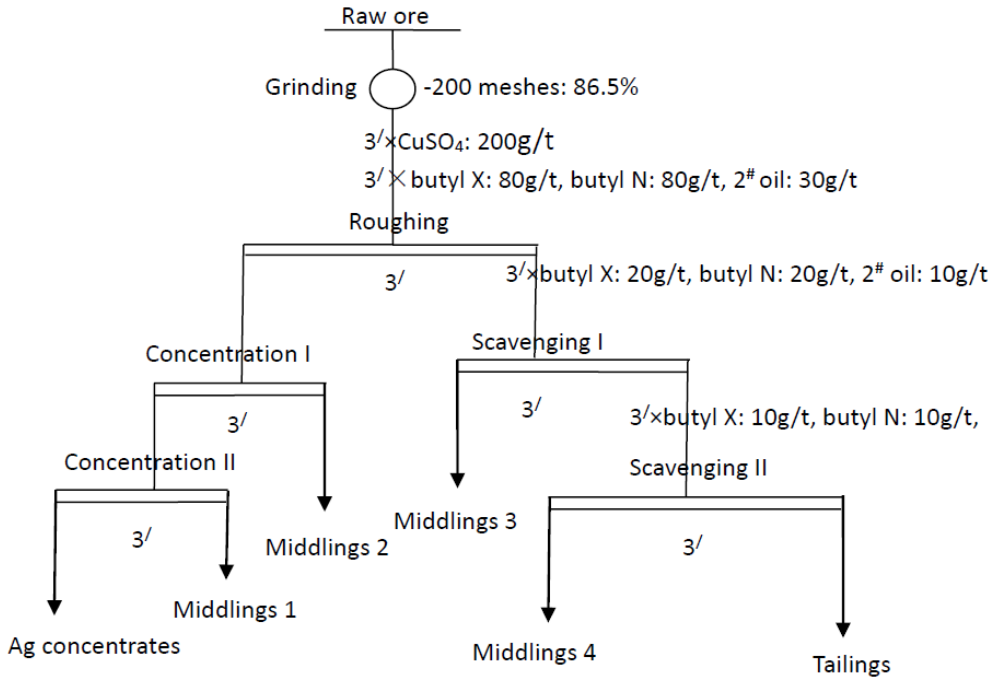


Figure 77: Flotation Test with Scavenging and Cleaning, Open circuit – no Gravity.

Table 21: Flotation test results including scavenging and cleaning, open circuit - no gravity.

	Flotation	Weight Rec.	Grade	Ag Recovery
	Time	%	g/t	%
Final Concentrate	3 min	9.30	2689	**80.88**
Scavenger 1 Conc.	3 min	7.87	97	**2.48**
Scavenger 2 Conc.	3 min	13.43	79	**3.42**
Cleaner 1 Tail	3 min	12.19	121	**4.76**
Cleaner 2 Tail	3 min	4.88	134	**2.11**
Final Tails		52.33	38	6.35
Feed		100.00	309	100.00

13.3.2.3 Diagram and results of open circuit flotation test including 2 stages of scavenging and 2 stages of cleaning (including gravity)

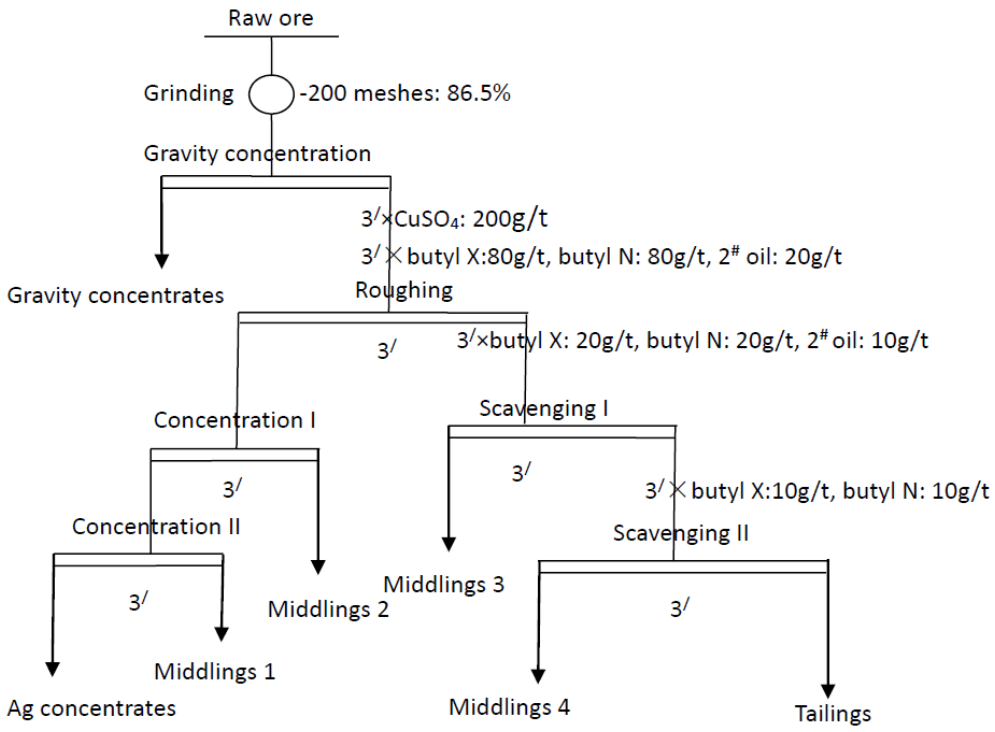


Figure 78: Flotation Test with Scavenging and Cleaning, Open Circuit – Including Gravity.

Table 22: Flotation Test Results Including Scavenging and Cleaning, Open Circuit – Gravity.

	Flotation	Weight Rec.	Grade	Ag Recovery
	Time	%	g/t	%
Gravity Conc.		0.33	17585	**18.70**
Final Concentrate	3 min	8.23	2424	**64.27**
Scavenger 1 Conc.	3 min	13.47	98	**4.26**
Scavenger 2 Conc.	3 min	5.00	71	**1.14**
Cleaner 1 Tail	3 min	12.81	65	**2.67**
Cleaner 2 Tail	3 min	8.47	101	**2.75**
Tails		51.69	37	6.20
Feed		100.00	310	100.00

13.3.2.4 Diagram and results of lock flotation test including 2 stages of scavenging and 2 stages of cleaning (including gravity)

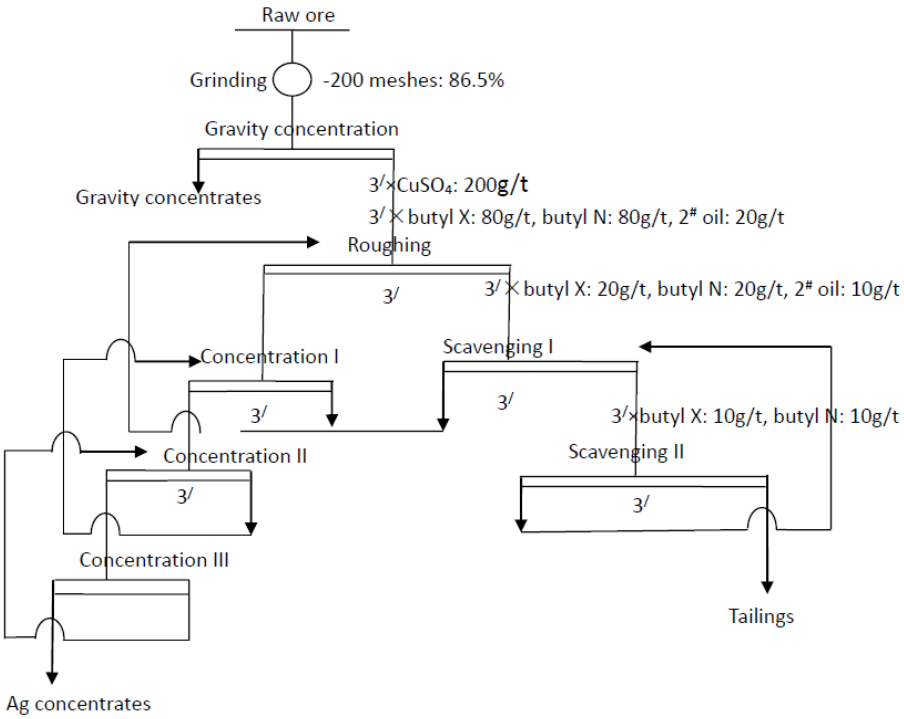


Figure 79: Flotation Test with Scavenging and Cleaning, Close Circuit – Including Gravity.

Table 23: Flotation Test Results Including Scavenging and Cleaning, Close Circuit – Gravity.

	Weight Rec.	Grade	Ag Recovery
	%	g/t	%
Gravity Conc.	0.34	17577	**19.10**
Final Concentrate	5.12	3962	**64.85**
Final Tailings	94.54	53	**16.05**
Feed	100.00	313	100.00

Table 24: Flotation Tailings Granulo Chemistry.

Size Fraction		Weight (%)		Grade	Occurance
mm	Mesh	Fraction	Passing	g/t	%
+0.074	+200	15.45	84.55	48.14	14.25
+0.044	+325	21.45	63.1	44.86	18.43
+0.038	+400	10.3	52.8	41.83	8.25
+0.030	+500	9.62	43.18	50.26	9.26
- 0.030	-500	43.18		60.23	49.81
TOTAL		100.00		52.21	100.00

13.3.3 Mineralized material density measurements

Xinhai made gravity measurements on the material and came with the following:

- Raw material density: 2.73 t/m^3
- Bulk density: 1.41 t/m^3

13.3.4 Tailing settling rates

Two flotation tailing settling tests were done by Xinhai. The first test was without any flocculation and the second test was with an addition of 6 g/t of an anionic ion flocculent.

Without any flocculation, average settling rate from a pulp having 17.54% of solid was 0.95 mm/min and final percentage of solid was 54.81%.

With flocculation, average settling rate from same percentage of solid pulp was 1.93 mm/min and final percentage of solid was 56.93%.

13.3.5 Xinhai recommended process flowsheet and conclusion

The recommended process flowsheet for the Millennium Silver Mining S.A. Zgounder mineralized material is shown in the following figure.

Note: The term Ore is used as mineralized material supplied to Xinhai and comes from the ore defined in the PFS of 2014. Here as per NI 43-101 regulation the author for the purpose of the PEA identified the ore as mineralized material in the text.

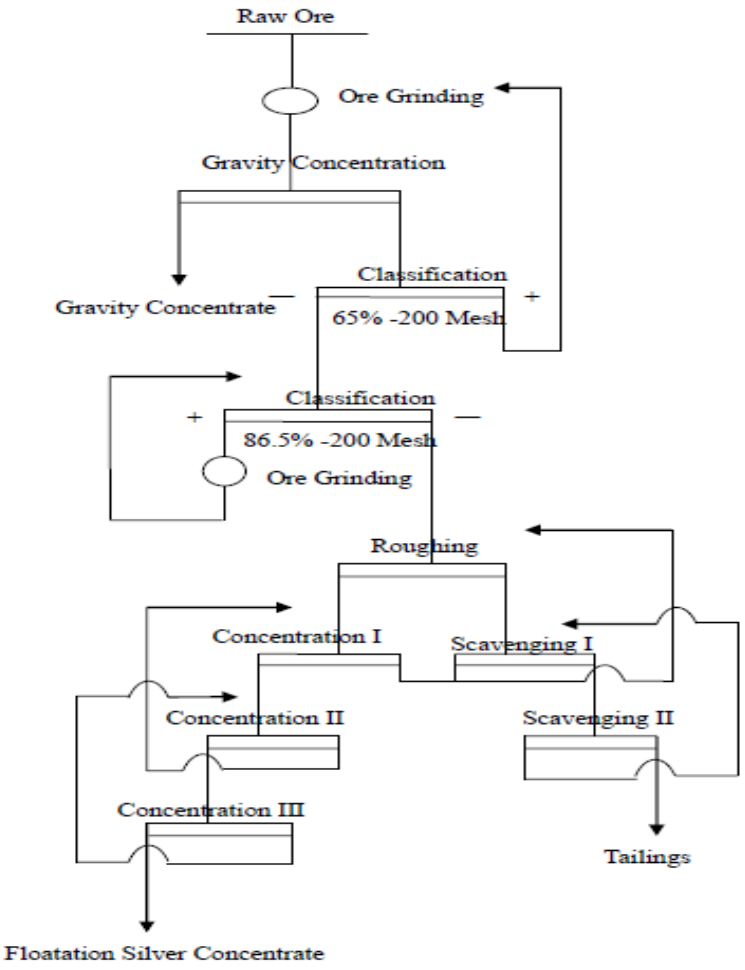


Figure 80: Xinhai Recommended Process Flow.

From the flowsheet above, a silver concentrate of 17,576.8 g/t with a silver recovery of 19.10% could be obtained at the gravity stage. With the flotation stages presented above and comprising one rougher stage, 2 scavengers and 3 cleaners, a silver concentrate grading 3,962.4 g/t along with a silver recovery of 64.5% is achievable for a total recovery of 83.95%.

13.4 Latest metallurgical tests - Shandong Xinhai Mining Technology & Equipment Inc. (2017)

Because in 2016, Xinhai stop short of cyanide leach the silver flotation concentrate, it was not possible to predict the real final Zgounder mill recovery. In order to correct the situation, Millennium Silver Mining S.A (Maya) asked Xinhai to do some cyanide leaching tests on the silver concentrates obtained during the 2016 metallurgical tests campaign and from the old mill tailings (1982 – 1990).

13.4.1 Cyanide leach test of old mill tailings

A sample of the old mill tailings grading 102.5 g/t was leached as is (without regrinding). Liquid-solid ratio was 2:1 (33% solid), alkali consumption was 4kg/t while NaCN consumption was 1kg/t. Test results are shown in the Table below.

Table 25: Old mill tailings cyanide leach test.

Leaching Time	Grade g/t	Residus g/t	Recovery %
6 h	102.50	48.62	**52.57**
8 h		46.46	**54.67**
16 h		32.11	**68.67**
24 h		24.5	**76.10**

This test implies that in the past, and even today, if the leach time would had been longer, silver recovery could easily have been in the 90% range.

13.4.2 Cyanide leach test of Zgounder high grade Mineralized material/ore

The cyanide test conditions and results of the Zgounder high grade silver ore are given at Table 26 and

Table 27 below.

Table 26: High grade silver test conditions.

Grade	g/t	1067.3
Fineness	-	Variable
Percentage soli	%	40
Lime (CaO)	kg/t	6
NaCN	kg/t	3.5
Leaching time	-	Variable

Table 27: High grade silver test results.

Grinding Fineness	Leaching Time (h)	Leached Residue g/t	Ag leaching Rate %
-200 mesh 85%	24	52.49	95.08
	32	40.04	96.25
	40	38.31	96.41
	48	30.91	97.10
-200 mesh 95%	24	43.29	95.94
	32	30.75	97.12
	40	28.36	97.34
	48	23.59	97.79
-325 mesh 90%	40	24.18	97.73
	48	19.33	98.19

13.4.3 New flotation lock test

The new gravity - flotation lock test parameters and results are given at Figure 81 and Table 28.

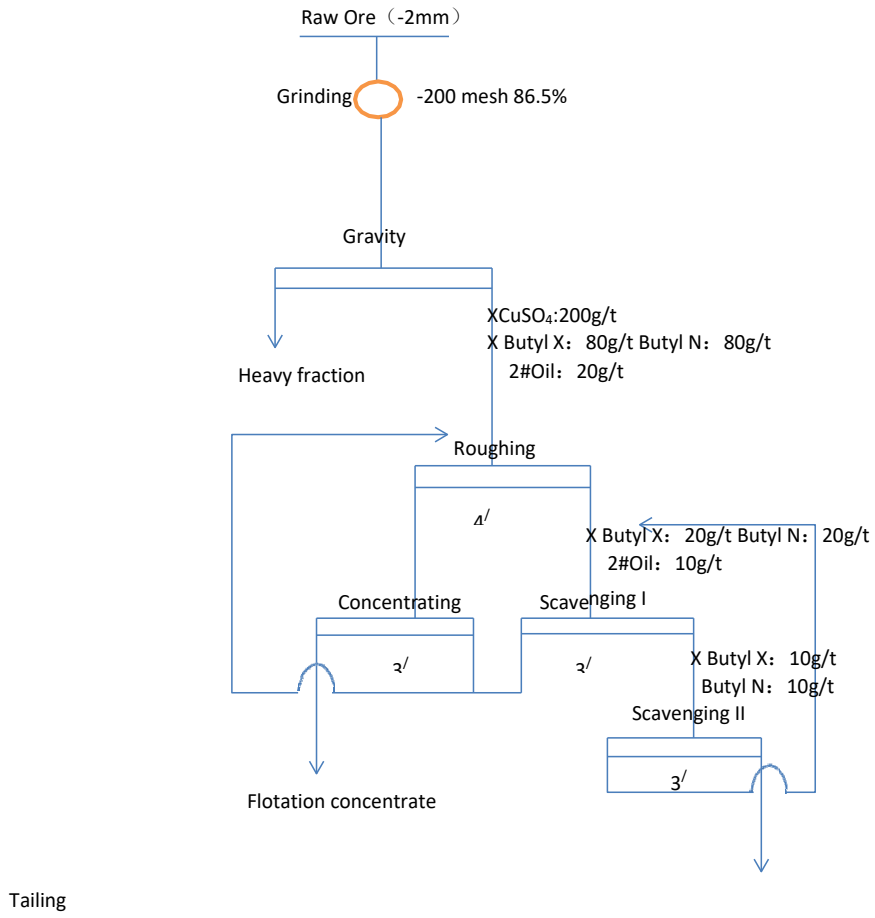


Figure 81: Xinhai new gravity – flotation lock test diagram and parameters.

Table 28: New gravity -flotation lock test results.

	Weight Rec.	Grade	Ag Recovery
	%	g/t	%
Gravity Conc.	0.95	6730	**20.46**
Flotation conc.	8.46	2397	64.90
Final Concentrate	9.41	2834	**85.36**
Final Tailings	90.59	50.5	**14.64**
Feed	100.00	312	**100.00**

13.4.4 Cyanide leach test of a low-grade flotation concentrate

The cyanide leach test conditions and results of a low-grade flotation concentrate are given at Table 29 and Table 30.

Table 29: Cyanide leach test parameters of the flotation concentrate (source: Article 4.1, Table 4.1 of the 2016 Xinhai report, done at 94.45% - 200 mesh, page 17).

Head grade	g/t	310.94
Flotation concentrate	g/t	1062.9
Fineness	%; m	94.5; -200
Ag Recovery	%	85.15
Percentage solid	%	33
Lime (CaO)	kg/t	4
NaCN	kg/t	2
Leaching time	-	Variable

Table 30: Low grade flotation concentrate cyanide leach test results.

Leaching Time (h)	Cyanidation Head grade (g/t)	Solid Tailings (g/t)	Leaching Rate (%)
24	1059[5]	459.48	71.10
40	1059	219.13	86.25

13.5 Xinhai (literal) recommendations

For Zgounder high grade silver ore cyanide leaching test, the grade of raw ore is 1,067.3g/t Ag. From the test results, we can see that the Ag leaching rate is increasing along with the augmentation of grinding fineness and cyanide leaching duration. Therefore, the grinding fineness has great impact on the leaching rate and Xinhai would suggest to grind this silver ore to -200 mesh 95%. When the Ag grade of raw ore becomes higher, we have to ensure the grinding fineness to the process of cyanide leaching procedure so that to ensure the Ag leaching rate. When the Ag grade of raw ore increases to more than 2000g/t, it would be suggested to increase grinding fineness to -325 mesh more than 90%; cyanide leaching duration shall be 48h so that to ensure the Ag leaching rate. In the process of cyanide leaching procedure, cyanogen concentration should be kept above 20 ‰.

The ancient tailings shall directly be transported to cyanide procedure without being grinded According to the previous results, by increasing cyanide leaching duration, Ag leaching rate increased from 52.57% to 76.10%. When the Ag grade of the heavy fraction and flotation concentrate become 2000g/t or higher, the flotation process flow is adopting the procedure of one roughing two scavenging and one concentrating. The Ag overall recovery is 85.36%; Ag grade is 2834.39g/t. Flotation concentrates of low grade silver ore directly to cyanide leaching procedure, the Ag leaching rate is 79.30%. The fraction of Heavy fraction + flotation concentrate mix together as material of cyanide leaching procedure is coarse than the fraction of only floated concentrate, hence in order to increase the Ag leaching rate it has to increase the grinding fineness.

[5] Head grade was probably recalculated from the cyanidation test results

13.6 GoldMinds Geoservices's conclusions

A non-optimized silver recovery of 67.30% was obtained from two sole laboratory tests made at Xinhai. A first flotation test done in 2016 was followed, in 2017, by a cyanidation test of the 2016 flotation concentrates. Since these tests were not optimised, GoldMinds chose not to take the results into account in this report.

In addition to Xinhai's recommendations to increase the silver recovery (finer regrind of the gravity-flotation concentrate and longer leach time), GoldMinds suggests to eliminate the cleaner stage(s) from the gravity-flotation flow diagrams presented above to allow a greater mass pull, thus significantly increase the final recovery. Goldminds, contrarily to Xinhai, firmly suggests not to use an amino collector in conjunction with the xanthate. These amines selectively float the silicates, thus greatly augment the rougher-scavenger mass pull for a very low increase in the silver recovery. These suggestions-recommendations should allow ZMSM to obtain an overall silver recovery well above the 80% mark while maintaining the flotation mass pull within the present cyanidation mill capacity.

If the rougher-scavenger mass pull is still above the 20% mark (capacity of the "lower" cyanidation mill), then Maya should consider to regrind the flotation concentrate before returning it to the rougher.

Due to a level of uncertainty regarding this approach, since most of the suggestions-recommendations above were not tested at the laboratory level and in order to be on the safe side, the base case for this report was set at 80% overall silver recovery for a process using gravity, flotation and cyanidation and 90% for the overall silver recovery for a new mill using gravity-cyanidation or cyanidation alone.

No metallurgical test works were carried out by GoldMinds nor were supervised by the QP responsible for the Mineral Processing and Metallurgical Test Work section of this report. Thereby, the results were not independently verified. However, due to BRPM's, BRGM's and especially Xinhai's reputations, GoldMinds is of the opinion that the tests achieved by theses laboratories, within the limits of their mandate, are of sound quality.

14 Mineral resource estimates

14.1 Summary

The mineral resources at Zgounder silver mine including in-pit constrained resources and high grade underground resources (just under the pit constrain resources surface) totalling 2,633,000 ounces of silver (242,000 tonnes at 338 g/t Ag) in the measured; 7,395,000 ounces of silver (748,000 tonnes at 308 g/t Ag) in the indicated; 10,028,000 ounces of silver in the Measured + Indicated (990,000 tonnes at 315 g/t Ag) and 28,338,000 ounces of silver in the inferred (3,437,000 tonnes at 256 g/t Ag), (rounded numbers).

Table 31: Total resource at Zgounder silver mine (rounded numbers).

Total resources Zgounder silver mine	Ag	Tonnes	Ounces
Measured	338	242 000	2 633 000
Indicated	308	748 000	7 395 000
Indicated+Measured	315	990 000	10 028 000
Inferred	256	3 437 000	28 338 000

- In-pit constrained resources:

The mineral resources in-pit totalling 2,108,000 ounces Measured of silver (208,000 tonnes at 315 g/t Ag); 5,794,000 ounces Ag Indicated of silver (616,000 tonnes at 293 g/t Ag); 7,902,000 ounces of silver in the Measured + Indicated (824,000 @ 298 g/t Ag) and 15,012,000 ounces of silver in the Inferred (1,886,000 tonnes at 248 g/t Ag) using a cut-off grade of 61.89 g/t Ag.

Table 32: Mineral resource In-Pit (rounded numbers).

Mineral resource In-pit	Ag	Tonnes	Ounces
Measured	315	208 000	2 108 000
Indicated	293	616 000	5 794 000
Indicated+Measured	298	824 000	7 902 000
Inferred	248	1 886 000	15 012 000

- High-grade underground resource, just under the pit constrain resources surface:

The mineral resources just under the pit constrain resources surface is totalling 527,000 ounces of silver in the Measured (34,000 tonnes @ 482 g/t Ag); 1,601,000 ounces of silver in the Indicated (132,000 tonnes @ 377 g/t Ag); 2,128,000 ounces of silver in the Measured + Indicated (166,000 @ 398 g/t Ag) and 11,209,000 ounces of silver in the Inferred (1,051,000 tonnes @ 332 g/t Ag) at a cut-off grade of 125 g/t Ag.

Table 33: High grade underground resource.

Underground Resource Class	Ag	Tonnes	Ounces
Measured	482	34 000	527 000
Indicated	377	132 000	1 601 000
Indicated+Measured	398	166 000	2 128 000
Inferred	332	1 051 000	11 209 000

- Old tailing

The mineral resource estimated for the old tailings corresponds to an Inferred resources of 2,122,000 ounces (500,000 tonnes at 132 g/t Ag).

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

The reported mineral resources are considered by the qualified persons to have reasonable prospects for economic extraction as per CIM 2014 definitions.

The geological interpretation was done by sector and by geological zones. A total of forty-eight (48) 3D envelopes were constructed by connecting the defined mineralized prisms.

Most of the bodies represent junctions of structures and stockworks which have a vertical elongated shape locally displaced by faults movements.

The silver mineralization at Zgounder occurs within sandstones & schist (specific gravity between 2.00 and 2.6) and dolerite (specific gravity between 3 and 3.05). The density used to convert volumes into tonnage is 2.7 t/m^3 which corresponds to an average density between sandstones and dolerites and the verified measurement of the specific gravity by GMG on the mineralized sandstone is 2.71 t/m^3.

Capping of outliers at 6 kg/t Ag is applied to the whole Zgounder assay results prior to compositing.

The database used for this mineral estimate includes drill results obtained from the recent 2017 drill program, it is not all holes drilled in 2017 which are included in the mineral resources as the latest assay results were not available at the moment of completing the mineral resource model in December 2017. Each composite has a length of 1.2m created from the beginning of each mineralized interval.

The mineral resources were modeled on 1mE x 1mN x 2mZ block size within the 3D envelopes.

The blocks were interpolated from equal length composites calculated from the mineralized intervals. Prior to compositing, high grade silver assays were capped to 6,000 g/t Ag.

For mineral estimation two runs were used. For run one (1) we used a number of composites limited to six (06) with a minimum of four (04). For run two (2) we used a number of composites limited to six (06) with a minimum of one (01).

Search ellipsoids were used for the grade estimation and follow the geological interpretation trends, each are specific envelope.

The classification parameters used:

- For measured mineral resources we used a minimum of ten (10) composites per block with a maximum of five (05) composites from the same drill hole.
- For indicated mineral resources we used a minimum of six (06) composites per block with a maximum of five (05) composites from the same drill hole. And the remaining blocks within the envelopes are classified as inferred mineral resources blocks.
    - Search ellipsoid radius measured 15m x 5m x 5m.
    - Search ellipsoid radius indicated 25m x 10m x 10m.
    - Remaining inferred.

GoldMinds Geoservices (GMG) did a survey in May 2017 at Zgounder mine using the GeoSight cavity monitoring system (CMS) to get an accurate 3D mapping of underground voids, drifts, shafts, stopes and adits.

In order to accurately estimate the resources GMG substracted the mined out volumes (stopes, drifts and adits) from the mineralized material bodies modeled by GMG prior to pit optimization. Afterward GMG also substracted from the measured resources the silver production since June 2017 (after the GMG CMS survey) which is around 24,493 tonnes at 343 g/t Ag.

14.2 Introduction

This section reports the results of the updated NI 43-101 mineral resource estimates for the Zgounder Silver Mine, which is established on historical data (SOMIL and CMT data) with analytical data sampled from the underground percussion drilling in 2013 and the integration of the new data related to 2015 and 2017 diamond drilling campaigns.

The geological interpretation was done by sector and by geological zones. A total of forty-eight (48) 3D envelopes were constructed by connecting the defined mineralized prisms.

Most of the bodies represent junctions of structures and stockworks which have a vertical elongated shape locally displaced by faults movements.

14.3 Data

For this updated mineral resource estimation, GMG based itself on the Zgounder drillhole database after compilation and validation/verification (Table 34). The Zgounder drillhole database is made of diamond drillholes (surface and underground), percussion holes, drift samples and trenches.

Table 34: The composition of the Zgounder database in meters.

Zgounder database (all collars in m)	Diamon drill holes (DDH and DDHS) (m)	Drift samples (m)	Percussion drillholes (m)	Trenches (m)
63,526.35	28479.32	9132.39	25874.63	40

Drillhole database file name: Compile Historic et forageHL_etsuiviGMG2017-MR_V6.mdb

Collars 2224
Deviations 538
Assays intervals 47371
Lithological intervals 4197
The following figures present a longitudinal and a plan views of the data.

GMG has requested and carried out in 2013 an independent drilling program of the principal mineralized bodies at Zgounder. Moreover the mine started silver production since 2014 and the results of the recent 2015 and 2017 diamond drilling campaigns makes the data more reliable to support the mineral resource estimate.

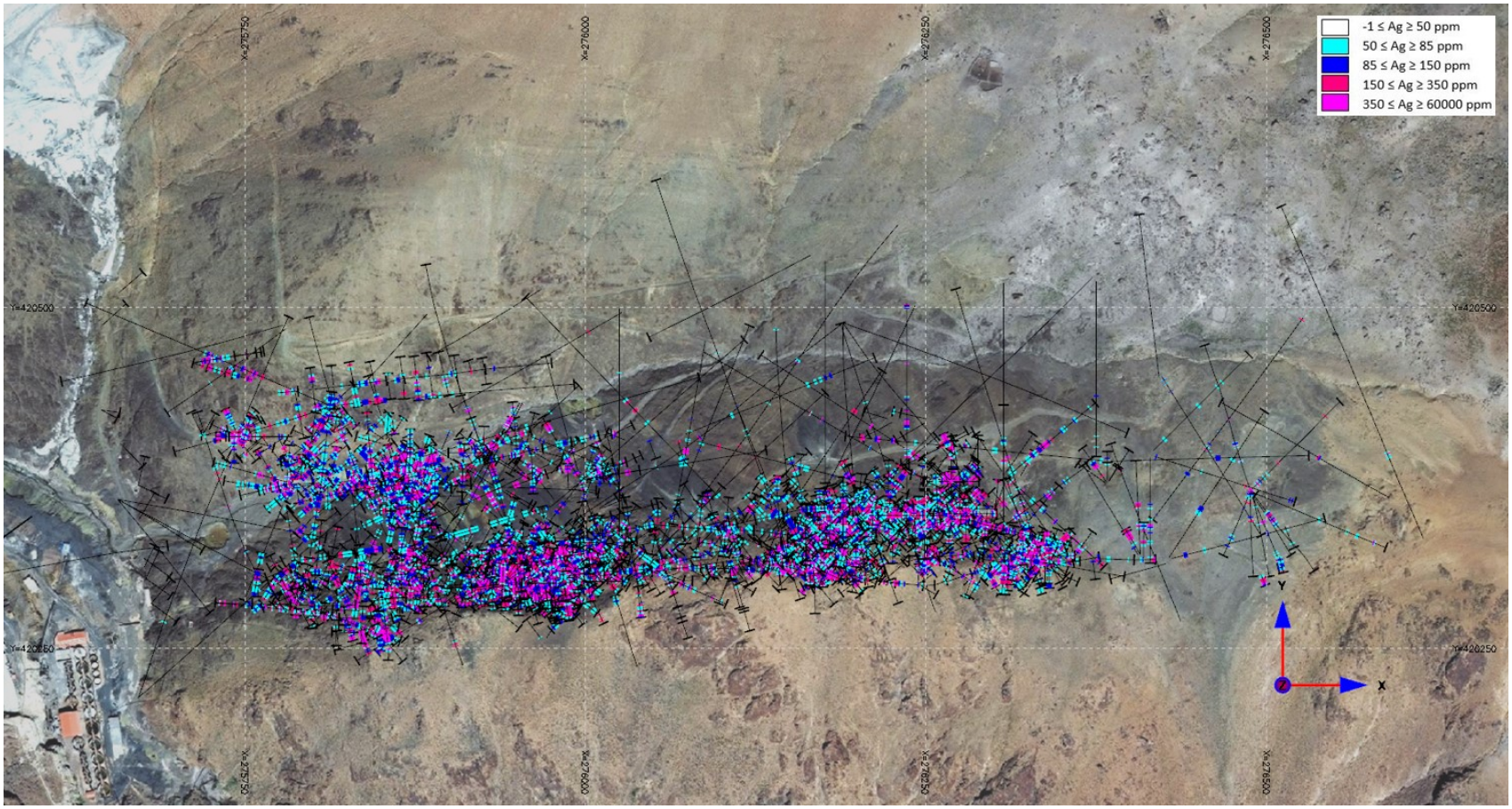


Figure 82: Plan view of all data of the Zgounder silver mine.

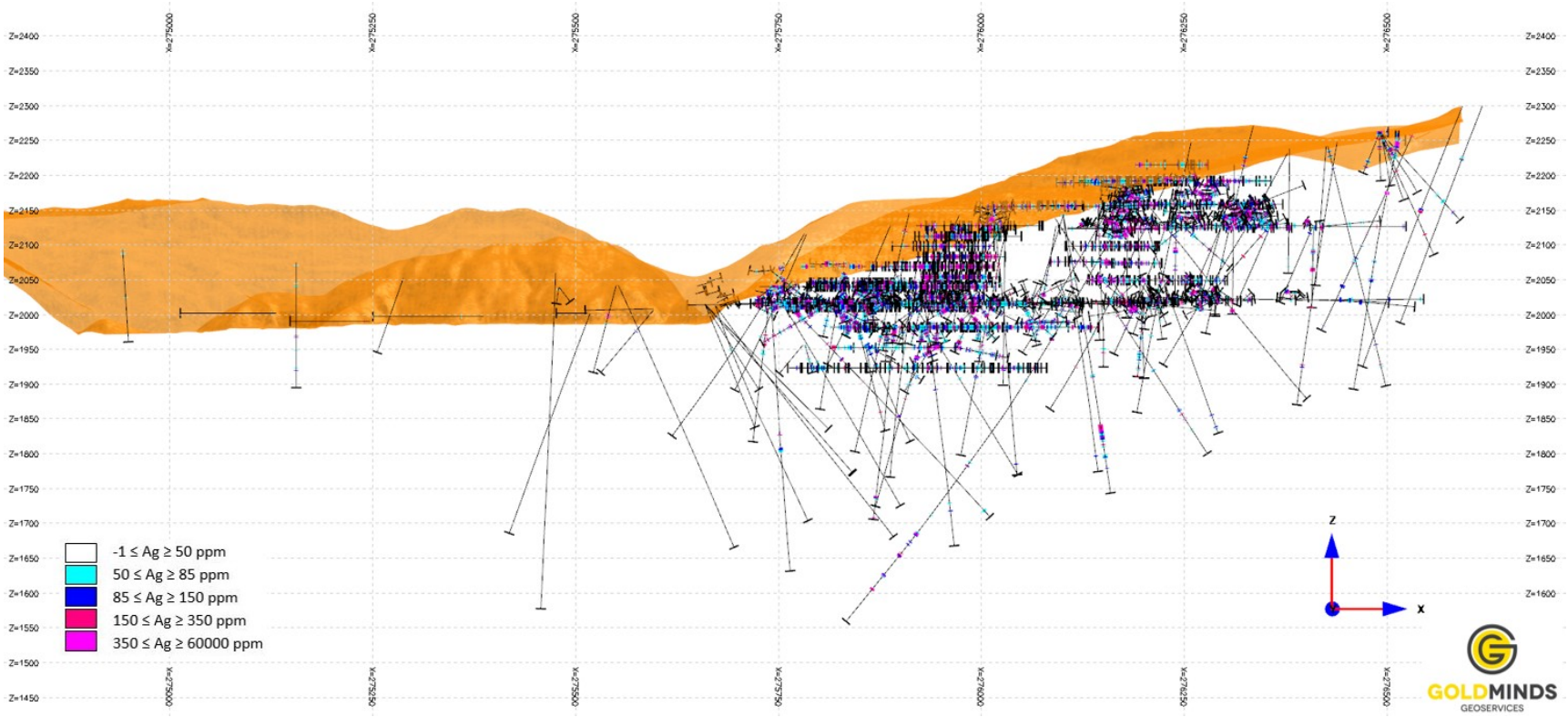


Figure 83: Longitudinal section looking north with all drilling data

14.4 Capping & compositing

The block model grade interpolation is conducted on composited assay data. A composite length of 1.2 m has been selected and the compositing is conducted from the start of each mineralized intercept of drillholes or channels, drift data. The last composite kept at the end of the mineralized intercept has a minimum length of 0.8 m.

Assays were capped (during intercept and composite calculation) at 6000 g/t Ag. The following statistical figure (Figure 84) has been used to select the capping level. The high grade values are not isolated and distribution is lognormal and continuous.

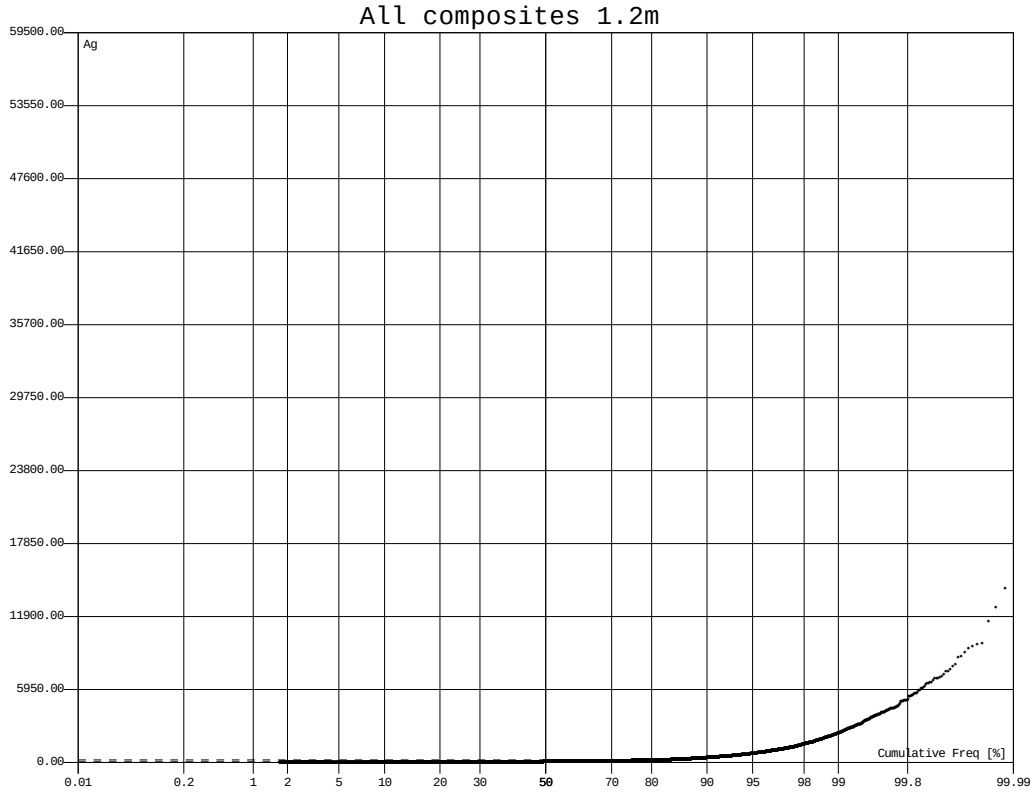


Figure 84: Cumulative frequency of all Ag silver composites within the envelopes (before capping).

The capping of the assays at 6000 g/t Ag keeps the mineral estimation more conservative. The high grade assays (more than 6000 g/t Ag) generating around 4% of the silver metal is not taken into account for the mineral estimation with this capping.

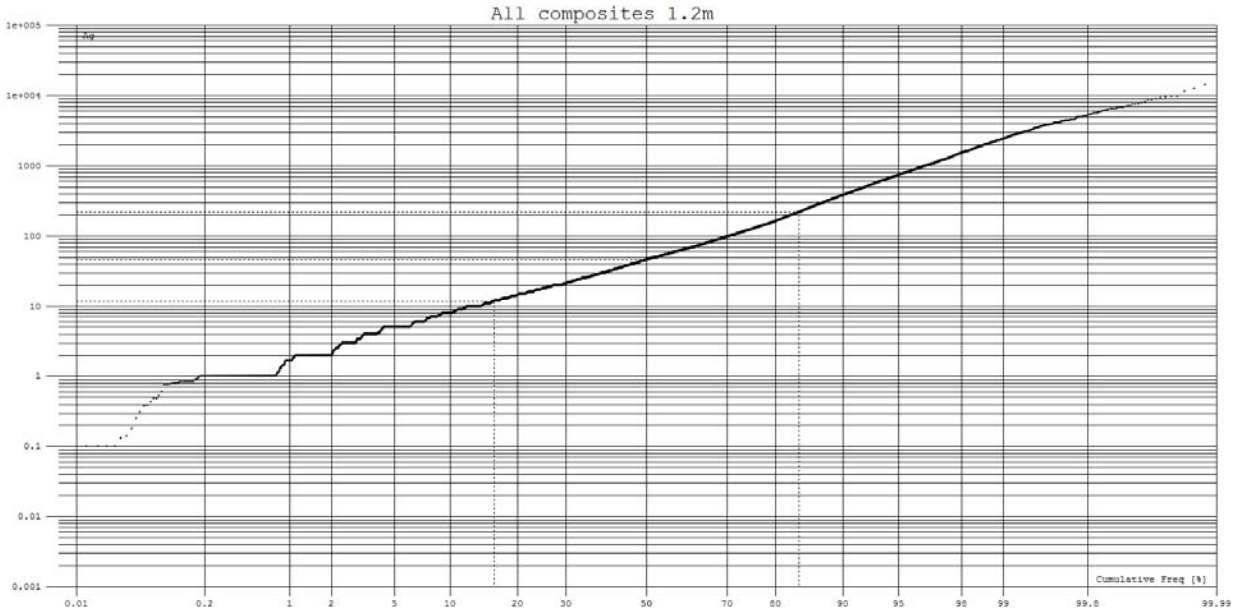


Figure 85 Cumulative frequency Log of all Ag silver composites within the envelopes.

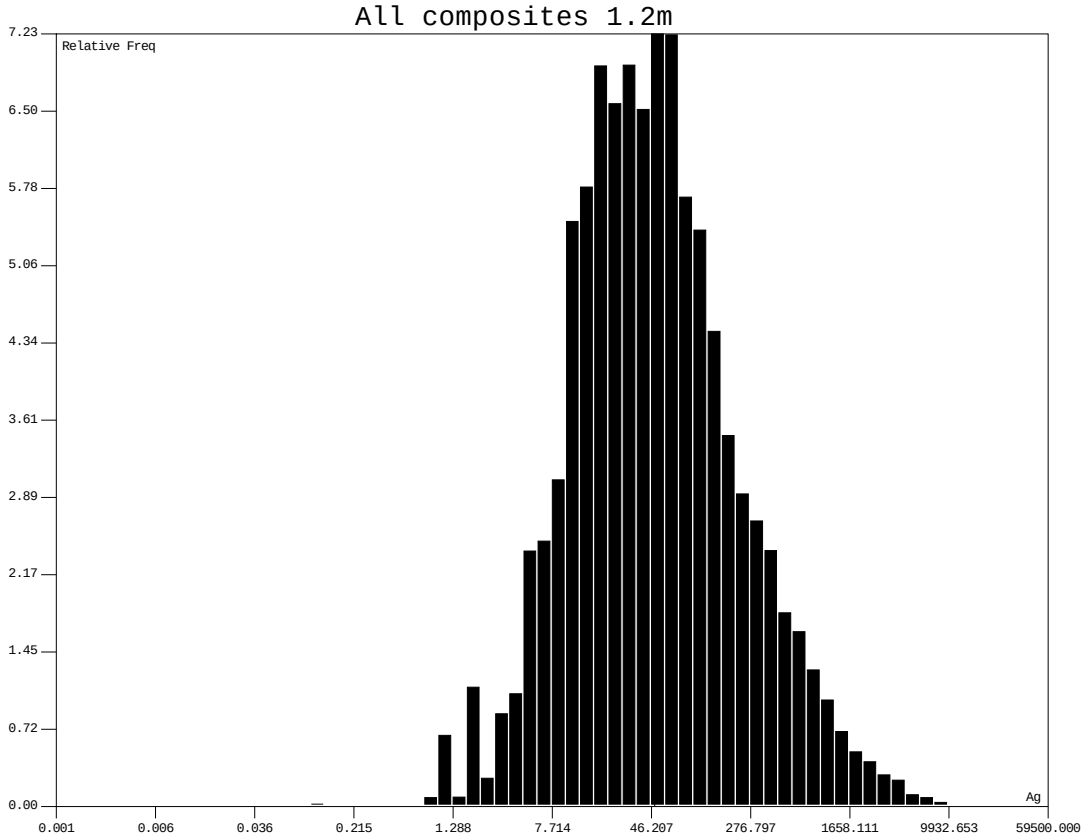


Figure 86 Histogram Log frequency of all Ag composites (not capped) within the envelopes.

Table 35: Statistics of all silver assay results.

STATISTICS FOR Ag

Number of Data	47371
number trimmed	450
mean	92.22
std. dev.	514.61
coef. of var	5.58
maximum	59500.00
upper quartile	40.15
median	15.00
lower quartile	5.00
minimum	.00

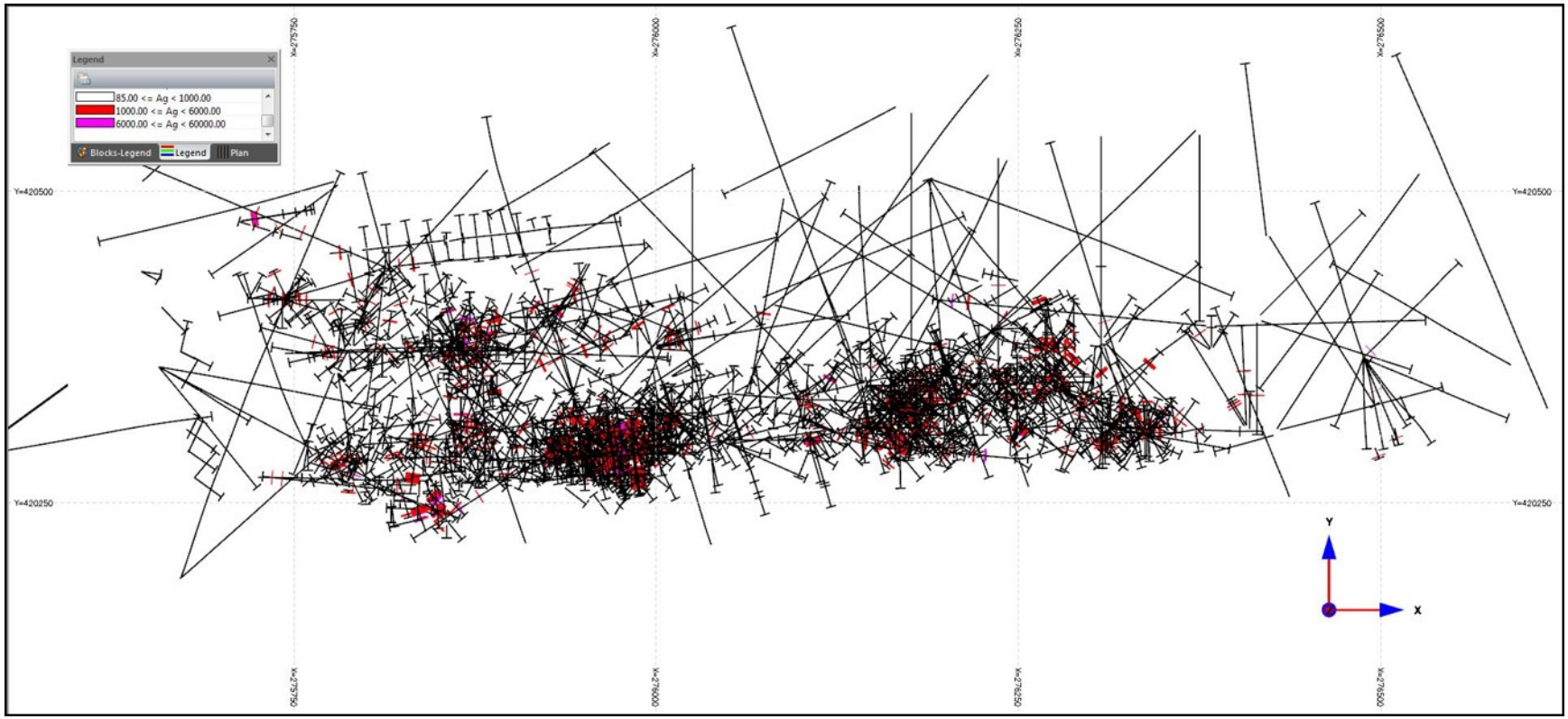


Figure 87: Plan view with continuous high grade Ag values.

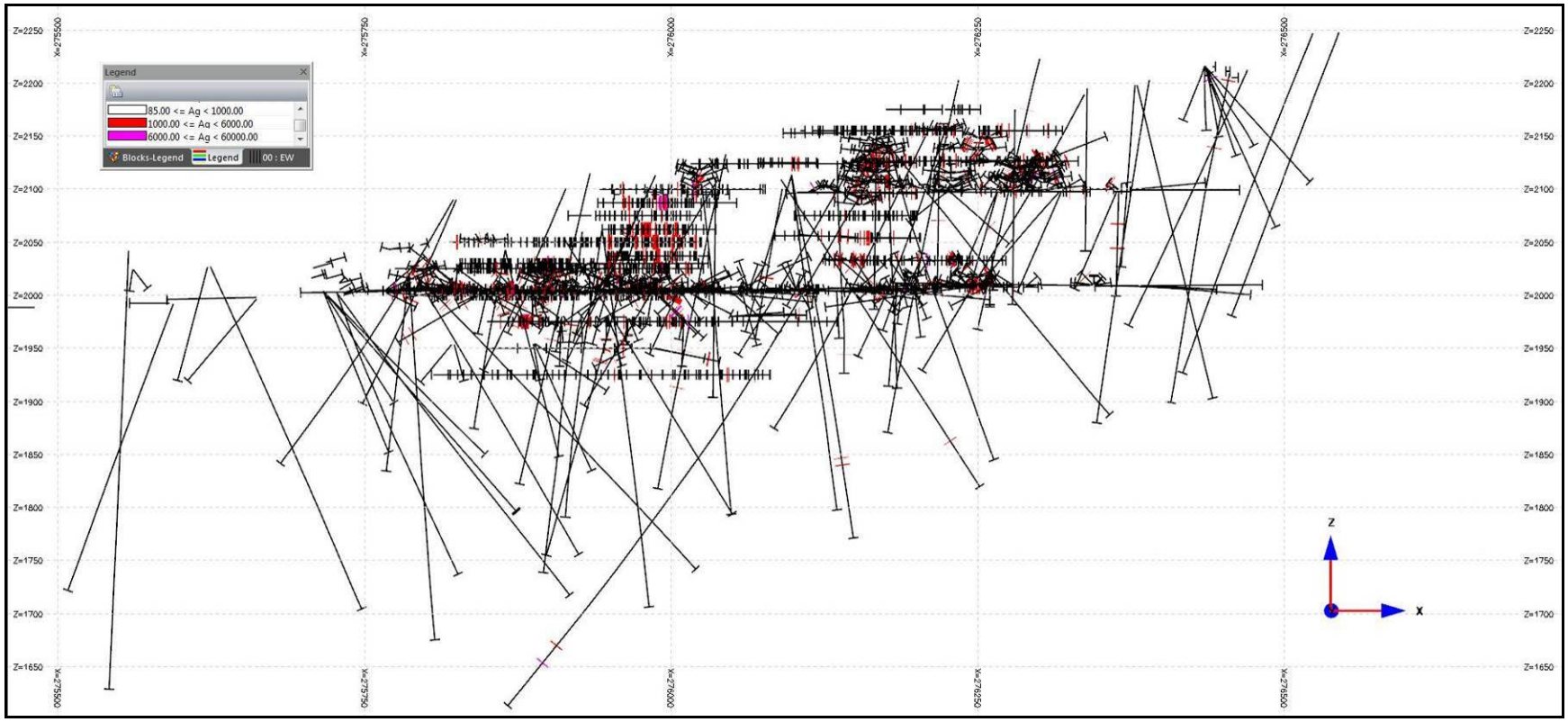


Figure 88: Longitudinal section view with high grade Ag values.

The figures above present silver assay grades between 1kg to 6 kg/t in red while assays above 6 kg/t are in magenta. Assay results below 1 kg/t are not shown.

The figures below (Figure 89, Figure 90) show that the maximum depth of the high grade silver mineralisation is Z= 1650m intersected by Hole ZG-17-16 drilled during the recent drilling campaign of 2017 (Ag 1078 g/t from 605m to 606.5m (1.5m length) and Ag 9480 g/t from 627.5m to 629m (1.5m length).

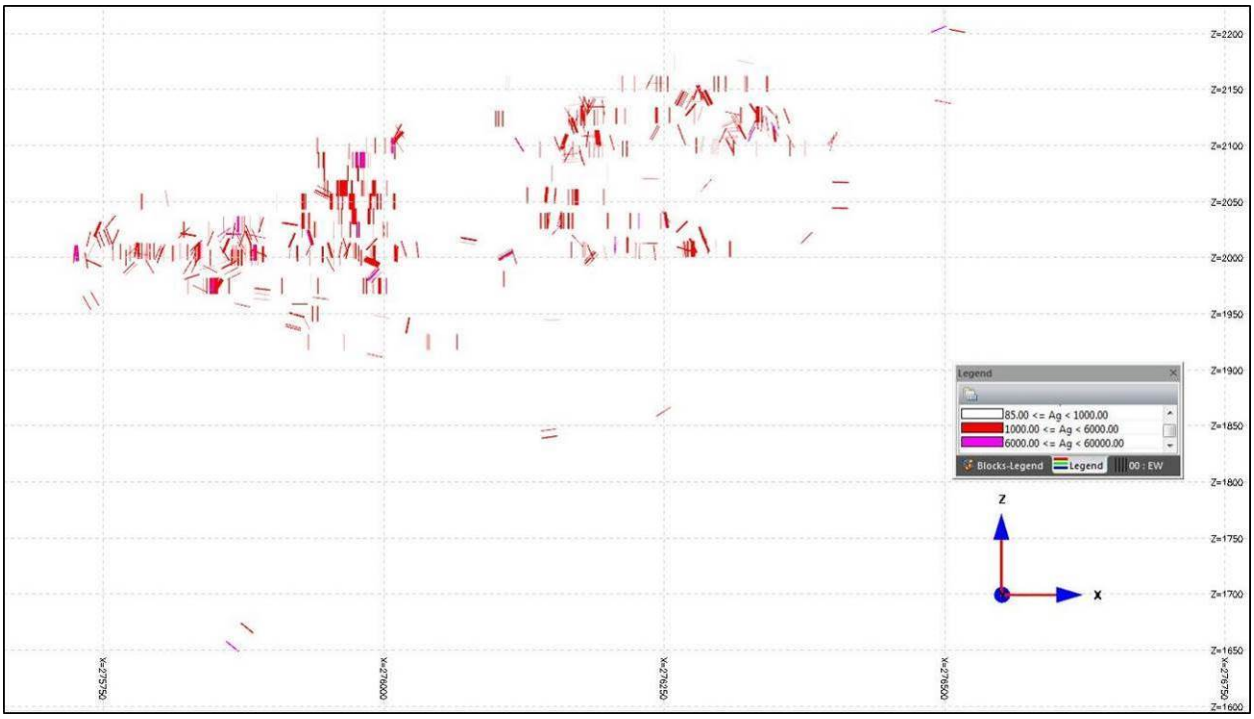


Figure 89: Section looking north continuous high grade Ag values (hole traces not shown).

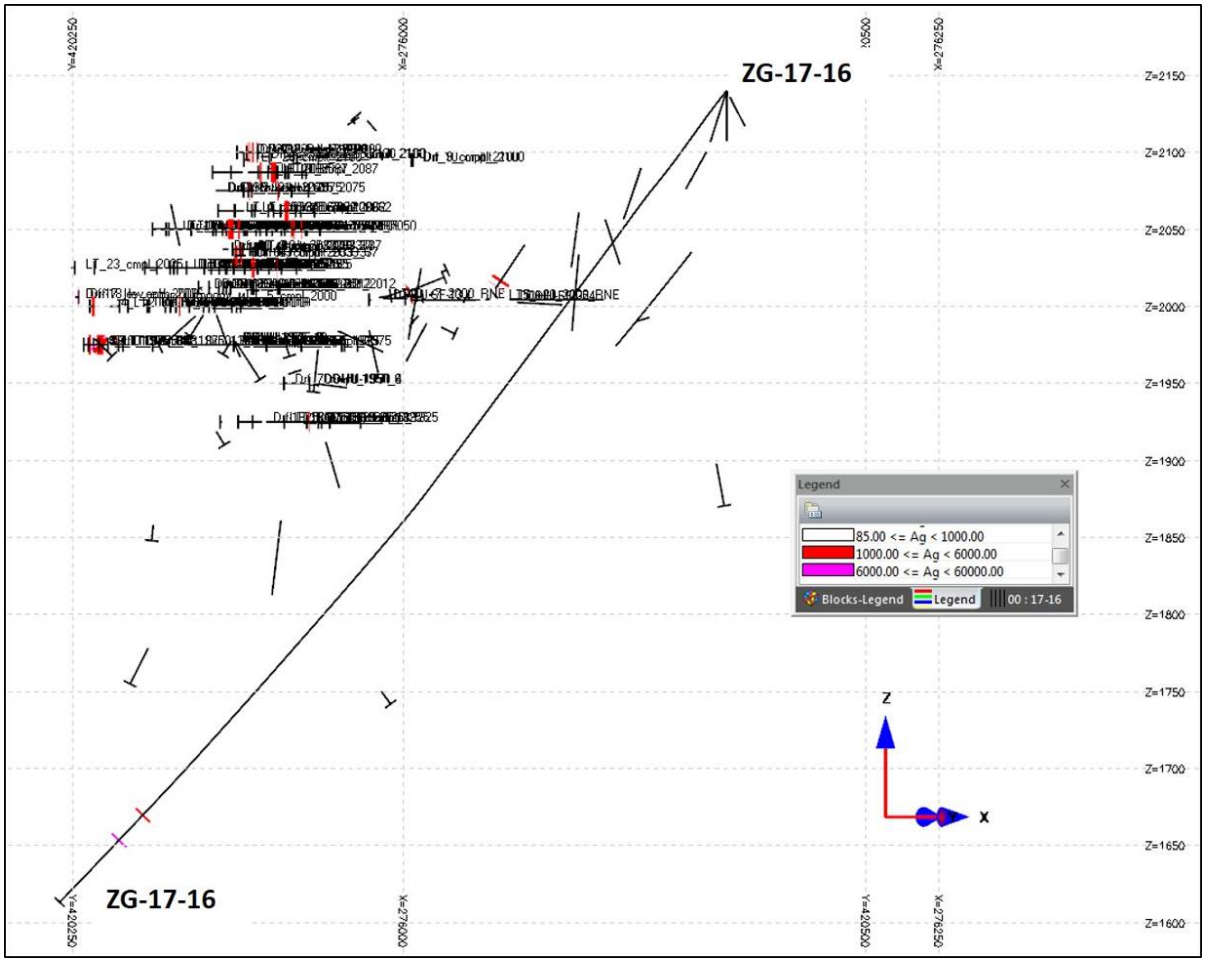


Figure 90: Section view of the hole ZG-17-16.

14.5 Density

In order to calculate tonnage from the volumetric estimates of the block models an average density of 2.70 t/m^3 was used to convert the volume of in-situ rock to tonnage. This is an average value of the different rock types found in historical documents.

GMG determined the density of only one core sample (interval of 1 meter core sample in 2017) of typical mineralized interval composed mainly by sandstones and the determined density was about 2.71 t/m^3.

It is recommended to carry density measurements on fresh cores during the next drilling program in order to monitor the density, Xinhai has determined a density of 2.73 t/m^3. Complete intervals of core pieces with corresponding assay tags (intervals) should be measured for a few select holes in order to allow additional reliable analysis and validation of the density over space.

14.6 Geological interpretation

GoldMinds Geoservices, conducted the geological, mineralization interpretation and modelling of the 3D wireframe envelopes of the Ag mineralization.

The geological interpretation was done by sector and by geological zones. Envelopes were constructed by connecting directly the defined mineralized prisms on the sections in Genesis© using Ag assays and the underground observed mineralised zones observed. For modelling purpose a minimum Ag grade of 85 g/t over a minimum drillhole interval length of 2.4m was generally used as guideline to define the width of the mineralized prisms.

Interpretations of zones near surface were limited by bedrock 3D surface. Most of the envelopes for block modelling have significant width and size. Most of the bodies represent junctions of structures and stockworks which have a vertical elongated shape, whereas the remainder represents isolated high grade structures.

A three-dimensional model of level plans and cross-sections was created to enable a better understanding of the inter-relationship between the various mineralized structures found at the Zgounder Silver Mine.

Each mineralized body (meshed envelopes for block modeling) were validated visually to ensure that grade and classification was geologically reasonable, and also cross validated with 3D laser scans of openings and historical mine plans.

14.7 The block models

14.7.1 The Envelopes

A total of forty eight (48) envelopes were created from the meshing of prisms (polygon interpretation on level plans, special cross sections). The modelling of envelopes relied on data available in the compiled database and taking into account the mined-out zones during modelling procedures. Envelopes were not created when there was a doubt or it was not possible to verify that it was not mined out.

The maximum depth of the mineralized envelopes at the eastern zone is around Z=1914m and at the western zone is about Z= 1624m. The following figures present the location and shapes of the envelopes used for block modelling.

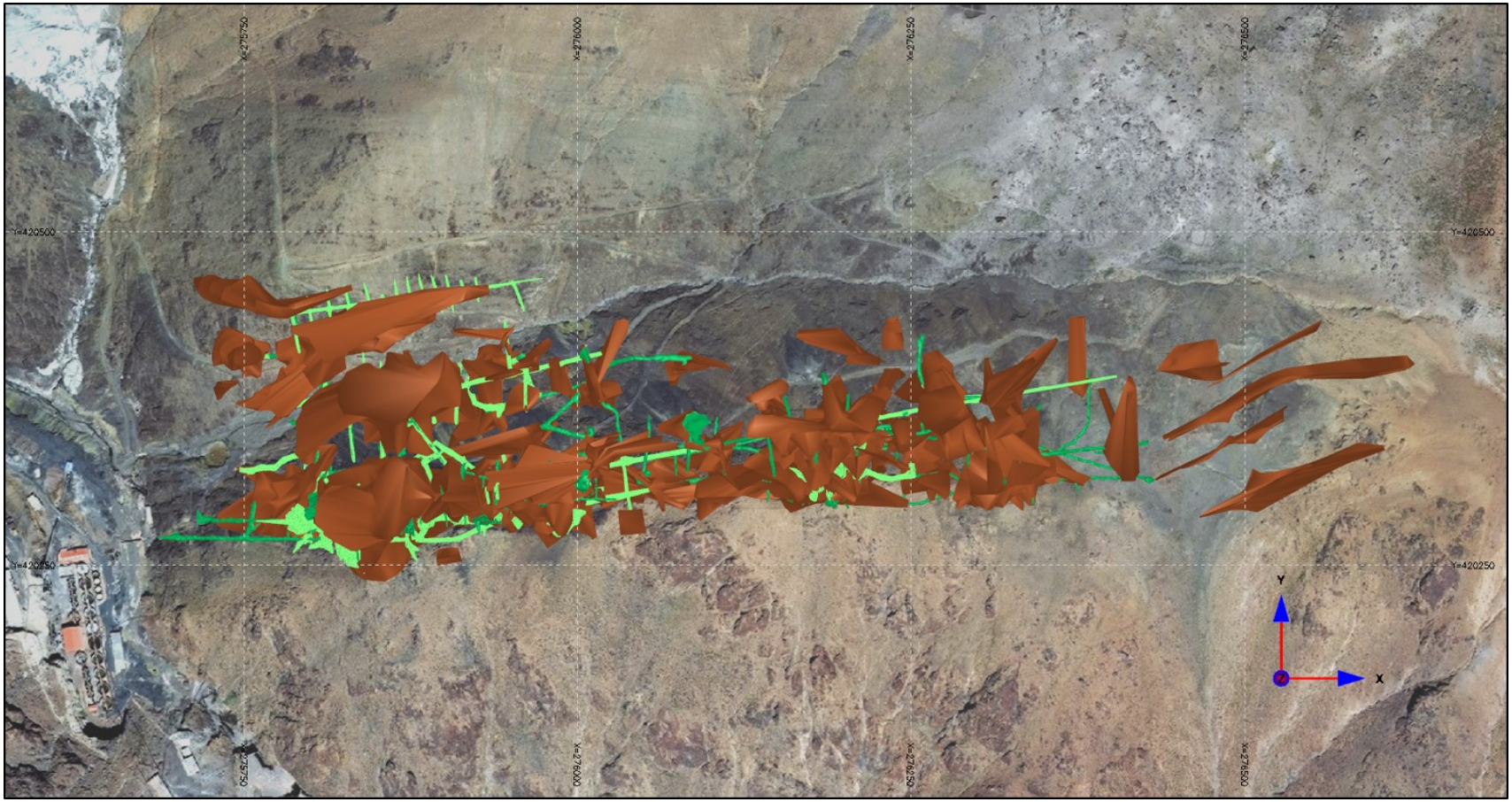


Figure 91: Plan view of the mineralized envelopes (the projection of underground levels and stopes in green color).

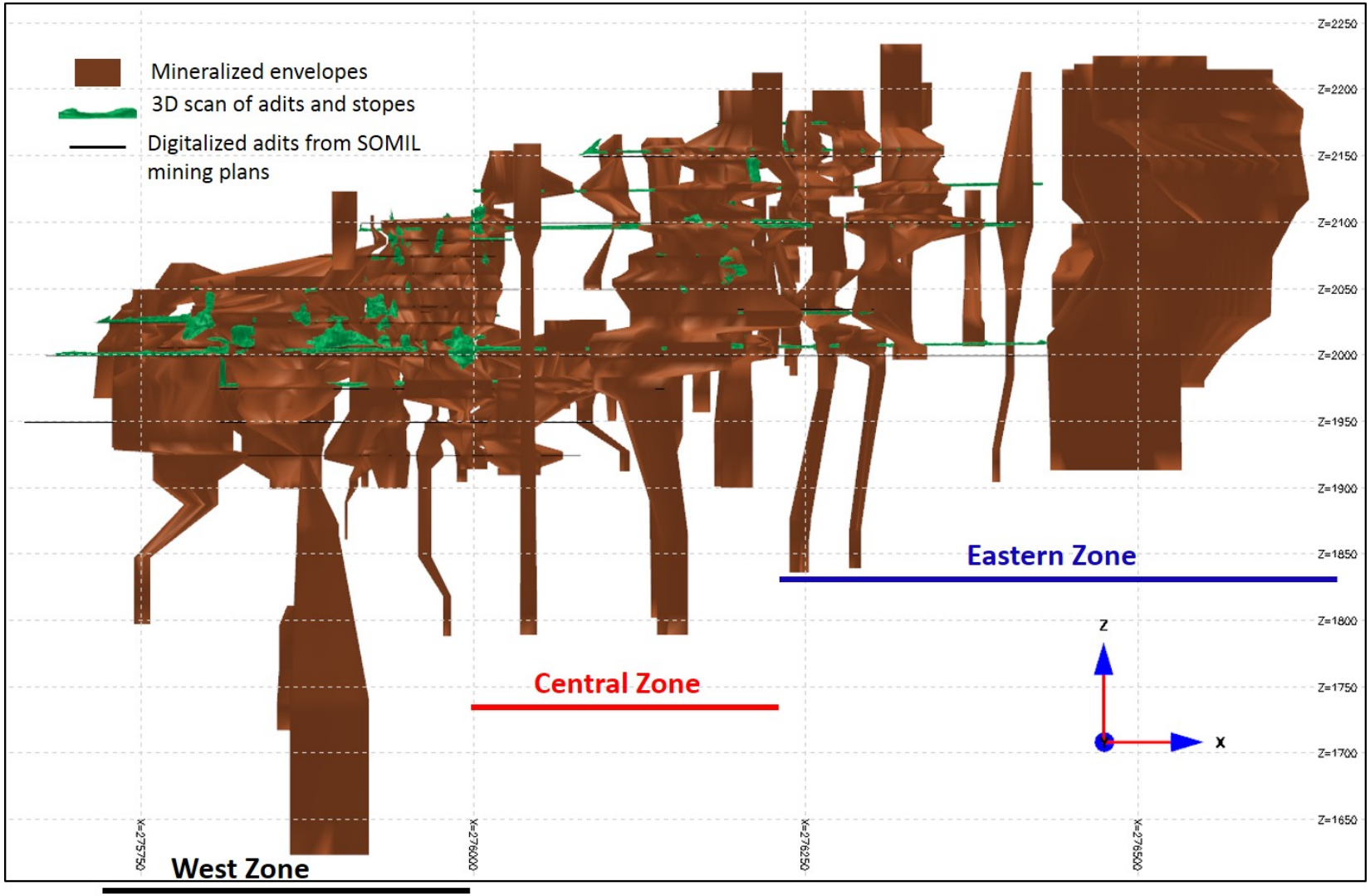


Figure 92: Section view to the north of the mineralized envelopes (underground levels and stopes in green color).

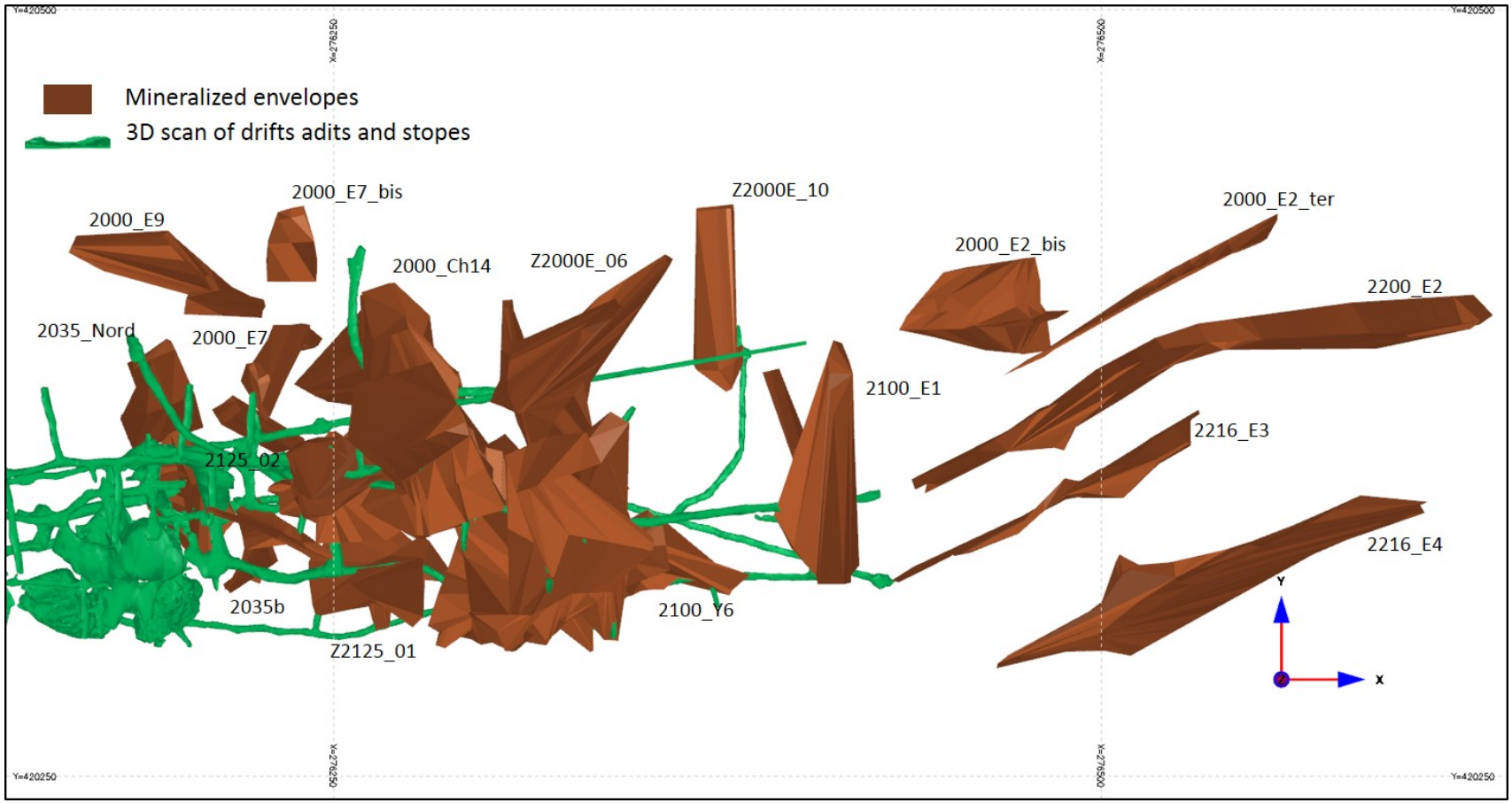


Figure 93: Plan view showing the mineralized envelopes at Zgounder mine (Eastern zone).

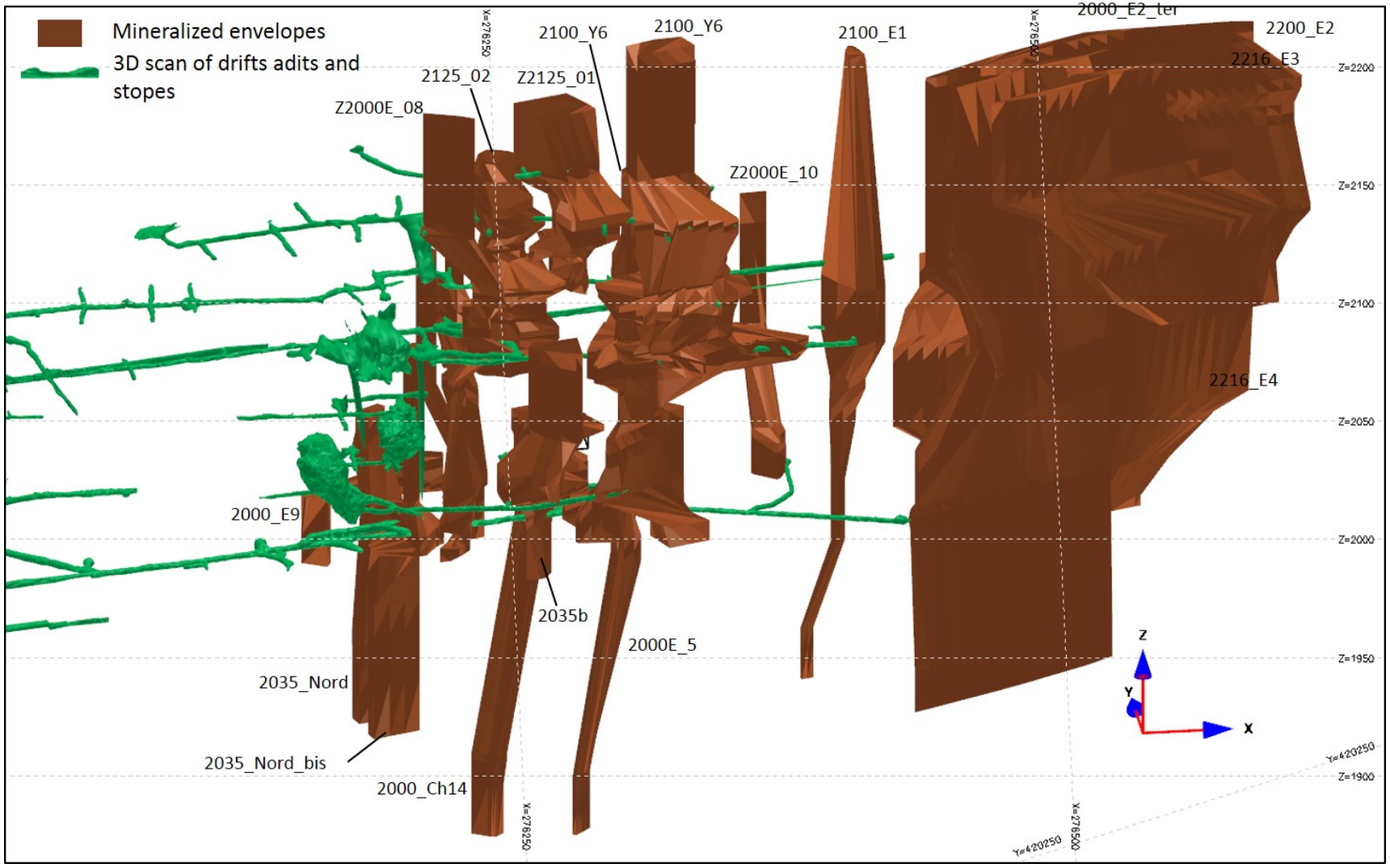


Figure 94: Section view showing the mineralized envelopes at Zgounder mine (Eastern zone).

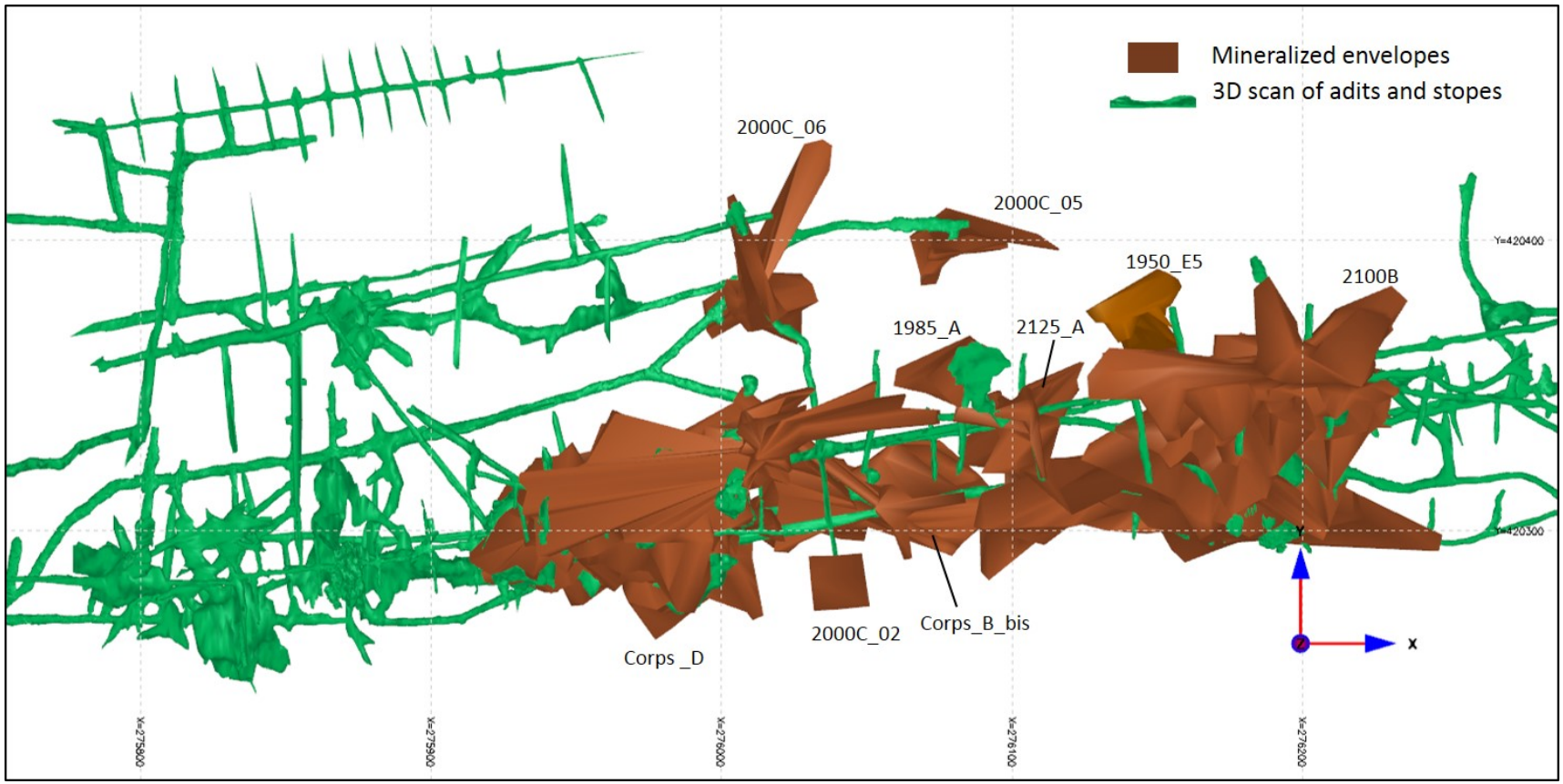


Figure 95: Plan view showing the mineralized envelopes at Zgounder mine (Central zone).

Figure 96: Section view showing the mineralized envelopes at Zgounder mine (Central zone).

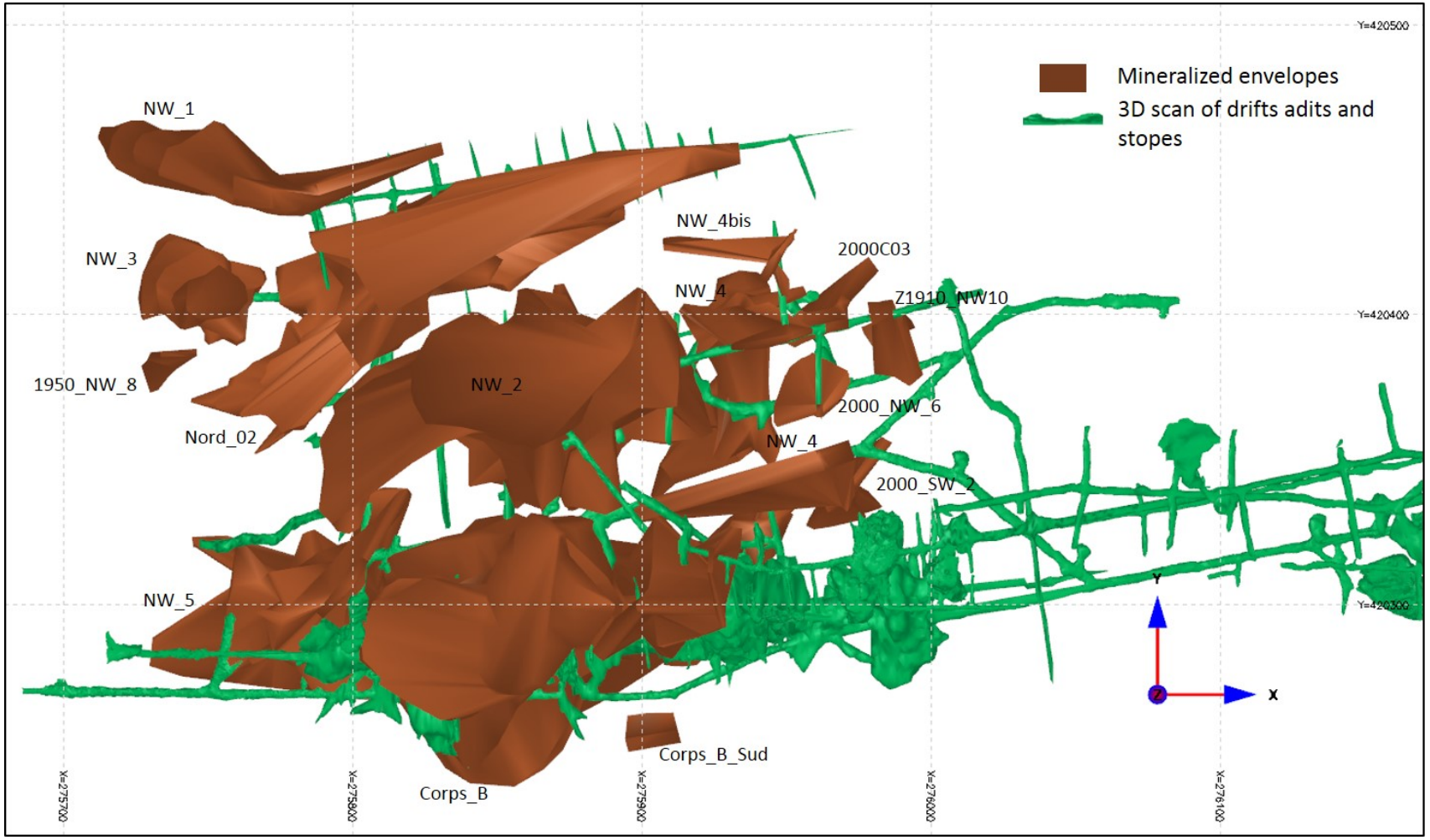


Figure 97: Plan view showing the mineralized envelopes at Zgounder mine (Western zone).

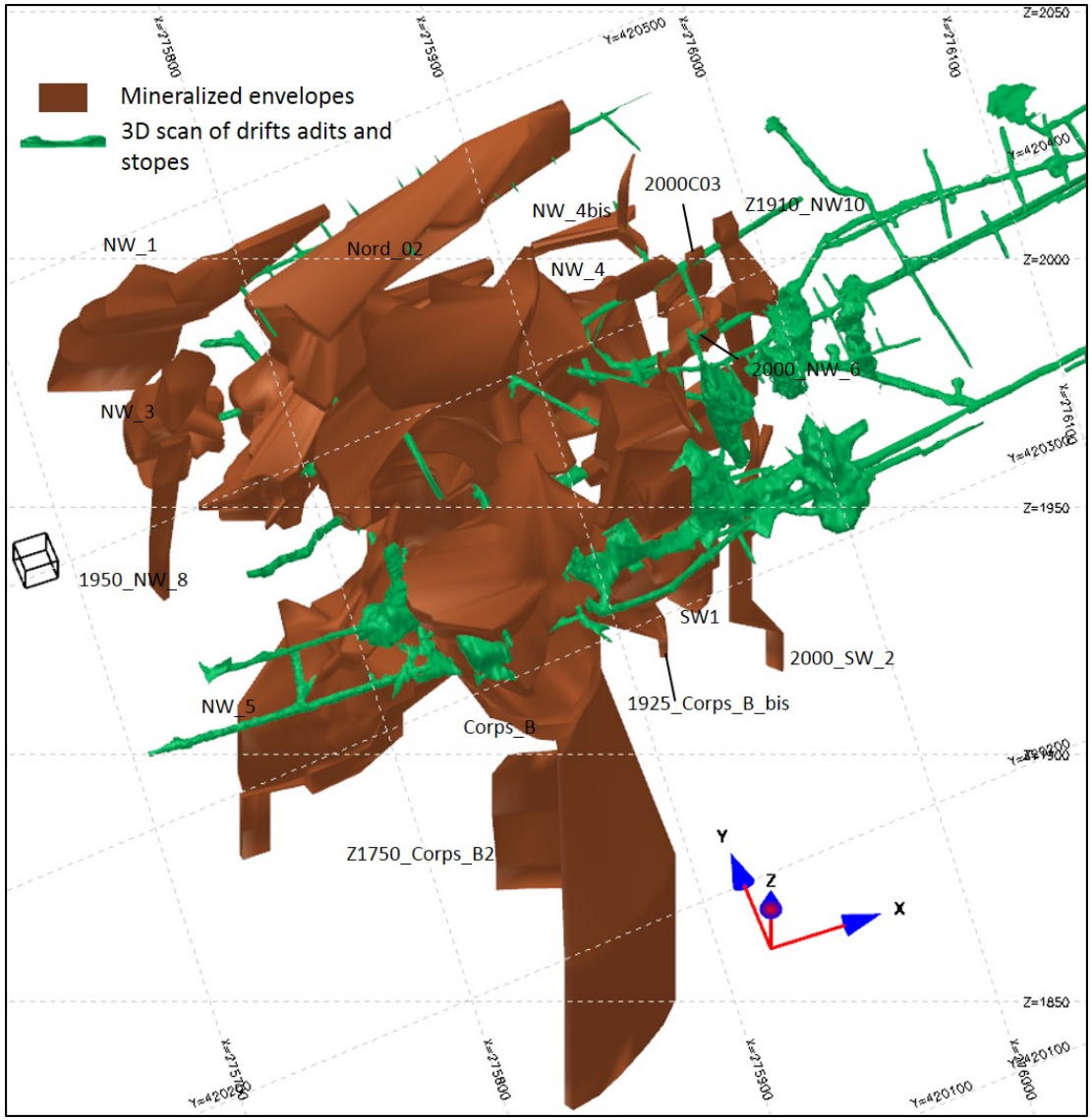
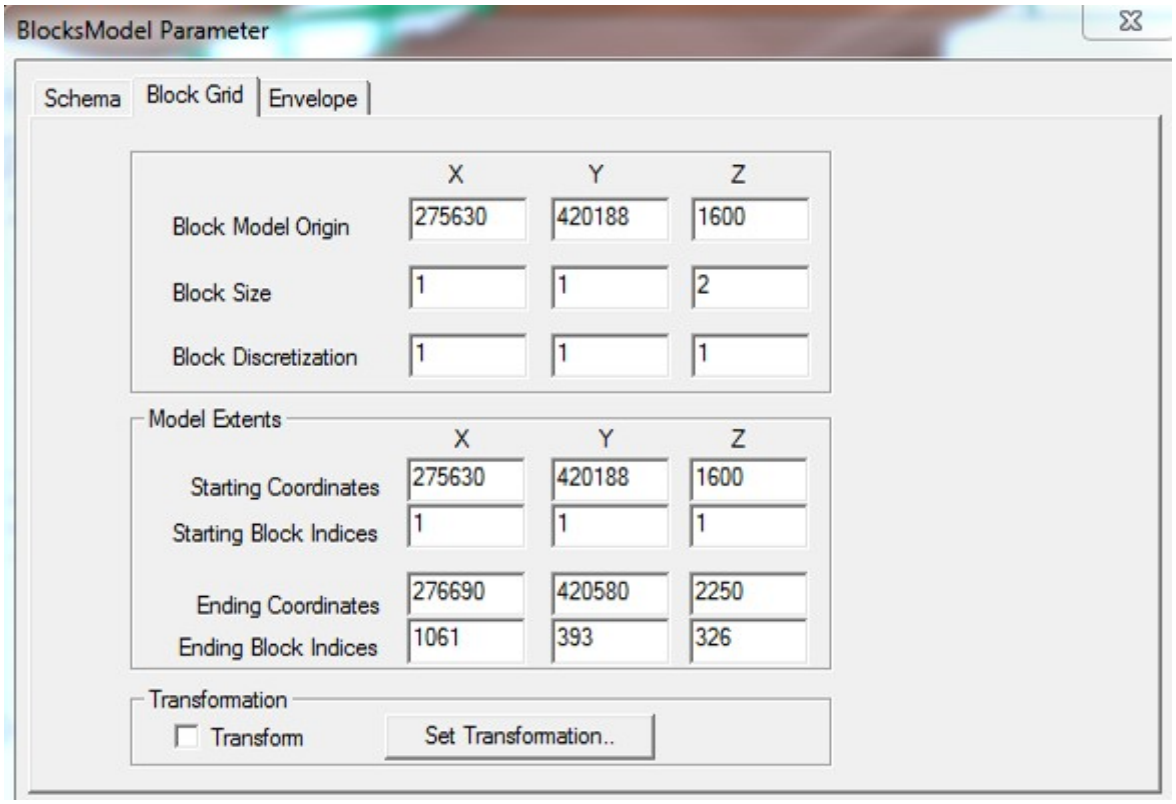


Figure 98: Section view showing the mineralized envelopes at Zgounder mine (western zone).

14.7.2 **Block Model definition**

The origin of the block model is the lower left corner of the mine (Table 36). The block size has been defined to respect complex geometry of the envelopes.

Table 36: Block grid parameters.



Block size: 1 m east(X) by 1 m north(Y) by 2 m vertical (Z).

14.7.3 **Search ellipsoid & interpolation parameters**

Search ellipsoids were used to select the composites (point data) used in the estimation of the grade of a block. The following table presents the search ellipsoids with their axis length and orientation.

Table 37: Search ellipsoid list.

Name	Show	Color	Shading	Date	Transparency	Azimuth	Dip	Spin	Azimuth2	Major	Median	Minor	Comments
Prisme_NW_1	Invisible		Gouraud	18-12-2017 14:18	None	107	0	90	0	20	40	5	
Prisme_NW3	Invisible		Gouraud	18-12-2017 14:36	None	86	0	90	0	10	20	5	
2100_E1	Invisible		Gouraud	18-12-2017 14:45	None	345	0	90	0	60	30	5	
2200_E2	Invisible		Gouraud	18-12-2017 15:01	None	88	0	90	0	75	100	5	
2216_E3	Invisible		Gouraud	18-12-2017 15:08	None	64	0	90	0	55	100	5	
2216_E4	Invisible		Gouraud	18-12-2017 15:14	None	67	0	90	0	80	100	5	
2100__Y6	Invisible		Gouraud	18-12-2017 15:38	None	60	0	90	0	25	50	10	
2035b	Invisible		Gouraud	18-12-2017 15:47	None	28	0	90	0	15	40	10	
2125_02	Invisible		Gouraud	19-12-2017 08:51	None	55	0	90	0	15	30	10	
2100B	Invisible		Gouraud	19-12-2017 08:59	None	90	0	90	0	45	90	15	
2000_Ch14	Invisible		Gouraud	19-12-2017 09:06	None	0	0	100	0	35	90	15	
Corps_B	Invisible		Gouraud	19-12-2017 09:21	None	90	0	100	0	50	30	110	
NW_4	Invisible		Gouraud	19-12-2017 09:54	None	90	0	0	0	35	15	10	
NW_5	Invisible		Gouraud	19-12-2017 10:06	None	90	0	0	0	60	30	15	
Corps_B_bis	Invisible		Gouraud	19-12-2017 10:18	None	90	0	90	0	25	50	20	
2000E_5	Invisible		Gouraud	19-12-2017 10:23	None	0	0	100	0	35	100	20	
2125_A	Invisible		Gouraud	19-12-2017 10:39	None	50	0	90	0	25	45	20	
2000_NW_6	Invisible		Gouraud	19-12-2017 10:54	None	143	0	90	0	15	25	12	
2000_SW_2	Invisible		Gouraud	19-12-2017 11:03	None	0	0	90	0	35	80	20	
1950_E5	Invisible		Gouraud	19-12-2017 11:29	None	90	0	90	0	20	60	15	
1950_NW_8	Invisible		Gouraud	19-12-2017 11:32	None	90	0	80	0	15	35	15	
2000_E7	Invisible		Gouraud	19-12-2017 11:57	None	90	0	0	0	42	20	15	
2000C_06	Invisible		Gouraud	19-12-2017 12:19	None	334	0	90	0	30	60	30	
2035_Nord	Invisible		Gouraud	19-12-2017 13:10	None	70	0	80	0	30	75	20	
2035_Nord_bis	Invisible		Gouraud	19-12-2017 13:50	None	70	0	95	0	25	70	20	
2000_E7_bis	Invisible		Gouraud	19-12-2017 14:13	None	90	0	90	0	35	15	10	
1985_A	Invisible		Gouraud	19-12-2017 14:28	None	90	0	90	0	15	25	15	
1975_A	Invisible		Gouraud	19-12-2017 14:36	None	336	0	90	0	20	25	10	
2000C_02	Invisible		Gouraud	19-12-2017 14:47	None	90	0	90	0	25	250	20	
2000C03	Invisible		Gouraud	19-12-2017 15:07	None	55	0	90	0	25	30	15	
Corps_B_Sud	Invisible		Gouraud	19-12-2017 15:15	None	90	0	90	0	15	30	10	
NW_2	Invisible		Gouraud	19-12-2017 15:21	None	77	0	90	0	45	65	30	
Nord_02	Invisible		Gouraud	19-12-2017 15:31	None	78	0	90	0	45	45	20	
1925_Corps_B_bis	Invisible		Gouraud	19-12-2017 15:35	None	92	0	90	0	25	30	15	
Corps_D	Invisible		Gouraud	19-12-2017 15:40	None	76	0	90	0	35	55	20	
2000_E9	Invisible		Gouraud	19-12-2017 15:48	None	311	0	90	0	25	30	20	
NW_4bis	Invisible		Gouraud	19-12-2017 16:01	None	94	0	90	0	25	25	10	
2000C_05	Invisible		Gouraud	19-12-2017 16:09	None	96	0	90	0	45	20	25	
2035_Nord_Ter	Invisible		Gouraud	19-12-2017 16:34	None	302	0	90	0	35	60	15	
2000_E2_bis	Invisible		Gouraud	19-12-2017 16:43	None	267	0	90	0	20	35	15	
2000_E2_ter	Invisible		Gouraud	19-12-2017 16:50	None	241	0	90	0	55	25	5	
Prisme_NW_1_copy	Invisible		Gouraud	19-12-2017 18:05	None	107	0	90	0	40	80	25	
Prisme_NW3_copy	Invisible		Gouraud	19-12-2017 18:22	None	86	0	90	0	20	40	10	
2100_E1_copy	Invisible		Gouraud	19-12-2017 18:29	None	345	0	90	0	120	60	30	
2200_E2_copy	Invisible		Gouraud	19-12-2017 18:43	None	88	0	90	0	150	200	45	
2216_E3_copy	Invisible		Gouraud	19-12-2017 18:48	None	64	0	90	0	110	200	30	
2216_E4_copy	Invisible		Gouraud	19-12-2017 18:53	None	67	0	90	0	160	200	30	
2035b_copy	Invisible		Gouraud	19-12-2017 18:59	None	28	0	90	0	30	80	20	
2125_02_copy	Invisible		Gouraud	19-12-2017 19:04	None	55	0	90	0	40	70	30	
2100B_copy	Invisible		Gouraud	19-12-2017 19:10	None	90	0	90	0	90	200	45	
2000_Ch14_copy	Invisible		Gouraud	19-12-2017 19:18	None	0	0	100	0	70	200	35	
Corps_B_copy	Invisible		Gouraud	19-12-2017 19:23	None	90	0	100	0	100	60	220	
NW_4_copy	Invisible		Gouraud	19-12-2017 19:30	None	90	0	0	0	70	45	30	
NW_5_copy	Invisible		Gouraud	19-12-2017 19:35	None	90	0	0	0	120	70	45	
Corps_B_bis_copy	Invisible		Gouraud	19-12-2017 19:41	None	90	0	90	0	50	100	45	
2000E_5_copy	Invisible		Gouraud	19-12-2017 19:49	None	0	0	100	0	70	200	40	
2125_A_copy	Invisible		Gouraud	19-12-2017 19:57	None	50	0	90	0	50	90	40	
2100__Y6_copy	Invisible		Gouraud	19-12-2017 20:00	None	60	0	90	0	50	100	25	
2000_NW_6_copy	Invisible		Gouraud	19-12-2017 20:06	None	143	0	90	0	30	50	24	
2000_SW_2_copy	Invisible		Gouraud	19-12-2017 20:10	None	0	0	90	0	70	160	40	
1950_E5_copy	Invisible		Gouraud	19-12-2017 20:12	None	90	0	90	0	40	120	30	
1950_NW_8_copy	Invisible		Gouraud	19-12-2017 20:15	None	90	0	80	0	30	70	30	
2000_E7_copy	Invisible		Gouraud	19-12-2017 20:19	None	90	0	0	0	80	40	30	
2035_Nord_copy	Invisible		Gouraud	20-12-2017 08:54	None	70	0	80	0	60	150	40	
2035_Nord_bis_copy	Invisible		Gouraud	20-12-2017 09:03	None	70	0	95	0	50	140	40	
2000C_06_copy	Invisible		Gouraud	20-12-2017 09:06	None	334	0	90	0	60	120	60	
2000_E7_bis_copy	Invisible		Gouraud	20-12-2017 09:09	None	90	0	90	0	70	30	20	
1985_A_copy	Invisible		Gouraud	20-12-2017 09:12	None	90	0	90	0	30	50	30	
1975_A_copy	Invisible		Gouraud	20-12-2017 09:16	None	336	0	90	0	40	50	20	
2000C03_copy	Invisible		Gouraud	20-12-2017 09:24	None	55	0	90	0	50	60	30	
Corps_B_Sud_copy	Invisible		Gouraud	20-12-2017 09:30	None	90	0	90	0	30	60	20	
NW_2_copy	Invisible		Gouraud	20-12-2017 09:33	None	77	0	90	0	90	130	60	
2000C_02_copy	Invisible		Gouraud	20-12-2017 09:42	None	90	0	90	0	50	500	40	
Nord_02_copy	Invisible		Gouraud	20-12-2017 09:46	None	78	0	90	0	90	90	40	
1925_Corps_B_bis_copy	Invisible		Gouraud	20-12-2017 09:50	None	92	0	90	0	50	60	30	
Corps_D_copy	Invisible		Gouraud	20-12-2017 09:55	None	76	0	90	0	70	110	40	
2000_E9_copy	Invisible		Gouraud	20-12-2017 09:59	None	311	0	90	0	50	60	40	
NW_4bis_copy	Invisible		Gouraud	20-12-2017 10:04	None	94	0	90	0	50	50	20	
2000C_05_copy	Invisible		Gouraud	20-12-2017 10:06	None	96	0	90	0	90	40	50	
2035_Nord_Ter_copy	Invisible		Gouraud	20-12-2017 10:10	None	302	0	90	0	70	120	30	
2000_E2_ter_copy	Invisible		Gouraud	20-12-2017 10:13	None	241	0	90	0	110	50	10	
2000_E2_bis_copy	Invisible		Gouraud	20-12-2017 10:19	None	267	0	90	0	40	70	30	
Measured	Visible		Gouraud	20-12-2017 17:23	None	90	80	0	0	15	5	5	
Indicated	Visible		Gouraud	20-12-2017 17:25	None	90	80	0	0	25	10	10	
Inferred	Visible		Gouraud	21-12-2017 08:40	None	90	80	0	0	50	25	25	
SW1_copy	Invisible		Gouraud	20-12-2017 10:44	None	110	0	90	0	40	60	20	
Z2000E_06_copy	Invisible		Gouraud	20-12-2017 10:40	None	49	0	90	0	60	100	40	
Z1750_Corps_B2_copy	Invisible		Gouraud	20-12-2017 10:36	None	107	0	90	0	50	80	30	
Z1910_NW10_copy	Invisible		Gouraud	20-12-2017 10:34	None	165	0	90	0	50	110	30	
Z2000E_08_copy	Invisible		Gouraud	20-12-2017 10:32	None	109	0	90	0	50	120	50	
Z2000E_10_copy	Invisible		Gouraud	20-12-2017 10:29	None	182	0	90	0	90	40	20	
Z2125_01_copy	Invisible		Gouraud	20-12-2017 10:25	None	110	0	90	0	40	60	20	
Z2000E_10	Invisible		Gouraud	19-12-2017 17:38	None	182	0	90	0	45	20	10	
Z2000E_08	Invisible		Gouraud	19-12-2017 17:31	None	109	0	90	0	25	60	25	
Z1910_NW10	Invisible		Gouraud	19-12-2017 17:27	None	165	0	90	0	25	55	15	
Z1750_Corps_B2	Invisible		Gouraud	19-12-2017 17:16	None	107	0	90	0	25	40	15	
Z2000E_06	Invisible		Gouraud	19-12-2017 17:06	None	49	0	90	0	30	50	20	
SW1	Invisible		Gouraud	19-12-2017 17:01	None	110	0	90	0	20	30	10	
Z2125_01	Invisible		Gouraud	19-12-2017 16:55	None	110	0	90	0	20	30	10	

The median is the long axis, the major is the intermediate axis and the minor is the short axis. Most of the ellipsoids have the long axis oriented in the subvertical direction similar to observations in the mined out areas i.e. the best long continuity axis.

In some case, we used variable ellipsoids to follow the 3D shape variation of the mineralized bodies. Here are the mineralized bodies estimated using variable ellipsoids (2000_E7, 2000_E7_bis, 2000_SW_2, 2000C_05, 2035_Nord, 2035_Nord_Ter, NW_4, NW_5, Z2000E_10, 2100-E1, Corps_B, Z2000E_10).

Block grades were interpolated from the composites in two passes using the inverse distance to the square methodology. For run one (1) we used a number of composites limited to six (06) with a minimum of four (04). For run two (2) we used a number of composites limited to six (06) with a minimum of one (01).

14.7.4 **Mineral resource classification**

The mineral resources of Zgounder mine were classified using the search ellipsoids for each category (Table 38).

Table 38: Ellipsoids parameters.

Ellipsoids	Measured	Indicated	Inferred
Azimut	90	90	90
Dip	80	80	80
Spin	0	0	0
Azimut2	0	0	0
Major axis	15	25	50
Median axis	5	10	25
Minor axis	5	10	25

The block grades were classified using the parameters below:

- For measured mineral resources we used a minimum of ten (10) composites per block with a maximum of five (05) composites from the same drill hole.
- For indicated mineral resources we used a minimum of six (06) composites per block with a maximum of five (05) composites from the same drill hole. And the rest in envelopes are classified as inferred mineral resources.

The classification of each mineralized body was validated visually to ensure that grade and classification was geologically reasonable. Additionally they were also cross validated with 3D laser scans of openings and historical opening drawing plans.

14.7.5 **Removal of mined out areas**

The removal of the mined out zones was necessary after the block model estimation since the mined out volumes were included in the modeled envelopes.

As described in 2014 (PFS report) the 3D scan done by Cap ressources in 2014 wasn't complete and some zones were not scanned for the lack of access (level 1975, the western and southern zones of level 2000, level 2030, level 2050, the eastern part of level 2000). It is why GMG took the decision to do a 3D survey with the CMS scanner at the Zgounder silver mine. GMG did a survey in May 2017 at Zgounder mine using the GeoSight cavity monitoring system (CMS) to get an accurate 3D mapping of underground voids, shafts, stopes and adits.

After the creation of the 3D envelopes and the resource estimate calculation the mined out tonnage have been removed from the mineral resource reports of the block models.

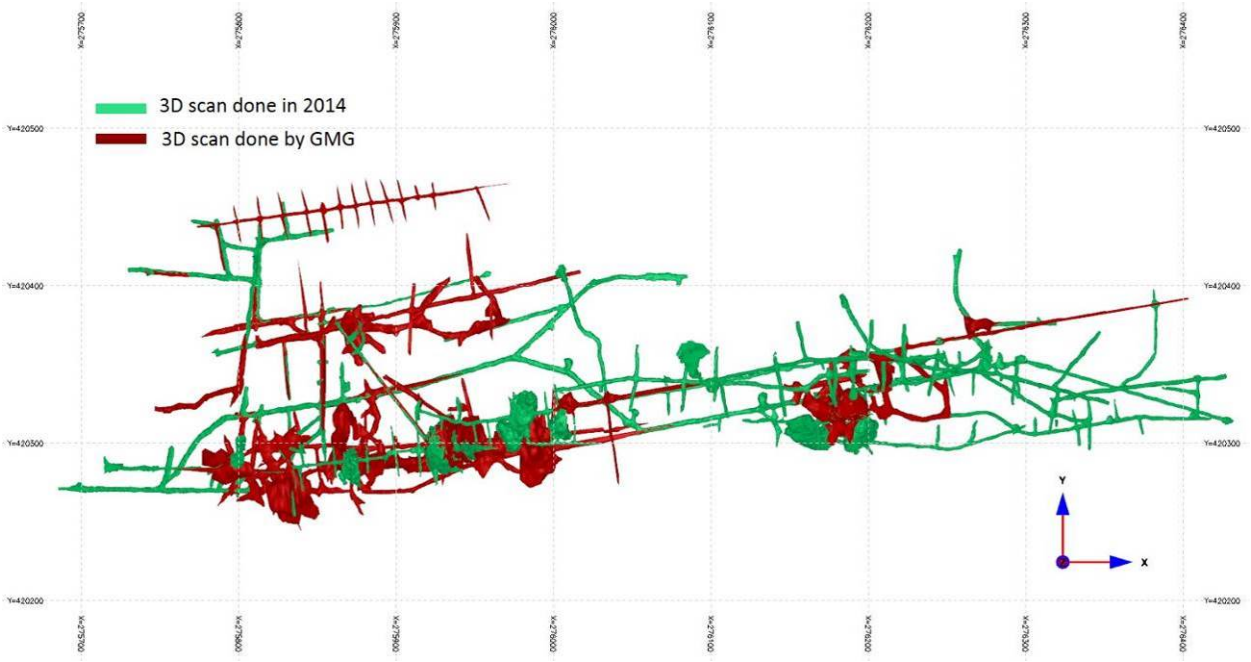


Figure 99: Plan view of the drifts adits and stopes scanned in 2014 and by GMG in 2017.

14.7.6 **Block models**

The envelopes have been filled by regular blocks and only composites within the envelopes have been used to estimate the grades of the blocks. The following figure presents the block model of Z2100Y6 and 2100B.

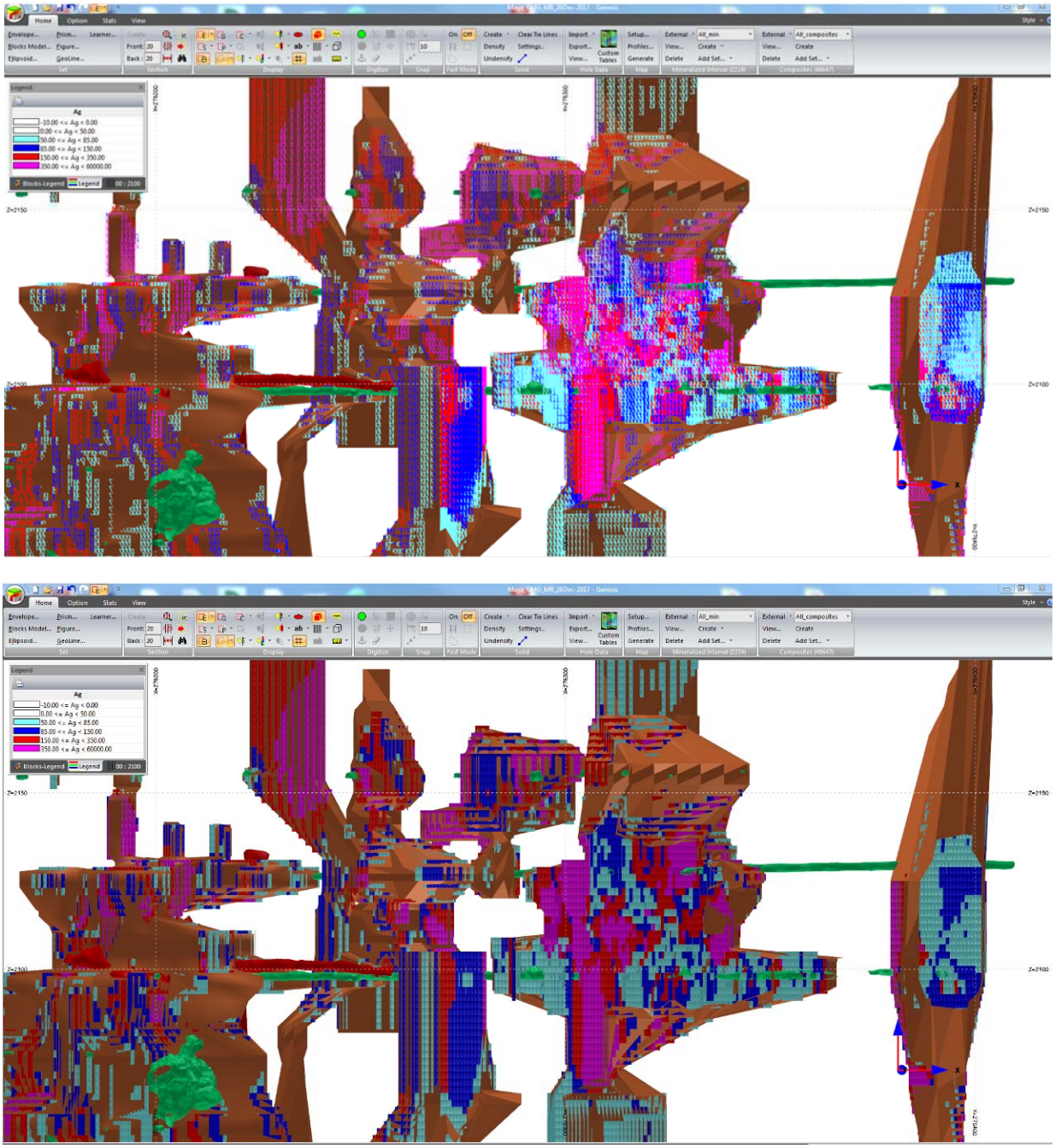


Figure 100: Block model view of 2100Y6 and 2100B colour coded by silver grade.

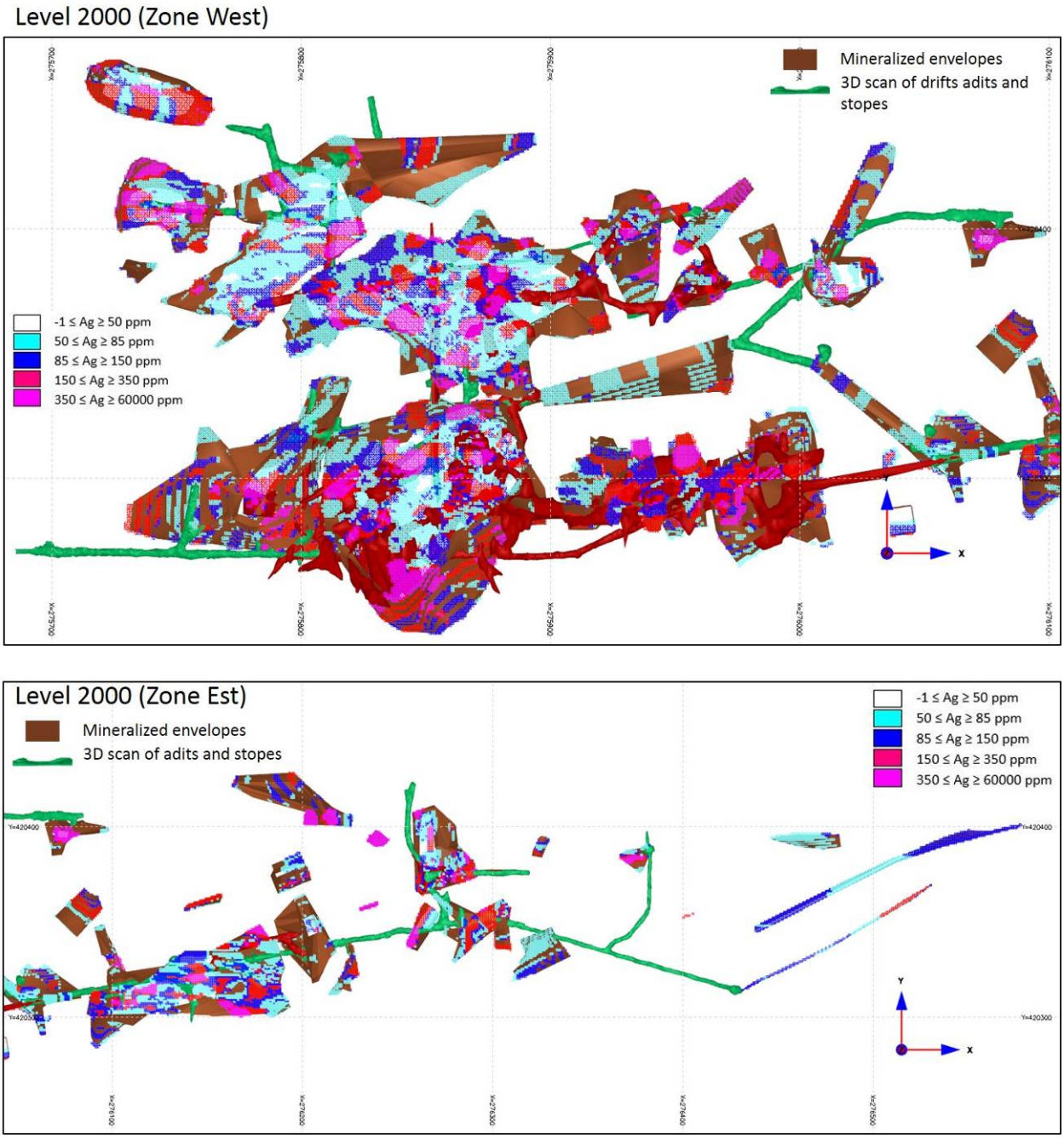


Figure 101: Example of block model at level 2000 with openings.

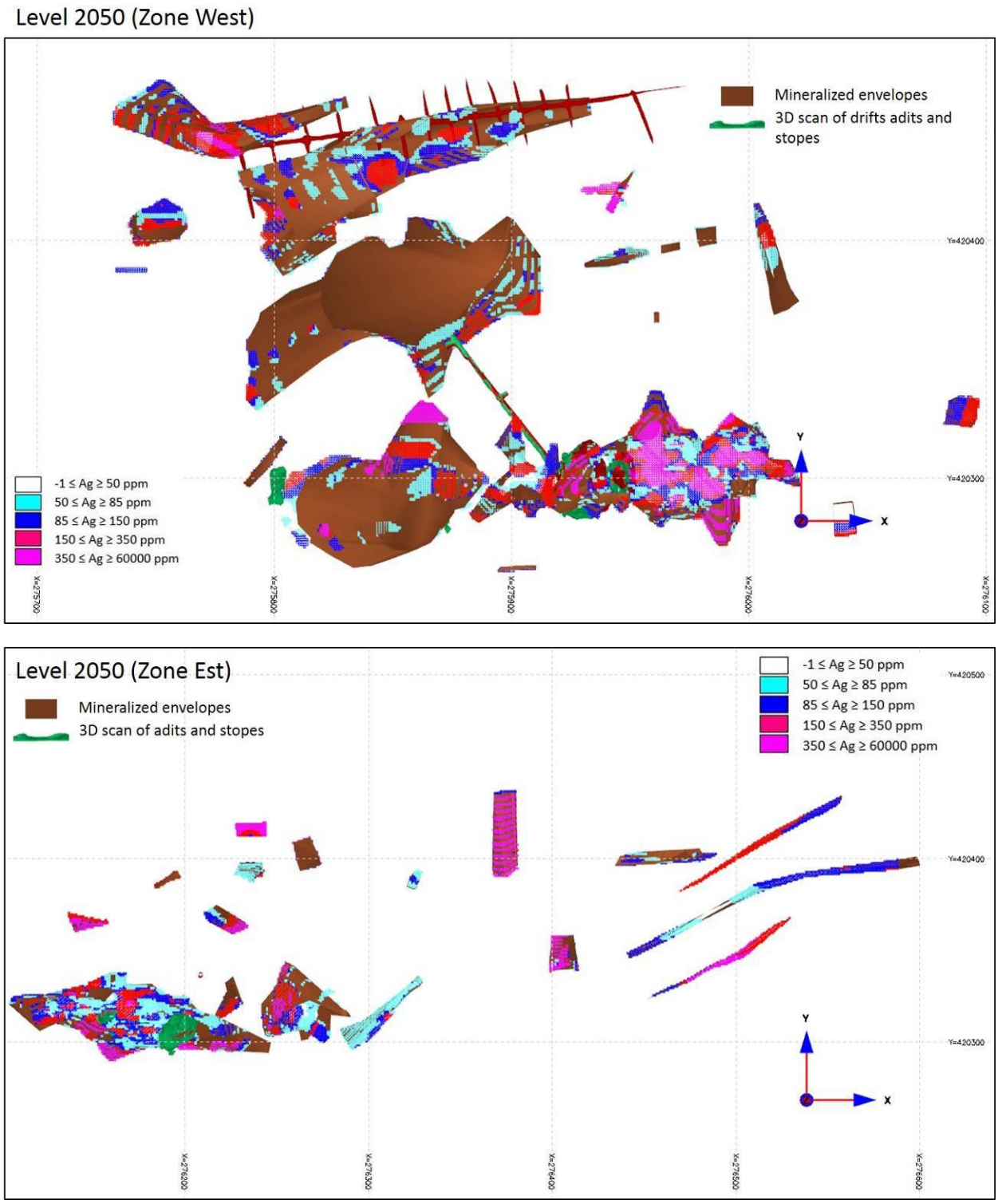


Figure 102: Blocks model at level 2050 with openings.

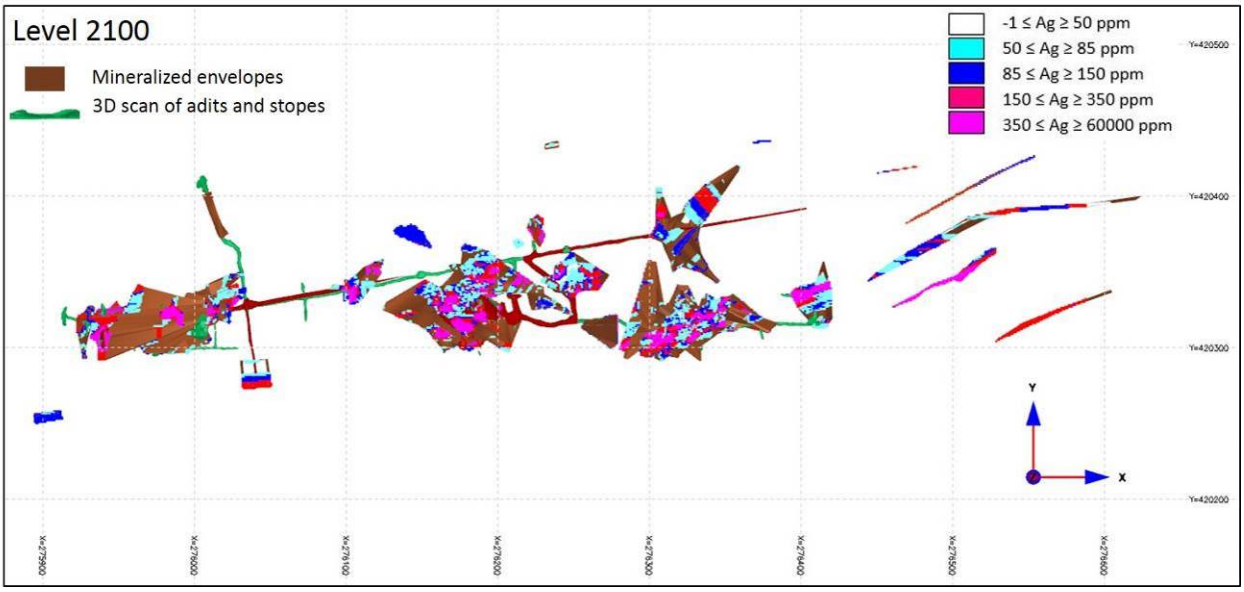


Figure 103: Blocks model at level 2100 with openings.

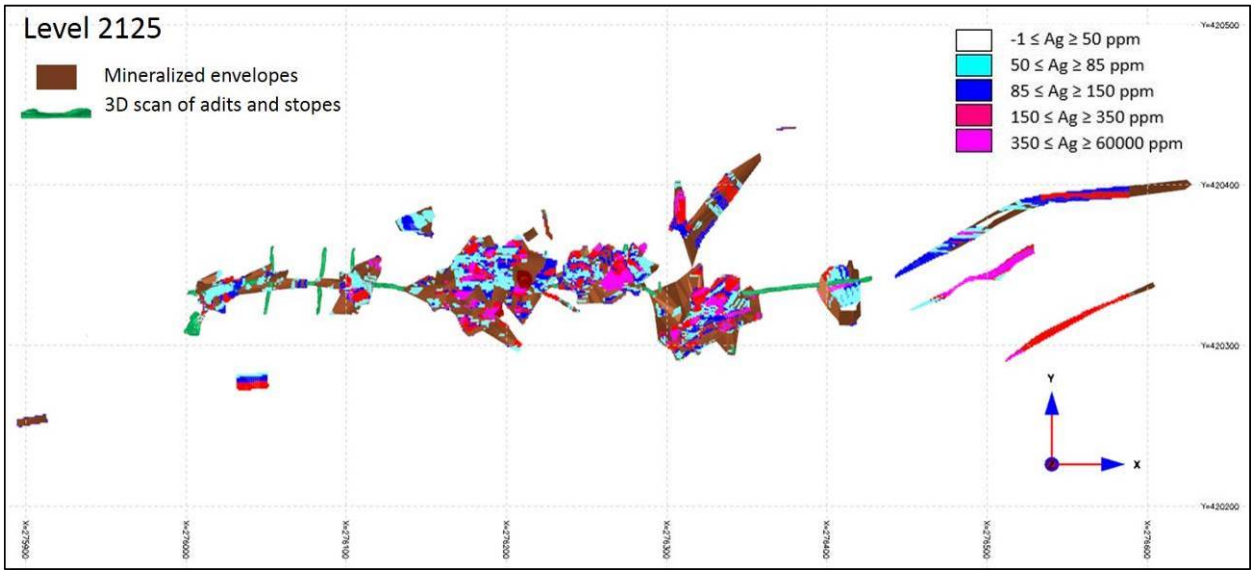


Figure 104: Blocks model at level 2125 with openings.

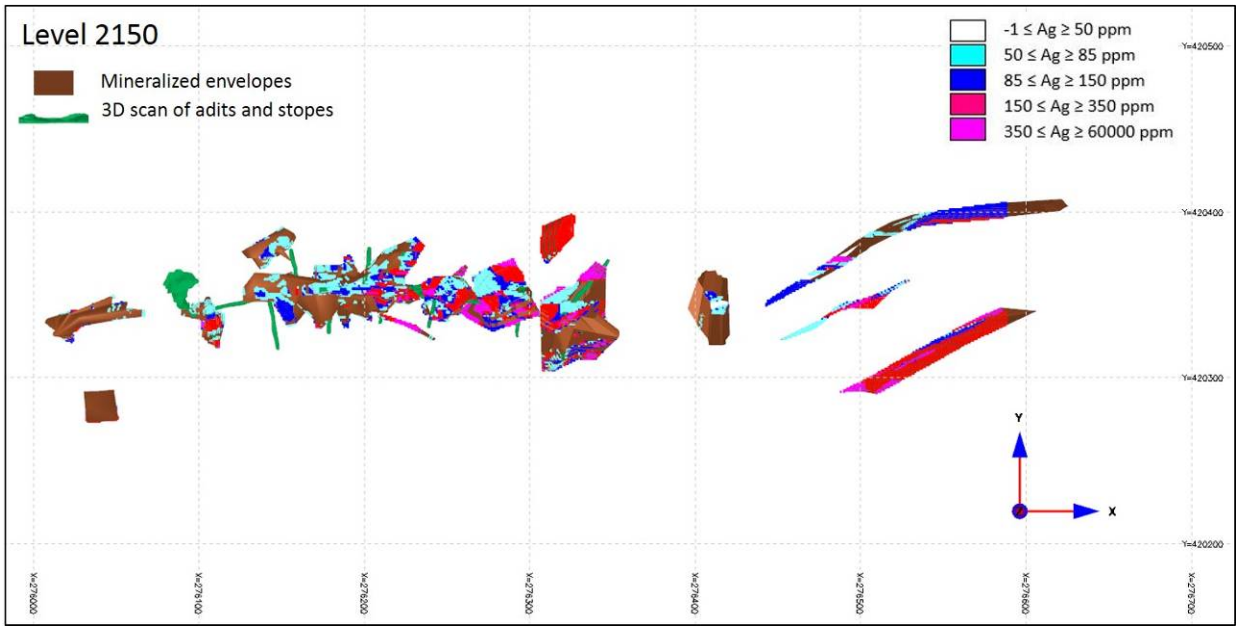


Figure 105: Blocks model at level 2150 with openings.

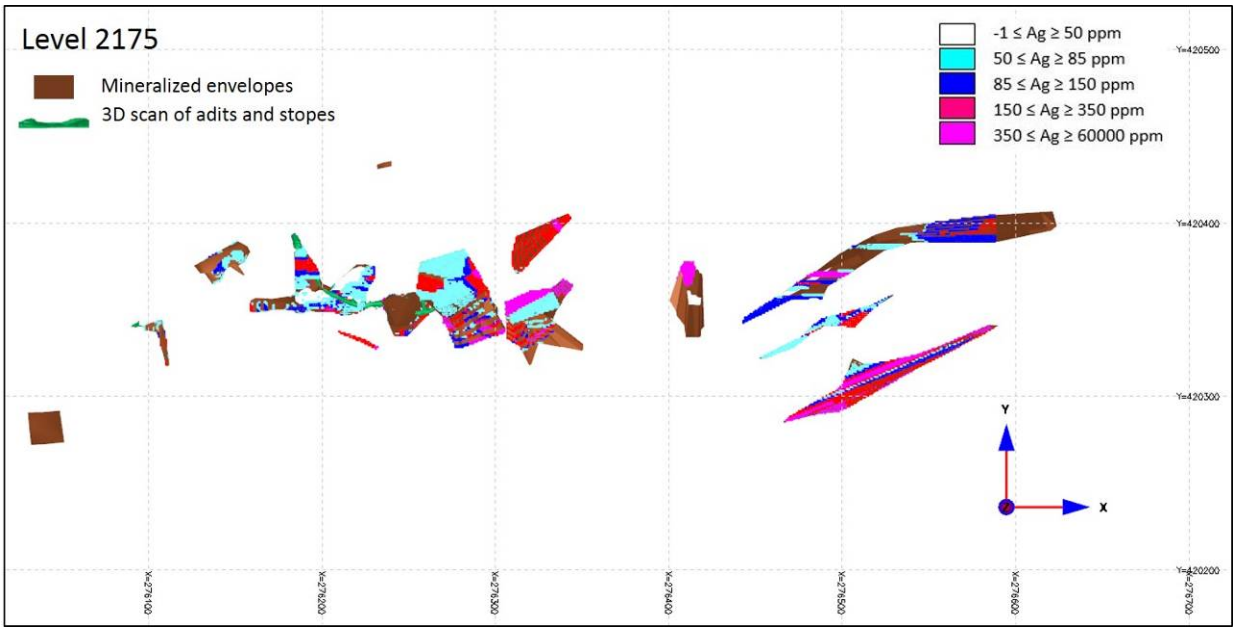


Figure 106: Blocks model at level 2175 with openings.

14.7.7 Mineral resource estimation and pit optimization

The base case measured resources total 2,633,000 ounces of silver (242,000 tonnes at 338 g/t Ag) indicated resources are 7,395,000 ounces of silver (748,000 tonnes at 308 g/t Ag) inferred resources total 28,338,000 ounces of silver (3,437,000 tonnes at 256 g/t Ag).

The following table summarizes GoldMinds Geoservices Inc. (GMG) mineral resources estimates combining forty-eight (48) block models. The mined out volume was removed from the estimated resources. The old tailings are included in the inferred resources.

Mineral reserves and mineral resources are as defined by CIM Definition Standards on Mineral Resources and Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability.

Table 39: Total mineral resources of the Zgounder silver mine.

Total resources Zgounder silver mine	Ag (g/t)	Tonnes	Ounces Ag
Measured	338	242 000	2 633 000
Indicated	308	748 000	7 395 000
Indicated+Measured	315	990 000	10 028 000
Inferred	256	3 437 000	28 338 000

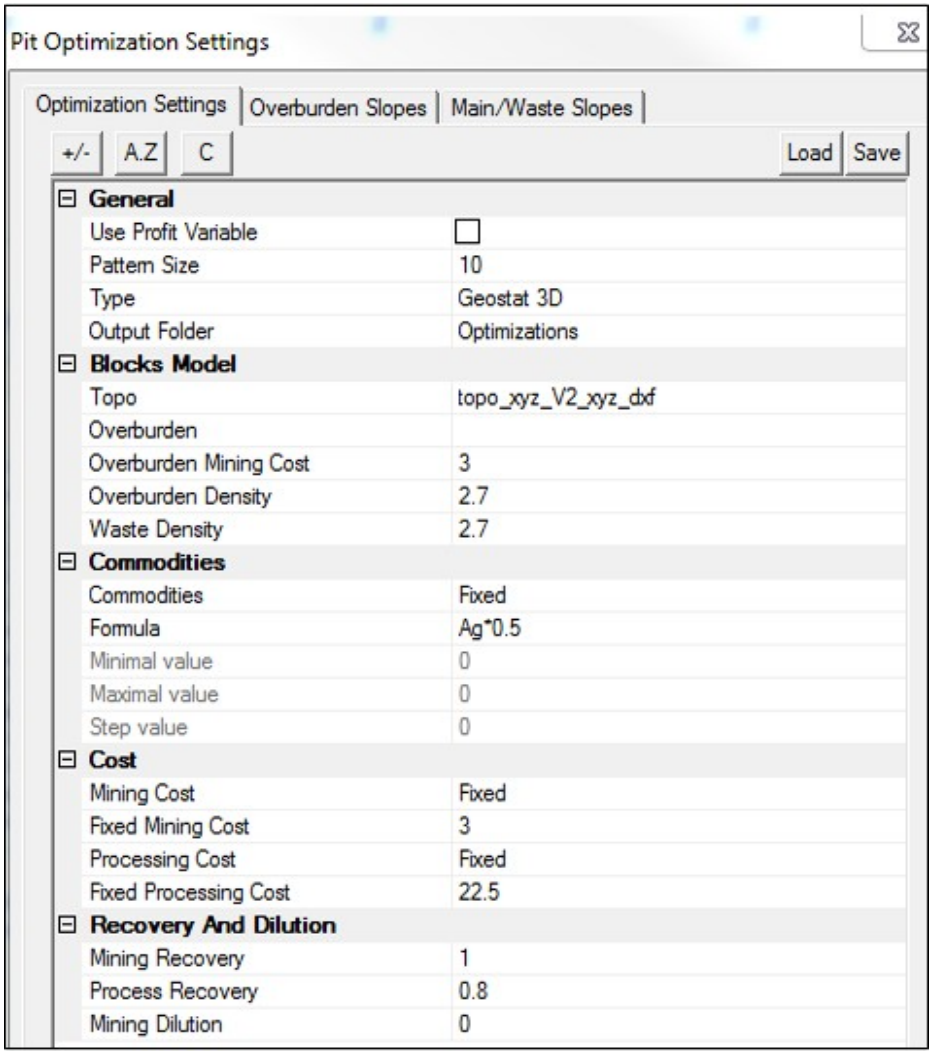
- **In-pit constrained resources:**

Pit optimization has been done with a fixed mining and processing costs. See figure below for the pit optimization settings (Table 40).

Before initiating the pit optimization we reblocked the final model into a large block of 5 m east(X) by 5 m north(Y) by 10 m vertical (Z) to facilitate the creation of the pit surface.

The resources presented have not shown economic viability but present a reasonable prospect of economic extraction as per CIM definition 2014.

Table 40: Pit optimization settings.



Measured open-pit constrained resources at Zgounder mine are 2,108,000 ounces of silver (208,000 tonnes grading 315 g/t Ag). Indicated open-pit constrained resources are 5,794,000 ounces of silver (616,000 tonnes grading 293 g/t Ag). Inferred open-pit constrained resources are 15,012,000 ounces of silver (1,886,000 tonnes grading 248 g/t Ag) at a cut-off grade of 61.89 g/t Ag (Table 41).

Silver commodity prices of US$16.00/oz Ag (0.50$/gram) is used in the calculation of the 61.89 g/t COG for pit optimization. Capping of outliers at 6 kg/t Ag is applied to the whole Zgounder database. Specific gravity used to convert volumes in tonnage is 2.7. The maximum depth of the optimized pit is the elevation Z 1940m (Figure 108).

Table 41: In-pit constrained mineral resources at Zgounder silver mine.

Cut-off grade of 61,89 g/t Ag

Category	Ag (g/t0	Tonnes	Ounces Ag
Measured in-pit constrained	315	208 000	2 108 000
Indicated in-pit constrained	293	616 000	5 794 000
Total Indicated+Measured	298	824 000	7 902 000
Inferred in-pit constrained	248	1 886 000	15 012 000

Note that mineral resources are not mineral reserves and do not have demonstrated economic viability. However, the reported mineral resources is considered by the qualified persons to have reasonable prospects for economic extraction as per new CIM 2014 definitions.

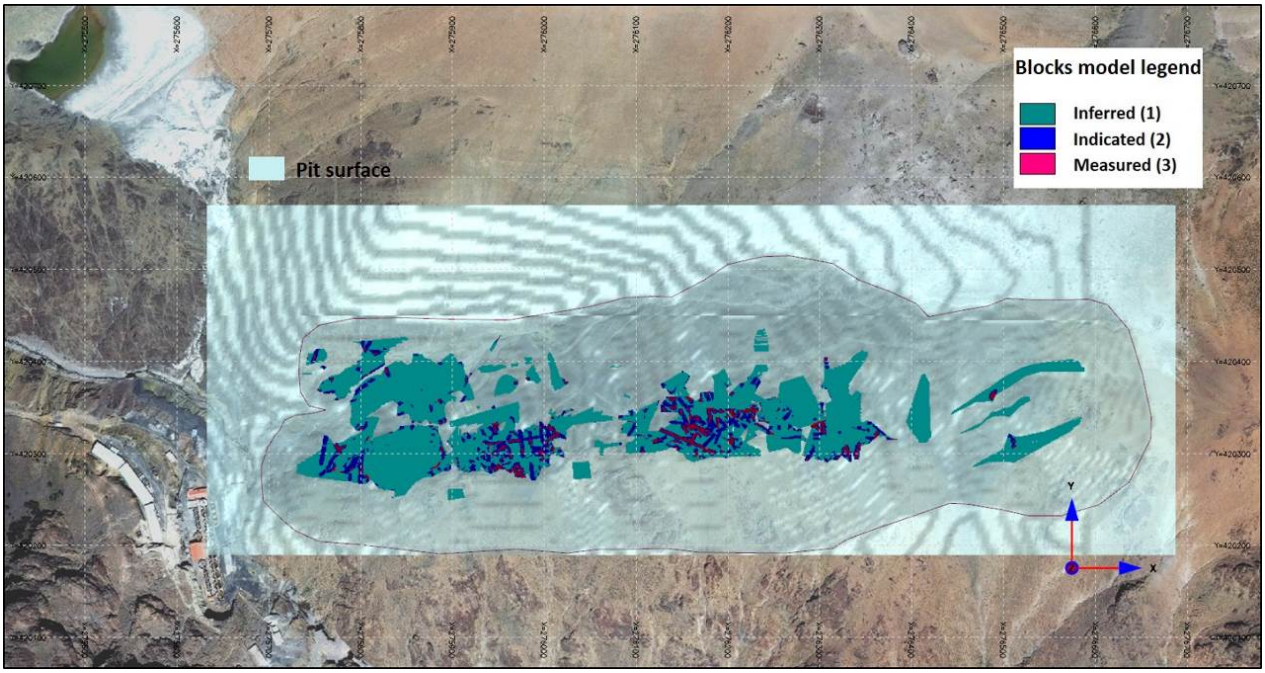


Figure 107: Pit optimization plan view with blocks model (color coded by classification).

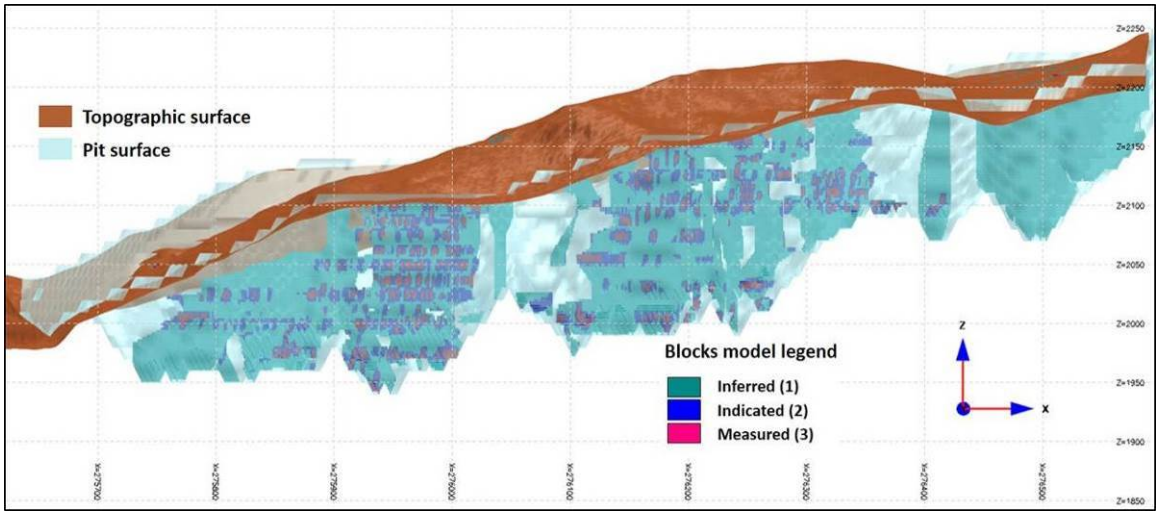


Figure 108: Pit optimization section view to the north with block model (color coded by classification).

- **High-grade underground resources:**

GoldMinds estimated the resource just under the pit surface using a cut-off grade of 125 g/t Ag (Table 42, Figure 109, Figure 110) as follow. Measured resources are 527,000 ounces of silver (34,000 tonnes grading 482 g/t Ag). Indicated resources are 1,601,000 ounces of silver (132,000 tonnes grading 377 g/t Ag). Inferred resources are 11,209,000 ounces of silver (1,051,000 tonnes grading 332 g/t Ag) at a cut-off grade of 125 g/t Ag (Table 42).

Table 42: High-grade underground resources just under the pit surface.

Cut-off grade of 125 g/t Ag

Category	Ag (g/t)	Tonnes	Ounces Ag
Measured	482	34 000	527 000
Indicated	377	132 000	1 601 000
Indicated+Measured	398	166 000	2 128 000
Inferred	332	1 051 000	11 209 000

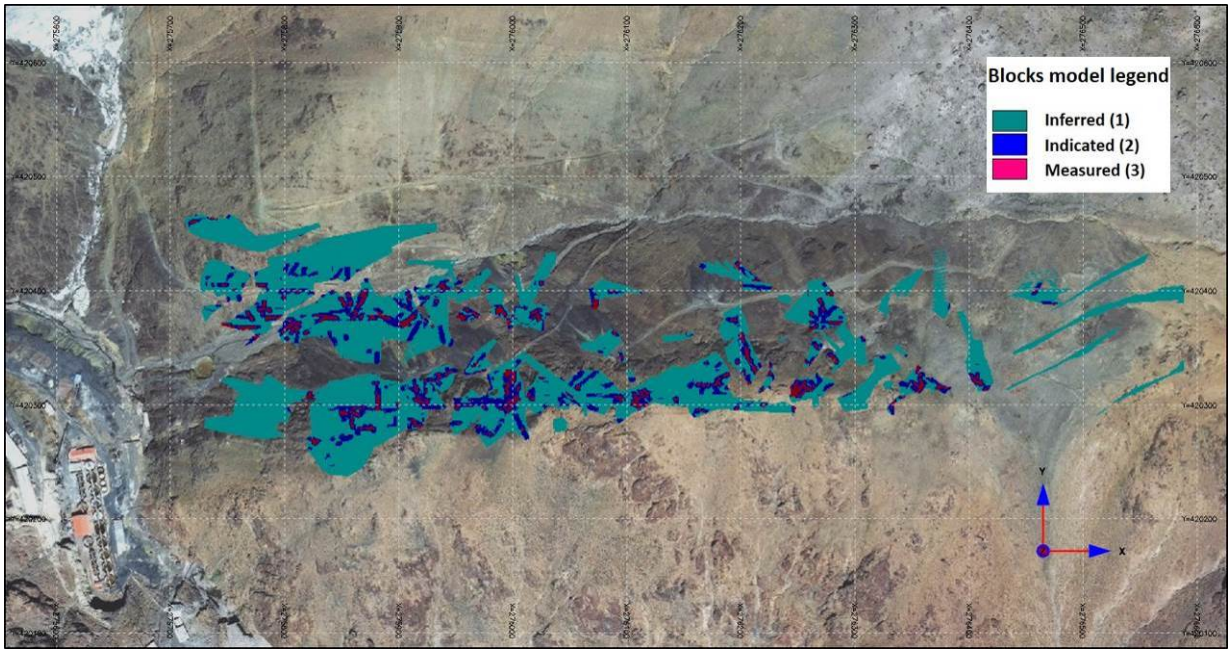


Figure 109: Plan view of blocks model (high-grade cut-off grade 125 g/t Ag) under the pit surface.

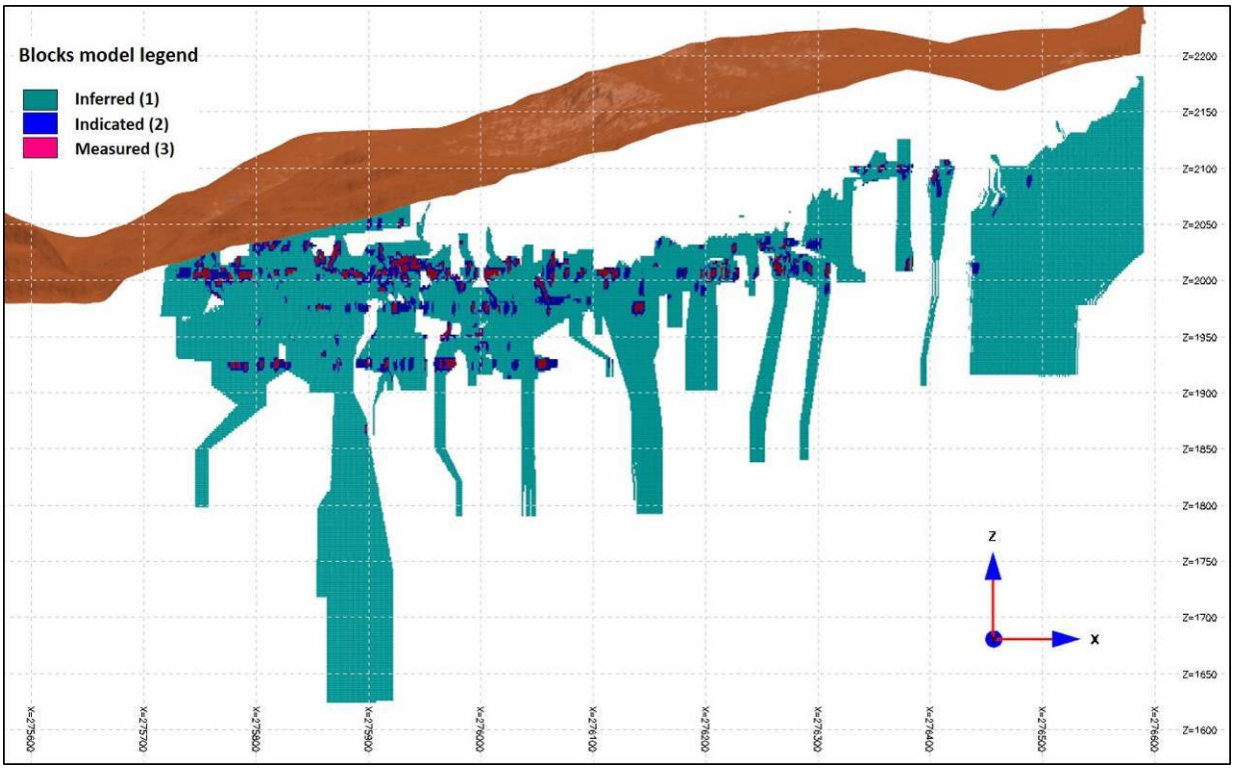


Figure 110: Section view of blocks model (high-grade cut-off grade 125 g/t Ag) under the pit surface.

- **The old tailings resources:**

Between 1982 and 1990, SOMIL extracted a total of 500,000 tonnes grading 330 g/t Ag* using various mining methods using a cut-off grade of 125 g/t Ag* (Reminex report, 2009). ACA Howe International estimated in 1999 that there was 500,000 tonnes in the tailings at the Zgounder silver mine (ACA How International, 1999).

During the 2013-2014 percussion drilling campaign supervised and managed by GoldMinds at Zgounder mine the material taken from the old and the recent tailings were used as standards. The standard I correspond to the old tailings (STDI) and show a mean silver content of 131.7 g/t Ag with a maximum value of 138 g/t Ag and a minimum of 125 g/t Ag (Figure 111).

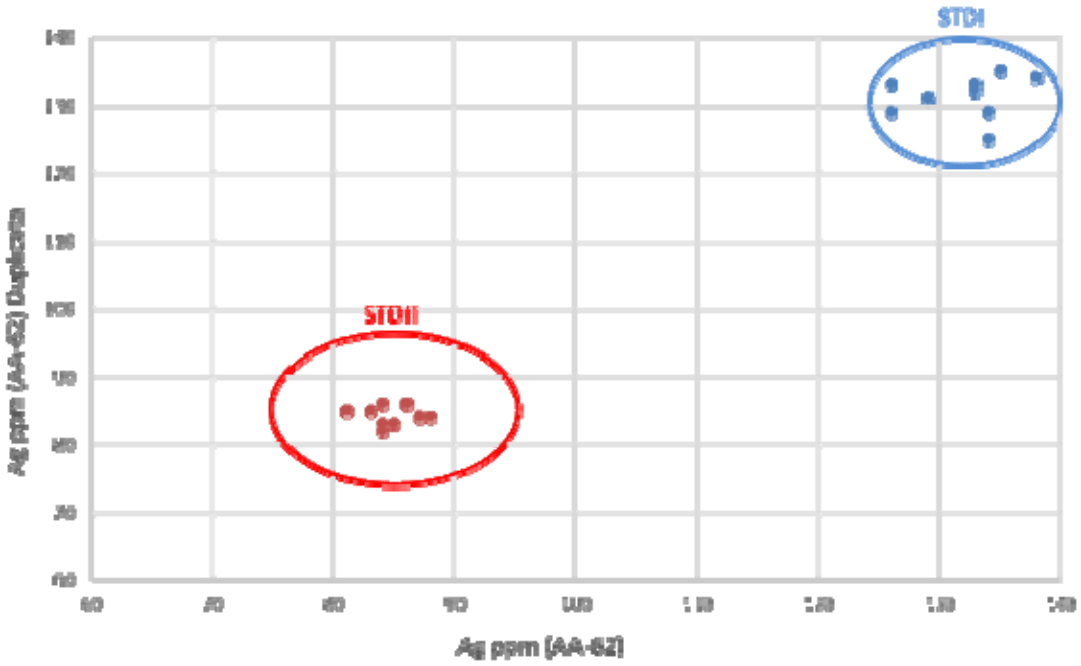


Figure 111: Silver content of the standards used during the 2013-2014 drilling campaign at Zgounder mine.

The old tailing was then added to the mineral resources estimate of 2,128,000 ounces of silver as inferred resources (500,000 tonnes grading 132 g/t Ag).

14.7.8 **Discussions**

GMG has taken all possible actions to ensure that the mineral resource statements are accurate. The authors relied on drilling program results and on the scanning of the mine openings.

The mineral resource at Zgounder silver mine has increased and the recent diamond drilling campaigns (2015 and 2017) have an important impact on the mineral resources estimate.

The recent exploration works show that the north zone has a high potential of silver zones close to the surface and more exploration works are needed to get a good resolution of the mineralized zones. The new zone intersected by hole ZG-17-16 show a deepened mineralized zone at an elevation of Z 1650m and extend the Corps D by more than 300 meters.

The actual situation and the commodity price of Silver is favorable for the economic development of the Zgounder Mine, considering the high grade of the Zgounder mine deposit.

At the moment of writing this report, the Kingdom of Morocco is a politically stable country with a strong history of mining and qualified workforce, either for underground workings or concentrator operations. Certain risks will always exist in mining development projects, but for this project the authors believe that they are of low impact.

No adverse protests or objections to the mine development have been observed at Zgounder and Askaoun village. The population expressed their total confidence in the project expecting more jobs will be created as commented by people met during our 2017 site visit.

15 Reserves

Reserves were identified in 2014 PFS report and the company is extracting them at the moment of writing this report.

The remaining Mineral reserves as of December 2017 are as follow:

Remaining Reserves 2018								
Proven			Probable			Proven + Probable		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
102 032	256,5	841 586	391 551	325,3	4 095 211	**493 582**	**311**	**4 936 797**

More details can be found in section 24 additional Information. An updated PFS is scheduled by Maya for the end of the year 2018 as there are more measured and indicated resources now than in 2014. Also additional drilling is scheduled in 2018 prior to PFS update. The base for the above reserves are included in the resources used for the PEA.

16 Mining methods

16.1 Introduction

This PEA report is based on the mineral resource estimate prepared by GMG with an effective date of January 8th, 2018. For the purpose of the PEA, mineral resources in all categories have been considered in the mining evaluation. The mineral resources considered includes the vertical interval from surface (2227m elevation) to the 1623 m elevation.

The mineralized zones are mainly subvertical with a wide variation in thickness. The vertical extension of the zones is offset by sub-horizontal faults with a northward movement of 10 to 30 m, pushing the mineralized zones in steps or blocks.

The holes drilled to the north from Tlat Nouna oued intersect some high mineralized zones near the surface as well as those drilled at the Eastern zone. The new zone intersected by hole ZG-17-16 show a deepened mineralized zone at an elevation of Z 1650m and extend the Corps D by more than 300 meters.

The Zgounder PEA project assumes the processing of an average 340 tpd for the first year (half at 187.5 tpd and half at 500 tpd), with an envisaged expansion to 100% of time at 500 tpd forecasted for 2 years and 2000 tpd for the remaining 7 years of potential production until 2027.

It is schedule to mine underground up to year 2020 and afterward combine mining by open pit of the mineral resources, old tailings and UG extraction.

In order to minimize development requirements and take advantage of the silver deposit geometry the cut and fill mining method was selected for underground exploitation. This mining method is also considered ideal for steeply dipping high grade deposits and highly selective (this is actually the

method they are using at the mine labelled TMR). It is also recommended to use the open long-hole mining method with sub-levels for the proposed new mining sites where the size of the mineralized bodies can take advantage of the method. It is also recommended to use the open long-hole mining method with sub-levels for the proposed new mining sites.

16.2 Geotechnical and hydrological parameters

The Zgounder deposit is located in generally competent rock and has a steep overall dip, making it readily mined using free falling methods. Several underground visits were done by QP's since 2013 and some stopes have dimensions as large as 10 m and more than 30 m of vertical height. No new information is available for this PEA, and a geotechnical evaluation for the purpose of underground mine design has not been performed at this level.

No known hydrogeological difficulties presently exist at the Zgounder mine. In general, the Zgounder mine does not have dewatering issues for mining stopes above the 2,000 m level, as the flow rates are small and almost completely gravity controlled. The 2,000 m level is above the small river (Zgounder oued) that flows at the entrance of the mine. (the flow is deviated at the entrance with a drift to secure mine access and safety).

For levels under 2,000m level no hydrogeological evaluation was performed for this PEA.

The water naturally stored in levels below 2,000m level while the shutdown period (2005 to 2013) has been partially pumped (down to the level 1,975m inspected during site visit) and the water was used for the drilling operations and the mill processing.

16.3 Stope preparation workings

The first years of production at Zgounder mine was focused on existing stopes (Corps D, Corps B, Corps C, stope 2035E) that were not completely mined out by CMT, thus granting operators time to develop new mining sites by scavenging existing broken rock and readily accessible mineralized material.

The stopes were visited and appear stable but detailed inspections will have to be made to confirm their competency over long term. The company has started to backfill with low grade some of the historical big opening to maintain mine stability.

16.4 Mill feed grade estimation

The current processing plant was built to process 200 metric tons per day and by assuming 350 working days per year, amounting to 70,000 tonnes per year. With the implementation of the new 500 tpd mill assuming 350 working days per year, amounting to 175,500 tonnes a year, the feed would come from the underground mine above the 2000m level. Afterward with the implementation of the 2000 tpd mill, mining and mill feed should come from surface, underground and the ancient tailings in a proportion of 45%, 42% and 13% respectively. The schedule tonnage for the 2000 tpd

from surface is 900 tonnes, 840 tonnes from underground and 260 tonnes from the old tailings. This has been applied to the ratio of available resources and optimization with detailed scheduling has not been done at this stage. However, all major underground accesses have been computed and taken into account for the proposed mine development of the PEA.

The surface extraction should use drill, blast, load, haul to crusher and/or to ore pass of the existing Alimak raise extension. A fleet was initially selected and the management of ZMSM prefers to use national mining contractors to reduce the capex burden. As well underground mining equipment was initially selected as a fleet, since the mine is actually using its own staff and mining contractors, the company wants to pursue in that route and equipment list elaborated by Goldminds should be used as reference for the equivalence only. With the present total mineralized material for the PEA being on the order of 4Mt, the mine life would be 10 years with the upgrade to 500 tpd followed by the 2000tpd. The mineralized material available is 1.681Mt at 331 g/t from UG, 1.79Mt at 300 g/t from potential quarry and 500,000 tonnes at 132 g/t Ag from the old tailings. Material at surface is pit constrained.

According to historical and the current mine production, the mining dilution is 10% and the mining recovery 97%. The 10 % mining dilution is applied up to year 2020 and afterward 30% as it represents the 10% from underground and an expected 50% dilution in the pit operations. These values are applied in the PEA Study. A dilution grade of 50 g/t Ag to the mill feed grade is applied and is considered reasonable in the Zgounder context with production records.

16.5 Proposed mining methods

16.5.1 Underground mining

At Zgounder the mineralized zones are generally vertical with irregular shapes and scattered mineralization. The cut and fill mining method is now used for exploitation and this method is considered ideal for steeply dipping high grade deposits. This mining method is also highly selective where high grade sections can be mined separately from the low grade rock that will be left in the stopes.

Cut and fill mining excavates the mineralized material in horizontal slices, starting from a bottom undercut advancing upward. The material is drilled, blasted, loaded and removed from the stope which is then backfilled with waste rock. The fill serves both to support stope walls and as a working platform when mining the next slice. Backfill selection is dependent on the quality of the host rock and the size of equipment working on top of the backfill.

In order to minimize the cost of the rock extraction Maya's mining engineers always try to orient the mobile access allowing the maximum extraction of the mineralized body. In the case of Corps Y level 2100m and level 2000m panels 8 and 9 the mobile accesses were arranged to extract respectively mineralized material (ore defined in PFS 2014) from panels 1Y, 2Y, 2Ybis, P3, et les panneaux 8, 9.

GMG propose to excavate a main ramp to connect all existing levels to the East above the 2,000m up to 2,100m and a ramp access to the 1,800m level below the 2000m level and reach out the develop levels below the 2,000 m level; this will facilitate the development and also the transportation of backfill once required. Above 2,100 m elevation, the levels are accessible by adits.

GMG also proposes the development of a drift at level 1925m more to the east plus two new drifts at level 1,800m and level 1,620m. The primary access to the underground mine (level 1,925m) will be via the proposed ramp from the South of the main mine entrance (level 2000m), see figure below (**Error! Reference source not found.**).

GMG also proposes the excavation of four main raises, two from level 1,925m and two other raises from level 1800m (**Error! Reference source not found.**). The proposed raises will bring fresh air to levels below the elevation 1925m and provide an evacuation alternative route in case of emergency.

Since the mine has previously been in production, few new developments are required above 2000m. The total required additional development required is estimated at 20% of mineralized material tonnage with an estimated average of 3.0 linear meters per working day. Provision in the capex sustaining capital for an average of around 6.0 linear meters per working day, including the ramp (3.4m x 4m section), for a total of 4,691 meters for the major access and a 315m internal shaft for the life of the mining operation (LOM).

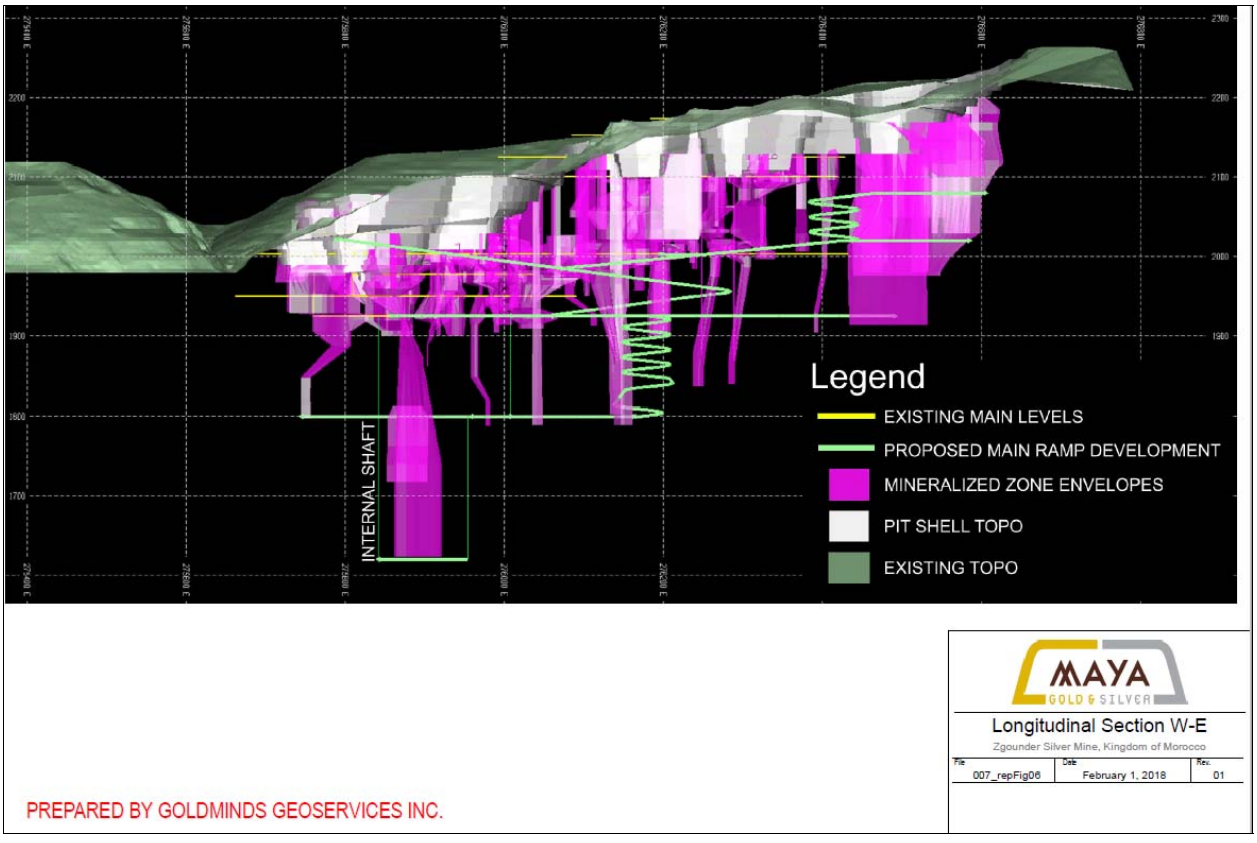


Figure 112: Longitudinal view of the proposed mine

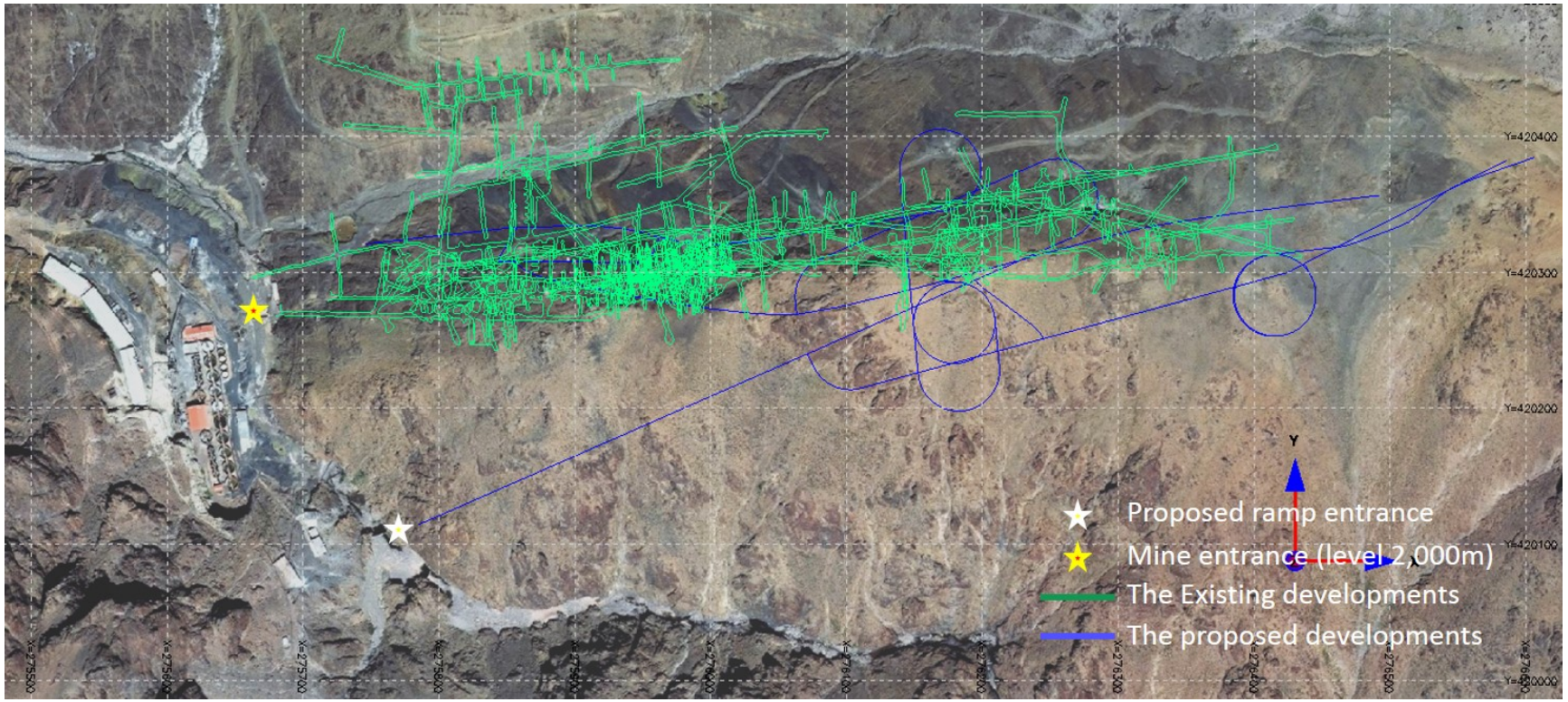


Figure 113: The proposed developments at Zgounder property.

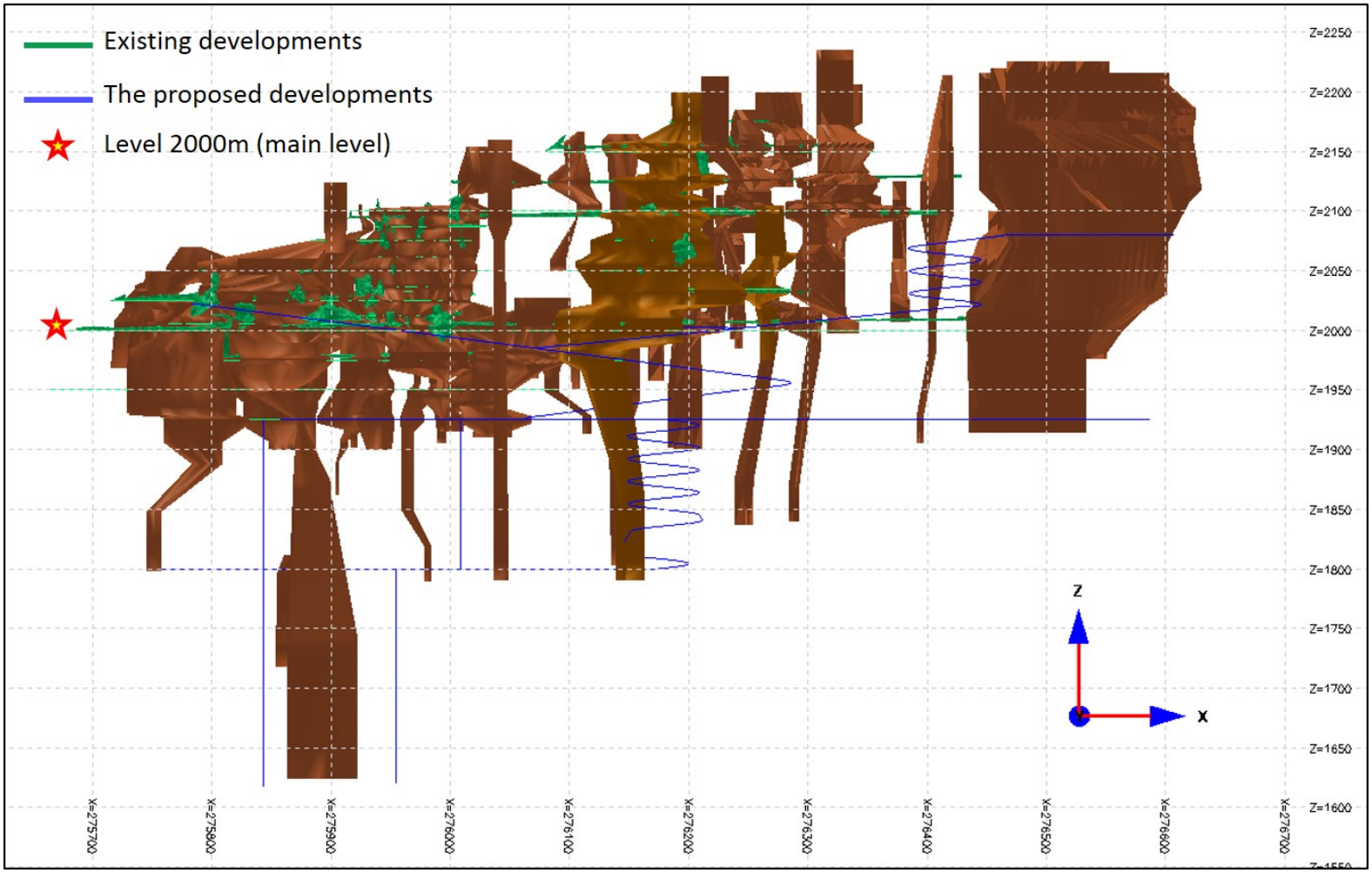


Figure 114: W-E section showing the mineralized envelopes and the proposed developments.

16.5.2 Open pit

The in-pit resource estimate as reported in section 14, is about 7.9 million ounces measured and indicated.

Table 43: In-pit mineral resource estimate.

Measured			Indicated			Inferred			Measured + Indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
208,000	**315**	**2,108,000**	**616,000**	**293**	**5,794,000**	**1,886,000**	**248**	**15,012,000**	**824,000**	**298**	**7,902,000**

16.5.3 Mineralized material available for the PEA

The mineralized material used for this PEA is a revised pit optimization reducing the waste/mineralized material ratio with a design allowing mineralized material to be retrieved by underground method and existing development.

The mineralized material available:

From the in-pit with pit design is: 1.793 Mt at an average grade of 300.19 g/t Ag. (about 45% M+I)

From the UG block model is: 1,681 Mt with an average grade of 331.73 g/t Ag (about 20% M+I)

From the old tailing is: 500,000 t with an average grade of 132 g/t Ag (100% inferred)

Combined for the cash flow mineralized material: 3.974 Mt at 292 g/t Ag where 45% is sourced from the pit, 42% from UG and 13% from the ancient tailings.

The waste to mineralized material ratio prior to dilution is 12.3 to 1 and becomes 8.2 to 1 with the dilution.

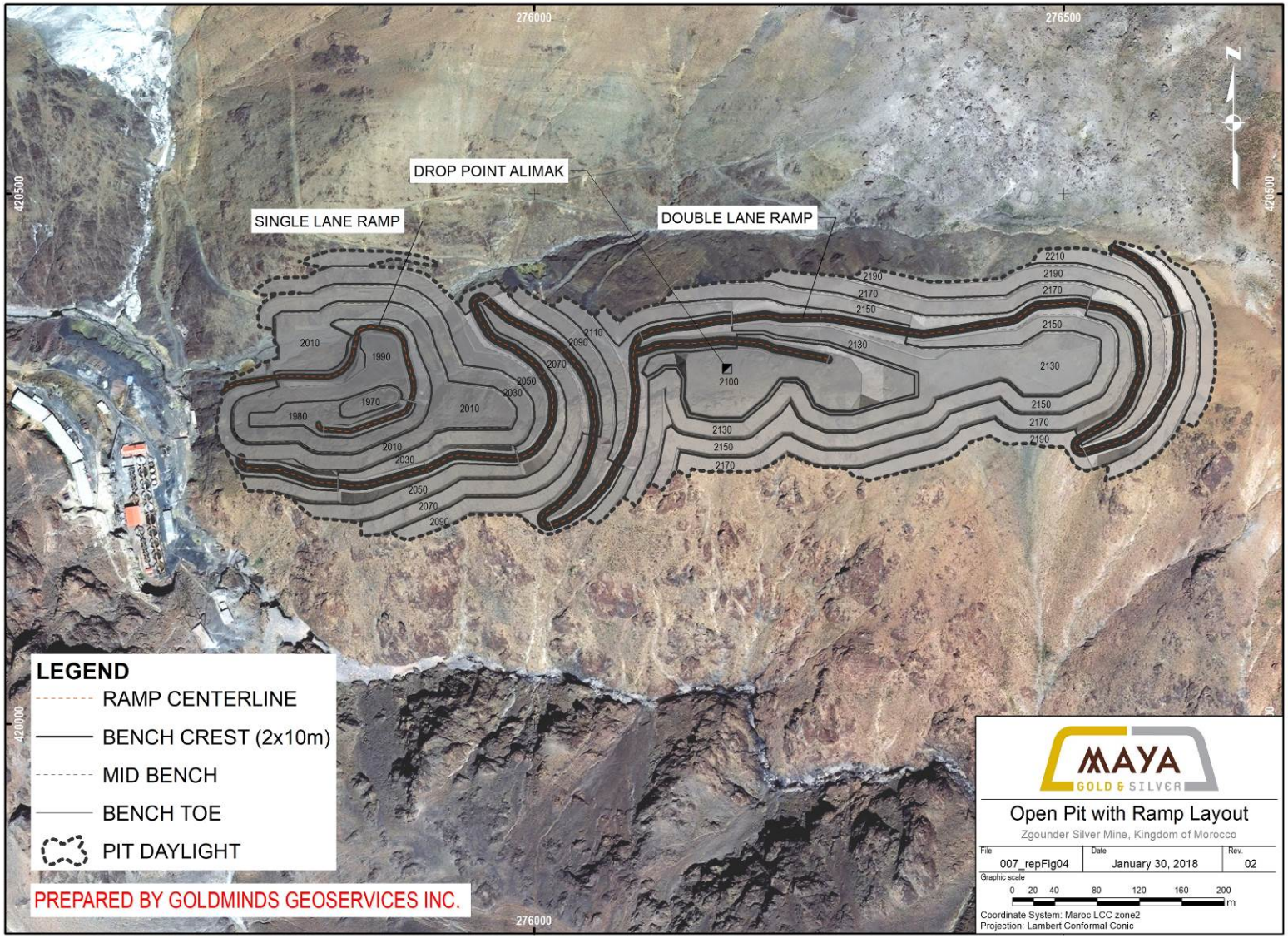


Figure 115: The open pit design with ramp layout.

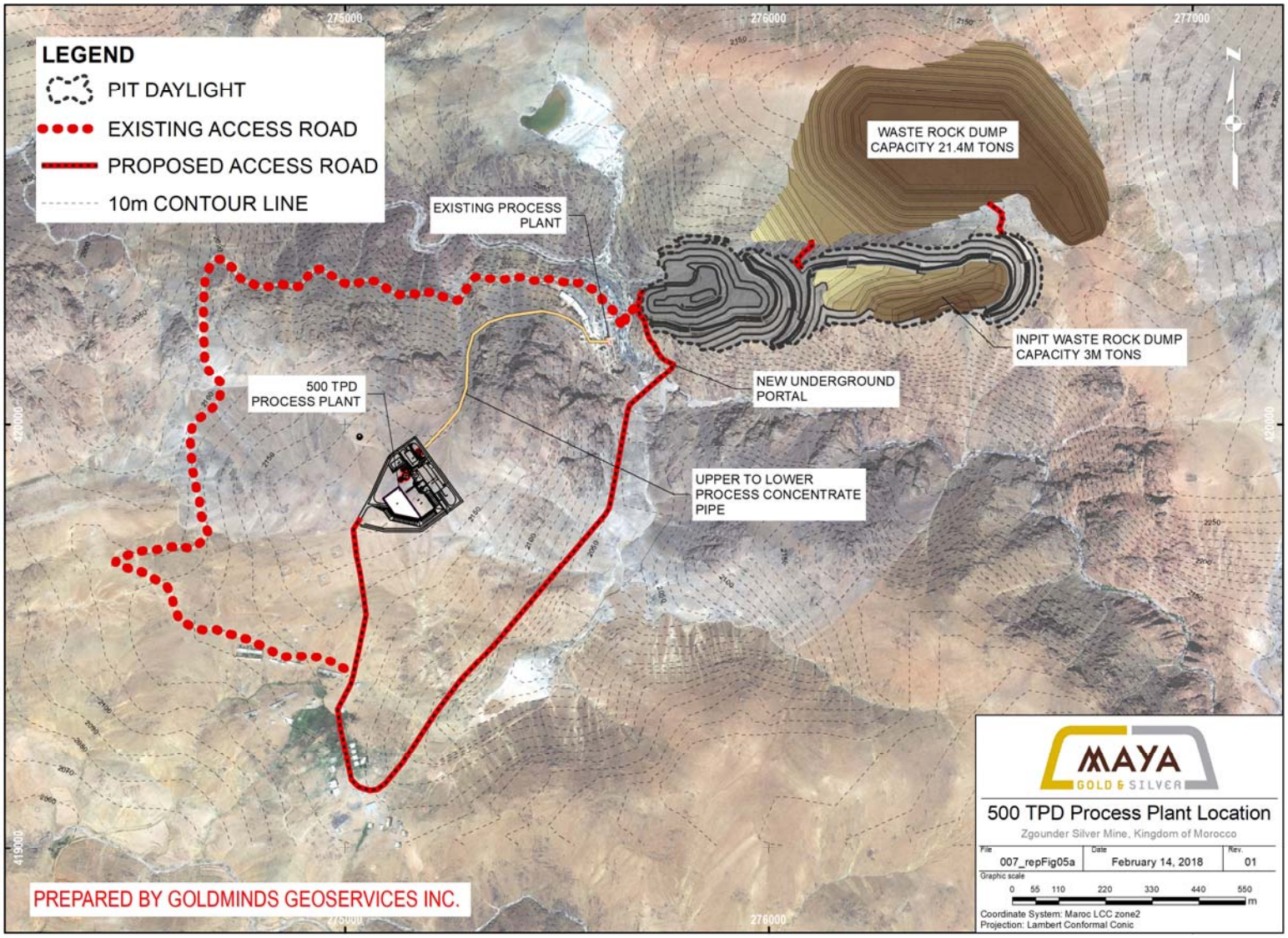


Figure 116: 500 tpd location and layout

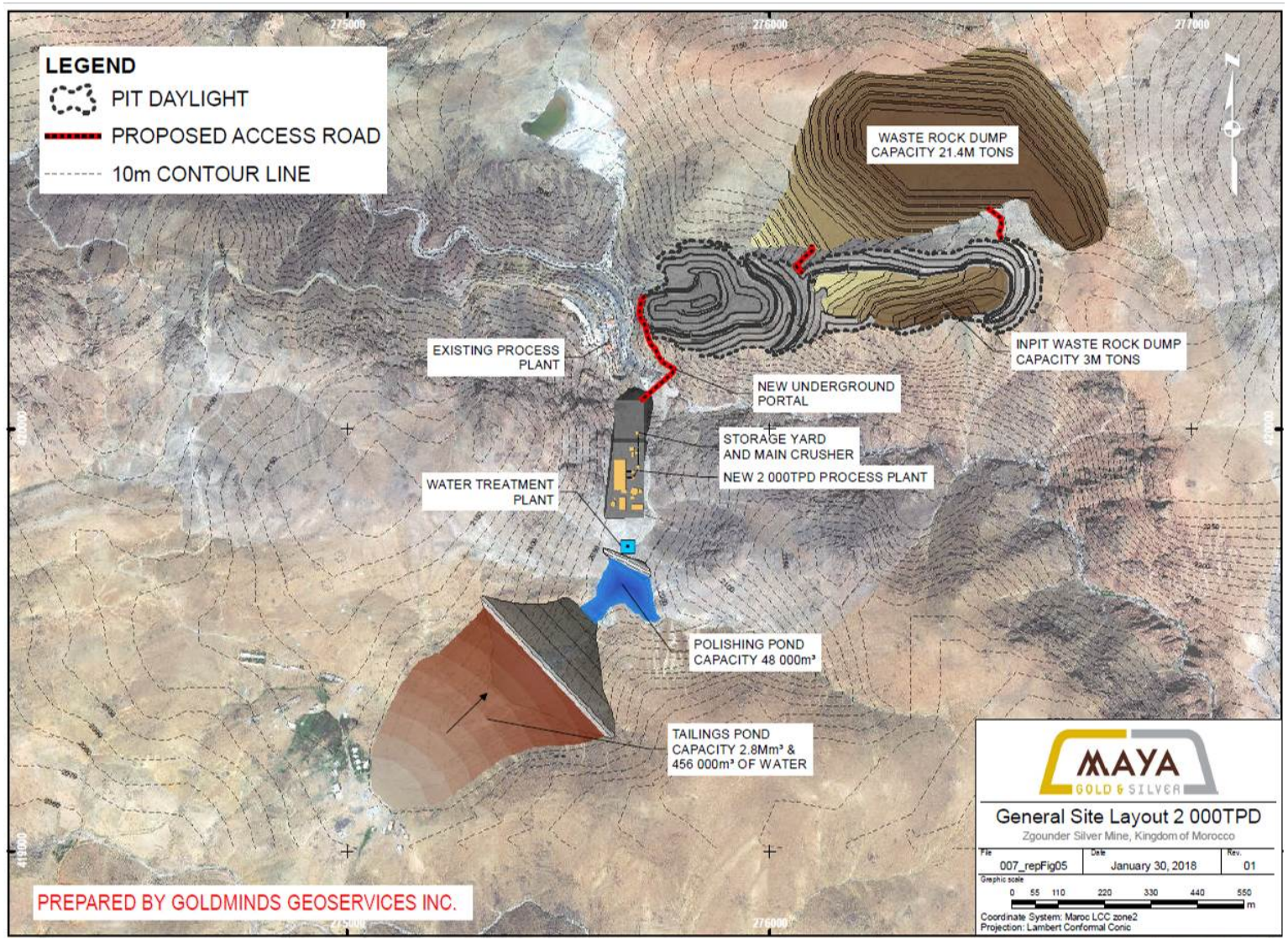


Figure 117: General site layout 2000 tpd.

16.6 Production rates, life of mine and mining dilution

The current plant was built to process 200 metric tons per day, assuming 350 working days per year, which amounts to 70,000 tonnes per year. With the envisaged expansion of the mill to 500 tpd for the next 2 years (2019 - 2020) and 2000 tpd for the remaining 7 years of production, the mine life will be 10 years.

The mining dilution is around 10% until 2020 and increase to 30% until the end of the operations in 2027. The mining recovery is estimated at 97% and considering a dilution grade of 50 g/t Ag, the mill feed grade will be approximately 92% of the mineralized grade in place.

16.7 Mining developments

The underground infrastructure design has been conceptually optimized in this PEA. The allowances have been made in the cost estimate for the major facilities described in this section.

The underground infrastructure is generally represented in the table below and **Error! Reference source not found.**, **Error! Reference source not found.**, Figure 118.

Considering the current resource estimate (published January 8th, 2018), the Zgounder mine should be developed both in open pit and underground. The open pit starts from elevation 2250m to 1940m and the underground development extends down to the elevation 1624m (Figure 118).

Table 44: Waste developments (General note: all ramps with 10% grade when turning and 12% grade when going straight).

TYPE	from LEVEL	to LEVEL	LENGTH (m)	DIMENSIONS	NOTE:
MAIN RAMP	1925	2022	851	4x3.4m	
RAMP	1800	1925	1240	4x3.4m	
RAMP	1985	2020	393	4x3.4m	TO REACH EAST PART MINERALIZED ZONES
RAMP	2020	2080	608	4x3.4m	
Total ramp			**3092**		
SHAFT	1620	1925	308	5x3.2m	+3m SUMP (16m^2)
SHAFT	1620	1800	180	1.8x1.8m	FOR AIR VENTILATION AND SECURITY EXIT
SHAFT	1800	1925	125	1.8x1.8m	FOR AIR VENTILATION AND SECURITY EXIT
Total shaft			**613**		
GALLERY	1620	1620	112	4x3.4m	
GALLERY	1800	1800	452	4x3.4m	
GALLERY	1925	1925	653	4x3.4m	ADDED GALLERY TO 1925 LEVEL
GALLERY	2020	2020	168	4x3.4m	
GALLERY	2080	2080	148	4x3.4m	
GALLERY CONNECTION	2000	2000	66	4x3.4m	
Total gallery			**1599**		

The waste development presented above comprises ramp (3092m), shaft (613m) and gallery (1599m). It is important to realize that these main development workings spread over five years.

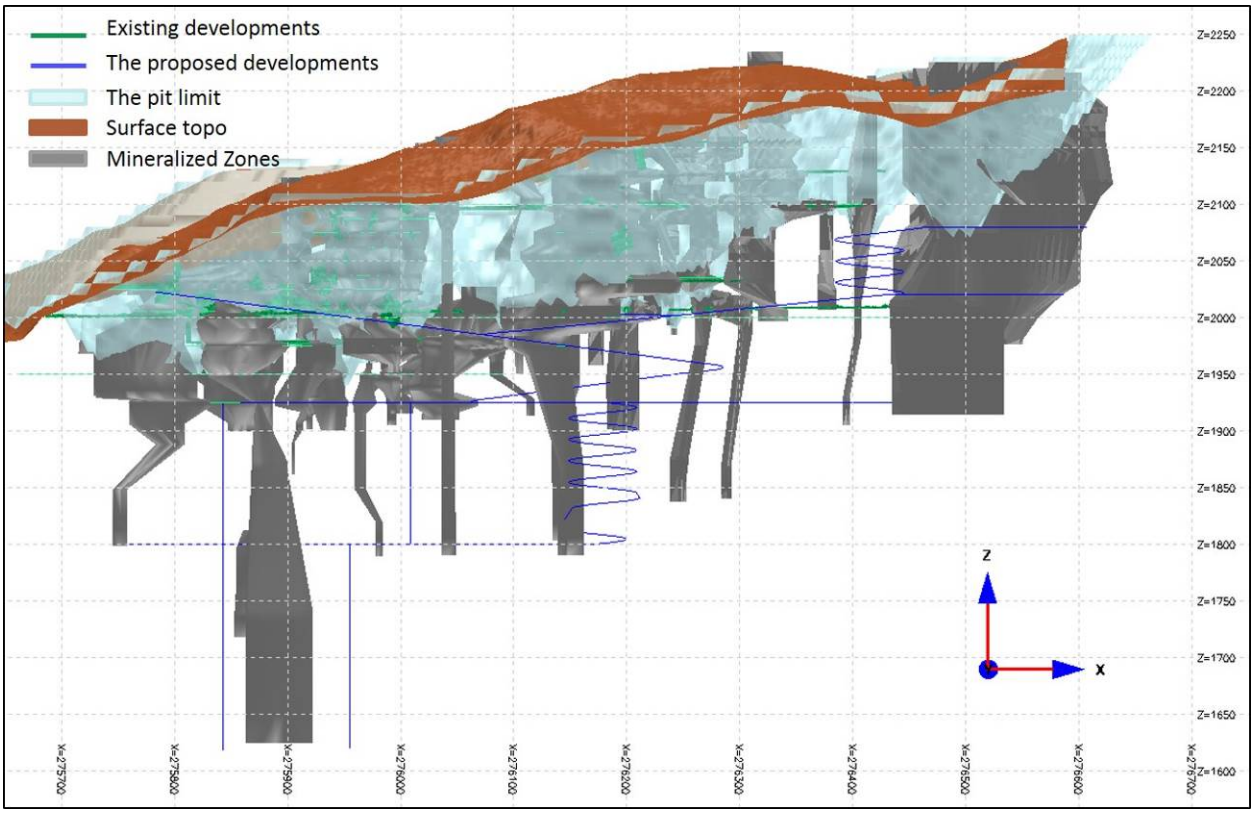


Figure 118: Section E-W showing the proposed mining developments and the open pit surface.

Mine infrastructure does not include refuge stations, material storage areas, electrical substations, main sump and pumping stations, maintenance facilities, fuel and lube bays, secondary sumps and drain hole cutouts, remuck and backfill bays and ventilation raise connections as we are at PEA level and these should be taken into account and detailed in a PFS. The conceptual internal shaft 3.2m x5m has the transport personal cage above the skip and a counterweight on the other side, the other portion in the area is used for infrastructure (water pipe, air pipe, electricity wires) and a manway.

16.8 Underground mining equipment

The mining underground equipment that will be mostly used in the Zgounder mine are equipment for loading and hauling. At the moment of the redaction of this report, three (03) dumpers (model XYUK-8 with a capacity of 4.2 and 4.5 m^3) and four (04) scooptrams (3) scooptrams model XYWJ-1.5B, one model XYWY-1.5; capacity of hauling 3t) are used underground.

The increase of the milling to 500 tpd until 2020 should be supported by the purchase of new equipment (Table 45) or provided by the mining contractor. For underground drilling, only T28 and T23 jacklegs are used for the production and development. Maya Gold and Silver is expected to

obtain new drilling equipment for production and development. It is necessary to purchase the drifting jumbo for the ramping program in the PEA to 2000 tpd. We also recommend the use of Atlas Copco Cavo 310 for the development sites accessible only by raises accesses, which can be rapidly dismantled and easily transported through small raises.

Table 45: List of the proposed underground equipment.

Equipment	Marque	Model	Quantity	% of uses
Development drill	ATLAS COP	Boomer 282	1	50%
Scoop	ATLAS COP	TS 1030	2	100%
Production drill	SIMBA	M4	2	100%
Emulsion charger	MacLean	EC3	1	100%
Atlas Copco Cavo 310	ATLAS COP	Cavo 310	1	50%
Transport truck	Sandvik	TH315	4	100%
Wheeled loader	KOMATSU	WA800-3	1	100%
Drill definition	Sandvik	DE110	1	100%
Truck	DUX	P1-Porter	1	100%
Transport	Toyota	Landcruiser	5	100%

A program for underground communications should be installed at Zgounder. GoldMinds Geoservices recommend to investigate the possibility to have a hand held radios for crews, supervisors, engineers, geologists, surveyors and maintenance personnel. A central dispatch station should be installed at the mine site to provide a continuous communications link with underground personnel if suitable in the context At least between the existing, mill, the laboratory, the office, the new mill and the mine entrance as cellular phone coverage is not always reliable outside. The detailed design for the underground and surface communications system and distribution is not included in this study.

The equipment list is a proposition to guide the mining contractors in Morocco as they could provide similar model and equipment equivalent for the purpose to achieve the proposed mining and development scenario.

16.9 Mine ventilation

Underground mine ventilation is a real issue to provide a flow of air with sufficient volume to dilute and remove dust and noxious gases and to regulate temperature.

16.9.1 The actual situation

At Zgounder mine, the ventilation does not seem to be a critical issue. Indeed the demand for fresh air is minimal for the following reasons:

- The underground mine mechanization degree is not high enough (two scooptrams and dumpers);
- The surface voids connected to the old excavations;
- The Zgounder mine is accessible from adits on each main level, offering the advantage of sufficient natural air circulation from surface to level 2000m;
- The non-use of ANFO explosives.

16.9.2 The projected situation

The Zgounder deposit assumes the processing of an average 340 tpd for the first year (half at 187.5 tpd and half at 500 tpd), with an envisaged expansion to 500 tpd forecasted for 2 years and 2000 tpd for the remaining 7 years of production. The mill feed averaging 233 g/t (at least for years 2021 to 2027) will come from 3 different locations. Around 45% will come from the open pit, 12% from the old tailings and the other 43% from deep underground mineralized sectors.

The new development planned require more mechanization with motorized equipment and the need of the ventilation is indispensable to work in safe conditions.

In order to minimize ventilation costs, it is preferable to opt for a ventilation system with automated regulating doors that can be operated from the surface. This system will facilitate the orientation of air fresh only in needed area. To ensure an optimal supply or distribution of fresh air in compliance with health and safety requirements, air flow sensors and gas sensors will be installed in several working areas. A ventilation shaft will be used as a fresh air inlet and connected to different areas of the mine.

The fresh air requirements in the underground mine are determined according to the method suggested by the Quebec Metal Mining Association Inc. Three approaches are used to estimate required fresh air flows taking into the consideration daily tonnage, mechanization degree, air speed, crushing equipment and number of employees. An average of the three approaches allow the estimation of the total flow rate to be injected into the mine.

The first step is the evaluation of the fresh air needed while the use of the equipment listed below. This evaluation is based on the power engine and their utilisation rate. The CANMET homologation was considered for the most part of this evaluation.

Table 46: Fresh air needed following the CANMET certification.

Equipment	Marque	Model	Qty	% of uses	Engine		Approval	Need in fresh air unit (m^3/s)	% applied to approval	Fresh air flow (m^3/s)
					Marque	Model				
Development drill	ATLAS COP	Boomer 282	1	0,5	Deutz	F5l912W	CANMET	2,93	100	1,465
Scoop	ATLAS COP	TS 1030	2	1	ATLAS COP	QSL9C250	CANMET	4,25	100	8,5
Production drill	SIMBA	M4	2	1	Deutz	TCD 2012 L04	CANMET	3,63	50	3,63
Emulsion charger	MacLean	EC3	1	1	Deutz	TCD 2012 L04	CANMET	3,64	100	3,64
Transport truck	Sandvik	TH315	4	1	Caterpillar	C15 (AD30), PN# 273 7265	CANMET	17,23	100	68,92
Wheeled loader	KOMATSU	WA800-3	1	1	KOMATSU	SAA12V140E-3	CANMET	4,81	100	4,81
Drill definition	Sandvik	DE110	1	1	Mercedes-Benz	OM904LA (148 HP)	CANMET	4,34167	50	2,17083
Truck	DUX	P1-Porter	1	1	Mercedes-Benz	OM904LA (173 HP)	CANMET	3,72833	100	3,72833
Transport	Toyota	Landcruiser	5	1	Toyota	D1503T (127 HP)	CANMET	3,445	50	8,6125
									Total	105,48

The required fresh air using the equipment listed above is 105.48 m^3/s. The total fresh air flow required to adequately ventilate the mine, calculated using the average of the three approaches mentioned above, is estimated at 172 m^3/s, or 364.46 KCFM, including a contingency of 10 % to take into account possible losses in the pipes.

During the initial development within the ramp the ventilation will be carried out by the auxiliary fans in series up to the level 2000 before being connected to the global system. Connections will be made as the ramp continues to the lower levels of the mine. The Fresh air will be conveyed into the mine through a 3m diameter vertical shaft and will draw air downward into different mine levels and the stale air comes out of the mine through the different ramps. Auxiliary fans will be required, however, to carry air into areas hard-to-reach, refuges and other by-pass circuits away from the main ventilation system.

The recommended ventilation system is an aspiring system with the main surface fan. In addition the geometry of the mine Zgounder, promotes the circulation of natural air in a large part of the mine which would help lower ventilation costs. The configuration of the upper part of the mine consists of interconnected galleries (from previous operations) secondary fans or booster will be installed if we should return to exploit the old working places.

To ensure optimal supply or distribution of fresh air, in compliance with health and safety requirements, air flow sensors and gas sensors should be installed in several work areas and in the

ramp. In order to allow easy movement of mine workers, the maximum speed of air in the crossing point should be limited to around 10m/s. GMG has carried-out preliminary calculation using VentSim[c] with the proposed UG main developments.

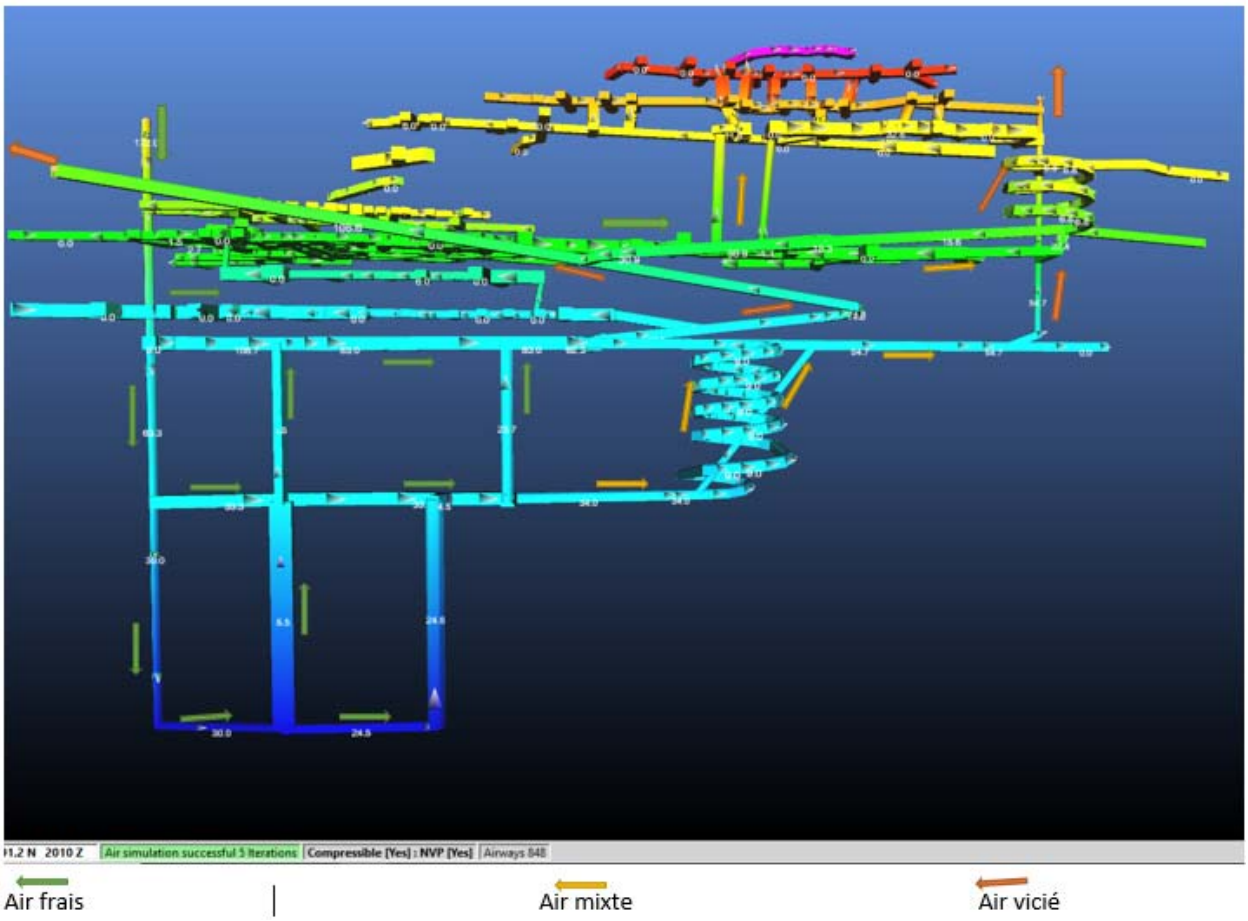


Figure 119: VentSim preliminary circuit

The above figure shows the suggested ventilation circuit design. The fresh air is supplied from a ventilation raise drove from the north-west side of the mine. This ventilation raise feeds with air the different levels of the mine including the main underground shaft that that does not go up to the surface and at the same time follows the progression of development of lower levels. Fresh air is directed from drifts towards different working places of the mine employing when necessary secondary fans or boosters to reach remote working spaces. Regulators and doors will be used to direct fresh air towards these areas as it is imposed by the "on demand" principle.

Part of the stale air will be evacuated by the main ramp, while the other part will flow to the surface through a ventilation chimney situated to the north-east of the mine.

Since the deposit is located on an hillside, it does favor natural ventilation in the upper part of the mine above level 2000 meters. This natural ventilation compensates a good part of the required fresh air, thus somewhat reduces ventilation cost.

16.10 Manpower

At the moment of the redaction of this report the total manpower for the Zgounder project is 190 workers (10 administration in Casablanca city and 180 employees and contractors at the mine site). When the production will be at 500 tpd the manpower of ZMSM will increase with a total of 244 workers (14 administration and 230 employees and contractors at the mine site).

Except for the geology (exploration and production planning), laboratory (analysis and samples preparation), mill operations and the mine site administration, all mining operations will be done by contractors. GMG has access to monthly financial costs of the mine and is in agreement with this figure. Moving to the 2000 tpd will require RFQ to secure costs and precisely define the man power requirements as well as base camp facilities.

17 Recovery methods

FOREWORD

The intent of Maya is to stepwise increase the Zgounder mill feed rate from +/- 200 tonnes per day to 2,000 tonnes per day.

+First step is to increase the mill feed rate to 500 tpd (2018 -2020).

+Second step is to increase the mill feed rate to 2,000 tpd (2020 -2027).

The object of this chapter of the PEA is to describe in broad details the mill operation at 500 and 2,000 tonnes per day. If this PEA proves successful, the 500 tpd operation will be dealt later in a future prefeasibility study. Important to mention that the Xinhai 500 tpd gravity-flotation mill parts are already on-site and the infrastructures are being built by entrepreneurs at the moment of writing this report.

17.1 500 tpd process description

The 500 tpd process plant designed to recover the silver by a gravity-flotation process followed by the cyanide leaching of the gravity and the flotation concentrates will comprise two different entities. The upper mill (located at higher elevation), designed by Yantai Xinhai Mining Research & Design Co., Ltd. (Xinhai), which will be located some 1,5 km from the actual mill (actually under construction at the moment of writing this report) will incorporate the following sections : run of mine ore storage, a three stage crushing plant, two 500 tonne fine ore bins, a two stage grinding bay integrating gravity, a flotation section followed by gravity and flotation concentrates thickening and regrinding spaces. See Xinhai flowsheets and plant drawings in Appendix.

The lower mill (actual Zgounder mill), except for the removal of the two small ball mils and the change of the present clarifier by 4 filter-presses will essentially remain the same as it is now. The "lower" mill will be fed by gravity from the gravity-flotation concentrates (cyclones O/F) coming from the "upper" mill.

17.1.1 **Crushing**

Material coming from underground grading approximatively 300 g/t will be hauled from the mine by off the road haul trucks and when possible will dump directly into the out of mine crusher feed hopper. However, because the mining and crushing operations will not always be on the same time schedule, it is assumed that 25% of the time the haul trucks will proceed to a RoM stock pile and the rest of the time will dump directly into the crusher feed hopper. Secondary handling of the mineralized material will be by a front-end loader that will, among other things, be used to feed the crusher hopper with the stockpiled RoM mineralized material as necessary.

The jaw crusher hopper will discharge on a middle-duty plate feeder which in turn will feed the primary jaw crusher. From the jaw crusher the mineralised material will be conveyed to a double deck vibrating screen in close circuit with a cone crusher. Top screen oversize falls by gravity into a smaller jaw crusher. The product of this crusher is mixed with the oversize of the bottom deck and are being conveyed to the cone crusher. Screen undersize is conveyed to two 500 tonne live load fine ore bins in parallel. Each fine ore bin has four apertures at the bottom discharging on a dedicated conveyor. Before entering the mill, the material is weighed with weight meters installed on each of the conveyors feeding the primary ball mill.

All in all, crushing capacity is approximately 100 tonnes per hour.

17.1.2 **Grinding**

The new "upper" mill is designed for a 500 tpd operation. From the fine ore bins, mineralized material will be conveyed to a primary ball mill. The ball mill will discharge on a sawtooth wave jig followed by a shaking table. Gravity tailings will report to a spiral classifier. Coarse particles from the classifier will discharge directly into the ball mill feed chute while fine particles will be cycloned. Cyclones underflow will be reground in a secondary ball mill while cyclones overflow will flow by gravity to a reagents conditioner before flowing to the flotation rougher. Gravity concentrate having a weight of approximately 0.65% of the mill feed rate will be pumped directly to a thickener before being reground.

17.1.3 **Flotation**

Flotation will comprise one rougher followed by one scavenger. Rougher concentrate along with the table concentrate will be pumped to a thickener prior being reground. Rougher tailings will be scavenged. Scavenger concentrate will be pumped to same thickener as rougher and table concentrates while scavenger tailings will be pumped to the tailings pond.

17.1.4 Thickening and regrinding

Rougher, scavenger and table concentrates will all be pumped two a thickener. Thickener overflow will report to the used water tanks while thickener underflow will be filter-pressed, repulped, cycloned and reground prior to leaching.

17.1.5 Thickening, leaching and counter-current decantation (actual Zgounder mill)

The "upper mill" regrind cyclone overflow will report by gravity to the actual "lower" mill thickeners in parallel. From the thickeners, pulp will be pumped to the first cyanidation tank of its dedicated leaching circuit. Each circuit consists of four identical 5 metre in diameter x 3.3 metre in height leach tanks operating in series for a total of eight tanks.

Contingent to the flotation mass pull, leaching time should be between 33 and 48 hours.

Each circuit consists of five 12 meters in diameter counter-current decantation (CCD) thickener type tanks for a total of ten tanks. The overflow solution from each tank is enriched by being pumped up to the preceding one while the underflow (slurry) is depleted from its silver content by being pumped down to the next tank. The tailings pump boxes and pumps are installed to pump the tailings slurry from both the final CCD tanks to the tailings pond. The overflow solution from each of the first CCD tanks passes to the silver recovery section.

17.1.6 Silver recovery and smelting

The silver recovery section is housed in a secure covered building and is common to both "lower" mill circuits. It incorporates the Merrill Crowe process for the recovery of silver using zinc dust cementation.

Main equipment consists of four filter-presses, a standard Crowe tank connected to a vacuum pump, a zinc cone dust feeder, two 1 m x 1 m filter presses, a pregnant and a barren solution tanks. The filter press sludge is dried, depleted from the remnant mercury in a static furnace and then smelted in a Wabi type furnace.

17.1.7 Tailings

The mill rejects (tailings pond) is not part of the GMG mandate. It is managed and designed by a Moroccan 3rd party. The conceptual design presented in this technical report is located at the same location as the existing one being used. See next figure for the 500 tpd mill flow diagram.

17.1.8 **Services**

17.1.8.1 Water

Water is supplied mainly from the barren solution tank and from the supernatant water from the tailings-polishing ponds. If not enough water coming from the tailings-polishing ponds, missing water will come from the small "Zgounder" stream flowing through a valley down from the mill. All water will be pumped to an overhead tank located directly above the "upper mill" and is allowed to flow by gravity to the required sections of the plant. Potable water is obtained from the source Mascot and will probably have to be pumped some distance to the plant site. Although the "Zgounder" stream ebbs and flows during the year, it is felt that there will always be sufficient water for the plant.

17.1.8.2 Electrical power

Presently, electrical power is supplied by 3 x 1000 KVA (800 KW generators). Two of these generators supply all surface and underground installations while the third one is standby. Since presently (200 tpd operation) the electrical demand for the whole plant is about 1,000 KW, at 500 tpd it is fair to predict that the new demand for the whole plant will be around 3,000 KW while around 75% of it will be for the mill operation alone. A new power line from the Office national d'électricité (ONE) is being brought to the Zgounder mine. This new power line rating 22 KV and having a power of 2500 KVA will probably be powerful enough for the milling operation.

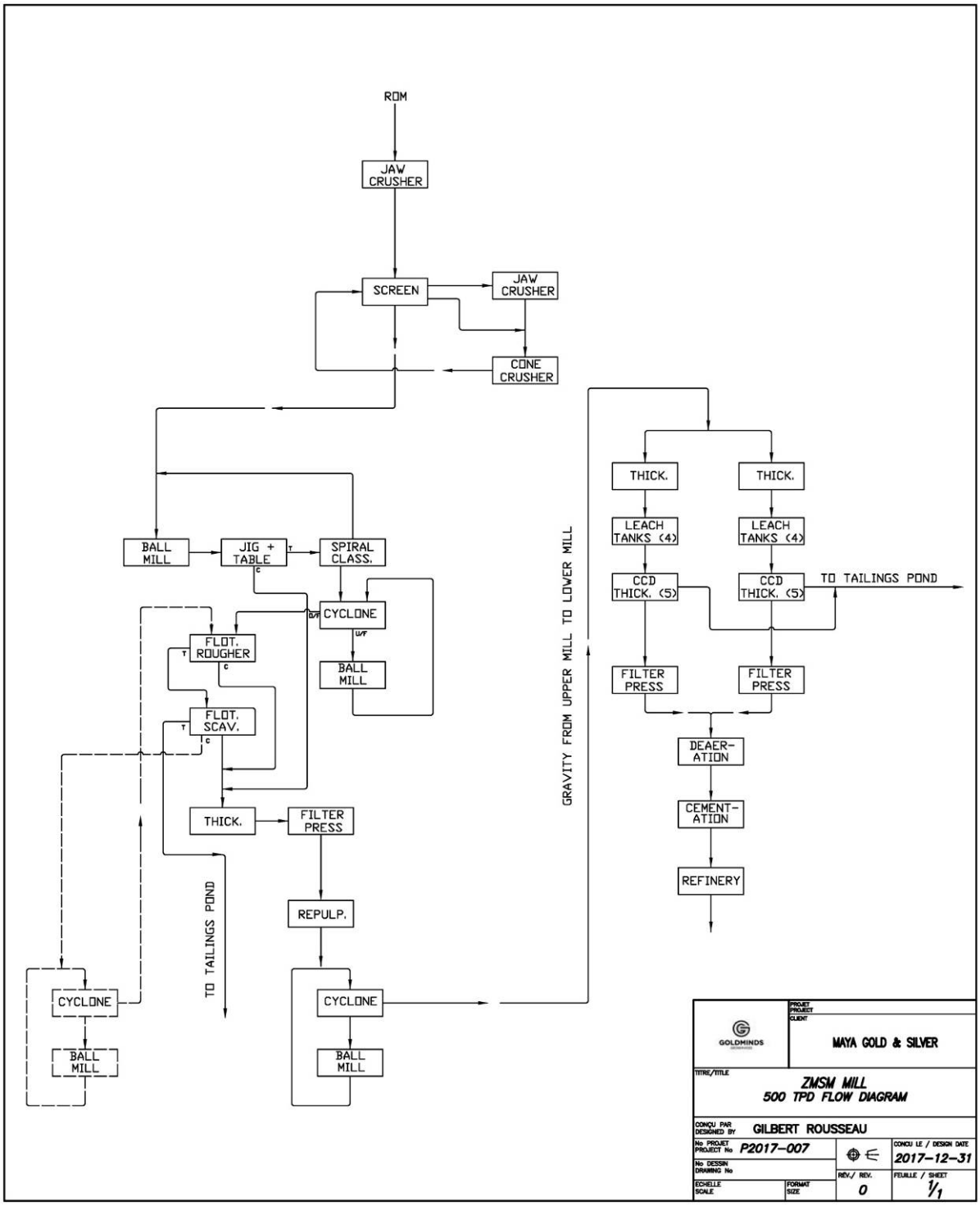


Figure 120: Maya PEA – 500 tpd Flow Diagram.

However, at least one diesel power generator will have to stay online to service the rest of the plant (mining, offices, shops, etc).

17.1.8.3 Laboratories

A combined assay/metallurgical laboratory is situated on site. The laboratory is equipped with pieces of equipment such as laboratory crushers and pulverisers, fire assay oven, precision balances, atomic absorption spectrometer (AAS), chemicals, glassware, laboratory sieve screens, flotation machine, etc.

17.1.9 **Mill operating costs (OPEX)**

A mill operating cost of US $40.00 per tonne for 2018 and $30 per tonne for 2019 and 2020 has been set for the 500 tpd mill and is strictly for the mineral processing and the recovery of the silver from the mineralized material. The limits for the cost estimation start at the RoM storage and end at the tailings pumps. General and administrative costs (G&A) are included but are limited to the mill operation and do not consider any costs related to the mine or Maya Gold & Silver head office.

Milling costs are mainly based on salaries, consumption of reagents and other consumables, supplies and power. The costs presented exclude the fringe benefits[6]. The mill operation cost is considered to have an accuracy of +/-35%.

Reagents and other consumables are limited to the crushers wear plates, bowls and mantles, grinding mills steel balls and liners, chemical reagents for the flotation, flocculent for the thickeners and CCD tanks, sodium cyanide and lime for the leaching circuit, lead nitrate and zinc dust for the Merrill Crowe circuit, fuel oil, silica sand and other fluxes for the refinery, gas oil for the loader, gasoline for the pick-up trucks, some chemicals for the assay office and mill laboratory and different lubricants for the mill machinery.

17.1.10 **Construction costs (CAPEX)**

Because the new "upper" mill will not require heavy infrastructures, an amount of only US $5,000,000 has been allotted by Maya to increase the mill capacity from +/- 200 tpd to 500 tpd[7]. The construction cost is considered to have an accuracy of +/-50%. GMG has seen the proposed cost of the mill from Xinhai at 2.5 Million USD hence provision for infrastructure and accessories is estimated at 2.5 Million USD.

[6] Except 2 weeks vacation for all employees

[7] This construction cost was provided by Maya and was not verified by Goldminds. However, it is deemed to be in the accuracy range generally acceptable for NI 43-101 PEA's technical reports.

Figure 121: Infrastructures being built, delayed by snow falls (Feb 6th 2018)

17.2 2,000 tpd process description

For the 2,000 tonnes per day operation (2020 – 2027), ZMSM will need a complete new mill. Mill feed averaging 231 g/t (at least for years 2021 to 2024) will come from 3 different locations. Around 45% will come from the open pit, 12% from the old tailings and the other 43% from deep underground mineralized sectors. To have a smooth and steady operation and to avoid large variations in feed grade and quality, the design criteria for the processing plant is based on a continuous and homogenous feed rate from all sources. The 2,000 tpd process plant will be designed to recover the silver mainly by cyanide leaching followed by a CIP (carbon in pulp) process. The mill tentatively proposed by Goldminds Geoservices Inc. (GMG) will be located some 0.4 km from the actual mill and will incorporate conceptually the following sections: run of mine ore storage, a one stage crushing plant, two fine material bins, a two stage grinding bay integrating gravity[8], cyanide leaching followed by carbon adsorption, carbon elution and finally refining.

17.2.1 **Crushing**

A grizzly will scalp the oversize rock from both the underground and open pit mineralized material. The oversize will be broken in place with a pneumatic stationary rock breaker. Grizzly undersize falls into a hopper which in turn feeds an apron feeder. The apron feeder discharge on a series of belt conveyors which in turn discharge on an incline vibrating bar scalper. Bar scalper oversize falls by gravity into a jaw crusher while the undersize, the crushed ore and the fines from the apron feeder is ultimately conveyed to the fine ore bins. All in all, crushing capacity will be around 400 tonnes per hour to be in operation only one 8-hour shift per day.

17.2.2 **Grinding – gravity separation**

The fine material bins will discharge, via 2 apron feeders, on a set of belt conveyors feeding a grate discharge SAG mill in close circuit with a one deck vibrating screen. Circulating load ought to be in the order of 20% of the fresh incoming feed to the SAG mill. Screen oversize will be conveyed back to the SAG mill feed chute while the undersize will flow by gravity to two ball mills in parallel discharge pump box.

The two ball mills discharge, coupled to the SAG screen undersize is pumped to a set of Kreb type cyclones. Cyclones underflow, flows by gravity to two gyratory concentrators (one in operation and

[8] Because of a too large amount of gravity concentrate that cannot be poured in silver bars directly at the mill refinery, gravity will be installed only if concentrate is rich enough to be sent to an outside smelter or poured at site.

one spare). Gyratory concentrate is upgraded on a multi deck shaking table while the gyratory tailings report by gravity to a second pump box to be pumped to the ball mill feed chutes.

If rich enough, table concentrate is sent to an outside smelter while the table tailings are brought back to the ball mill feed pump box (see foot note).

17.2.3 Thickening – Leaching – Adsorption (CIP)

Cyclone overflow flows by gravity to a thickener. Thickener overflow reports by gravity to the mill process water tank while thickener underflow is pumped to the first tank of a bank of leach tanks in series. Last leach tank overflow is pumped to the first tank of a bank of counter-current adsorption tanks also in series (CIP).

This counter-current process is repeated until the carbon eventually reaches CIP tank No 1 at which point an air lift will be used to transfer loaded carbon to the loaded carbon recovery screen. Loaded carbon is screened and reports to the carbon wash tank. Leached tails will pass through a safety screen before being pumped to the tailings pond.

17.2.4 Carbon elution – Refining

The carbon elution – refining circuit comprises mainly a loaded carbon tank, an acid wash tank, a carbon strip vessel, a bank of electrowinning cells and an electric induction bullion furnace[9]. Stripped carbon is reactivated in a horizontal kiln, quenched and classified. Classifier oversize is ready to be reused while very fine carbon particles are filtered in a filter press and kept aside to be eventually shipped to an outside commercial smelter.

17.2.5 Tailings

Tailings from the undersize of the safety screen coupled to other miscellaneous waste streams from the process plant are combined in the tailings collection pump box and pumped to the tailings pond to settle. Supernatant water is allowed to flow by gravity to the polishing pond. Clear water from the polishing pond is finally pumped back to the process water reservoir. The conceptual tailings proposed by GMG should have enough retention time for natural cyanide destruction. An extensive tailings management facility study is required to concretise the proposed scenario.

17.2.6 Cyanide destruction

If ZMSM can not find a large enough space to store the mill tailings in order to have at least a 6-month retention time to permit natural detoxification of the tailings cyanides, then an INCO SO2-

[9] Only if electrical power is affordable. Otherwise, smelting will be done with fuel oil Wabi type furnaces.

Air unit or something similar will have to be added to the mill circuit. The 2000 tpd flowsheet diagram is presented next figure.

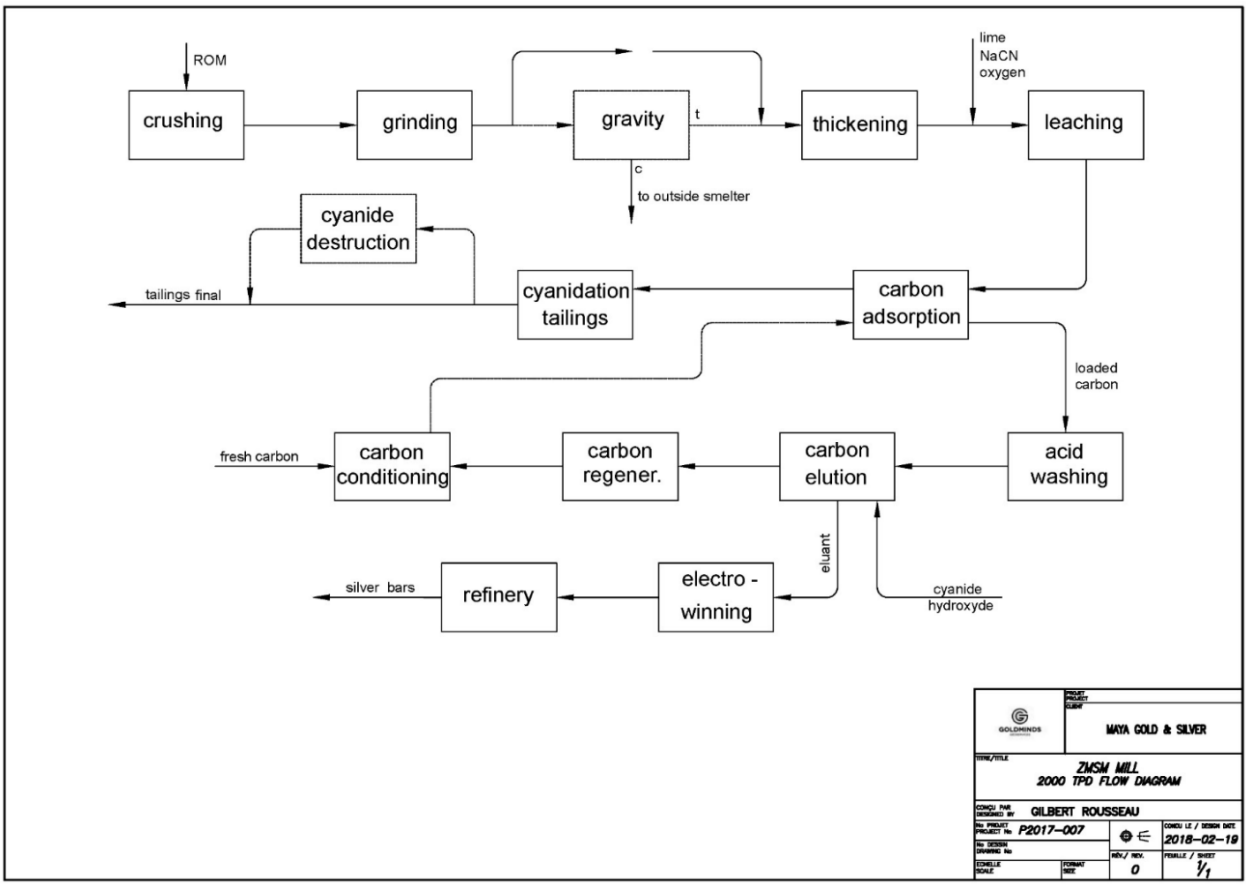


Figure 122: 2000 tpd flow sheet diagram

17.2.7 **Services**

17.2.7.1 Water

At 2,000 tpd, the demand for water will be approximately 2,500 m^3/d or 104 m^3/h. If during spring time, right after the thawing of the winter snow, there will be enough water from the thickener overflow, the small Zgounder stream (oued) and the tailings-polishing ponds supernatant water to supply the mill, it is far from being the case the rest of the year. On the other hand, it is felt that the Mascot source will be barely capable of supplying enough potable water just for the operation work force. If it has not been completely done for or during the 500 tpd operation, ZMSM will then have to actively look for other sources of water to secure the required demand. A retention dam within the Zgounder oued upstream should be consider for storage and as well for water level management and control during spring meltdown.

17.2.7.2 Electrical power

At that time (2025) electricity will be supplied by the Office national d'électricité (ONE) from a new 60KV/22 kV power line having a power output of 2 * 10 MVA. This new power line will be powerful enough to service the whole 2,000 tpd mining operation.

17.2.8 **Mill operating costs (OPEX)**

A mill operating cost of US $18.00 has been set for the 2,000 tpd mill and is strictly for the mineral processing and the recovery of the silver from the ore.

17.2.9 **Mill construction cost**

Here again because the new 2,000 tpd mill will not require a heavy infrastructure, an amount of US $20,000,000 as been allotted in 2024 to build a completely new 2,000 tpd mill. The construction cost is considered to have an accuracy of +/-50%. GMG has seen a proposal for a 2500 tpd similar mill for 8.5 Million USD and is comfortable with the new mill capex in this context.

A complete geotechnical investigation of the proposed mill site is required as cut and fill will be required to prepare the mill pad.

18 Project infrastructures

18.1 Zgounder mine site and access road

Maya Gold and Silver has done several works just before the start of operations at Zgounder mine. Maintenance works on the processing plant, the installation of the second crusher and purchase of equipment and glassware for the mine laboratory.

The 5.5 km gravel road between Askouan and the mine site has been rebuilt. Maya has also built a new permanent concrete bridge at the entrance of the mine (level 2000) with appropriate drainage to allow trucks and other machines to cross Zgounder oued.

18.2 Major on-site infrastructures

18.2.1 Electrical energy

Three generating units of 1,000 kVA (850 kW) are used at Zgounder mine. Two of them run in parallel while the third generator is a spare. The estimated power demand for the project is 1,690 kW and is summarized below.

Table 47: Estimated Power Requirement.

Description	kW
Concentrator	780
Mine - general services	400
Mine - compressed air	460
Surface and repair shops	50
Total	**1,690**

Maya Gold and Silver intends to connect the Zgounder mine to the national power line at Askaoun (the closest village to the Zgounder mine) for the mill starting operations at 500 tons per day. The new power line rating 60 KV will follow the current path of the low 22 KV ande will probably be powerful enough for the 500 tpd milling operation. Afterward, Maya Gold and Silver will increase the capacity of milling to 2000 tons per day in 2021. The available national electrical energy at Askaoun village is not powerful enough to supply the 2000 tons per day mine installations. For this reason Maya Gold and Silver plans to connect the Zgounder mine to the National power line brought from Taliouine and discussion with ONE set the total Capex to USD3.5 million for the 56km line. Meetings with ONE are schedule for June 2018 on the matter for the exact path and procedures.

18.2.2 **Water line**

A new water line should be installed for the 2000 tpd mill upgrade and there is provision in the Capex for this.

Potable water is brought from groundwater well located near the accommodations camp area. A chlorine treatment process is needed for water disinfection. Then treated water will be distributed in a piping ring to serve all potable water users in all facilities.

18.2.3 **Tailings**

The existing tailing should be reinforced and modified conceptually to accommodate the whole mine life of the PEA. A polishing pond with water containment of 450,000 cubic meters is scheduled to assist in the management of recycle water. Provision for a water treatment plant near the polishing pond is planned. A geotechnical study is needed for the new tailings, polishing pond and should include all required safety factors during dike construction up to the closure of the mine. The current design by GMG is conceptual.

18.2.4 **Site camp**

The staff housing and offices have already been renovated. Expansion of the existing accommodation camp (on-site personnel and administrative building) will have to take place to house the new mining crews and support personnel increase. The provision for the camp expansion is in the existing capex.

A nursing home was built on the site with the acquisition of an ambulance.

18.2.5 **Compressed air**

Three electric compressors are used at Zgounder mine two of them are delivering 25m^3/min (415 l/sec) each for a total of 830 l/sec, which is sufficient for mine production. The third one is rated at 18m^3/min (300 l/sec) and was purchased as a back-up unit.

The estimated requirement of air consumption for mining is outlined in the following Table 48

Table 48: Mine Compressed Air Requirement

Mine Compressed Air Requirements	Number	Demand l/s	Usage %	TOTAL l/s
Long-hole drill - A Copco BBC 120	1	167	70%	116.9
Jack Legs - A Copco BBC 17	6	60	50%	180
Stopers - A Copco 46	4	75	50%	150
Blower pipes, small tools & miscellaneous	2	100	25%	50
Shops and repairs	Estimation			50
			Sub-total	547
			Losses: 10%	55
			Total: l/s	602
			Total: m^3/min	**36**

The total air requirement is then 602 l/sec, which is 75% of the output of the two largest compressors. There is therefore more than sufficient available compressed air at the site. The concentrator operates on its own system of compressed air. Dimensioning of additional compressed air equipment during production increase will have to be refined and calibrated. Each of the mineralized bodies will have its mining method determined as some of the mineralized zone may be mined by traditional manner to reduce mine dilution and define amount of working air required.

18.2.6 Repair shop and warehouse

These installations are in place and some minor repairs were completed. This will have to be resized over time.

18.2.7 Explosive magazines

The explosive magazines are in safe area at about 150 meters from the offices. This will have to be resized over time.

18.2.8 On-site roads

The existing roads from the main offices to the concentrator were completely rebuilt. For the construction of the 500 tonnes/day mill and the widening of the existing road will be required. Probably before the start of the open pit operation others roads have to be built to the pit and to the dump. All bridges and culverts were rebuilt and proper drainage has been put in place. These may require modifications in the future.

18.2.9 Concentrator

This item is fully described in section 17.

19 Markets studies and contracts

Project economics have been assessed using the following silver metal prices, which were selected referencing current market, recent historical prices, price forecasts, and other recent projects (Table 49).

Table 49: Silver price used for this study.

Year	2018	2019	2020	2021	2022 to 2027
Silver price USD	$17.50/oz	$18.50/oz	$19.50/oz	$20.50/oz	$21.50/oz

As silver is an open traded commodity, it is possible to observe prices on the market. The yearly average price in the study is $20.50. The 5 years trailing average set the current silver much higher than market. The author has made an internal market study by consulting the 10 major silver producers (First Majestic, Pan American Silver, Hecla, Tahoe, GoldCorp, Agnico Eagle just to name a few) with public information available to prepare the silver price used in this study where at short term the silver price is close to the market and increase slightly over time but remaining significantly lower than the 23USD/Oz found in one company forecast as well as another source extreme highly speculative of 50USD/Oz by 2020. The lower hand price was found to be 16USD/Oz by USGS. An extensive study on worldwide production labelled MCS-2018-silver.PDF can be found on USGS web site. The authors are not aware of any specific contract except the refining contract with a group in Switzerland.

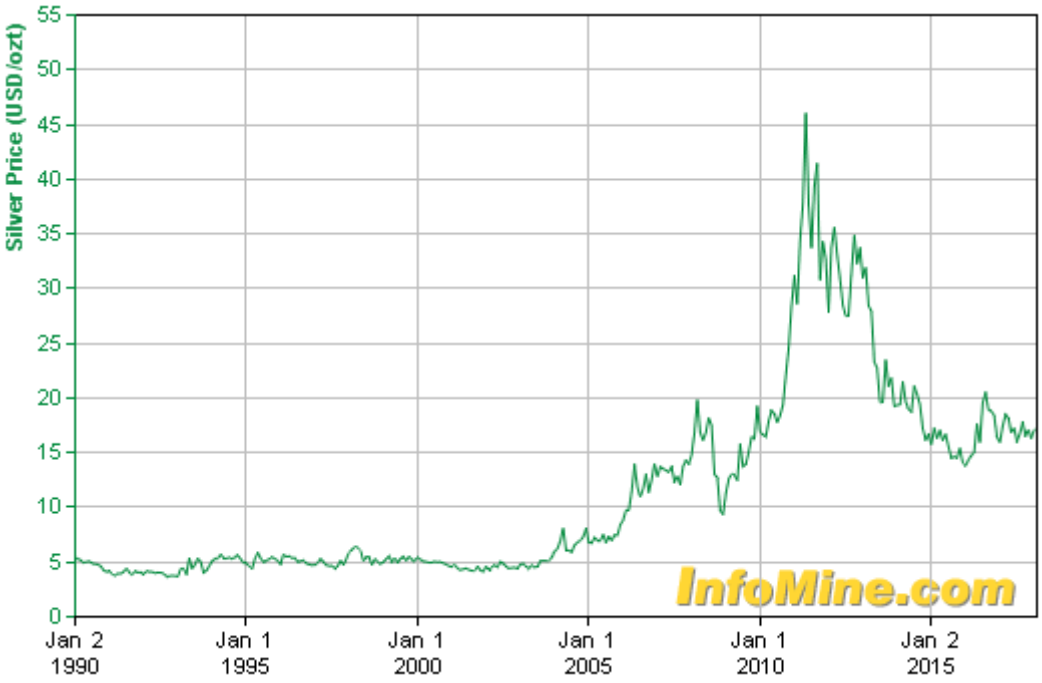


Figure 123: Silver price during last 28 years (source infomine.com).

On the figure above (Figure 123) you can explore silver's price history. Silver maintained a trading range under $10 for years and prices did not climb above $10 per ounce until 2006 with a minimum of 3.68 USD/oz in 25th, March 1993. In 2008, silver price double to about $20 USD/oz. This silver price increase can be explained by the breaking financial crises of 2008/2009 that saw the global banking system nearly collapse. Silver prices once again came back down to around $10 USD/oz just before the historical climb in price with a maximum nearly to $50 USD/oz in 2011 (Figure 123).

For the last five years (Figure 124), silver price shows a negative tendency and reach a bottom in 2016 at less than 14 USD/oz. Since that time, silver price has risen slightly and has essentially been ranged between $15 and $20 USD/oz.

Figure 124: Silver price for the last 5 years (source infomine.com).

The last year (2017) the precious metals price saw some ups and downs, but overall the price was around 17.2 USD/oz (Figure 125).

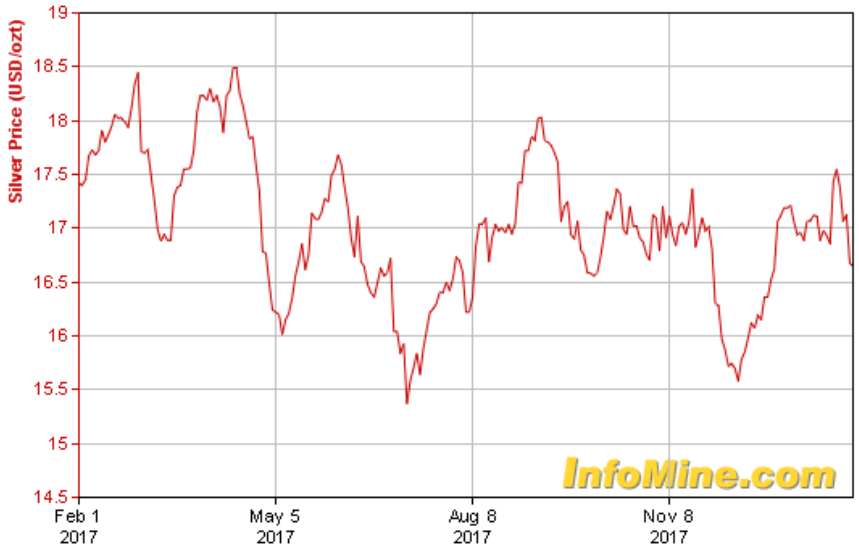


Figure 125: One year silver price (source infomine.com)

The project being in Morocco with manpower and certain commodities being paid in Dirham (MAD) the project is also subject to variation in currency between USD to MAD. This feature has not been analysed in details in this study. A conversion of 10 to 1 for easier calculation is used conceptually in this PEA, the tendency looks like the MAD is getting stronger and closed at 9.14 on Feb 14th 2018.

Figure 126: Exchange rate USD to MAD 2019 to 2018

20 Environmental studies, permitting, and social or community impact

FOREWORD

Most of the information in this section is based from 3rd party information and are being reproduced and additional information has been added to the information by GMG.

20.1 Summary

The Hydraumet study (2013) was realized to evaluate the environmental and social impacts of the reopening of the Zgounder silver mine.

Since 2014, Engitech did several site visits for the environmental monitoring of the Zgounder site.

The Zgounder mine has been in operation from 1982 to 1990 and was relying on a cyanide leaching process to recover the silver metal. Two tailings sites are present and the Hydraumet analysis results indicated the presence of remaining cyanide that could be harmful.

GoldMinds Geoservices and SGS Geostat, proposed in 2014 the following recommendations:

- The installation of a cyanide destruction circuit in the concentrator.
- Collect samples at depth from the tailings ponds for cyanide content verification.
- Add lime to the mill tailings to raise the pH and precipitate the heavy metals directly in the tailings pond.
- Install a basic heat transfer system (condenser) to recover all the mercury fumes from the mercury exhaustion static oven.

In addition GoldMinds Geoservices proposes in this report the following recommendations:

- More sampling should be done by ENGITECH upstream and downstream for water sampling to get more resolution on the contaminants distribution on the Zgounder site.

- Take measurements of the suspended solids for all outfalls of wastewater and rain water within the site.

- Compile all the results (all analyzes of wastewater and groundwater) in the annual environmental report of the Zgounder mine.

- Maya Gold and Silver does not take into the consideration the air quality in the environmental monitoring of the Zgounder site. As discussed in the PFS report of 2014 the site characterization has to cover both the air quality on the site and the vicinity. The results have to be compared with the values of the Decree on the limitation of air pollution in the mining sector.

- The quality of drinkable water at the mine site necessitates a chlorine treatment to reduce the concentration of pathogenic aerobic microorganisms.

- A wall or a barrier has to be built down the old tailings to avoid the Zgounder oued contamination. GoldMinds Geoservices included the old tailings in the recent mineral estimates. The presence of Zinc element downstream oued zgounder let us believed that the old tailings infiltration is the main source of contamination.

- For the new tailings a water retention ponds have to be dug between the main tailings pond and the Zgounder oued to prevent contamination in case of overflow during rainstorms periods.

According to Hydraumet, four (**4)** permits are required for the Zgounder project, they are:

1- Land Title

The land title No.09/2096 has been provided by the Mining Department in Rabat. This land title agreement (leased) must be filed on behalf of the petitioner.

2- Operating License by Administrative Authorities

ONHYM delivered to Maya the operating license No. 2306 including prospecting. This license also provides surface rights and access to the property and allows any type of mining.

3- Building Permits

All the necessary premises for the operation of the mine already exist on the site. They will undergo an upgrade to improve the conditions of work and life. The new buildings will be subject to obtaining a building permit provided by the Municipality in accordance with regulations governing the planning.

4- Authorizations for use of public water

All necessary authorizations for the use of public water must be obtained from the Water Basin Agency of Souss Massa Draa, including the spring water or groundwater necessary for the mining process and the discharges of treated wastewater into wadis, and the temporary occupation of wadi banks.

Additional permits and/or modifications to the existing ones will be required to achieve the PEA proposed scenario.

20.2 Introduction

The first study of Environmental Impact (EIA) at Zgounder mine was prepared in 2013 by Hydraumet Morocco. Since 2016 several visits (three visits) were made by Engitech to integrate the environmental dimension into the managing and the mine activities.

General

The land area related to this impact study is covered by the title No 09/2096 provided by the Mining Department in Rabat. An operating license No. 2306 including prospecting license, surface rights and access to the property and allowing any type of mining was delivered to Maya Gold and Silver Inc. by the ONHYM.

The Zgounder Millenium Silver Mining S.A received the environmental acceptability for operating the Zgounder mine from the prefecture of Agadir Ida-Outanane on 15th august 2014.

المملكة المغربية
وزارة الداخلية
ولاية جهة سوس ماسة درعة
عمالة أكادير إداوتنان
قسم التعمير والبيئة
مصلحة البيئة

أكادير في: 15 2014

قرار رقم : 2014/21

قـــرار الموافقـــة البيئيـــة
والي جهة سوس ماسة درعة و عامل عمالة أكادير إداوتنان

- بناء على القانون رقم 12.03 المتعلق بدراسات التأثير على البيئة الصادر بتنفيذه الظهير الشريف رقم 1.03.60 الصادر في 10 ربيع الأول 1424 (12 ماي 2003) لاسيما المواد 1 و 2 و7 و19 منه؛
- بناء على المرسوم رقم 2.04.563 الصادر بتاريخ 5 ذو القعدة 1429 (4 نونبر 2008) المتعلق باختصاصات وسير اللجنة الوطنية واللجان الجهوية لدراسات التأثير على البيئة؛
- بناء على المرسوم رقم 2.99.922 الصادر في 6 شوال 1420 (13 يناير 2000) في شأن تنظيم واختصاصات كتابة الدولة لدى وزير إعداد التراب الوطني والبيئة والتعمير والإسكان المكلفة بالبيئة؛
- بناء على المرسوم رقم 2.07.1303 الصادر بتاريخ 4 ذو القعدة 1428 (15 نونبر 2007) المتعلق باختصاصات وزيرة الطاقة والمعادن والماء والبيئة؛
- بناء على قرار وزيرة الطاقة والمعادن والماء والبيئة رقم 2558.07 الصادر في 19 من ذي القعدة 1428 (30 نوفمبر 2007) بتفويض بعض الاختصاصات إلى كاتب الدولة لدى وزيرة الطاقة والمعادن والماء والبيئة المكلف بالماء والبيئة؛
- بناء على قرار كاتب الدولة لدى وزيرة الطاقة و المعادن و الماء والبيئة المكلف بالماء والبيئة رقم 470.08 الصادر في 27 صفر 1430 (23 فبراير 2009) المتعلق بتفويض الإمضاء إلى السادة الولاة، نيابة عن كاتب الدولة لدى وزيرة الطاقة والمعادن والماء والبيئة المكلف بالماء والبيئة، على قرار الموافقة البيئية المنصوص عليه في المادة 7 من القانون 12.03 المشار إليه أعلاه؛
- بناء على قرار والي جهة سوس ماسة درعة رقم 90 بتاريخ 2009/09/07 القاضي بإحداث اللجنة الجهوية لدراسة التأثير على البيئة بجهة سوس ماسة درعة ؛
- بناء على رأي اللجنة الجهوية لدراسة التأثير على البيئة المنعقد **بتاريخ 07 غشت 2014**.

قرر ما يلي :

المادة 1 :تمنح الموافقة البيئية لمشروع **"إعادة فتح و تأهيل منجم الفضة بموقع الزكندر** بالجماعة القروية أسكاون، إقليم **تارودانت** والمقدم من طرف شركة « **ZGOUNDER MILLENIUM SILVER MINING S.A** »

المادة 2 : يلتزم صاحب المشروع باحترام خلاصات دراسة التأثير على البيئة وبنود دفتر التحملات المرفق بهذا القرار.

المادة 3 : تعتبر هذه الموافقة البيئية لاغية إذا لم يتم إنجاز المشروع خلال أجل أقصاه خمس سنوات ابتداء من تاريخ الحصول عليها.

والي جهة سوس ماسة درعة

والي جهة سوس ماسة درعة
عامل عمالة أكادير إداوتنان

إمضاء : محمد اليزيد زلو

Figure 127: Certificate of environmental acceptability for operation at Zgounder mine.

All necessary authorizations for the use of public water must be obtained from the Water Basin Agency of Souss Massa Draa, including the spring water or groundwater necessary for the mining process: the discharges of treated wastewater into Zgounder river (oued).

20.3 Chapter 1 - Overview of the project

This chapter of Hydraumet report describes in detail the mining industry in Morocco and the main characteristics of the Zgounder project.

20.4 Chapter 2 - Analysis of the legislative and regulatory framework

This chapter defines the legal and regulatory framework governing the mining activity and the extraction of metal. The most important highlights are summarized below:

- **Legal Texts**
  1. Dahir of 16 April 1951, Regulations concerning the mining sector.
  2. Decree No. 2-80-273 (February 18, 1981), Specifications prescribing the procedure applicable to the award of mining concessions under Article 89 of the Royal Decree of 16 April 1951 concerning mining regulations.
  3. Decree No. 2-57-1647 (December 20, 1957), Mining regulations in Morocco on brokerage institution or renewal of mining rights at the annual tax concessions, and work obligations at the expense of mining.
  4. Order Vizierial (March 11, 1938), General regulations on the use of mines other than mines fuels.
- **Related legal texts**
  - Dahir No. 1-69-170 of July 1969 on the protection and restoration of soil.
  - Order of the Director of industrial production and mining of December 29, 1954 as amended and supplemented by Decree of the Minister of Energy and Mines No. 167-01 of 21 Shawwal 1421 (16 January 2001) regulating the technical conditions for storage of explosives, detonators and fireworks firing explosives.
  - Vizierial order dated 2 January 1932 (23 Sha'ban 1350) regulating the use of explosives in quarries and construction sites, as amended by the Vizierial decree of February 24, 1940.
  - Royal Decree of 30 January 1954 (24 Jumada I 1373) on the control of explosives.
  - Law No. 11-03 on the protection and enhancement of the environment.
  - Law No. 12-03 on studies of environmental impact.
  - Decree No. 2-04-563 of November 4, 2008 on the functions and operation of the national committee and regional committees studying environmental impact.
  - Decree No. 2-04-564 04 November 2008 laying down rules for the organization and conduct of the public inquiry into the project subject to the studies of environmental impact.
  - Law No. 13-03 on the fight against air pollution.
  - August 25, 1914 Dahir regulating unhealthy institutions, inconvenient or dangerous, as amended and its implementing regulations.
  - Law No. 10-95 on the water.
  - Law No. 28-00 on waste management and disposal.

- Decree No. 2-07-253 of 18 July 2008 concerning the classification of waste and establishing a list of hazardous waste.
- Decree No. 2-97-787 of 4 February 1998 on water quality standards and inventory of the degree of water pollution.
- Law No. 78-00 on municipal charter.
- Law No. 12-90 on the town and its implementing Decree No. 2-92-832.
- 65-99 Act on the Labour Code.

➢ **Permits required**

According to Hydraumet, the four (4) permits required for the Zgounder project resumption are:

1- Land Title

The land title No.09/2096 has been provided by the Ministry of Energy, Mines and Sustainable Development.

2- Operating License by Administrative Authorities

ONHYM delivered to Maya an operating license No. 2306 including prospecting license. This license provides surface rights and access to the property and allows any type of mining.

3- Building Permits

All the necessary premises for the operation of the mine already exist on the site.

The new buildings will be subject to obtaining a building permit provided by the Prefecture of Agadir Ida-Outanane.

4- Authorizations for use of public water

All necessary authorizations for the use of public water must be obtained from the Water Basin Agency of Souss Massa Draa, including the spring water or groundwater necessary for the mining process and the discharges of treated wastewater into oueds.

➢ **Other legal conventions and guidelines applicable to the project.**

✓ **Ratified conventions applicable to the project**

This section described the five (5) international and the two (2) regional conventions ratified by Morocco and applicable to this project.

✓ **Grid boundaries used for the project**

In the absence of regulation at national level, international guidelines are applied. This section presents them all, in full details.

✓ **Institutional framework**

Many Moroccan institutions and technical departments are directly involved in the management of the environment. There are eight (8) Ministries involved by the environment and three (3) councils, or bodies, are also involved.

At the regional level, there is the existence of the:

- Agencies watersheds;
- Provincial Directorates of Agriculture, and the
- Urban Agencies: Regional Committees impact studies on the environment.

20.5 Chapter 3 - Natural environment

A well description is done in relation to the physical, biological and socio-economic environment of the project area and the sensitive characteristics of this environment are consequently highlighted.

In relation to the socio-economic activities, a Socio-Economic survey was conducted by Hydraumet throughout the intervention of the study, in Askaoun and villages that belong to the territory of the province of Taroudant. This survey was conducted in close collaboration with local authorities (Caïdat of Askaoun and president of the town). Social or community impacts related to the project were discussed during the Hydraumet study, mainly:

- Air quality: mainly dust control from the roads and the tailings pounds.
- Sound characterization and protection: for underground miners and operators of noisy machineries.
- Storm water runoff: it was mentioned that difficulties occurred in the past due to heavy rainfalls that have caused flooding and damages.
- Groundwater controls: secured and protect all tanks and reservoirs containing chemical products, oil, grease or combustibles, from leakages or spills by installing basins or appropriate collector devices.
- Wastewater discharges: identification and control, by septic tanks or other methods of all sewers from the plant.
- Soil Protection: re-vegetation of unused spaces to limit erosion.
- Fauna and Flora: mitigation of the impacts of the mine on wildlife measures are those required to bring a diversity of flora and fauna as the operation of the mine and especially during his rehabilitation.
- Usage of cyanide: this item is fully discussed elsewhere in the report.

20.6 Chapter 4 - Characterization of current status of the project environment

20.6.1 **Hydraumet 2013**

Nine water collecting points have been identified in the vicinity of the project site for a reference of the groundwater and surface water in the study area. Analyses were performed on chemical parameters (sulfide (H_2S), parameters of organic pollution (BOD5, COD, TSS, dissolved O_2), and parameters of heavy metal pollution (cyanide, lead, mercury, arsenic).

Table 50: Water sampling coordinates and their identification.

Sample No.	Points	Lambert coordinates		Identification
		X (m)	Y (m)	
M 1	Source Tinghrif	275,756	416,642	Water Source
Ech 2	Amsirar	275,645	416,699	Water well
Ech 3	Ain Izegharne	273,737	417,787	Water source
Ech 4	Flow Tassiouite	274,361	419,047	Surface water
Ech 5	Ain macoste	274,336	419,039	Water sourcde
Ech 6	Leachate Dam	275,492	420,758	Leachate discharge
Ech 7	Downstream dam			Leachate discharge
Ech 8	Dam	275,421	419,387	Leachate discharge
Ech 9	On the Zgounder River	275,606	420,338	Surface water

The above table gives the coordinates and identification of the water sampling locations that are shown on the next figure.

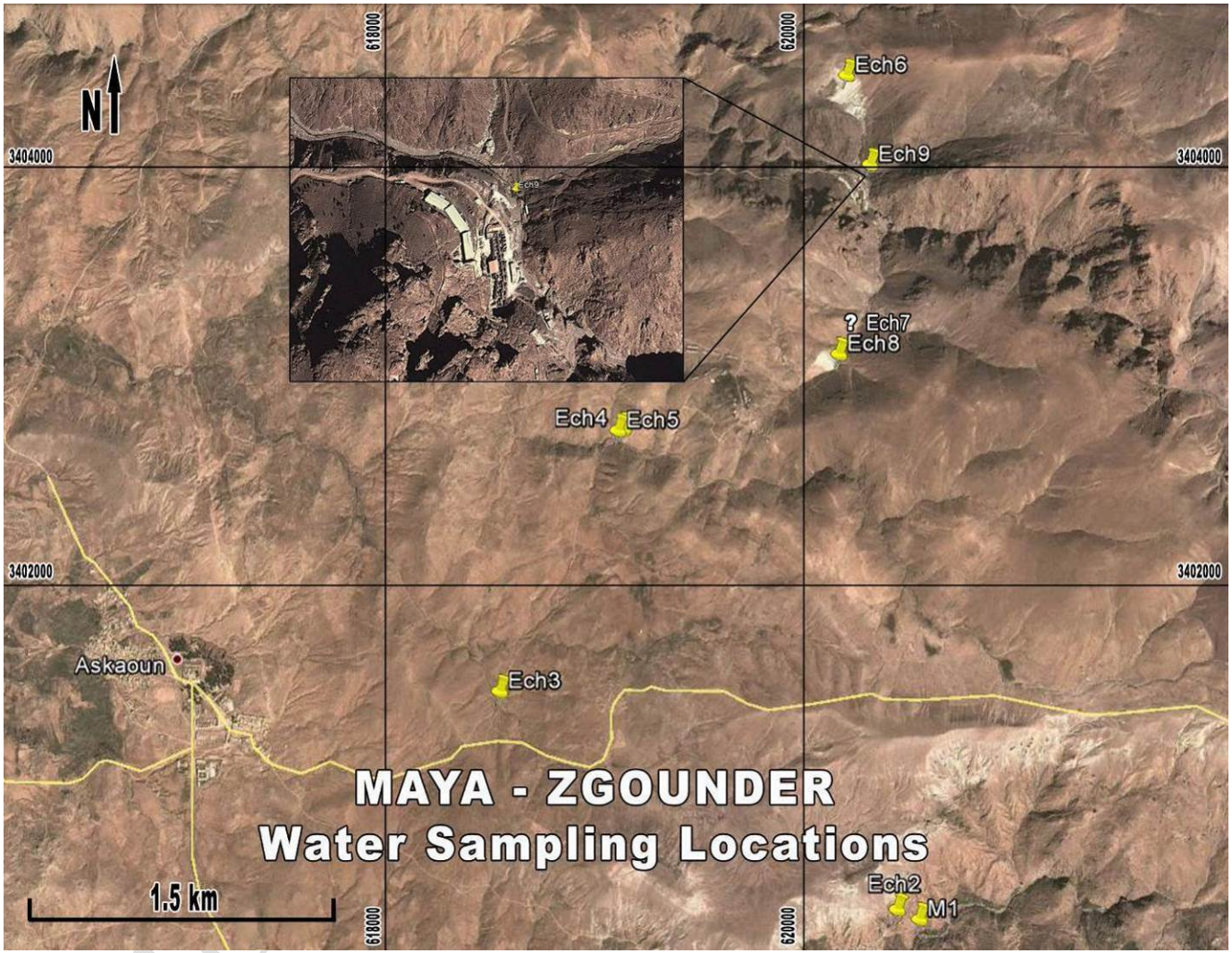


Figure 128: Water Sampling Locations done by Hydraumet in June 2013

- **Water quality**

The interpretation of the analyses results of nine samples taking from several locations around the Zgounder mine (before starting the operations at Zgounder mine by Maya Gold and Silver) are described below:

M1 (Source Tineghri tiliwo Tamaloute): In comparison with water quality standards for surface water source Tineghri tiliwo Tamaloute results are excellent.

Ech2 (Well Amsirar): Amsirar Well waters are in the drinking water standards and require a simple physical treatment and desinfection to fit human consumption needs. They are not polluted by liquid discharges from the mine.

Ech 3: Ain Izagharne: The Ain Izegharne water is of excellent quality.

Ech 4 Ain Tasstiwite: The Ain Tasstiwite water is of excellent quality.

Ech 5 Ain Zarghane at 9 km: The ain Zarghane water is of excellent quality.

Ech 6 (old tailings): The leachate from the old dam has characteristics are compliant with direct release into the environment standards.

Ech 7 (aval of the recent tailings): Downstream of the dam: Waters downstream of the new tailings are compliant with direct discharges standards. These waters are not contaminated by solid and liquid wastes from silver mine.

Ech 8 (recent tailings): Water collected on the surface of the new tailings: The analyze results revealed that the accumulated water is high in cyanide with upper limits for direct release into the environment values levels. This content comes from previous processing activities of CMT at the Zgounder mine. There is a risk of leaking into surface water and soil pollution.

Ech 9 Zgounder Oued: Analyses show that the waters of the Zgounder river (Oued) located about 1 km south of the new tailings have high cyanide content, making it a poor water quality body in this setting.

20.6.2 Environmental monitoring done by ENGITECH

ENGITECH is responsible for the environmental monitoring at Zgounder site. The monitoring objective is the integration of the environmental issue within the Zgounder mine activities. ENGITECH made a site visit before the start of operations at the Zgounder mine. Since the beginning of operations at Zgounder, ENGITECH has made three site visits (December 2016, March 2017 and December 2017) the certificates are inserted in the appendixes.

- **July 2014**

Four samples were taken from the Zgounder site in july 2014 and were analyzed at the certified laboratory IPROMA which is a subsidiary of ALS minerals (Spain). Those samples were taken while the first visit of ENGITECH before the start of Zgounder operations and are considered as reference samples. It is obvious that for Zgounder site the initial state is not the logical reference as the Zgounder mine was already in operation.

Two samples taken from tailings ponds (the old and the new tailings ponds) show signs of toxicity by arsenic and lead (see table below).

Table 51: Analyses of the soil samples taken from Zgounder site (in mg/kg).

SOL	Arsenic	Mercure	Cyanure	Plomb	Cadmium	Nickel	Cuivre	Fer	Zinc	Aluminum
Old tailings	210	0.6	<130	270	<1	38	230	60 000	580	59 000
New tailings	140	2.3	<130	180	2.5	<25	110	35000	630	39000
Terrasses /AD	1300	1.8	<130	1700	6.1	49	1000	160 000	2300	71000
Terrasses /ND	49	0.7	<130	90	<1	<25	80	27000	280	41000
*Norme vocat	30	2	-	200	2	50	100	-	250	1100
anomalies naturelles*	60-284	>2.3	550 en ZI	100-10000 1250 ZI	2-45	130-2075	65-160 500ZI	-	250-11420 1250 ZI	-

ENGITECH has identified five water points to sample at the Zgounder site (Figure below) that will be used as a reference for the characterization of surface and the ground water in the area.

Table 52: Water points sampled by ENGITECH.

Samples	Points
Ech 1	Old tailings
Ech 2	New tailings
Ech 3	E. Source (Zgounder cité)
Ech 4	E. Exahaure (O. Zgounder amont)
Ech 5	E. Oued Zgounder (O. Zgounder aval)

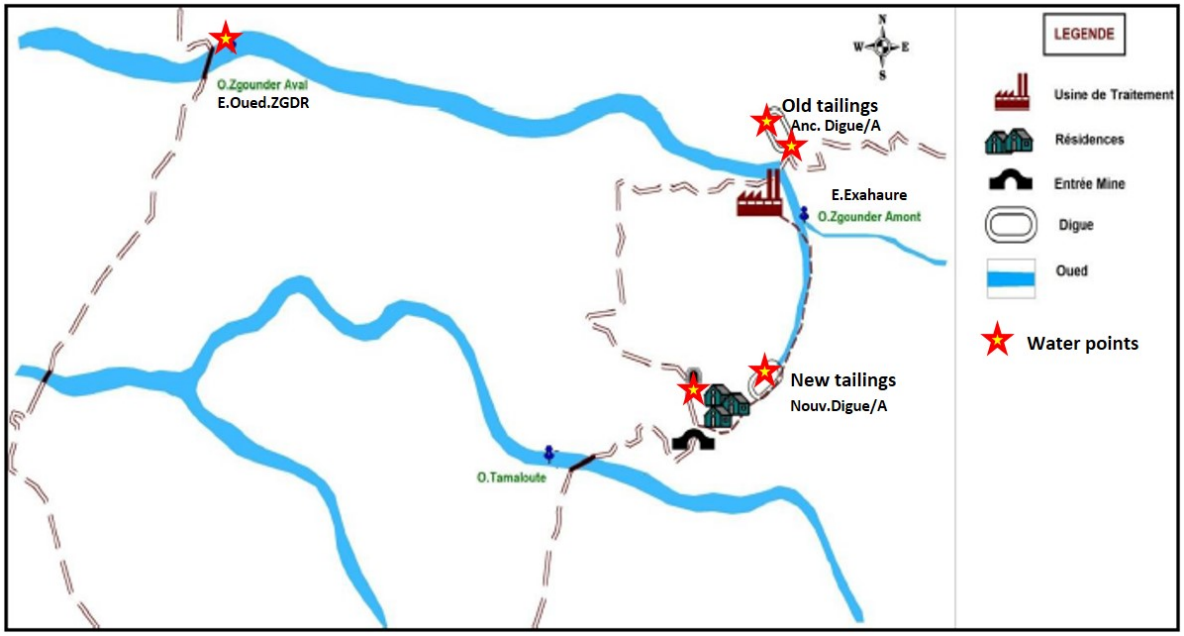


Figure 129: Localisation of water points considered as a reference for mine site characterization.

The main results of the bacteriological analyses made on the five water points are given in the table below.

Table 53: Bacteriological analyses on the water samples.

EAU	Germes totaux à22°C/ml	Coliformes totaux/ 100ml	Coliformes fécaux/100ml	E.Coli/100ml	C.sulfitoréducstrice	O.Némathodes
Old tailings	43 000	510	<1	<1	2	<1
New tailings	330 000	80	7	5	180	<1
E. Source	770 000	4	1	<1	9	<1
E.Exahaure	66	<1	<1	<1	8	<1
E. oued ZGDR	72 000	80	<1	<1	2	<1
Norme EP	100	0	0	0		
Norme irrig.			1000/100ml		0/450ml	0
Etat	Très mauvais	mauvais	bon	bon	Mauvais	bon

All the water samples analyzed are contaminated by germs except the sample taken from the ground water which seems to be protected.

Table 54: Toxic metals in the water samples.

Water samples	Arsenic mg/l	Mercure	Cyanure	Plomb	Cadmium	Nickel	Cuivre	Fer	Zinc	Aluminium
Old tailings	<005	<0.003	0.37	<0.01	0.069	0.1	<0.025	2.4	3.5	<0.1
New tailings	<0.05	<0.003	0.16	<0.01	<0.01	<0.01	<0.025	0.55	0.066	<0.1
E. Source	<0.05	<0.003	<0.012	<0.01	<0.01	<0.01	<0.025	0.21	0.27	<0.1
E .exhaure	<0.05	<0 .003	<0.012	0.022	0.03	0.13	0.026	0.15	9	<0.1
E. oued ZGDR	<0.05	<0.003	<0.012	<0.01	<0.01	<0.01	<0.025	0 .044	<0.025	<0.1
Norme EP	0.01	-	0.02	0.01	0.003	0.02	0.2	0.3	0.3	0.2
Norme irrig	0.1	0.01	1	5	0.01	0 .2	0.2	5	2	5
Etat	bon	bon	bon	bon	mauvais	bon	bon	Bon	bon	bon

The table above shows the contents of toxic metals in the water samples. Overall, the various water samples do not seem to be affected by metal pollution. Nevertheless, water sample taken from the old tailings show a slight overload of cadmium and zinc elements.

Table 55: Physico-chemical parameters of water samples.

Water samples	PH	Cond.us/cm	DBO5	DCO	MES	NTK	NH4	PT	SO4 mg/l
Old tailings	7.1	5000	<5	12	50	4.5	2.8	<0.05	2100
New tailings	7.7	3500	10	65	22	14	13	0.08	1400
E. Source	6.6	57	9	58	18	<2	<1	<0.05	1.9
E .exhaure	6.7	590	6	35	62.2	<2	<1	<0.05	200
E. oued ZGDR	7.2	430	<5	18	<5	<2	<1	0.09	120
Norme EP		200-1000			5				40
Norme irrig	6.5-8.4	2700			100-2000	30			250-1000
Etat	bon	mauvais	bon	bon	bon	bon			bon

- **December 2016**

In December 2016, water samples (Table below) were taken by ENGITECH and analyzed at Labomag laboratory (in Morocco).

The measurements and analyzes focused on the following parameters:

- Toxic metals in water (Cu, Zn, Pb, As, Hg, Cd, CN);
- Physico-chemical parameters of water (Ph, Eh, MES, DBO, DCO, NTK, PT ...);
- Toxic metals in the soil;
- Bacteriological parameters in drinking water.

Table 56: Water points sampled by ENGITECH.

Samples	Points
MS7-1	Oued Zgounder Amont
MS7-2	New tailings (actual digue)
MS7-3	Oued Zgounder Inter (base of the old tailings)
MS7-4	Oued Zgounder aval
MS7-5	Puits (ground water)

Table 57: Toxic metals in water samples, Zgounder site (December 2016).

EAU	Cuivre mg /l	Zinc mg/l	Plomb mg /l	Arsenic mg/l	Mercure mg/l	Cyanure mg /l
Oued.Znd.Amont	<0.01	<0.01	<0.005	<0.005	<0.0001	<0.01
Digue	59.25	521.4	0.31	14.969	1.85	0.39
Oued .Znd.Inter	0.02	0.19	<0.005	<0.005	<0.0001	<0.01
Oued.Znd.Aval	<0.01	0.11	<0.005	<0.005	<0.0001	<0.01
Puit.Znd.Aval	<0.01	0.08	<0.005	<0.005	<0.0001	<0.01
Norme EP	0.2	0.3	0.01	0.01	-	0.02
Norme irrig	0.2	2	5	0.1	0.01	1
Etat	-	-	-	-	-	-

The results compiled in the table below show the absence of contamination by metallic pollution in surface and groundwater. Their evolution from upstream to downstream seems to be generally constant except for the Zinc elements which shows slight fluctuations.

ENGITECH in their report approved that the cyanide circuit seemed to be well controlled in all the sites prospected. They even highlighted a decrease in cyanide concentration in recycled water emanating directly from the tailings polishing pond (from 0.58 to 0.39 mg/l during the last quarter).

The physico-chemical parameters of the water samples indicate generally neutral or slightly acidic with a basic tendency particularly at the tailings station. Since ENGITECH reports a gradual

increase in pH from 7.2 to 12 at the tailings station. The water at the mine site (ground water taken from the well, Table 59) are in tolerable quality and ENGITECH recommended a simple preventive treatment (disinfecting using chlorine treatment).

Table 58: Results of physico-chemical parameters.

EAU	PH	Cond.us/cm	NO3	NO2	NTK	PT	SO4	MES	DBO5	DCO
Oued.Znz.Amont	7.75	150	8.64	0.06	1.40	0.44	13.40	16	<5	<5
Digue	11.95	9420	8.90	2.93	179.2	0.37	166.9	35	15	2108
Oued .Znd.Inter	7.60	200	13.45	0.10	1.40	0.27	38.60	13	<5	<5
Oued.Znd.Aval	7.77	280	7.07	<0.04	2.80	0.16	59.80	13	<5	<5
Puit.Znd.Aval	7.91	190	9.30	<0.04	1.40	0.24	2.80	4	<5	<5
Norme EP		200-1000					40	5		
Norme irrig	6.5-8.4	2700			30		250-1000	100-2000		

Table 59: Bacteriological analyses of the groundwater at the mine site.

EAU	Micro-organismes revivifiables à 22°C UFC/ml	Micro-organismes revivifiables à 36°C UFC/ml	Coliformes thermotolérants à 44°C UFC/100ml	Spores de micro-organismes anaérobies sulfito réducteurs à 37°C (clostridia) UFC/100ml
Eau. Zgounder. Cité Situation Décembre	$4,9.10^2$ (N')	$9,4.10^1$ (N')	<3	$1,6.10^1$

- **March 2017**

In March 2017, several water samples were taken from different locations at the Zgounder mine. These water samples (Table below) were taken by ENGITECH and analyzed at Labomag laboratory in Morocco.

The measurements and analyzes focused on the following parameters:

- Toxic metals in water (Cu, Zn, Pb, As, Hg, CN);

- Physico-chemical parameters of water (Ph, Eh, MES, DBO, DCO, NTK, PT ...);

Table 60: Water points sampled by ENGITECH, March 2017.

Samples	Points
MS8-1	Oued Zgounder Amont
MS8-2	New tailings (actual digue)
MS8-3	Oued Tamaloute
MS8-4	Oued Zgounder aval
MS8-5	Puits (ground water)

Table 61: Toxic metals in water samples, Zgounder site (March 2017).

EAU	Cuivre mg /l	Zinc mg/l	Plomb mg /l	Arsenic mg/l	Mercure mg/l	Cyanure mg /l
Oued.Znz.Amont	0.08	0.06	<0.005	0.008	<0.0001	<0.01
Digue	192.3	942.4	<0.005	2.655	1.016	1890
Oued .Tamaloute	<0.01	0.41	<0.005	0.01	<0.0001	<0.01
Oued.Znz.Aval	0.03	0.04	<0.005	0.018	<0.0001	<0.01
Puit.Znz.Aval	<0.01	0.53	<0.005	<0.005	<0.0001	<0.01
Norme EP	0.2	0.3	0.01	0.01	-	0.02
Norme irrig	0.2	2	5	0.1	0.01	1
Etat	-	-	-	-	-	-

The results of water samples analyses show the absence of contamination by metallic pollution (Table above). Their evolution from upstream to downstream seem generally constant except for the Zinc element which shows a slight increase at the station situated downstream Zgounder oued. For the cyanide element the results are under the limit of detection for the four reference stations and 1890 mg/l for the station at the new tailings pond.

The physico-chemical parameters show that water samples are usually neutral or slightly acidic with a basic tendency at the tailings pond station. The well for drinking water at the mine site has undergone deepening works which explain the increase in Zinc element.

Table 62: Results of physico-chemical analysis, March 2017.

EAU	PH	Cond.us/cm	NO3	NO2	NTK	PT	SO4	MES	DBO5	DCO
Oued.Znz.Amont	7.96	110	<1.50	0.08	1.40	<0.2	21.50	5	5	6.8
Digue	9.80	6310	7.45	6.33	-	-	-	<4	<5	893.1
Oued .Tamaloute	8.03	150	2.49	<0.04	2.80	<0.2	24.1	10	<5	<5
Oued.Znz.Aval	8.06	140	<1.5	<0.04	1.40	<0.2	32.7	<4	<5	13.4
Puit.Znz.Aval	7.69	180	6.69	<0.04	1.40	<0.2	21	37	<5	<5
Norme EP		200-1000					40	5		
Norme irrig	6.5-8.4	2700			30		250-1000	100-2000		

Overall, it can be noted that the contamination of water by metals both upstream and downstream of the Zgounder mine continue to give normal results and no alarming sign was recorded.

- **September 2017**

In September 2017, six water samples were taken from different reference locations at the Zgounder mine. These water samples (Table below) were taken by ENGITECH and analyzed at Labomag laboratory in Morocco.

The measurements and analyzes focused on the following parameters:

- Toxic metals in water (Cu, Zn, Pb, As, Hg, CN);
- Physico-chemical parameters of water (Ph, Eh, MES, DBO, DCO, NTK, PT ...);
- Microbiological parameters (germs and bacteria).

Table 63: Water points sampled by ENGITECH, March 2017.

Samples	Points
MS10-1	Oued Zgounder Amont
MS10-2	New tailings (actual digue)
MS10-3	Oued Tamaloute
MS10-4	Oued Zgounder aval
MS10-5	Puits Znz Aval (groundwater)
MS10-6	Puit.Znz.Amont

The sample locations Tamaloute oued, Zgounder oued upstream and downstream were not sampled due to their complete drying.

Table 64: Toxic metals in water samples, Zgounder site (September 2017).

EAU	Cuivre mg /l	Zinc mg/l	Plomb mg /l	Arsenic mg/l	Mercure mg/l	Cyanure mg /l
Oued.Znz.Amont	-	-	-	-	-	-
Digue (S2)	0.01	11.10	<0.005	0.006	<0.0001	1.54
Oued Tamaloute	-	-	-	-	-	-
Oued.Znz.Aval	-	-	-	-	-	-
Puit.Znz.Aval	0.01	<0.01	<0.005	<0.005	<0.0001	<0.01
Puit.Znz.Amont	0.01	<0.01	<0.005	<0.005	<0.0001	<0.01
Norme EP	0.2	0.3	0.01	0.01	-	0.02
Norme irrig	0.2	2	5	0.1	0.01	1
Etat	-	-	-	-	-	-

The water samples indicate the absence of contamination by metallic pollution. The comparison between the upstream and the downtream of the Zgounder oued is not possible due to the absence of samples from the Zgounder oued location.

Table 65: Results of physico-chemical analysis, September 2017.

EAU	PH	Cond.us/cm	NO3	NO2	NTK	PT	SO4	MES	DBO5	DCO
Oued.Znz.Amont	-	-	-	-	-	-	-	-	-	-
Digue	8.05	4260	<1.5	<0.04	29.4	1.03	2380	7	40	82.2
Oued .Tamaloute	-	-	-	-	-	-	-	-	-	-
Oued.Znz.Aval	-	-	-	-	-	-	-	-	-	-
Puit.Znz.Aval	8.03	520	68.64	<0.04	2.8	1.11	30.74	<4	<5	<5
Eau Cité	8.11	210	6.62	<0.04	2.80	1.06	14.46	<4	<5	<5
Puit.Znz.Amont	8.10	410	<1.5	<0.04	2.8	0.29	19.98	<4	45	90.8
Norme EP		200-1000					40	5		
Norme irrig	6.5-8.4	2700			30		250-1000	100-2000		

The results of the physico-chemical analysis show that samples are generally basic. The ratio DCO/DBO5 reveal the presence of industrially low pollution water.

The bacteriological analyses (Table below) done on sample taking from the well water at the mine site indicates that the quality of the water remains degraded in terms of the microorganism manifestation. A chlorine treatment is necessary to reduce the concentration of pathogenic aerobic microorganisms.

Table 66: Bacteriological analyses of the groundwater at the mine site, September 2017.

EAU	Micro-organismes revivifiables à 22°C UFC/ml	Micro-organismes revivifiables à 36°C UFC/ml	Coliformes thermotolérants à 44°C UFC/100ml	Spores de micro-organismes anaérobies sulfito réducteurs à 37°C (clostridia) UFC/100ml
Eau. Zgounder. Cité Situation Septembre 2017	$2,3.\ 10^3$ (N')	$1,7.\ 10^3$ (N')	$4,6.\ 10^2$	0

Overall, the results of water samples at the Zgounder site continue to give normal results and no alarming sign was documented except the well water at the mine site. This water must be treated by chlorine before use.

20.7 Comments and recommendations

More sampling should be done by ENGITECH upstream and downstream for water sampling to get more resolution on the contaminants distribution at the Zgounder site.

The quality of drinkable water at the mine site is degraded and a chlorine treatment is necessary to reduce the concentration of microorganisms.

A wall or a barrier has to be built down the old tailings to avoid potential Zgounder oued additional contamination.

For the new tailings a water retention ponds have to be dug by the company betwen the main tailings pond and the Zgounder Oued to prevent oued contamination in case of overflow in rainstorms and thawing periods.

20.8 Chapter 5 - Project description-Mitigation measures

This chapter gives a mechanical, electrical and processing description of the whole plant.

- ✓ **Concentrator**

To offset the negative impacts of the cyanide, arsenic, lead and mercury, here are the recommendations.

- ✓ **Cyanide**

Recommendation to install at the concentrator a cyanide destruction circuit;
Re-process the old tailings at the concentrator where the cyanide will be totally destroyed.

- ✓ **Arsenic (and other heavy metals)**

If one or several of these heavy metals (including the arsenic) exceed acceptable limit values, lime should be added to the mill tailings pump box in order to raise the pH and precipitate the heavy metals directly in the tailings pond. Add Ferriclear[c] or similar product to precipitate soluble As in more stable form.

- ✓ **Mercury**

GMG recommends that a basic heat transfer system (condenser) be installed to recover all the mercury fumes from the mercury exhaustion static oven. The company is actually recovering as much as possible mercury at the smelting stage where fumes are being condensed and sold, about 87 litres have been recovered since beginning of production by ZMSM.

20.9 Chapter 6 - Environmental impact assessment

The Hydraumet study examined and measure the magnitude, both positive and negative effects, taking into account the different stages of the Zgounder silver mine.

The environmental impacts related to the Zgounder project may affect the following areas:

- The physical environment;

- The biological environment;

- The human environment;

Impacts on the natural environment may be :

- The change in air quality

- The change in water quality

- Changing soil

- Disruption of wildlife

20.10 Chapter 7 - Mitigations impact

A complete review is done of the procedures and steps that should be taken to reduce or offset any environmental negative impact during the mine operation.

The environment of the site has been characterized and sensitive items that may be affected by the project activities have been identified. Similarly, identification and characterization of matrix effects was developed using the sources of pollution activities and the affected receiving environments.

20.11 Chapter 8 - Monitoring plan

An Environmental monitoring is conducted by ENGITECH at Zgounder site to ensure compliance of the Mine activities.

1**. Water quality**

Several water samples were taken for physico-chemical parameters, toxic metals and bacteriological analyses.

GoldMinds Geoservices recommends to Maya Gold and Silver:

- To take measurements of the suspended solids for all outfalls of wastewater and rain water within the site.
- To compile all the results (all analyzes of wastewater and groundwater) in the annual environmental report of the Zgounder mine.

2. **Air quality**

Maya Gold and Silver do not take into consideration the air quality in the environmental monitoring of the Zgounder site.

As discussed in the PFS report of 2014 the site characterization has to cover both the air quality on the site and the vicinity. The results have to be compared with the values of the Decree on the limitation of air pollution in the mining sector.

3. **Noise**

Maya Gold and Silver do not take into the consideration the noise impact in the environmental

monitoring of the Zgounder site.

The Zgounder mine is located far from the village of Askaoun at about 5 km and the noise impact is not an issue for the villagers. Despite of the Zgounder location, some noise measurements has to be performed to determine if the activities of the mining operations emit unacceptable levels of noise and to evaluate the noise impact of the principal noise sources (explosives, transport equipment, crushers and grinders).

20.12 Chapter 9 - Guidelines for mine site reclamation

Like any industrial activity, mining can have negative impacts on the environment. The redevelopment proposals aim to eliminate the danger of the abandoned excavations and propose solutions that will help the soils stabilization and the site reintegration.

Thus, redevelopment options can be considered for the reclamation of the silver mine Zgounder:

Return to an agricultural state

This option is a recovery of the vegetation around the site for agriculture, forestry, landscape, ecological, etc. The techniques are generally fairly well understood, they allow recovering after restoration, soil with agronomic potential identical to the existing soil before extraction.

Reforestation

This option consists of a forest revegetation to comply with strict constraints, in particular the preparation of the soil, the choice of species and plants as well as maintenance.

Reclamation

The preferred option for the reclamation of the mine is the redevelopment of land for reforestation purposes, the steps to be followed are:

- Securing of berms.
- Properly sloping edges.
- Planting a plant screen on the berms by local species of trees and shrubs adapted to the soil conditions of the site that will be attractive for the mine and a habitat for local wildlife.
- For the creation of water bodies, the banks will have a sinuous contour and depth adapted to provide habitat for wildlife.

Any buildings or equipment on surface will be sold or recycled if possible, or otherwise demolished, waste will be moved from the site to an appropriate offsite waste management facility.

All site areas and roads not required for long term site management will be broken up, covered with

overburden as needed and revegetated.

21 Capital and operating costs

21.1 Capital costs

Capital expenditures (capex) required for the increase of production in the first step is estimated at $5 million for the 500 tpd. The other capital expenditures are not required at the beginning but later over the years and are included as sustaining capital for the purpose of the calculation. An estimated amount of $41.9 million is required. No contingency on the Capex has been added as it is a PEA. Estimates of capex purchases were mainly prepared using contractor prices in Morocco received from project owner and comparable prices for new equipment as well as in house prices of similar studies. Under the terms of the general conditions of a Preliminary Economic Assessment (PEA), the estimation of all costs is made with a margin of certainty of about 30%. In the next level study, the prices for machinery and equipment including delivery, taxes and a minimum of spare parts will have to be identified. Other than the mill cost quotes, no other detailed quotes were received. The summary and details of capital costs is provided in the following Tables.

Table 67: Capex Summary.

Description	Cost - US
Mill 500 tpd	$5 000 000
Mill 2000 tpd	$20 000 000
Shaft+Rock B.	$3 000 000
Ramp & Gallery	$6 400 000
New tailing	$1 500 000
Energy line	$3 500 000
Explosive magazine	$800 000
UG Maintenance room	$750 000
Site prep. mill 2000 tpd	$1 000 000
Air vent/Exit	$250 000
Exploration+Studies	$2 500 000
Water treatment plan	$450 000
Ventilation	$500 000
Upgraded Live Camp	$1 250 000
Total	**$46 900 000**

1US$=10Dirhams

Provision is made for additional studies and exploration for minimum of 2.5Million.

21.2 Surface capex

This section describes items required at surface required for the PEA ramp-up. The surface mining fleet is not considered in the Capex since the project owner intends using mining contractors. The

item identified requires these minimum amount.

Table 68: Surface Capex Summary

Description	Cost USD
New tailing	1 500 000 $
Energy	3 500 000 $
Explosive magazine	800 000 $
Site prep	1 000 000 $
Water treatment plan	450 000 $
Upgraded Live Camp	1 250 000 $
	8 500 000 $

21.3 Concentrator capex summary

The Capex and Opex for the mills are described in section 17 of this report.

Table 69: Concentrator Capex

Description		Cost USD
Mill	500tpd	5 000 000 $
Mill	2000tpd	20 000 000 $
		25 000 000 $

The current mill is operating. The capex above includes the mill cost, and the mill infrastructure construction estimated cost. The mill costs are from quotes by a Chinese mill supplier.

21.4 Underground mine capex

The mine is actually in operation and cost are known for extraction with the current mining team and mining contractors. The main developments and items are tabulated as capex for the PEA scenario presented and are estimated to be a minimum cost.

Table 70: Underground Mine Capex Summary

Description		Cost USD
Shaft+Rock B.		3 000 000 $
Ramp/Gallery		6 400 000 $
UG Maintenance room		750 000 $
Air vent/Exit		250 000 $
Ventilation		500 000 $
		10 900 000 $

21.5 Sustaining & working capital

As the mine is already in production and producing positive cash flow, no provision was made for sustaining and working capital. It is anticipated that most of the required cash will come from the operation profit. The expected life of mine (LoM) of 10 years as calculated in this study is short, and capital replacements costs are in theory very limited. The major equipment and vehicles have a replacement life which is fortunately and normally longer than the LoM. This being said the owner relies on the national mining entrepreneurs to supply the adequate mining fleet to achieve the production goals as it is doing right now.

21.6 Rehabilitation and mine closure

A preliminary amount of US$500,000 has been estimated for rehabilitation and mine closure in 2014. In this study GMG has elected to include 0.50$/tonne milled in environmental costs on the G&A provision line in the cash flow. This represent US$2.463 million for the life of the mine to set aside for the reclamation.

21.7 Operating costs

The estimated operating costs of development and mining were prepared mainly from Zgounder costs as provided by Maya ZMSM operation. For the extraction by open pit the costs are in range with contractor costs in Morocco.

Table 71: Operating costs at Zgounder Project for the PEA

Items	Cost US	Cost US/t milled
Waste development cost	$102,074,242	$20.72
Mineralized Material production cost	$51,842,142	$10.52
Mineralized Material process cost	$95,507,510	$19.39
General and Administration	$23,325,499	$4.73
Royalty & Management fees (incl. NPI)	$40,765,601	$8.27
Total	**$313,514,993**	**$63.63**

21.7.1 Direct mining operating costs estimates

The underground development costs in both waste and mineralization are actual figures and for the open pit they have been compared with other similar operations.

The underground mining cost of mineralized material up to June 2018 is the same as current cost and will be reduced due to mining a higher extraction level for an average of 25$/t in 2018, and 20$/t in 2019 up to the end of the mine life. The mining of mineralized material in open pit is expected to be 6$/t and 3$/t for the ancient tailings material. The combination of each source for year 2021 to 2027 i.e. 7 years is expected to have an average cost of 9.39$/t.

The underground mining cost of waste material is expected to remain the same for the whole project at 15$/t. The tonnage assigned to that cost is 10% of the production UG up to 2020 as most will be extracted from already well developed sectors. In year 2021 going forward, 20% of mineralized material (MinMat) ratio is assigned in waste and development costs.

The waste cost in the pit is estimated at 4$/t for the whole mine life. The waste development in pit may be used for infrastructure or mechanic fill in UG stope. The study did not get in such level of details. There is no optimization.

The processing cost varies from 40$/t in 2018 to 30$/t up to 2020 and stabilized at 18$/t for the rest of the mine life while processing of 2000tpd.

The administrative cost varies from 7.50$/t to 5$/t and reduces to 3$/t at 2000 tpd. The environmental cost provision of 0.50$/ is fixed for whole mine life.

As per owner information, smelting charges with insurance and shipping totals 0.21$/Oz.

The detailed development costs for the underground mine have not been prepared at this stage. As general information entrepreneur costs for different works are:

+ 1200 USD/m for 3m x 4m ramp

+ 1360 USD/m for 3.4m x 4m ramp

+ 1500 USD/m for 4m x 4m ramp

+ 4225 USD/m shaft 5x3.2m internal shaft with equipment

The 4691m main ramp system proposed with average of 6m/day advance over 330 day/year should take 2.4 years to complete, it is why this expense has been initiated prior to the 2000 tpd mill construction.

The company has monthly compilation cost control and management reports. The authors have had access to all these reports. A sample of the December 2017 report (tables) following figures is included to present the effective production cost at the mine to support the cost analysis and assumptions. It is all well itemized by department.

Figure 130: Extract of December 2017 monthly report with cost per Oz

Département Contrôle de Gestion

I. Coût de revient carreau mine ZGOUNDER

	Production	Unité	Charges	Prix de revient
Géologie	2 024	Heure	79 295,43	39,18
Laboratoire	2 769	Nbre échantillons	60 890,25	21,99
Maintenance	4 040	Heure	271 469,31	67,20
Exploitation minière	5 676	Tonnage extrait	905 093,76	159,46
Traitement	4 760	Tonnage traité	1 787 079,26	375,44
Total charges de production	3 103 828			

Total Charges de structures	264 988,59

Coût de revient technique

31,1035 G/once
10 Dhs/$ US

Production Métal (once)	44 129,63
Total Charges de Production	3 103 828,01
Coût de revient technique $/once	7,03
Total Charges d'exploitation	3 368 816,60
Coût de revient d'exploitation $/once	7,63

II. SERVICE TRAITEMENT

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Tonnage traité	5 411	3 536	2 503	4 217	4 972	4 514	4 750	4 760
Montant	1 681 886	1 385 966	899 037	1 532 047	1 620 314	1 632 960	2 057 143	1 787 079
Prix de revient	310.85	448,21	359,15	363,26	325,89	361,75	433,08	375,44

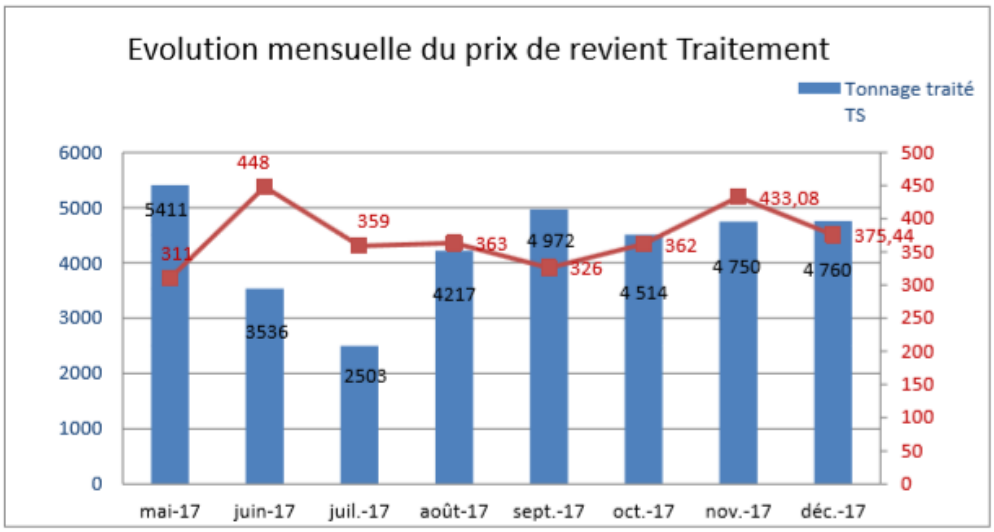


Figure 131: Extract of the December report processing service

SERVICE Fond

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Tonnage extrait TS	5690	4633	2177	6 060	5 300	4 876	5 378	5 676
Prix de revient DH/T	133	132	216	132	155	149	205	159

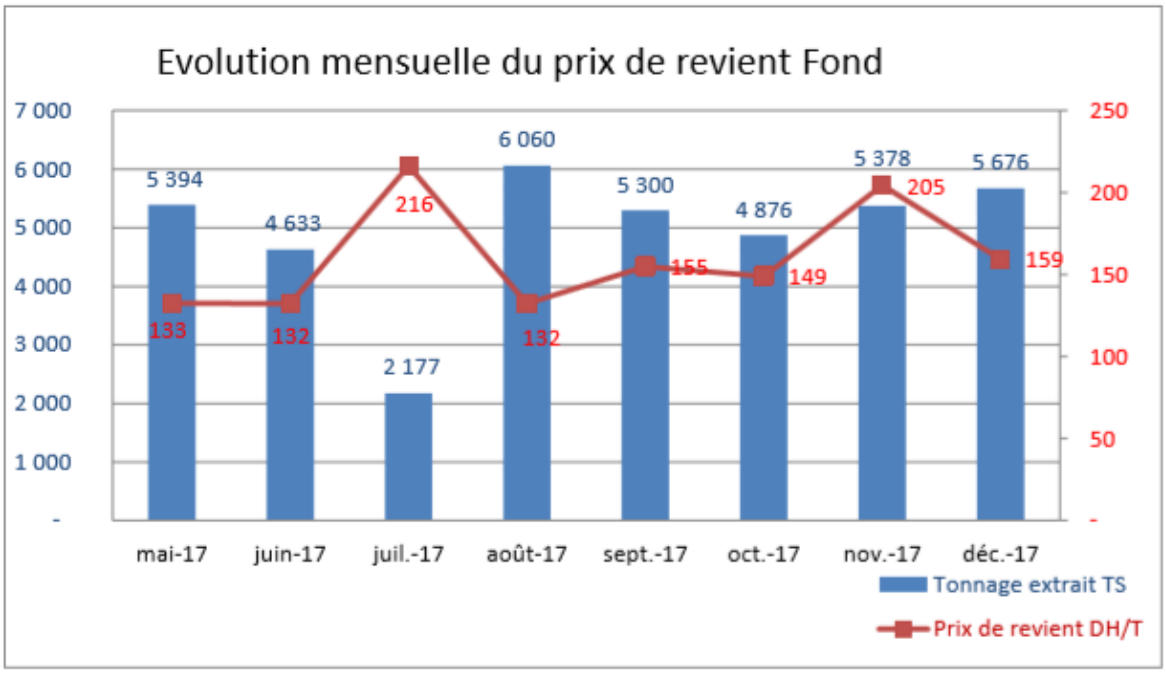


Figure 132: Extract of the December report UG mining service

III. COÛT DE REVIENT TECHNIQUE

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Métal (once)	54 013	31 942	16 211	42 033	46 331	46 619	42 264	44 130
Montant	2 789 730	2 603 694	1 749 480	2 699 138	2 799 848	2 689 500	3 513 623	3 103 828
Coût de revient technique $/once	5,16	8,15	10,79	6,42	6,04	5,77	8,31	7,03

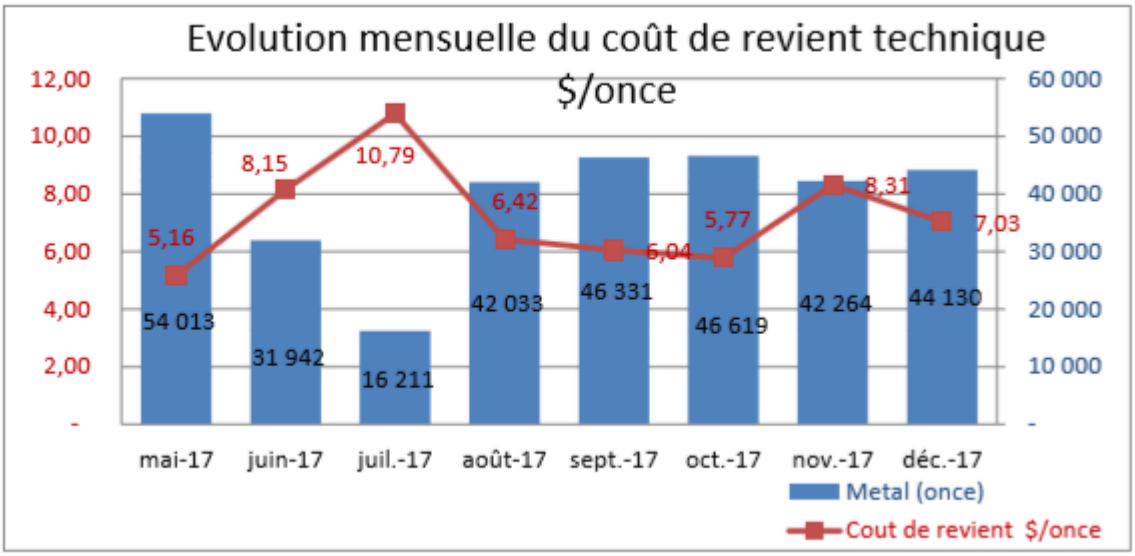


Figure 133: Extract of the December report technical MAD & Cost US$/oz

V. SERVICE MAINTENANCE

SERVICE MAINTENANCE

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Nombre des heures	3 192	3 744	2 936	3 856	4 344	2 984	3 592	4 040
Montant	286 239	293 820	264 214	222 781	221 766	199 818	214 145	271 469
Prix de revient	89,67	78,48	89,99	59,02	51,05	66,96	59,62	67,20

SERVICE GEOLOGIE

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Nombre des heures	1 432	1 329	1 664	2 136	2 024	2 104	1 976	2 024
Montant	55 720	64 458	68 158	76 851	76 601	71 990	80 530	79 295
Prix de revient	38,91	48,50	40,96	35,98	37,85	34,22	40,75	39,18

SERVICE LABORATOIRE

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Nombre des échantillons	2 395	2 117	1 807	3 583	2 986	2 448	2 437	2 769
Montant	50 659	47 249	47 336	61 050	59 744	59 329	61 418	60 890
Prix de revient	21,15	22,32	26,20	17,04	20,01	24,24	25,20	21,99

VI. CHARGE DE STRUCTURE

	mai-17	juin-17	juil-17	août-17	sept-17	oct-17	nov-17	déc-17
Total	419 860	400 215	403 950	351 083	329 693	316 866	271 079	264 988

Figure 134: Extract of the December report Maintenance, Geology, Laboratory and Corporate charges in MAD

E- Variation d'effectif par département

Département	Novembre	recrutement	départ	Réaffectation	Décembre
Administration siège	9				9
Administration Mine	6		1		5
Fond	59				59
Laboratoire	4				4
Géologie	10				10
Magasin	3				3
Maintenance	26	1			27
Traitement	52				52
Chauffeur	3				3
Restaurant	4				4
PROJET FLOTTATION	3	1			4
Total	179	2	1	0	180

Figure 135: Extract of the December 2017 report with staff by department

22 Economic analysis

22.1 Introduction

A preliminary economic analysis of the project base case is prepared from an annual cash flow model constructed in constant money terms (first quarter of 2018). No provision is made for inflation effects and results are presented after taxation. The after tax cash flow results are shown in two separate items, one for the whole project and a second one for the Maya portion alone, which takes into account the 15% ONHYM participation in the project.

22.2 ONHYM royalty

An NSR type royalty of 3% applicable on the metal sales is payable to the ONYHM (Office National des Hydrocarbures et des Mines).

22.3 The Maya Management royalty

There is a Maya Management fees of 2.75% applied on profit before taxes, this royalty includes the NPI of Global Works, Assistance and Trading, S.A.R.L. Maroc. It equals to 5% of the gross revenues from the Zgounder mine, less mining and milling costs. This is taken into account and included in the Maya Management fees in the cash flow calculation directly.

22.4 ONHYM participation

ONYHM also has a 15% non-contributing participation in the net earnings of the Zgounder project, until the production of 8 million ounces of silver as described in the above Section 4.4. Once this commitment is achieved a new company will be created and should beneficiate from tax reduction for the new company.

22.5 Economical assumptions

The silver metal price, is based on actual marketing conditions and was agreed by the project operators, this price varies over time and an average of US$20.50/oz was set for this PEA.

The sensitivity analysis weights a silver price range of ±30%.

The following Table is a summary of the main economic parameters and assumptions retained in the base case.

Table 72: Project base case economic parameters and assumptions

Items	Units	Values
Silver price (yearly average)	US/oz	$20.50
Processed tonnage over LoM	metric tonne	4,926,500
Silver metal production	ounces	33,682,600
Royalty on sales (ONHYM)	%	3.0
Maya Management Fees including NPI*(1)*	%	2.75
Taxes for the first 5 years on gross revenues for a new company*(2)*	%	0.5
Taxes after the first 5 years on profits	%	17.5

1 Net Profit Interest on gross profits (sales less milling and mining costs)

2 After completion of OHNYM 8Million Oz commitment (15%), Project will be 100% owned by a new company owned by Maya in 2021.

22.6 Taxation

The tax system applicable in the cash flow is the Moroccan one as supplied by Maya Canada; it consists of a minimal tax of 0.5% for the first 5 years applicable on the gross revenues, and by a 17.5% tax applicable on the net profits for the following years as it is an exporting company. The taxation scheme assumes the creation of a new company in 2021 after the commitment of 8M oz is achieved. This should allow the new local operating company to beneficiate from the lower taxation rate. Details on Moroccan taxation on corporative business can be found at: https://www.tax.gov.ma/wps/portal/DGI/Vos-impots-procedures/Impots-sur-les-societes

- 17,50% de manière permanente pour :

  - les entreprises minières exportatrices, à compter de l'exercice au cours duquel la première opération d'exportation a été réalisée. Bénéficient également de ce taux, les entreprises minières qui vendent leurs produits à des entreprises qui les exportent après leur valorisation ;

  - après une période d'exonération de 5 ans, le taux réduit est appliqué de manière permanente pour :

    * Les entreprises exportatrices de produits ou de services, à l'exclusion des entreprises exportatrices des métaux de récupération, pour le montant de chiffre d'affaires réalisé à l'exportation ;

    * Les entreprises, autres que celles exerçant dans le secteur minier, qui vendent à d'autres entreprises installées dans les plates-formes d'exportation des produits finis destinés à l'export bénéficient, au titre de leur chiffre d'affaires réalisé avec ces plates-formes ;

    * Les entreprises hôtelières et les sociétés de gestion des résidences immobilières de promotion touristique, pour la partie de la base imposable correspondant à leur chiffre d'affaires réalisé en devises dûment rapatriées directement par elles ou pour leur compte par l'intermédiaire d'agences de voyages ;

    * Les sociétés de services ayant le statut «Casablanca Finance City», au titre de leur chiffre d'affaires à l'exportation et des plus- values mobilières nettes de source étrangère réalisées au cours d'un exercice.

Figure 136: Extract of the Moroccan tax calculation

These calculations are quite straight forward. A company cannot be taxed by two countries, then only the Moroccan taxation applies to the project.

22.7 Financial results

The summary of the base case financial results is presented in the following Table. The financial results are those for the whole project and are given from an assumed regular production at a constant grade as no production optimization was made. It is almost certain that a detailed production optimization would return a better cash flow by processing the higher grade mineralized material during the first years; the present cash flow was prepared by including all resources, regardless of categories, grade or operating costs.

Highlights of the Zgounder Silver Mine PEA Study:

- A project life of 10 years with the current resources up to 2027;
- ZMSM Internal Rate of Return of 134% and 118% after taxes;
- ZMSM pre-tax Net Present Value of US$215.1M (discounted at 6.5%) at variable silver prices from US$17.50 to US$21.50 per ounce with yearly average of US$20.50 per ounce;
- ZMSM after-tax Net Present Value of US$200.2M (discounted at 6.5%) at variable silver prices from USD$17.50 to USD21.5 USD per ounce with average of US$20.5 per ounce;
- The extraction of 3.974Mt at 292 g/t Ag for silver production of 33.682M ounces;
- Milling to increase to 500 tpd in 2018 then up to 2020 followed by a 2000 tpd operation in 2021;
- Production increases to 1.354M ounces per year up to 4.762M ounces of silver per year;
- Total operating cost of US $63.64 per tonne (averaged over the expected mine's life);
- Capex and sustaining capital requirements of US $46.9M
- MAYA Internal Rate of Return of 121% with an NPV of US$209.86M;
- The Zgounder PEA was prepared combining underground extraction, open pit extraction of mineralized material and reprocessing of old tailings based on the mineral resources reported on January 8, 2018.

Table 73: Project Cash Flow Summary ZMSM

Items	Value US
Total revenue of silver sales	$708,967,000
Total operating costs	$313,515,000
After-tax undiscounted cash flow	$325,182,000
After-tax discounted (6.5%) NPV	$200,217,000

Cash flow statement

The base case cash flow is presented in details in the following table for the 10-year estimated life of mine.

Table 74: Cash Flow Model 2018 – base case.

Years		US$	-1	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Undiluted MinMat Grade	g/t			325	325	325	288	288	288	288	288	288	288	
Forecasted Undiluted Mining Tonnage	t/year	t		111 583	164 500	164 500	560 000	560 000	560 000	560 000	560 000	560 000	174 000	3 974 583
Mining Dilution	%			10	10	10	30	30	30	30	30	30	30	
Dilution Grade	g/t	50		50	50	50	50	50	50	50	50	50	50	
Mining Recovery	%	97%		97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	
Diluted Mill Feed Grade	Ag	g/t		300	300	300	233	233	233	233	233	233	233	
Forecasted Production & Processing	days/year	days		350	350	350	350	350	350	350	350	350	350	
Forecasted Production & Processing	t/year	t		119 037	175 522	175 522	706 160	706 160	706 160	706 160	706 160	706 160	219 414	4 926 454
Forecasted Production & Processing	t/day	t		340,10825	501,49	501,49	2017,6	2017,6	2017,6	2017,6	2017,6	2017,6	626,8971429	
Mill Recovery	%			80%	80%	80%	90%	90%	90%	90%	90%	90%	90%	
Metal Production	Ag	oz/y		918 526	1 354 376	1 354 376	4 762 584	4 762 584	4 762 584	4 762 584	4 762 584	4 762 584	1 479 803	33 682 583
Metal price	$/oz			17,5	18,5	19,5	20,5	21,5	21,5	21,5	21,5	21,5	21,5	
Total Revenues		$		16 074 211	25 055 958	26 410 334	97 632 965	102 395 549	102 395 549	102 395 549	102 395 549	102 395 549	31 815 760	708 966 973
MinMat Mined & Processed	t/year	t		119 037	175 522	175 522	706 160	706 160	706 160	706 160	706 160	706 160	219 414	4 926 454
MinMat Production Cost (UG+Pit+Tailings)	$/t			25,00	20,00	20,00	9,39	9,39	9,39	9,39	9,39	9,39	9,39	
MinMat Production Cost (UG+Pit+Tailings)		$		2 975 930	3 510 430	3 510 430	6 630 842	6 630 842	6 630 842	6 630 842	6 630 842	6 630 842	2 060 297	51 842 142
Waste & Stope Preparation (UG)	t/year	t		11 904	17 552	17 552	141 232	141 232	141 232	141 232	141 232	141 232	43 883	
Waste & Stope Preparation (UG)	$/t			15	15	15	15	15	15	15	15	15	15	
Waste & Stope Preparation (UG)		$		178 556	263 282	263 282	2 118 480	2 118 480	2 118 480	2 118 480	2 118 480	2 118 480	658 242	14 074 242
Waste & Stripping (Pit)	t/year	t		0	0	1500000	2929000	2928500	2928500	2928500	2928500	2928500	2928500	22 000 000
Waste & Stripping (Pit)	$/t			4	4	4	4	4	4	4	4	4	4	
Waste & Stripping (Pit)		$		0	0	6000000	11716000	11714000	11714000	11714000	11714000	11714000	11714000	88 000 000
MinMat Processing	$/t			40	30	30	18	18	18	18	18	18	18	
MinMat Processing		$		4761487,5	5265645	5265645	12710880	12710880	12710880	12710880	12710880	12710880	3949452	95 507 510
Ingots transport , Insurance & refiner cost	$/Oz			0,21	0,21	0,21	0,21	0,21	0,21	0,21	0,21	0,21	0,21	
Ingots transport , Insurance & refiner cost		$		192 891	284 419	284 419	1 000 143	1 000 143	1 000 143	1 000 143	1 000 143	1 000 143	310 759	7 073 343
Administration & Environment	$/t			8	5,5	5,5	3	3	3	3	3	3	3	
Administration & Environment		$		952 298	965 368	965 368	2 118 480	2 118 480	2 118 480	2 118 480	2 118 480	2 118 480	658 242	16 252 156
ONHYM Royalties (on sales)	3%	$		482 226	751 679	792 310	2 928 989	3 071 866	3 071 866	3 071 866	3 071 866	3 071 866	954 473	21 269 009
Maya & Management Fees (on sales)	2,75%	$		442 041	689 039	726 284	2 684 907	2 815 878	2 815 878	2 815 878	2 815 878	2 815 878	874 933	19 496 592
Total of Expenses		$		9 985 428	11 729 862	17 807 739	41 908 720	42 180 569	42 180 569	42 180 569	42 180 569	42 180 569	21 180 398	313 514 993
Zgounder Project Profit before Amortization and Taxes		$		6 088 783	13 326 096	8 602 595	55 724 245	60 214 980	60 214 980	60 214 980	60 214 980	60 214 980	10 635 362	395 451 980
ONHYM Participation (8MOz Total)	15%	$		913 317	1 998 914	1 290 389	2 449 081	0	0	0	0	0	0	6 651 702
Initial Capital		$	5 000 000											5 000 000
Sustaining Capital		$		2 500 000	6 000 000	21 000 000	6 000 000	2 000 000	2 000 000	1 000 000	1 000 000	400 000	0	41 900 000
Total Capital Expenditure (Capex)		$	5 000 000	2 500 000	6 000 000	21 000 000	6 000 000	2 000 000	2 000 000	1 000 000	1 000 000	400 000	0	46 900 000
MAYA Net Annual Cash Flow before Taxes - (EBITDA)			-5 000 000	2 675 466	5 327 181	-13 687 794	47 275 164	58 214 980	58 214 980	59 214 980	59 214 980	59 814 980	10 635 362	341 900 279
MAYA Net Cumulative Cash Flow before Taxes - (EBITDA)			-5 000 000	-2 324 534	3 002 647	-10 685 147	36 590 017	94 804 997	153 019 977	212 234 957	271 449 937	331 264 917	341 900 279	
Discounted MAYA Cash Flow at 6.5% - NPV			**209 858 210**											
IRR			**121%**											
ZGOUNDER Total Project Cash Flow before Taxes - (EBITDA)			-5 000 000	3 588 783	7 326 096	-12 397 405	49 724 245	58 214 980	58 214 980	59 214 980	59 214 980	59 814 980	10 635 362	348 551 980
ZGOUNDER Cumulative Project Cash Flow before Taxes - (EBITDA)			-5 000 000	-1 411 217	5 914 879	-6 482 526	43 241 719	101 456 699	159 671 679	218 886 659	278 101 639	337 916 619	348 551 980	
Discounted Zgounder Cash Flow at 6.5% - NPV			**215 108 831**											
IRR			**134%**											
Taxes on profit			17,5%	1 065 537	2 332 067	1 505 454	4 147 278	511 978	511 978	511 978	511 978	10 537 621	1 861 188	23 497 057
ZGOUNDER Total Project Cash Flow after Taxes			-5 000 000	2 523 246	4 994 029	-13 902 859	45 576 967	57 703 002	57 703 002	58 703 002	58 703 002	49 277 358	8 774 173	325 054 923
ZGOUNDER Cumulative Project Cash Flowafter Taxes			-5 000 000	-2 476 754	2 517 275	-11 385 584	34 191 383	91 894 385	149 597 387	208 300 389	267 003 392	316 280 750	325 054 923	
Discounted Zgounder Cash Flow at 6.5% - NPV			**200 216 731**											
IRR			**118%**											

22.8 Sensitivity analysis

The sensitivity analysis has been prepared from the base case described above from the results of the NPV and was evaluated for five variables: the Capex, the Opex, silver (Ag) price, silver recovery & head grade. As seen in the sensitivity results, the net present value (NPV) analysis suggests that the most sensible parameters are the head grade, the recovery and the silver price. The project outlook calculation presents a robust positive project even at US$14.35/Oz silver and also shows important NPV with the increase in Metal price. The following table present the variations before & after-tax results of the whole project.

Table 75: Sensitivity Analysis Results

Parameter	Unit	-30%	-20%	-10%	0%	+10%	+20%	+30%
Pre-Tax								
Capex	M US$	32,83	37,52	42,21	**46,90**	51,59	56,28	60,97
NPV @ 6,5%	M US$	224,68	221,49	218,30	**215,11**	211,92	208,73	205,53
IRR	%	152	146	140	**134**	128	123	117
Opex	M US$	219,46	250,81	282,16	**313,51**	344,87	376,22	407,57
NPV @ 6,5%	M US$	275,55	255,40	235,26	**215,11**	194,96	174,81	154,66
IRR	%	182	165	149	**134**	119	106	93
Metal Price (avg)	$/oz	14,35	16,40	18,45	**20,50**	22,55	24,60	26,65
NPV @ 6,5%	M US$	86,97	129,68	172,39	**215,11**	257,82	300,54	343,25
IRR	%	59	83	108	**134**	161	189	217
Recovery (avg)	%	61	70	78	**87**	96	–	–
NPV @ 6,5%	M US$	88,33	130,59	172,85	**215,11**	257,37	–	–
IRR	%	60	84	108	**134**	161	–	–
Head Grade	g/t	204	234	263	**292**	321	351	380
NPV @ 6,5%	M US$	94,07	134,42	174,76	**215,11**	255,45	295,80	336,14
IRR	%	63	85	109	**134**	160	187	214
Parameter	Unit	-30%	-20%	-10%	0%	+10%	+20%	+30%
After-Tax								
Capex	M US$	32,83	37,52	42,21	**46,90**	51,59	56,28	60,97
NPV @ 6,5%	M US$	209,79	206,60	203,41	**200,22**	197,03	193,83	190,64
IRR	%	135	129	124	**118**	113	108	103
Opex	M US$	219,46	250,81	282,16	**313,51**	344,87	376,22	407,57
NPV @ 6,5%	M US$	256,59	237,80	219,01	**200,22**	181,43	162,63	143,84
IRR	%	155	143	130	**118**	107	95	85
Metal Price (avg)	$/oz	14,35	16,40	18,45	**20,50**	22,55	24,60	26,65
NPV @ 6,5%	M US$	80,15	120,17	160,19	**200,22**	240,24	280,26	320,29
IRR	%	55	76	97	**118**	140	162	185
Recovery (avg)	%	61	70	78	**87**	96	–	–
NPV @ 6,5%	M US$	81,43	121,02	160,62	**200,22**	239,81	–	–
IRR	%	56	77	97	**118**	139	–	–
Head Grade	g/t	204	234	263	**292**	321	351	380
NPV @ 6,5%	M US$	86,87	124,65	162,43	**200,22**	238,00	275,78	313,57
IRR	%	58	78	98	**118**	139	160	182

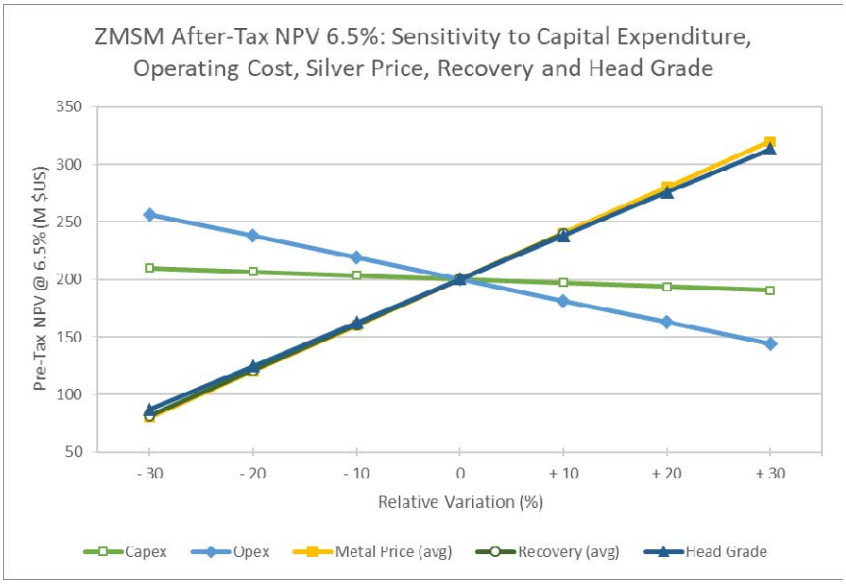


Figure 137: Graph of Sensitivity Analysis (NPV)

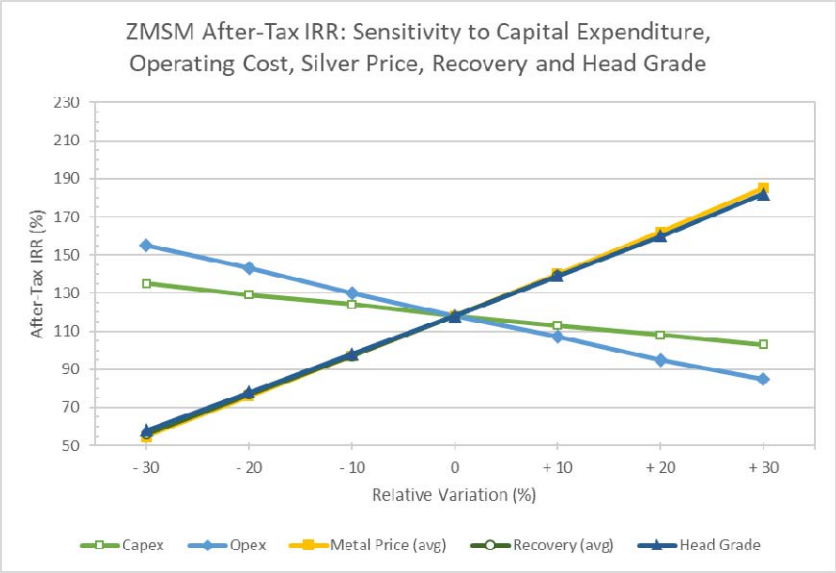


Figure 138: Graph of Sensitivity Analysis (IRR)

23 Adjacent properties

There are no adjacent properties of 3rd party, and the author is not aware of any significant exploration works by others. The closest mines are Hajjar (Zn, Pb, Cu and Ag) to the north and Imini (Mn) to the east, which are both at great large distances (around 50 km) from Zgounder.

Maya Gold and Silver acquired in October 2015 five exploration permits near the Zgounder mine, located in the Taroudant Province in Morocco. Each permit covers 16 square kilometres (4x4 km). The permits are located in the periphery of the Askaoun intrusion which is a favourable structural context for the hydrothermal fluids circulation.

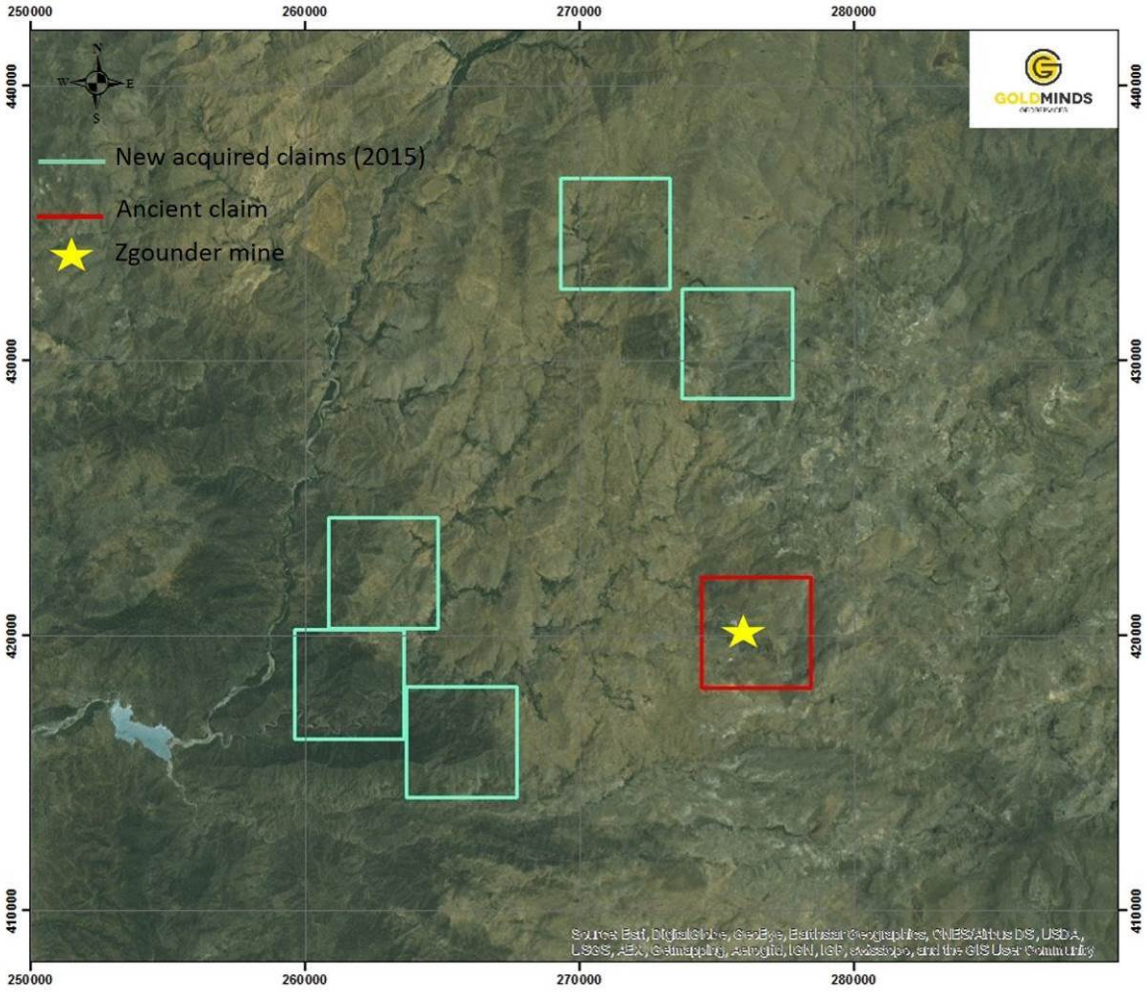


Figure 139: Localisation of the exploration claims around the Zgounder mine.

The GMG authors have taken all possible actions to insure that the mineral resource statements are accurate. The author relies on historical data verification, independent drilling results and on the scanning of the mine openings.

The GMG authors are also aware that Zgounder mine and mineralization contain deleterious elements such as arsenic, lead, zinc, cadmium and mercury, which Maya has to take into account in their mineral processing, tailings disposal, water management and reclamation plans.

No adverse protests or objections to the mine development have been observed at Zgounder and Askaoun areas. The population expressed their confidence in the project, as it is expected that new jobs are created in this region.

24 Other relevant data and information

A prefeasibility study with 200 t/d processing rate was prepared in 2014 and the results was announced in the press release of May 22nd 2014. The PFS highlighted 573,000 tonnes Proven & Probable reserves at 317.3 g/t Ag for 5,845,000 ounces of silver and was expected to last 6 years.

Out of the mineral reserves identified in 2014, 76,154 tonnes at 381 g/t Ag for 932,902 ounces of silver in the measured and indicated resources have been taken out. The remaining proven & probable reserves are: 493 582 tonnes at 311 g/t for 4,936,797 ounces of silver (resources: 462,589 tonnes at 337g/t for 5,015,118 ounces of silver) and current mineral reserves could sustain 4.8 years at 200 t/d or could sustain 2 years at a milling rate of 500 t/d.

These mineral reserves are included in the mineral resources statement within this PEA report, i.e. they are included in the PEA 2018 resources and do not add, they are inclusive.

The additional silver mined out up to December 2017 is from historical stopes broken and mineralized materials which were not taken into account in the mineral resources & reserves of 2014. The company has planned an updated PFS by the end of 2018.

Table 76: Details of the source material processed from 2014 to December 2017.

Geology Department ZMSM	Stope	Total cumulated/stope (T)	Grade Ag (ppm)	Oz/stope
Stopes not taken into account in 2014 estimates	Corps D	36 886	332,38	394 177
	Corps A	17 976	312,16	180 411
	Corps C	24 417	356,06	279 524
	Corps B	4 286	354,95	48 913
	Taille 2035	4 614	298,54	44 288
	Taille 2030	2 112	304,60	20 683
	produits de niveau 2100	14 378	344,00	159 021
Not part of the resources nor reserves	Chambre 33 et 44	10 930	294,00	103 315
Subtotal		**115 599**	**334,90**	**1 230 331**
	Stope	**Total cumulated/stope (T)**	**Grade Ag (ppm)**	**Oz/stope**
Stopes from the 2014 GMG Res/Rsv	Panneau 9	29 643	413,83	394 403
	Panneau 8	11 992	384,46	148 233
	2000_NW10	494	279,92	4 446
	Centre Nord	7 481	267,00	64 220
	2100 secteur Est	19325	398,34	247 500
	secteur nord	3 301	305,00	32 370
	2125	1 624	316,12	16 506
	Secteur Est	2 294	342,00	25 224
Subtotal		**76 154**	**381**	**932 902**

It is from the total above mineralized material and resources that 1.438 MOz Ag was produced in Ingots.

The following in italic present the summary of the PFS of 2014, extract of the press release

2014 Highlights of the Zgounder Silver Mine PFS Study include:

- *An anticipated mine life of 6 years with the current reserves with Internal rate of return of 128 per cent;*
- *First year silver production of 582,600 ounces, followed by two years at 885,400 ounces, and the final three years at 914,000 ounces per year;*
- *Mill feed grade estimated at 317 g/t Ag;*
- *Total operating cost of USD109.50 per tonne (averaged over the expected mine's life);*
- *Additional capex requirements total USD3.8 million, which include the proposed concentrator expansion;*
- *Net present value of USD27.9 million (discounted at 6.5 per cent) at silver price of USD20.50 per ounce;*

The Zgounder PFS was prepared as a strictly underground mine based solely on the measured and indicated mineral resources reported on February 19, 2014.

Mineral Reserve Estimate as at March 21st, 2014

Proven			*Probable*			*Proven + Probable*		
Tonnes	*Ag g/t*	*Ounces*	*Tonnes*	*Ag g/t*	*Ounces*	*Tonnes*	*Ag g/t*	*Ounces*
152,000	*281*	*1,371,000*	*421,000*	*330*	*4,474,000*	*573,000*	*317.3*	*5,845,000*

Notes:
The reserves have been estimated in accordance with the definitions and guidelines adopted from the Canadian Institute of Mining, Metallurgy and Petroleum (CIM Standards on Mineral Resources and Reserves). The reserves are based entirely on measured and indicated resources and were converted as probable and proven respectively. Since the material is from underground mining operations, the cut-off grade includes the costs of production, processing and the general & administration (G&A).
Parameters of cut-off grade estimation (the exchange rate has been set at 7.63 MAD = $1.00, as of December 29, 2013.)

Parameters	*Unit*	*Data*
Mining	*USD/t*	*32.79*
Mining dilution	*%*	*10.00*
Development	*USD/t*	*10.79*
Processing	*USD/t*	*45.89*
G&A	*USD/t*	*8.54*
Metal price	*USD/oz*	*20.50*
Metal price	*U/g*	*0.66*
Process recovery	*%*	*0.90*
Cut-off grade	*g/t*	*166*

The existing parameters at the mine and mill are in the same range as the one scheduled in the PFS. Moreover the sensitivity analysis (table 61) of the 2014 PFS reproduced below shows the reserves are still positive with the current commodity silver price of 16.50US$ per ounce. It is why the author still consider them as valid.

Table 77: Sensitivity of 2014 PFS

Parameters	Units	-30%	-20%	-10%	0%	+10%	+20%	+30%
Capex	MUS$	2.6	3.0	3.4	**3.80**	4.2	4.6	4.9
NPV @ 6.5%	MUS$	29.0	28.6	28.2	**27.90**	27.5	27.1	26.7
Silver price	$/oz	14.35	16.4	18.45	**20.50**	22.55	24.6	26.65
NPV @ 6.5%	MUS$	5.6	13	20.4	**27.90**	36.3	42.7	50.1
Opex	MUS$	42.9	49.1	55.2	**61.30**	67.5	73.6	79.7
NPV @ 6.5%	MUS$	42.3	37.5	32.7	**27.90**	23.0	18.2	13.4

This being said the tonnage and balance of production and remaining resources/reserves is presented in the following table where the extracted resources (between year 2014 & 2017) have been removed from the measured and indicated resources used in the 2014 for the mineral reserves. The remaining reserves has been updated accordingly as presented in the next table.

Table 78: Compilation table of remaining reserves 2018

Mineral resources estimate 2014 GMG								
Measured			Indicated			Measured and indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
142 136	304,3	1 390 741	396 607	357,4	4 557 279	538 743	343,4	5 948 020
Resources extracted from 2014 to 2017								
Measured			Indicated			Measured and indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
46 511	360,1	538 499	29 643	413,8	394 403	76 154	381,0	932 902
Remaining Resources 2018								
Measured			Indicated			Measured and indicated		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
95 625	277,2	852 242	366 964	352,8	4 162 876	**462 589**	**337**	**5 015 118**
Mining dilution	10%							
Dilution Grade	50g/t							
Mining recovery	97%							
Remaining Reserves 2018								
Proven			Probable			Proven + Probable		
Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces	Tonnes	Ag g/t	Ounces
102 032	256,5	841 586	391 551	325,3	4 095 211	**493 582**	**311**	**4 936 797**

It is important to remember that 1.23 Million Ounce of silver was extracted from other source of the mine and only 43% of the mill feed from 2014-2017 was from the mineral reserves identified in 2014.

Table 79: Resources & reserves in 2014

Final Resources > CoG	142,136	304.3	1,390,741	394,728	358.4	4,548,420	536,864	344.1	5,939,161
Parameters for dilution and recovery	Mining dilution - 10% Dilution grade - 50 g/t Ag Mining recovery - 97%			Mining dilution - 10% Dilution grade - 50 g/t Ag Mining recovery - 97%					
Final Reserves	**Proven**			**Probables**			**Proven + Probables**		
	Tonnes	**Ag g/t**	**Ounces**	**Tonnes**	**Ag g/t**	**Ounces**	**Tonnes**	**Ag g/t**	**Ounces**
	151,659	**281.2**	**1,371,182**	**421,175**	**330.4**	**4,473,519**	**572,834**	**317.3**	**5,844,701**

The extract of 2014 PFS above shows there was alsmost 6 Millions ounces and there is now 5 Million ounces of silver in the remaining reserves Proven+Probable. Numbers may not add-up due to rounding.

25 Interpretation and conclusions

The exploration results have been positive with a significant increase in mineral resources since 2014 where they have been multiplied by almost a factor of 300%. The new mineral resources have allowed the company to prepare this PEA with a ramp up scenario compared to previous studies.

The company knows now more about mineralization, processing behaviour and the mine accesses. The production from 2014 to 2018 has set solid base for the company to move forward as it is not a resume operation scenario anymore.

The property has resources, shows interesting potential and deserves additional exploration. The author would not be surprised of a significant discovery to the west at depth as our beliefs are that the current Zgounder mine is a block which has moved upward and the potential extension appears to be plunging to the west.

The forecast silver recovery for the base case for this report was set at 80% for a process using gravity, flotation and cyanidation and 90% for a new mill using gravity cyanidation. The installation of the new mill should comfort the silver recovery and addition works (testings) should be done to maximise the recovery for the 2000 tpd design.

The PEA is positive and deserve serious attention, significant effort should be put in place for extensive exploration to convert and increase the quality of the resources.

With ZMSM after-tax Net Present Value of **US$200.2M** (discounted at 6.5%) at variable silver prices from **USD 17.50** to **USD 21.5** per ounce with an average price of **US$ 20.50** per ounce; and MAYA Internal Rate of Return of **121%** with an NPV of **US$209.86M** we can conclude that the company has a positive project in its hands.

26 Recommendations

This section outlines the work required to advance the Zgounder project to the next stage of development. These recommendations concern exploration, mining development and the processing.

26.1 Drilling and exploration

GoldMinds Geoservices recommend to Maya Gold and Silver an exploration drilling program composed of Reverse circulation drilling (RC drilling), percussion drilling, surface and underground diamond drilling in order to convert inferred mineralized envelopes to indicated or measured.

For the old tailings we recommend an auger drilling campaign of 500 meters (estimated at 35,000 USD). At least 5 holes in the tailings pile should be sampled in a manner which enables the measurement of the in-situ density profile from surface to bottom which should allow conversion an adequate estimation of tonnage.

For the first phase of exploration budget GMG propose the following program (budgeted) at Zgounder property:

Table 80: Estimation of the first phase of exploration budget at the Zgounder property.

Recommended works for Phase I	All included cost (USD)
Reverse circulation drilling (5500 meters) at 120 USD per meter	660,000
Surface diamond drill (3000 meters) at 150 USD per meter	450,000
Underground diamond drill (4500 meters) at 175 USD per meter	787,500
Percussion drilling (1500 meters) at 70 USD per meter	105,000
Auger drilling for tailings (500 meters) at 70 USD per meter	35,000
Total	**2,037,500 USD**

Core specific density measurement should be done on the whole core sample length, ideally the whole core and match the from-to of the analysis for at least 5 holes of the next diamond drilling program.

26.2 Development and mining

Cavities became one of the main hazard sources that endanger the safety of miners. The lack of accurate cavity information may cause deterioration in mining condition (safety assessment, mining dilution, and disaster prediction).

GoldMinds Geoservices recommend to Maya Gold and Silver to acquire a cavity monitoring system (CMS) to get an accurate 3D mapping of underground voids, shafts, stopes, drifts and adits on a continuous basis or carry a survey at least 3 times a year. The CMS will help the mining operators for volume calculations, blasting design of the pilars, slope analysis, mine planning and overall operations.

Cavity monitoring system	Cost training included (USD)
Cavity monitoring system (Geosight)	75,000

Mine levels below elevation 1975m need to be dewatered before to start developements in these parts of the mine. It is highly recommended to analyse the water coming from these underground levels to make sure it can be safely discharged into the Zgounder River or to be used for the processing without being treated.

It is necessary to make a more extensive study on the location of the new mill (2000 tons per day). This location must take into consideration all processing operations and the tailings location.

GMG propose the installation of the mill (2000 tons per day) at about 300 meters at the south from the mine entrance (following figure). For this study Maya has also to take into account the stabilisation of the tailings and the management of the rainstorms waters.

Maya has to build water retention ponds between the main tailings pond and the Zgounder Oued to prevent contamination in case of overflow while rainstorms periods.

Maya Gold and Silver as part of his development project intends to increase the mill feed rate from 200 tons/day to 500 tons/day to 2000 tons/day. This increase of the tonnage processed go with an increase of water use. Maya should develop/secure a method for water recycling and also the installation of water dams to retain water during the periods of high flood. During November 2014, heavy rains increased the level of Zagmouzen oued, which caused extensive damage to the Taliouine bridge and the surrounding farmlands about 56 km south at crow flies of the Zgounder mine.

Figure 140: The GMG proposed mill (2000tons per day) location.

27 References

ACA Howe International 1999. Zgounder Silver Deposit Taroudant Province, Morocco – Review of Geology, Reserves, Plant and Metallurgical Testwork. Rapport interne, 34 pp.

Baroudi, Z., El Beraaouz, H., Rahimi, A., Saquaque, A., Chouhaidi, M.Y. (1999): Minéralisations poly métalliques argentifères d'Imiter (Jbel Saghro, Anti-Atlas, Maroc): Minéralogie, évolution des fluides et mécanismes de dépôt. Chronique de la Recherche Minière 536-537, 91–112.

Boily, M. (2012): The Zgounder Silver Deposit Taroudant Province, Kingdom of Morocco. NI 43-101 report, 120 pp.

Bounajma, H. (2002): Le Gisement de Zgounder: Données et Réflexions Géologiques. Rapport Interne de la compagnie CMT; 7 pp.

Buggisch, W. and Flügel, E. (1988): The Precambrian/Cambrian boundary in the Anti-Atlas (Morocco) discussion and new results. The Atlas System of Morocco, Lecture Notes in Earth Sciences, 15, 81-90.

Cheilletz, A., Levresse, G., Gasquet, D., Azizi Samir, M.R., Zyadi, R., Archibald, D. (2002): The giant Imiter silver deposit: Neoproterozoic epithermal mineralization in the Anti-Atlas, Morocco. Miner. Depos. 37, 772–781.

Clauer, N. (1974): Utilisation de la méthode Rb-Sr pour la datation d'une schistosité de sédiments peu métamorphisés : application au Précambrien II de la boutonnière de Bou Azzer – El Graara (Anti-Atlas, Maroc). Earth and planetary Science Letters, 4, 404-412.

CMT. (2004): Synthèse des travaux de recherche à fin 2004, Rapport Interne; 13 pp.

Demange, M. (1977): Le cadre géologique du gisement argentifère de Zgounder (Massif du Sirwa, Anti-Atlas, Maroc). Notes Serv. Géol. Maroc, 267, 105-122.

Essarraj, A., Boiron, M-C., Cathelineau, M., Banks, D., El Boukhari, A. and Chouhaidi, M. (1998) : Brines related to Ag deposition in the Zgounder silver deposit (Anti-Atlas, Morocco) Eur J Mineral, 10, 1201-1214.

Hydraumet, Study of Environmental Impact, provisional report, 183 pages, September 2013.

Leblanc, M. (1975): Ophiolites précambriennes et gisements arséniés de cobalt (Bou Azzer, Maroc). Unpubl. Doct Thesis, Paris VI Univ., 329 p.

Marcoux Eric (Expertise minéralogique appliquée à la mise au point d'un procédé de traitement optimal) février 2003.

Marcoux, E. and Wadjinny, A. (2005): Le gisement Ag–Hg de Zgounder (Jebel Siroua, Anti-Atlas, Maroc) : un épithermal néoprotérozoïque de type Imiter. C. R. Geoscience, 337, 1439–1446

Pasava, J. (1994): Geochemistry and the role of anoxic sediments in the origin of the Imiter silver deposit in Morocco, Vestnik Ceského geologického ustavu, 69, 1–11.

Petruk, W. (1975): Mineralogy and geology of the Zgounder Silver deposit in Morocco. Can. Mineral, 13, 43-54.

Popov, A.G., Millar, G. and Fettouhi, A. (1985): Carte géologique inédite au 1/500 Unpubl. BRPM report.

Popov, A.G., Millar, G., Belhaj, O.K., Serment, R., Fettouhi, A. (1989): Gisement argentifère de Zgounder: Etude des mineralisations et des roches encaissantes porteuses de sulfures. Unpubl. BRPM report.

SGS Canada Inc. & GoldMinds Geoservices Inc., Rapport Technique NI 43-101 – Évaluation Économique Préliminaire – Mine Argentifère de Zgounder, Royaume du Maroc, 25 Avril 2014 (date effective 10 Janvier 2014) 237p.

Shandong Xinhai Mining Technology&Equipment Inc. - Maya - Zounder Silver Ore Additional Test Results – 2017, 7 pp.

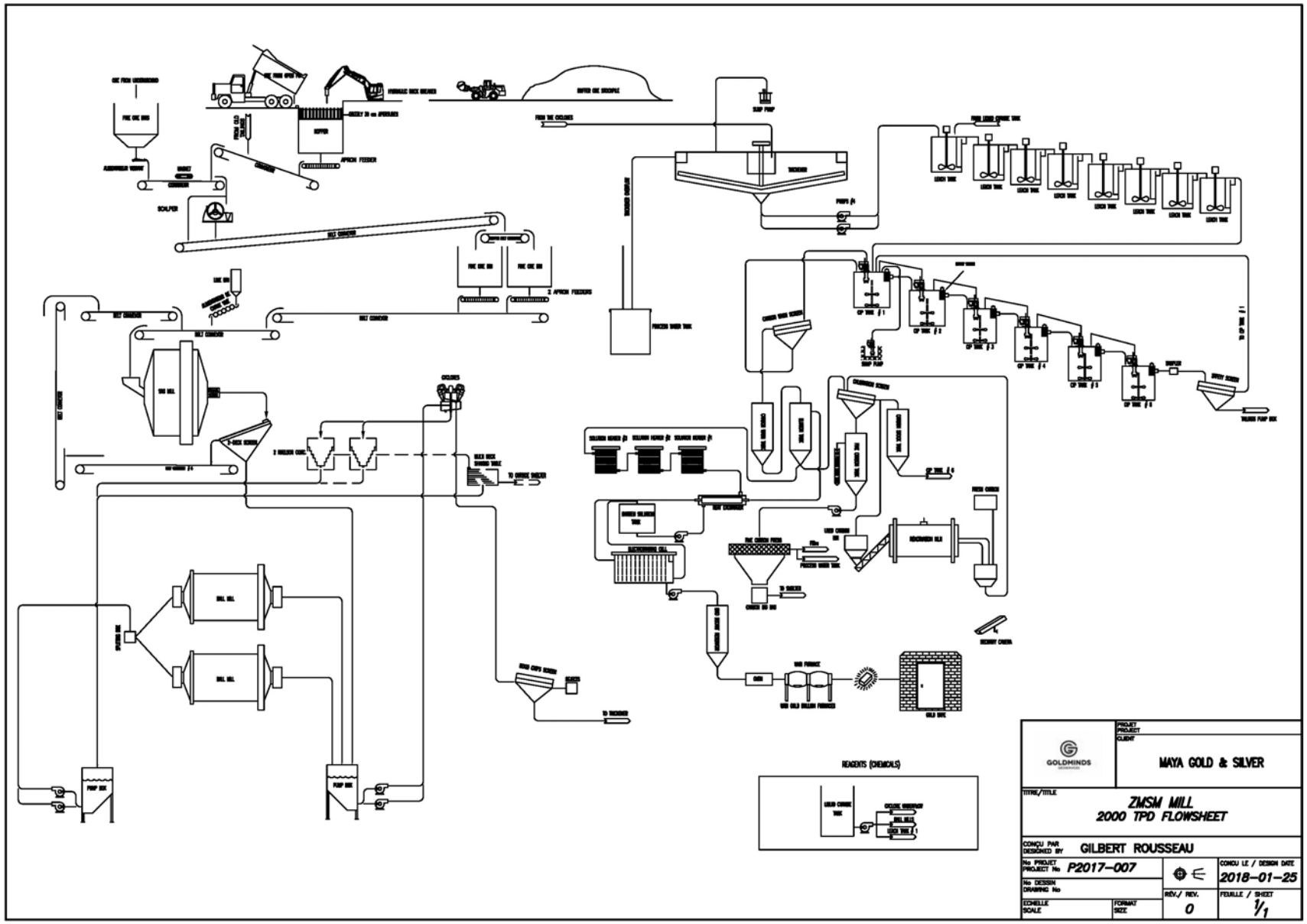
Stacey, J.S. and Kramers, J.D. (1975): Approximation of terrestrial lead isotope evolution by a two-stage model, Earth Planet. Sci. Lett. 26, 207-221.

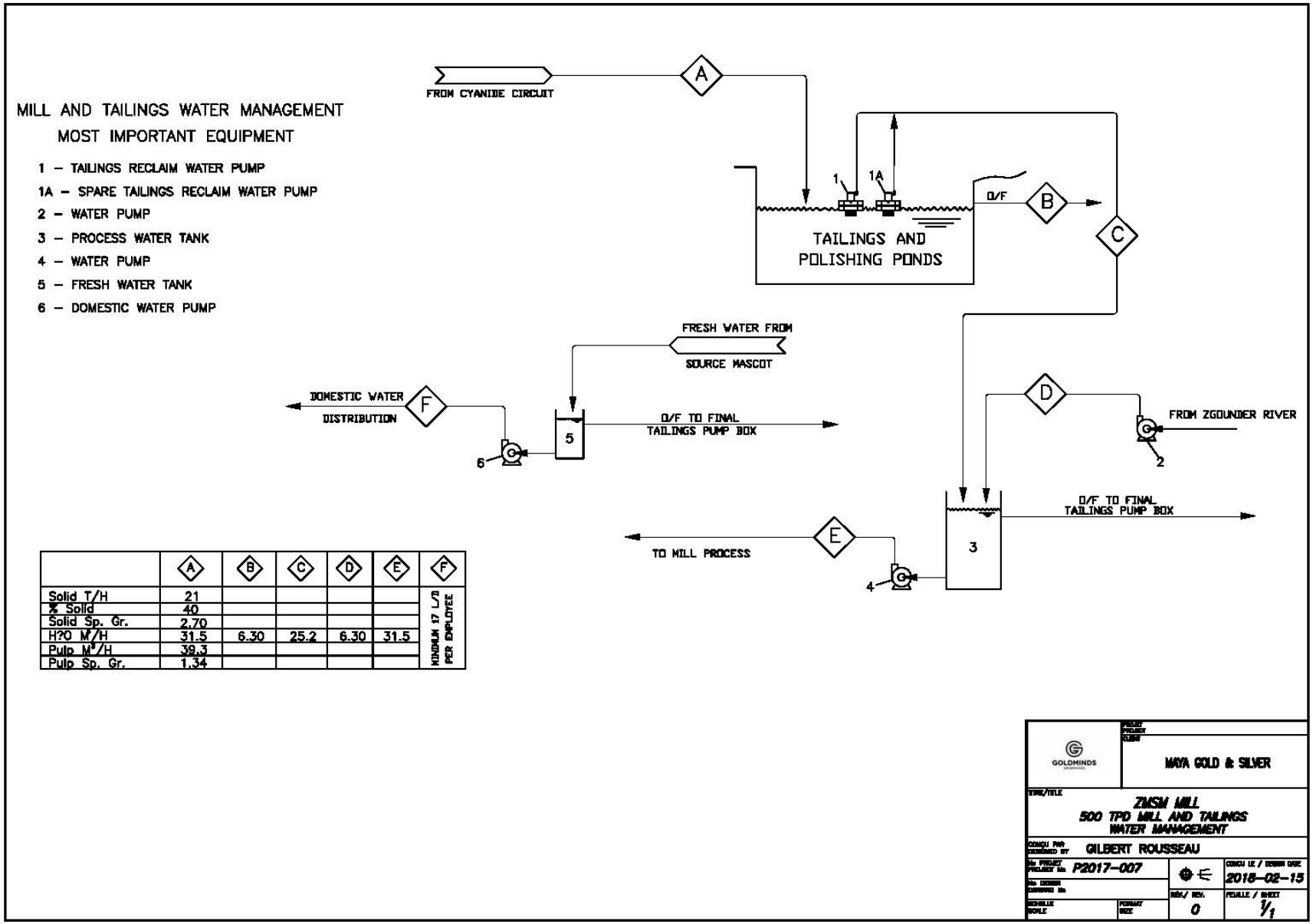
Thomassin J.F., 2003 : partie du Rapport, pages 17 à 43.

Yantai Xinhai Mining Research & Design Co., Ltd. - Morocco Zgounder Millennium Silver Mining S.A - Silver Ore Test Report – 2016, 38 pp.

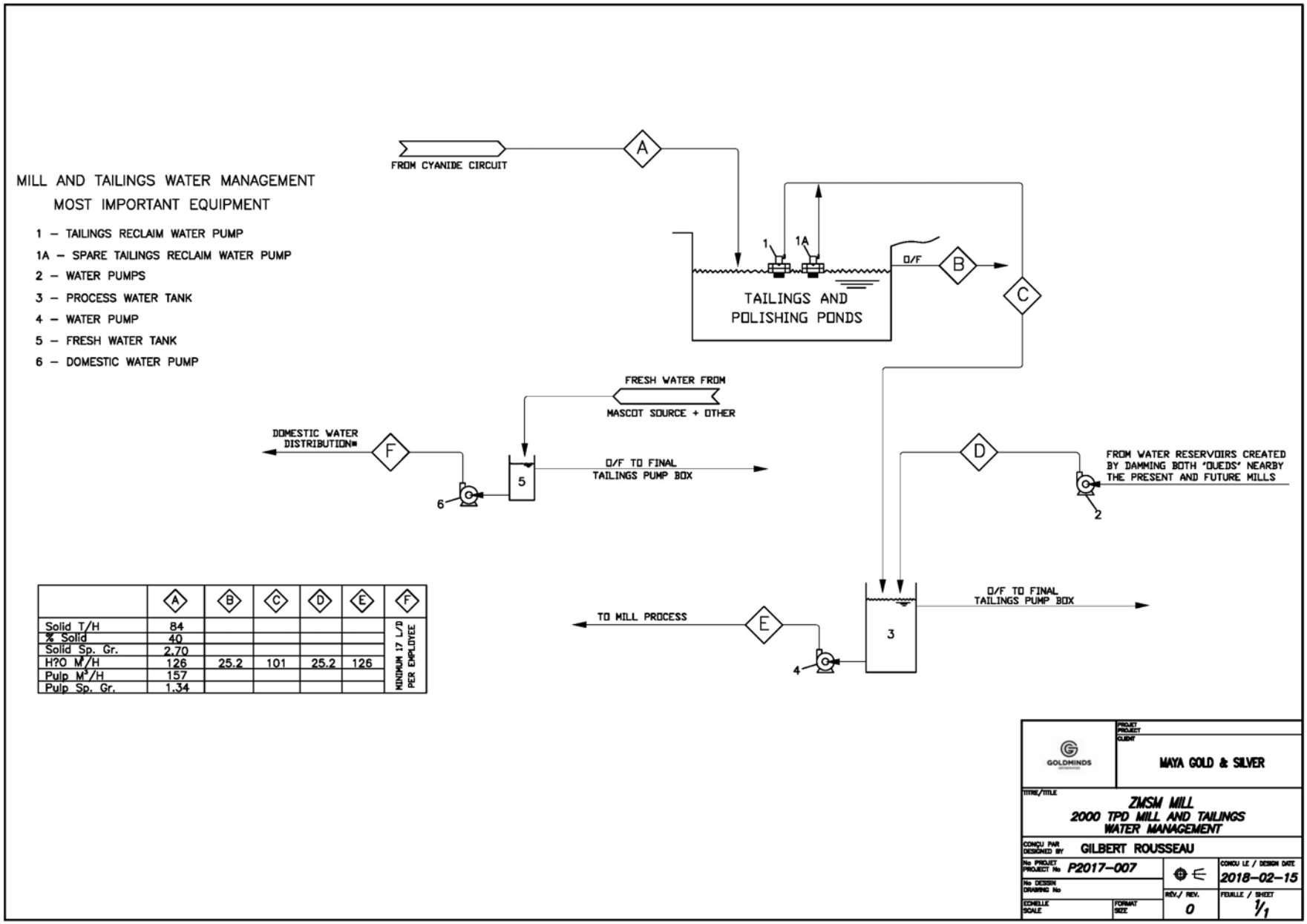
Appendices

Appendix 1: flowsheet, water managements & layout

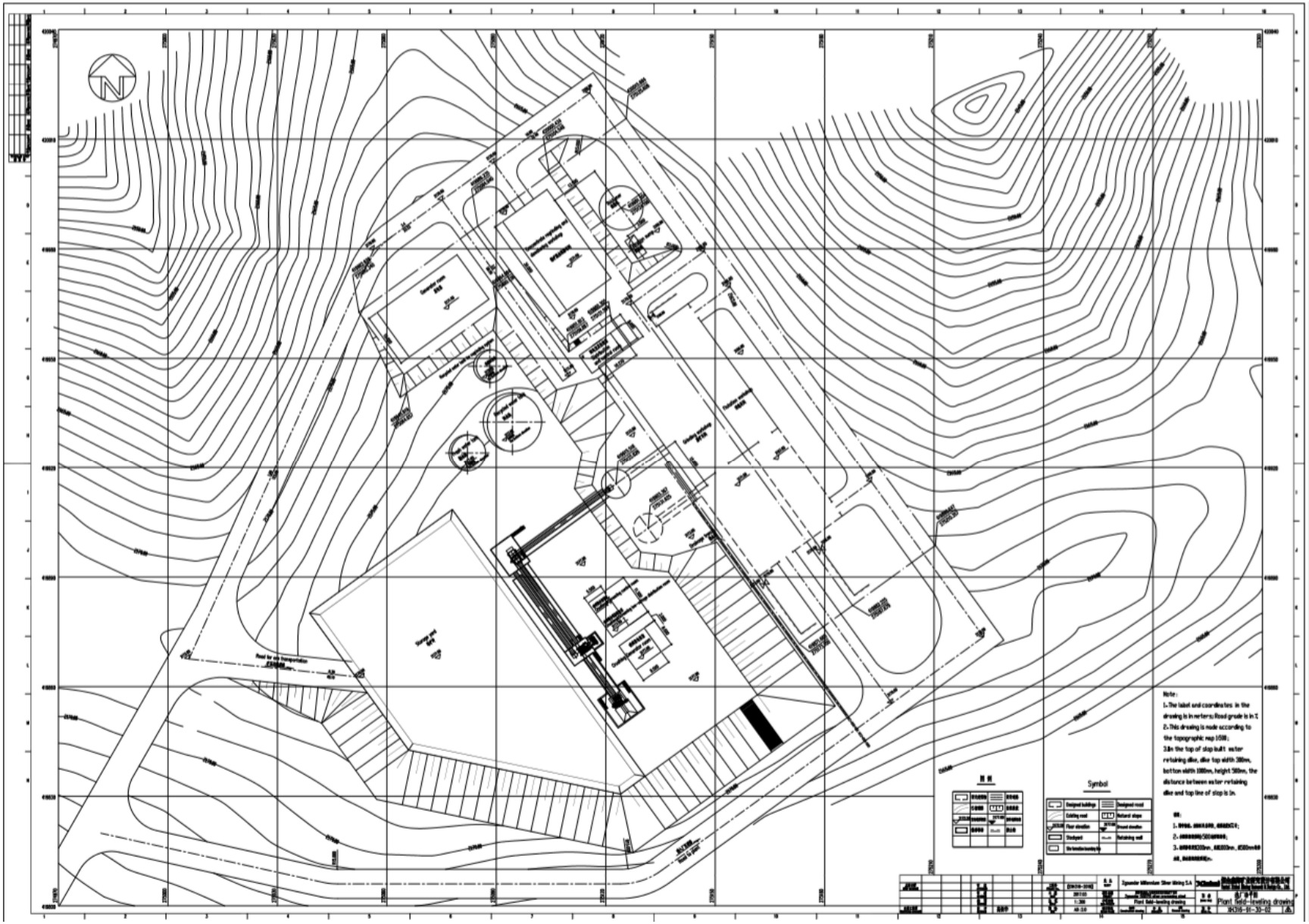

REAGENTS (CHEMICALS)
GOLDMINDS
MAYA GOLD & SILVER
ZMSM MILL
2000 TPD FLOWSHEET
GILBERT ROUSSEAU
P2017-007
2018-01-25
0
1/1



	A	B	C	D	E	F
Solid T/H	21					MINIMUM 17 L/S PER EMPLOYEE
% Solid	40					
Solid Sp. Gr.	2.70					
H?O M³/H	31.5	6.30	25.2	6.30	31.5	
Pulp M³/H	38.3					
Pulp Sp. Gr.	1.34					



	A	B	C	D	E	F
Solid T/H	84					
% Solid	40					
Solid Sp. Gr.	2.70					
H?O M³/H	126	25.2	101	25.2	126	
Pulp M³/H	157					
Pulp Sp. Gr.	1.34					


Symbol
Note:

Appendix 2: CD-ROM of Project Database